Ozarks Transportation Organization

January 17, 2007

Technical Committee Meeting

Plaster Student Union, Room 317

Missouri State University

1:30-3:30 PM

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 TIP AMENDMENT CAN BE CONDUCTED AND COMMENTS RECEIVED PRIOR TO THE FEBRUARY BOARD OF DIRECTORS MEETING.

B. MoDOT 85 in 5 Resurfacing Plan TIP Amendment Request ..... Tab 3
(5 minutes/Miller)
As part of implementing the State's 85 in 5 (bringing 85% of Missouri's primary roadways up to good or better condition within five years) resurfacing plan MoDOT has requested that the TIP for FY2007 be amended to include two projects in the OTO service area. The first resurfacing project is for the US60/State Route 413 corridor. The resurfacing project would include both east and west bound lanes along the corridor from Route 174 in Republic to Scenic Avenue. The second resurfacing project is for the Route 744 (Kearney Street) corridor. The resurfacing project would include both east and west bound lanes along the corridor from US 65 to Route OO. As part of this request, MoDOT is also requesting the removal of the TIP project titled "Pavement Improvements on Major Roadways Throughout the Ozarks Transportation Organization Study area in FY2007 and the scoping project for Route 744 to determine pavement rehabilitation needs. Additional resurfacing projects as part of the 85 in 5 Plan will be added in out years during the next TIP adoption cycle. (Materials Attached.)

TECHNICAL COMMITTEE ACTION REQUESTED TO MAKE A RECOMMENDATION TO THE BOARD OF DIRECTORS ON AMENDING THE TIP TO INCLUDE RESURFACING OF US60/ROUTE 413 AND ROUTE 744 IN FY2007. 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 TIP AMENDMENT CAN BE CONDUCTED AND COMMENTS RECEIVED PRIOR TO THE FEBRUARY BOARD OF DIRECTORS MEETING.

C. Consideration of the 2007 Enhancement Funding Handbook..... Tab 4
(10 minutes/Edwards)
At the request of the OTO Board of Directors, staff has made some modifications to the 2007 Enhancement Funding Handbook. These changes revise the make-up of the project selection committee to include six members of the Technical Committee and five members of the OTO Bicycle and Pedestrian Advisory Committee. Please note that three of the five Bicycle and Pedestrian Committee members that have been added to the selection committee also serve on the Technical Committee. The other change is that the amount of funds available for programming in FY2007 has been decreased slightly from what had been anticipated when the last Handbook was adopted. (Materials Attached.)

TECHNICAL COMMITTEE ACTION REQUESTED TO MAKE A RECOMMENDATION TO THE BOARD OF DIRECTORS ON THE APPROVAL AND ADOPTION OF THE REVISED ENHANCEMENT FUNDING HANDBOOK.

D. North-South Corridor Study
(15 minutes/Olsson Associates)
The subcommittee charged with overseeing the consultant preparation of the North-South Corridor Study is continuing their work and have voted to request that a special meeting of the Technical Committee be called prior to the next Board of Directors in February. Staff from Olsson Associates will provide an overview of the North-South Corridor Study recommendations and distribute a draft of the final report. The subcommittee will meet the week of January 22-26 to make a final recommendation to the full Technical Committee.

TECHNICAL COMMITTEE ACTION REQUESTED TO SET A DATE, TIME AND LOCATION FOR A SPECIAL TECHNICAL COMMITTEE MEETING FOR THE SOLE PURPOSE OF MAKING A FINAL RECOMMENDATION ON THE NORTH-SOUTH CORRIDOR STUDY TO THE BOARD OF DIRECTORS. THE MEETING MUST OCCUR PRIOR TO THE BOARD OF DIRECTORS MEETING ON FEBRUARY 15.

IV. Other Business

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

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

C. Information Items ..... Tab 5
(Articles attached.)

V. Adjournment

Targeted for 2:30 P.M. Next Technical Committee meeting scheduled for Wednesday, March 21, 2007 at 1:30 PM at the Missouri State University Plaster Student Union.

DR/dr
Attachments and Enclosure

Pc: David Coonrod, MPO Chair, Greene County Presiding Commissioner
Ms. Donna McQuay, Vice-Chair of MPO, Mayor, City of Nixa
Tom Carlson, Immediate Past Chair, Mayor, City of Springfield
Stacy Burks, Senator Bond's Office
Steve McIntosh, Congressmen Blunt's Office
Mike McKenna, Olsson Associates
Area News Media

MEETING MINUTES

Attached for Technical Committee member review are the minutes from the last Technical Committee meeting. Please review these minutes prior to our 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 MEETING MINUTES
November 15, 2006

The Technical Planning Committee of the Ozarks Transportation Organization met at its scheduled time of 1:30-3:30 p.m., at the Missouri State University Plaster Student Union (East Ballroom, 3rd Floor).

The following members were present:

Mr. Brian Bingle, City of Nixa (Chair)
Mr. Earl Newman, City of Springfield
Mr. Gary Snavely, Missouri State University
Mr. Fred Gress, City of Willard
Mr. Ralph Rognstad, City of Springfield
Ms. Carol Cruise, City Utilities
Mr. Steve Childers, City of Ozark
Mr. Terry Whaley, Ozark Greenways
Mr. Jim Dow, Springfield R-12 Schools
Mr. Ryan Mooney, Chamber of Commerce
Mr. Joel Keller, Greene Co. Planning Department
Mr. Bill Robinett, MoDOT
Mr. Frank Miller, MoDOT
Mr. Duffy Mooney, Greene Co. Highway Department
Mr. Wally Schrock, City of Republic
Ms. Dan Watts, SMCOG
Mr. David Hutchison, City of Springfield
Mr. Marc Thornsberry, City of Springfield
Mr. Harry Price, City of Springfield (a)
Mr. Eric Bernskoetter, MoDOT

The following members were not present:

Mr. John Vicat, City of Strafford
Mr. Kent Morris, Greene County
Mr. Dan Smith, Greene Co. Highway Dept.
Mr. Mokhtee Ahmad, FTA
Mr. Mike Tettamble, Jr., Trucking Rep.
Mr. Bob Atchley, Christian Co. Planning & Zoning
Mr. Roger Howard, Burlington Northern Railroad
Mr. Gary Cyr, Airport
Mr. Brad McMahon, FHWA
Mr. Kevin Lambeth, City of Battlefield
Mr. Mark Schenkelberg, FAA
Mr. Andy Mueller, MoDOT

Others present were: Carl Carlson, Scott Consulting Engineers; King Coltrin, Great River Engineering; Steve McIntosh, Congressman Roy Blunt's office; Jim McClure, MSU; Mike McKenna, Olsson Associates; Dan Rudge, Sara Edwards, Natasha Longpine and Cheri Hagler, Ozarks Transportation Organization.

Mr. Bingle called the November 15, 2006 Technical Planning Committee Meeting to order at 1:31 p.m.

I. Administration

A. Approval of Technical Committee Meeting Agenda

Mr. Bingle asked if there were any additions or revisions to the agenda. Mr. Rudge stated under new business there would be the addition of Item III.C, a discussion on District 8's "85 in 5" plan. Mr. Rognstad motioned to approve the agenda. Mr. Thornsberry seconded, and the motion was carried unanimously.

B. Approval of September 20, 2006 Meeting Minutes

Mr. Rognstad motioned to approve the September meeting minutes as presented. Mr. Dow seconded and the motion was carried unanimously.

C. **Public Comment Period**

No one from the public spoke.

D. **Executive Director's Report**

Mr. Rudge provided a progress report on current projects including the North-South Corridor Study, City Utilities Transit Development Plan, Coordinated Human Service Transit Plan, Ozark Transportation Plan, Regional Rideshare Program, US 60 East Corridor Study, Functional Class and Urban Area Boundary Mapping, Transportation and Land Use Study and the Visualization Techniques for MPO Public Participation as well as reviewing upcoming projects.

II. Old Business

A. Functional Classification Map

The region's Functional Classification map has not been updated since 2000. MPO staff, in association with local jurisdictions and MoDOT District Eight staff, met on several occasions to prepare a revised map that accurately portrays the existing functional classification for each roadway in the OTO service area. As a result of this update, several roads will become eligible for STP-Urban and other federal and state funding categories. Because the functional classification map update process under federal law is a MoDOT requirement, with consent and adoption by MPOs as part of that process, MoDOT staff has the lead in updating the functional classification map. While MoDOT District Eight staff and the OTO staff and member jurisdictions have completed their portion of the update, the revised map is still being reviewed by MoDOT staff in Jefferson City.

Mr. Miller has been tracking the process and provided an update on the status of the OTO Functional Classification Map. He said consideration should be given to separating the major and minor routes. Board members expressed concerns over collectors and the off-system bridge projects.

III. New Business

A. Route 14 in Downtown Ozark TIP Amendment Request

Ms. Edwards said the City of Ozark is undertaking a downtown revitalization program for the area east of the Finley River. As part of their program, the City has decided that improvements to Route 14 between the Finley River Bridge and Oak Street are necessary. The City of Ozark is requesting a TIP amendment to spend their Urban STP funds on the design of an improved Route 14 corridor that would include the addition of median controls and protected turn lanes.

It was requested that since this will use unencumbered funds and the funds being used have already been apportioned to Ozark the request be approved.

Mr. Dow made a motion to recommend the Route 14 TIP amendment to the Board of Directors for approval and staff will prepare a press release pursuant to the MPO's Public Involvement Process so that a 15 day public review period for TIP amendments can be conducted and comments received prior to the February Board of Directors meeting. Mr. Gress seconded and the motion was carried unanimously.

B. MoDOT Support Letter Request

Mr. Rudge stated MPO staff has received a letter from the MoDOT Central Office requesting a letter of support from the OTO to seek federal grant funds to establish a pilot program to convert the existing I-44 Weigh Scale locations into areas for parking for Commercial Motor Vehicle carriers. The USDOT has identified addressing long-term parking shortages along the National Highway System for Commercial Motor Vehicles as a priority to improve the efficient movement of goods across America. If MoDOT is successful in obtaining these grant funds additional transportation funds would be brought into the OTO study area and no existing funds designated for the OTO area would be used on this project.

Mr. Miller stated there are safety issues with semi-trucks using the inter-changes as parking lots and this program will help to address those issues.

Concerns expressed by members present include the effects of trucks on the City of Strafford and the foot traffic in the area of the weigh station and the use of off-ramps by these large trucks. It was suggested that a letter of support be given specifying the need to look at the effects on foot traffic.

Mr. Gress made a motion to recommend to the Board of Directors that the MPO Executive Director draft a letter of support. Mr. Thornsberry seconded and the motion was carried unanimously.

C. MoDOT – District 8's "85 in 5" Pavement Improvement Plan

Mr. Miller addressed the draft of this plan and said the basic goal of the plan is to have 85% of District 8's major routes in good condition by 2011. The plan is divided into two components: the Ozarks Transportation Organization area and the non-metropolitan (rural) area of District 8. This is a relatively straight-forward plan where the engineering data related to pavement condition was looked at, a pavement treatment was devised to fix the problem and those problems prioritized according to severity of need. Next there was a proposal for funding projects in order of their importance.

Mr. Miller stated he wanted to draw attention to three areas:

1. Page 2, Planning Partner Consultation: A request to have comments by the end of the business day on November 17, 2006 including any information that responders have from their needs lists or regional transportation plans indicating the importance to their region of maintaining smooth roads and taking care of the existing system.

2. Page 2, Major Routes: OTO is in the process of updating functional classification of roadways and are just beginning in the rural portion of the district and he has made assumptions about which routes may be approved as major routes. He said as a note to OTO Staff that MoDOT is considering breaking the major routes designation from the principal arterial designation so there will be principal arterials that will not be major routes. He said this might impact how to proceed with functional class.

3. Page 6 and 11, Programming Schedules: these pages list the projects that are proposed to keep the major routes in good condition.

C. Update on the North-South Corridor Study

Mike McKenna, Olsson Associates, provided an overview of the status of the North-South Corridor Study. He said the refined scope of study would be for FF, Kansas Expressway, 160 and National south of James River Freeway along with I-44 to Willard and 13 which will realign to FF. He stated they will be evaluating the criteria and ranking them by their importance.

IV. Other Business

A. Technical Committee Member Announcements

Ryan Mooney stated that Pete Rahn, Director of MoDOT would be speaking to members of the Springfield area Chamber of Commerce on January 5, 2007 at the Chamber offices. Mr. Mooney extended an invitation to all Technical Committee members to attend this presentation.

Mr. Miller addressed rest areas and said they may be updating the one in Conway in the next few years. They would like to expand it but there is no sewer capacity so they may move closer it closer to Lebanon or Marshfield.

Mr. Miller said regarding the I-44 study they would first be looking at Highway 13 and I-44 interchange.

Brian Bingle said the CC Highway to Emerald Hill study has concluded and they have submitted a study to the OTO. If any further action is needed it will be on the January agenda.

Mr. Rudge asked for other jurisdictions to forward any neighborhood organization information they have to him.

Mr. Whaley thanked MoDOT Districts 5, 7 and 8 for their assistance with the signs between Bolivar and Clinton which connects the Kady Trail to the Frisco Highline.

Mr. Gress thanked Dan Rudge and Sara Edwards for their help in removing the speed bumps at the new high school.

B. Transportation Issues for Technical Committee Member Review

None were brought forward.

C. Information Items

Mr. Rudge referred the Technical Committee to the information and news media articles available behind Tab Four of their agenda package.

IV. Adjournment

Mr. Dow made a motion to adjourn the meeting. Mr. Rognstad seconded the motion. The meeting was adjourned at 1:55 p.m.

TECHNICAL COMMITTEE AGENDA 01/07; ITEM II.A

Rt. 14 in Nixa TIP Amendment Request

Ozarks Transportation Organization
(Springfield, MO Area MPO)

AGENDA DESCRIPTION: The City of Nixa's transportation priorities have been amended and as a result the City has requested that amendments be made to FY2007 TIP. In a letter dated December 21, 2006, the City requested that existing TIP project #NX0403 be removed (signalization of Route 14 and Majestic Oak/Tiffany Boulevard intersection including a center turn lane) and that Nixa's Urban STP funds be returned to their allocation pot.

On January 3, 2007, the City requested that a new project be added to the FY07 TIP to signalize the intersection of Route 14 and Truman Road. The amount of Urban STP funds being allocated by Nixa to this project is less than the amount allocated for the project being removed. This change therefore meets the financial restraint requirements as specified in federal legislation.

STAFF RECOMMENDATION: Since the request is using Urban STP funds that have already been apportioned to Nixa for projects of their choosing and because the request is for improvements on one of the MPO's top five priority corridors, staff recommends approval of the TIP amendment request.

TECHNICAL COMMITTEE ACTION REQUESTED: To either recommend the Route 14 TIP amendment to the Board of Directors for approval or to form a special subcommittee to further study the issue. 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 TIP amendments can be conducted and comments received prior to the February Board of Directors meeting.

CITY OF NIXA

FY2007

~~**State Highway 14 at Majestic Oak/Tiffany Boulevard Intersection (MoDOT #8P0786)** ..... **TIP #NX0403**~~
~~Installation of center turn lane on SH14 and signalization.~~

~~Federal Source Agency: FHWA~~
~~Federal Funding Category: STP – Urban~~
~~MoDOT Funding Category: Safety~~
~~Work or Fund Category: Construction~~

~~STP-Urban: $224,000~~
~~Local (City of Nixa): $400,000~~
~~MoDOT:$376,000~~
~~**TOTAL FY2007: $1,000,000**~~

North Main and Tracker Road ..... **TIP #NX0601**
Improve to three lanes from Aldersgate to Tracker including intersection improvements at Tracker with signalization.

Construction Cost – Local (City of Nixa): $965,000
Inspection Fee – Local (City of Nixa): $48,250
Design Fee – Local (City of Nixa): $96,500
Project Total: $1,109,750

Nicholas Road at State Highway 14 ..... **TIP #NX0602**
Widen Nicholas north of SH 14 to three lanes and reconfigure signals.

Construction Cost – Local (City of Nixa): $372,000
Inspection Fee – Local (City of Nixa): $18,600
Design Fee – Local (City of Nixa): $37,200
Project Total: $427,800

State Highway 14 (Mt. Vernon) at Truman ..... **TIP #NX0604**
Signalization

STP-Urban (City of Nixa): $192,800
Local (City of Nixa): $48,200
Project Total: $241,000

North Street ..... **TIP #NX0701**
Full improvements from Century Elementary to Cheyenne. Design and ROW only.

Right of Way - Local (City of Nixa): $100,000
Design Fee – Local (City of Nixa): $154,500
Project Total: $254,500

FY2008

North Street ..... **TIP #NX0802**
Full improvements from Century Elementary to Cheyenne.

Construction cost – Local (City of Nixa): $1,545,000
Inspection fee – Local (City of Nixa): $77,250
Project Total: $1,622,250

FINANCIAL SUMMARY

--Highways/ Roads--

FINANCIAL CONSTRAINTS

	FEDERAL						MoDOT	Local	Total
	STP Urban	STP	NHS	BRIDGE	ITS	TOTAL			
2007 Anticipated	$14,893,603	$9,266,894	$12,183,200	$1,613,600	$596,862	$38,554,159	$32,066,890	$20,323,485	**$90,944,534**
2007 Programmed	$4,050,400	$9,266,894	$12,183,200	$1,613,600	$596,862	$27,710,956	$32,066,890	$20,323,485	**$80,101,331**
Balance	$10,843,203	$0	$0	$0	$0	$10,843,203	$0	$0	**$10,843,203**
2008 Anticipated*	$2,853,954	$4,095,886	$4,750,000	$2,151,200	$739,656	$14,590,696	$7,439,685	$13,588,597	**$35,618,978**
2008 Programmed	$6,661,284	$4,095,886	$4,750,000	$2,151,200	$739,656	$18,398,026	$7,439,685	$13,588,597	**$39,426,308**
Balance	-$3,807,330	$0	$0	$0	$0	-$3,807,330	$0	$0	**-$3,807,330**
2009 Anticipated*	$2,853,954	$8,487,549	$0	$654,051	$0	$11,995,554	$47,332,200	$5,448,673	**$64,776,427**
2009 Programmed	$0	$8,487,549	$0	$654,051	$0	$9,141,600	$47,332,200	$5,448,673	**$61,922,473**
Balance	$2,853,954	$0	$0	$0	$0	$2,853,954	$0	$0	**$2,853,954**
2010 Anticipated*	$2,853,954	$2,199,200	$0	$0	$0	$5,053,154	$549,800	$9,439,769	**$15,042,723**
2010 Programmed	$0	$2,199,200	$0	$0	$0	$2,199,200	$549,800	$9,439,769	**$12,188,769**
Balance	$2,853,954	$0	$0	$0	$0	$2,853,954	$0	$0	**$2,853,954**

TOTAL BALANCE REMAINING 2007-2010 **$12,743,780**

FINANCIAL SUMMARY

--Highways/ Roads--

2007

PROJECT	FEDERAL						MoDOT	Local	Total
	STP Urban	STP	NHS	BRIDGE	ITS	TOTAL			
CC0701	$200,000					$200,000		$50,000	**$250,000**
CC0702		$231,200				$231,200	$57,800		**$289,000**
GR0507		$56,800				$56,800	$14,200		**$71,000**
GR0512						$0		$1,108,000	**$1,108,000**
GR0614						$0	$23,990,000		**$23,990,000**
GR0701				$924,000		$924,000		$231,000	**$1,155,000**
GR0702				$471,200		$471,200	$117,800		**$589,000**
GR0703			$669,600			$669,600	$167,400		**$837,000**
GR0704				$218,400		$218,400		$66,600	**$285,000**
NX0403	$224,000					$224,000	$376,000	$400,000	**$1,000,000**
NX0601						$0	$0	$1,109,750	**$1,109,750**
NX0602						$0		$427,800	**$427,800**
NX0604						$0		$241,500	**$241,500**
NX0701						$0		$254,500	**$254,500**
OK0701		$575,192				$575,192	$242,028	$43,920	**$861,140**
RP0701						$0		$20,000	**$20,000**
RP0702						$0		$45,600	**$45,600**
RP0703						$0		$4,560	**$4,560**
SP0406	$2,226,400		$2,000,000			$4,226,400	$266,000	$556,000	**$5,048,400**
SP0415	$1,400,000	$750,000				$2,150,000		$32,000	**$2,182,000**
SP0416						$0		$150,000	**$150,000**
SP0418						$0		$2,000,000	**$2,000,000**
SP0423						$0		$75,000	**$75,000**
SP0427						$0		$1,400,000	**$1,400,000**
SP0603						$0		$450,000	**$450,000**
SP0604						$0		$425,000	**$425,000**
SP0606						$0		$750,000	**$750,000**
SP0609						$0		$1,000,000	**$1,000,000**
SP0610						$0		$3,000,000	**$3,000,000**
SP0617						$0		$450,000	**$450,000**
SP0620		$857,000				$857,000	$96,500	$96,500	**$1,050,000**
SP0626						$0	$100,000		**$100,000**
SP0706						$0		$350,000	**$350,000**
SP0707						$0		$100,000	**$100,000**
SP0708						$0		$175,000	**$175,000**
SP0710						$0		$150,000	**$150,000**
SP0712		$1,471,102				$1,471,102	$243,961	$243,961	**$1,959,024**
SP0716		$200,000				$200,000		$50,000	**$250,000**
SP0717						$0		$700,000	**$700,000**
SP0718						$0		$310,000	**$310,000**
SP0719						$0		$940,000	**$940,000**
SP0720		$800,000				$800,000		$200,000	**$1,000,000**
SP0721						$0	$335,000		**$335,000**

FINANCIAL SUMMARY

--Highways/ Roads--

2007

PROJECT	FEDERAL						MoDOT	Local	Total
	STP Urban	STP	NHS	BRIDGE	ITS	TOTAL			
SP0803		$1,120,000				$1,120,000		$280,000	**$1,400,000**
MO0701		$205,600				$205,600	$514,000	$428,762	**$1,148,362**
MO0702		$2,176,000				$2,176,000	$544,000		**$2,720,000**
MO0703		$824,000				$824,000	$206,000		**$1,030,000**
TOTAL	**$4,050,400**	**$9,266,894**	**$12,183,200**	**$1,613,600**	**$596,862**	**$27,710,956**	**$32,066,890**	**$20,323,485**	**$80,307,331**

TECHNICAL COMMITTEE AGENDA 01/07; ITEM II.B

MoDOT 85 in 5 Resurfacing Plan TIP Amendment

Ozarks Transportation Organization
(Springfield, MO Area MPO)

AGENDA DESCRIPTION: As part of implementing the State's 85 in 5 (bringing 85% of Missouri's primary roadways up to good or better condition within five years) resurfacing plan MoDOT has requested that the TIP for FY2007 be amended to include two projects in the OTO service area.

The first resurfacing project is for the US60/State Route 413 corridor. The resurfacing project would include both east and west bound lanes along the corridor from Route 174 in Republic to Scenic Avenue. The second resurfacing project is for the Route 744 (Kearney Street) corridor. The resurfacing project would include both east and west bound lanes along the corridor from US 65 to Route OO.

As part of this request, MoDOT is also requesting the removal of the TIP project titled "Pavement Improvements on Major Roadways Throughout the Ozarks Transportation Organization Study area in FY2007 and the scoping project for Route 744 to determine pavement rehabilitation needs. Additional resurfacing projects as part of the 85 in 5 Plan will be added in out years during the next TIP adoption cycle.

STAFF RECOMMENDATION: Since the request is using MoDOT controlled Taking Care of the System funds and is being used on the roadways identified in an informally approved 85 in 5 Plan that was circulated to Technical Committee, staff is recommending approval.

TECHNICAL COMMITTEE ACTION REQUESTED: To either recommend the 85 in 5 Resurfacing Plan TIP amendments to the Board of Directors for approval or to form a special subcommittee to further study the issue. 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 TIP amendments can be conducted and comments received prior to the February Board of Directors meeting.

MPO WIDE OPERATIONS AND MAINTENANCE

FY2007

Intelligent Transportation Systems Management and Operations 2007 (MoDOT #8Q0875) TIP#MO0701

Ongoing Intelligent Transportation Systems Management and Operations, including operations of the Transportation Management Center for the Springfield region.

Federal Source Agency: FHWA
Federal Funding Category: STP
MoDOT Funding Category: Major Projects and Emerging Needs - Distributed
Work or Fund Category: Operations

FHWA (STP): $205,600
MoDOT: $514,000
Local (City of Springfield): $428,762
TOTAL FY2007: $1,148,362

~~**Pavement Improvements on Major Roadways Throughout the Ozarks Transportation Organization Area – SFY2007 (MoDOT #8P0877) ..... TIP #MO0702**~~

~~Federal Source Agency: FHWA~~
~~Federal Funding Category: STP~~
~~MoDOT Funding Category: Taking Care of the System~~
~~Work or Fund Category: Construction~~

~~FHWA (STP): $2,176,000~~
~~MoDOT: $544,000~~
~~**TOTAL FY2007: $2,720,000**~~

North-South Corridor Study Phase II ..... TIP#MO0703

Environmental Impact Statement for selected alternatives resulting from Phase I of the North South Corridor Study.

Federal Source Agency: FHWA
Federal Funding Category: STP
MoDOT Funding Category: Major Projects
Work or Fund Category: PE

FHWA: $824,000
MoDOT: $206,000
TOTAL FY 2008: $1,030,000

North-South Corridor Study ..... TIP # SP0716

Determine alignment, estimated cost, and priority for major roads at the northwest fringe of Springfield involving SR 13, US 160, and I-44, and at southwest fringe of Springfield for major north-south roads in the area from West Bypass to National Avenue and from James River Freeway into Christian County.

Federal Source Agency: FHWA
Federal Funding Category: STP
Work or Fund Category: PE

FHWA : $200,000
Local (Various Organizations): $50,000
TOTAL FY2007: $250,000

GREENE COUNTY

DESIGN AND SCOPING PROJECTS

The following projects appear on the Missouri Department of Transportation's Preliminary Engineering List:

MoDOT Job #	Route	Project Description
8S0724	RT H	Scoping to determine needs at interchange and intersections on Rte. H from north of FR102 (Valley Water Mill) to south of I-44
8S0835	RT M	Add turn lanes, signal at Republic High School
8S0795	New	Scoping for needs of new access road to serve new Midfield terminal at Springfield/Branson National Airport
8P0760	Var	Scoping for Advanced Transportation Management System at MoDOT's at various routes in Springfield area
8P0858	Var	Repair guardrail in the Ozarks Transportation Boundary
8P0683D	US 60	Scoping for corridor preservation for US 60/J/NN interchange with corresponding outer roads from w/o Highland Springs Rd. to e/o Farm Road 213
8P0683E	US 60	Scoping for corridor preservation for interchange and outer roads from west of FR213 to FR247
8P0683B	US 60	Rebuild interchange and replace cloverleaf with directional ramps at Route 60/65 interchange in southeast Springfield
8P0791	US 60	PE to determine intersection needs at James River Freeway and National in Springfield
8P0792	US 60	PE to determine intersection needs at James River Freeway and Route 160/13 (Campbell) in Springfield
8PO789	BU 65	PE to determine intersection needs at Glenstone and Primrose in Springfield
8P0850	US 65	Scoping to improve interchange capacity at Rte. Business 65 (Chestnut Expressway)
8P0841	MO 13	Scoping to improve interchange capacity at I-44
8S0851	MO 266	Scoping to improve capacity on Chestnut Expressway at I-44 interchange and between I-44 and Route AB
8S0790	MO 744	PE to determine intersection needs at Kearney and National in Springfield
~~8S0852~~	~~MO 744~~	~~Scoping to determine pavement rehabilitation needs from Route 65 to Route OO~~
8I0860	I-44	Repair guard cable in the Ozarks Transportation Organization boundary
8I0862	I-44	Repair guard cable in the Ozarks Transportation Organization boundary
8P0896	US 160	Scoping to improve intersection capacity at Hughes Road in Willard

GREENE COUNTY (Unincorporated Area)

US 60/413 (MoDOT #8P0877B) ..... **TIP #GR0705**

Mill and resurface segments of the eastbound and westbound lanes between Highway 174 in Republic and Scenic Avenue in Springfield.

Federal Source Agency: FHWA
Federal Funding Category: STP
MoDOT Funding Category: Taking Care of System
Work or Fund Category: PE/Construction

MoDOT: $559,800
FHWA: $2,239,200
TOTAL FY2007: $2,799,000

MO 744 (MoDOT #8S0852) ..... **TIP #GR0706**

Mill and resurface between Route 65 and Highway OO.

Federal Source Agency: FHWA
Federal Funding Category: STP
MoDOT Funding Category: Taking Care of System
Work or Fund Category: PE/Construction

MoDOT: $91,400
FHWA: $365,600
TOTAL FY2007: $457,000

Project Summary

8P0877B

Transportation Planning
2217 St. Mary's Blvd
P.O. Box 270
Jefferson City, MO 65102
Phone: (573) 526-8058 Fax: (573) 526-8052

Project Manager:	DON SAIKO	**Status:**	4-ACCEPTED	**Stage:**	SCOPING
(Award Month):	6	**(Award Year):**	2007	**SFY / (STIP SFY):**	2007

Route Name	Begin Log	End Log	Begin County	TMA	Travelway ID
MO 413 S	0.81	5.56	Greene	Y	256809
MO 413 N	43.814	48.014	Greene	Y	256808
US 60 W	263.4	267.78	Greene	Y	7783
US 60 E	75.64	81.67	Greene	Y	7782

System	Func. Class	NHS	AADT	Confl.
Primary	Freeway	Y	13,422	N
Primary	Principal Arterial	Y	20,191	N
Supplementary	Principal Arterial	Y	13,980	N

Purpose And Need	Provide smoother pavement on Rtes. 413, 60 between Route 174 and Scenic Ave.
Reason And Remarks	"85 in 5" Project.
Detailed Description	Mill and resurface segments of the eastbound and westbound lanes
Location	from Rte 174 in Republic to Scenic Ave. in Springfield.

Funding Package 1:		**Federal Oversight:**	No	**Primary Category:**	1- EXISTING SYS (DIST)
Funding Package 2:		**Fed. Funding Category:**		**Secondary Category:**	P- REHAB AND RECONST
Bonding SFY:		**Capitalization Code:**		**Work Type 1:**	O- OTHER
Adv. Const/Payback:	No	**Adv. RW Year:**	0	**Subwork Type:**	25- REHAB/REPLAC SOLUTION
Work Miles:	9.8	**Bridge Count:**	0	**Work Type 2:**	
Parcel Count:	0	**Track:**	No	**Work Type 3:**	
Award Month:	0	**Award Year:**	0	**Const. Award Cost:**	0
85 in 5:	Yes				

Cost Estimate Breakdown

Grading/Drain.	Base Surface	Bridge Est.	Misc.	Contract Est.
0	2,269	0	468	2,737

Constr. Conting.	Const. Est.
55	2,792

Utilities
0

Non Contract	Const. Cost
0	2,792

R/W Acquisition
0

R/W Incident.	Prelim. Engr.	Constr. Engr.	Ttl Incidental
0	0	192	192

Incent./Disincent.
0

Prog. Est. Ttl.
192

PE Spent
0

ACT RW Spent
0

Appr. STIP	% Diff.
Const. Cost: 0	10,000.0%
RW Acquisition: 0	0.0%

Prj. Ttl.
2,991

Lane Miles	Cost/Mile
38.48	72.55

Project Costs

	Prior	2005	2006	2007	2008	2009	2010	2011	2012	Future	Prg Ttl	Total
Preliminary Engineering	0	0	0	7	0	0	0	0	0	0	0	7
Construction	0	0	0	2792	0	0	0	0	0	0	0	2792

Project ID:	9720
Let By:	Central Office
Work District:	8
Length:	4.885

Planning Org	Federal District	Senate District	House District
OTO MPO	7	30	134

Project Summary

8S0852

Transportation Planning
2217 St. Mary's Blvd
P.O. Box 270
Jefferson City, MO 65102
Phone (573) 526-8058 Fax (573) 526-2052

Project Manager:	JAMES HARTMAN	**Status:**	4-ACCEPTED	**Stage:**	SCOPING
(Award Month):	6	**(Award Year):**	2007	**SFY / (STIP SFY):**	2007 / ()

Route Name	Begin Log	End Log	Begin County	TMA	Travelway ID
MO 744 E	8.568	11.262	Greene	Y	2152
MO 744 W	0.076	2.77	Greene	Y	2153

System	Func. Class	NHS	AADT	Confl.
Supplementary	Principal Arterial	Y	8,026	N

Purpose And Need	Provide smoother pavement on Route 744 between Route 65 and Route OO.
Reason And Remarks	"85 in 5" Project.
Detailed Description	Mill and resurface roadway
Location	between Route 65 and Route OO.

Funding Package 1:		**Federal Oversight:**	No	**Primary Category:**	1- EXISTING SYS (DIST)
Funding Package 2:		**Fed. Funding Category:**		**Secondary Category:**	
Bonding SFY:		**Capitalization Code:**	1-C-CAPITALIZED	**Work Type 1:**	
Adv. Const/Payback:	No	**Adv. RW Year:**	0	**Subwork Type:**	
Work Miles:	2.7	**Bridge Count:**	0	**Work Type 2:**	
Parcel Count:	0	**Track:**	No	**Work Type 3:**	
Award Month:	0	**Award Year:**	0	**Const. Award Cost:**	0
85 in 5:	Yes				

Cost Estimate Breakdown

Grading/Drain.	Base Surface	Bridge Est.	Misc.	Contract Est.
0	355	0	88	443

Constr. Conting.	Const. Est.
9	452

Utilities
0

Non Contract	Const. Cost
0	452

R/W Acquisition
0

R/W Incident.	Prelim. Engr.	Constr. Engr.	Ttl Incidental
0	0	31	31

Incent./Disincent.
0

Prog. Est. Ttl.
31

PE Spent
0

ACT RW Spent
0

Appr. STIP	% Diff.
Const. Cost: 0	10,000.0%
RW Acquisition: 0	0.0%

Prj. Ttl.
488

Lane Miles	Cost/Mile
5.39	83.89

Project Costs

	Prior	2005	2006	2007	2008	2009	2010	2011	2012	Future	Prg Ttl	Total
Preliminary Engineering	0	0	0	5	0	0	0	0	0	0	0	5
Construction	0	0	0	452	0	0	0	0	0	0	0	452

Project ID:	9298
Let By:	Central Office
Work District:	8
Length:	2.694
Est. Submittal Date:	Nov 22, 2006

Planning Org	Federal District	Senate District	House District
OTO MPO	7	30	139
		20	

FINANCIAL SUMMARY

--Highways/ Roads--

2007

PROJECT	FEDERAL						MoDOT	Local	Total
	STP Urban	STP	NHS	BRIDGE	ITS	TOTAL			
CC0701	$200,000					$200,000		$50,000	**$250,000**
CC0702		$231,200				$231,200	$57,800		**$289,000**
GR0507		$56,800				$56,800	$14,200		**$71,000**
GR0512						$0		$1,108,000	**$1,108,000**
GR0614						$0	$23,990,000		**$23,990,000**
GR0701				$924,000		$924,000		$231,000	**$1,155,000**
GR0702				$471,200		$471,200	$117,800		**$589,000**
GR0703			$669,600			$669,600	$167,400		**$837,000**
GR0704				$218,400		$218,400		$66,600	**$285,000**
GR0705		$2,239,200				$2,239,200	$559,800		**$2,799,000**
GR0706		$365,600				$365,600	$91,400		**$457,000**
NX0601						$0	$0	$1,109,750	**$1,109,750**
NX0602						$0		$427,800	**$427,800**
NX0604	$192,800					$192,800		$48,200	**$241,000**
NX0701						$0		$48,200	**$48,200**
OK0701		$575,192				$575,192	$242,028	$43,920	**$861,140**
RP0701						$0		$20,000	**$20,000**
RP0702						$0		$45,600	**$45,600**
RP0703						$0		$4,560	**$4,560**
SP0406	$2,226,400		$2,000,000			$4,226,400	$266,000	$556,000	**$5,048,400**
SP0415	$1,400,000	$750,000				$2,150,000		$32,000	**$2,182,000**
SP0416						$0		$150,000	**$150,000**
SP0418						$0		$2,000,000	**$2,000,000**
SP0423						$0		$75,000	**$75,000**
SP0427						$0		$1,400,000	**$1,400,000**
SP0603						$0		$450,000	**$450,000**
SP0604						$0		$425,000	**$425,000**
SP0606						$0		$750,000	**$750,000**
SP0609						$0		$1,000,000	**$1,000,000**
SP0610						$0		$3,000,000	**$3,000,000**
SP0617						$0		$450,000	**$450,000**
SP0620		$857,000				$857,000	$96,500	$96,500	**$1,050,000**
SP0626						$0	$100,000		**$100,000**
SP0706						$0		$350,000	**$350,000**
SP0707						$0		$100,000	**$100,000**
SP0708						$0		$175,000	**$175,000**
SP0710						$0		$150,000	**$150,000**
SP0712		$1,471,102				$1,471,102	$243,961	$243,961	**$1,959,024**
SP0716		$200,000				$200,000		$50,000	**$250,000**
SP0717						$0		$700,000	**$700,000**
SP0718						$0		$310,000	**$310,000**
SP0719						$0		$940,000	**$940,000**
SP0720		$800,000				$800,000		$200,000	**$1,000,000**
SP0721						$0	$335,000		**$335,000**

FINANCIAL SUMMARY

--Highways/ Roads--

2007

PROJECT	FEDERAL						MoDOT	Local	Total
	STP Urban	STP	NHS	BRIDGE	ITS	TOTAL			
SP0803		$1,120,000				$1,120,000		$280,000	**$1,400,000**
MO0701		$205,600				$205,600	$514,000	$428,762	**$1,148,362**
MO0703		$824,000				$824,000	$206,000		**$1,030,000**
TOTAL	**$4,019,200**	**$9,695,694**	**$12,183,200**	**$1,613,600**	**$596,862**	**$28,108,556**	**$32,004,090**	**$19,523,885**	**$79,636,531**

FINANCIAL SUMMARY

--Highways/ Roads--

FINANCIAL CONSTRAINTS

	FEDERAL						MoDOT	Local	Total
	STP Urban	STP	NHS	BRIDGE	ITS	TOTAL			
2007 Anticipated	$14,893,603	$9,695,694	$12,183,200	$1,613,600	$596,862	$38,982,959	$32,004,090	$19,523,885	**$90,510,934**
2007 Programmed	$4,019,200	$9,695,694	$12,183,200	$1,613,600	$596,862	$28,108,556	$32,004,090	$19,523,885	**$79,636,531**
Balance	$10,874,403	$0	$0	$0	$0	$10,874,403	$0	$0	**$10,874,403**
2008 Anticipated*	$2,853,954	$4,095,886	$4,750,000	$2,151,200	$739,656	$14,590,696	$7,439,685	$13,588,597	**$35,618,978**
2008 Programmed	$6,661,284	$4,095,886	$4,750,000	$2,151,200	$739,656	$18,398,026	$7,439,685	$13,588,597	**$39,426,308**
Balance	-$3,807,330	$0	$0	$0	$0	-$3,807,330	$0	$0	**-$3,807,330**
2009 Anticipated*	$2,853,954	$8,487,549	$0	$654,051	$0	$11,995,554	$47,332,200	$5,448,673	**$64,776,427**
2009 Programmed	$0	$8,487,549	$0	$654,051	$0	$9,141,600	$47,332,200	$5,448,673	**$61,922,473**
Balance	$2,853,954	$0	$0	$0	$0	$2,853,954	$0	$0	**$2,853,954**
2010 Anticipated*	$2,853,954	$2,199,200	$0	$0	$0	$5,053,154	$549,800	$9,439,769	**$15,042,723**
2010 Programmed	$0	$2,199,200	$0	$0	$0	$2,199,200	$549,800	$9,439,769	**$12,188,769**
Balance	$2,853,954	$0	$0	$0	$0	$2,853,954	$0	$0	**$2,853,954**

TOTAL BALANCE REMAINING 2007-2010 **$12,774,980**

TECHNICAL COMMITTEE AGENDA 01/07; ITEM II.C

Consideration of the Enhancement Funding Handbook

Ozarks Transportation Organization
(Springfield, MO Area MPO)

AGENDA DESCRIPTION: When the Springfield Metropolitan Statistical Area passed the 200,000 population threshold as a result of the 2000 census, federal law required that MoDOT allow the MPO to decide how certain federal funds would be spent within the MPO area. One funding category that came under primary MPO control was the Enhancement funds. In January of 2005 a special Subcommittee of the Technical Committee was formed to decide how best to review project submissions for enhancement funds and how to decide which projects should be funded. As a result of the work of the Subcommittee, the MPO Board of Directors adopted the "Enhancement Funding Handbook" in April of 2005.

In subsequent years the handbook has received minor modifications to better reflect regional priorities for the use of these funds. There are two modifications this year. First, the Board has requested that members of the Bicycle and Pedestrian Advisory Committee be included on the subcommittee for selection of projects. The subcommittee would include six members of the Technical Committee and five members of the OTO Bicycle and Pedestrian Advisory Committee. Please note that three of the five Bicycle and Pedestrian Committee members that have been added to the selection committee also serve on the Technical Committee. The other change is that the amount of funds available for programming in FY2007 has been decreased slightly from what had been anticipated when the last Handbook was adopted.

STAFF RECOMMENDATION: Staff has made the modifications to the handbook as requested by the Board of Directors. Based on fund estimates provided by MoDOT, the amount of available funds shown in the Handbook has also been revised downward. Staff recommends approval of the FY2007 Enhancement Funding Handbook.

TECHNICAL COMMITTEE ACTION REQUESTED: To either recommend the "Enhancement Funding Handbook" to the Board of Directors for approval or to return the Handbook to a special subcommittee to further study the issue. 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 "Enhancement Funding Handbook" can be conducted and comments received prior to the February Board of Directors meeting.

2007
Enhancement Funding Handbook

Ozarks Transportation Organization

PO BOX 8368 - 840 Boonville, Springfield MO, 65801

(417) 864-1453 fax (417) 864-1881

Table of Contents

Introduction

The Transportation Enhancements Program was a component of the Transportation Equity Act for the 21st Century (TEA-21) and continues with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). This law and its accompanying regulations guide project development practices, programming procedures, and funding mechanisms. The Transportation Enhancements Program is a set-aside of 10% of each state's Surface Transportation Program funding. The Missouri Transportation Enhancement Funds Program is administered by the Missouri Department of Transportation (MoDOT). In accordance with the Missouri Department of Transportation's, "A Guide to Transportation Enhancements" funds are distributed to Transportation Management Areas (TMAs) for use within the metropolitan planning area. The Ozarks Transportation Organization (OTO) is the designated TMA for parts of Greene and Christian Counties. Please see TMA Boundary Map for specific boundaries.

Using their own evaluation criteria, the Ozarks Transportation Organization selects projects for the metropolitan region in agreement with MoDOT. This handbook provides the evaluation criteria and the application to be used for enhancement funding. Additional information may be found in the Missouri Department of Transportation's Transportation Enhancement Funds Program booklet.

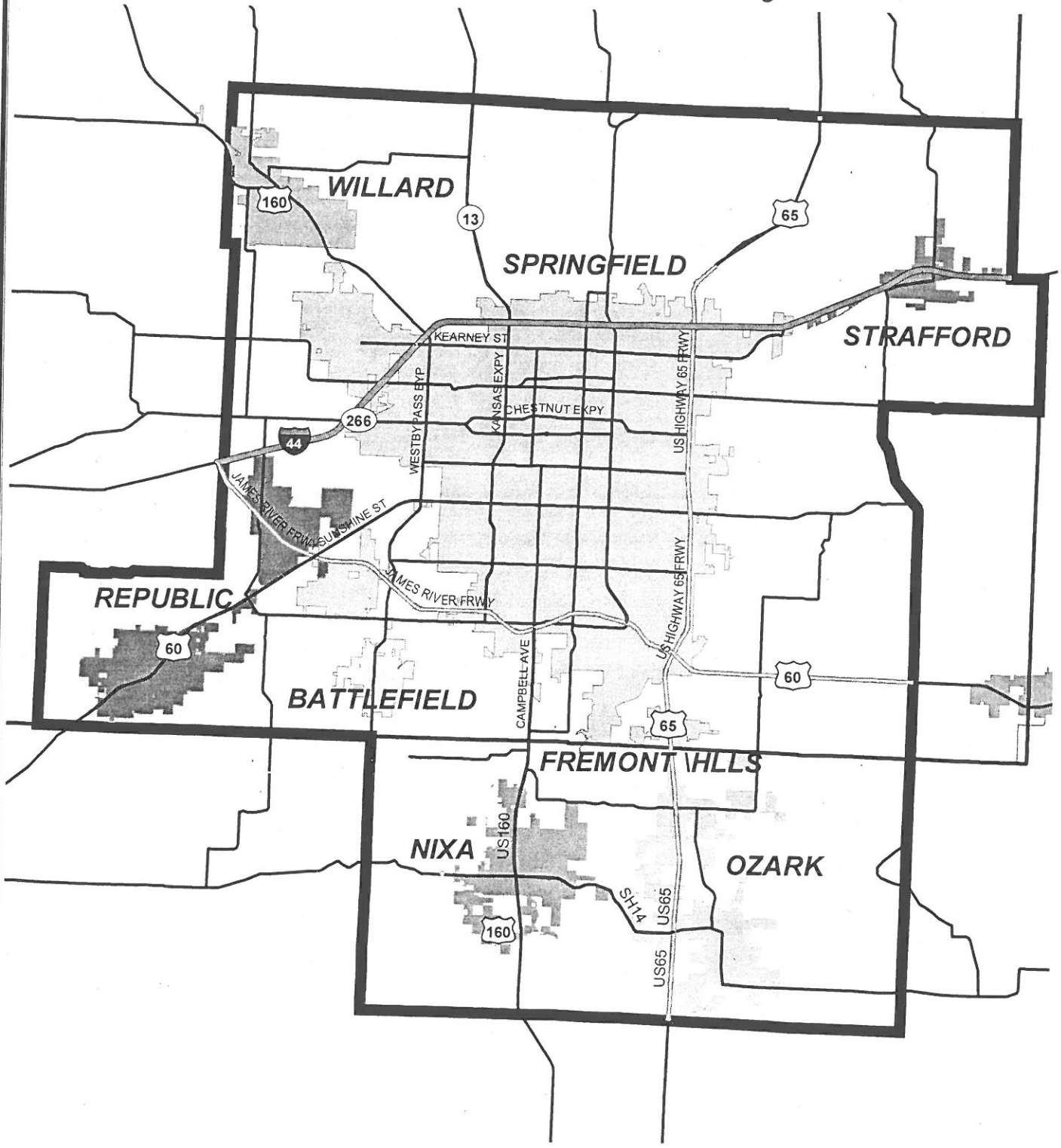
NOTE: This application handbook is for use in applying for funds allocated to the Ozarks Transportation Organization. If you would like to apply for Missouri Statewide funds please use the Missouri Transportation Enhancement Funds Program booklet and application. All statewide enhancement projects must appear in the OTO Transportation Improvement Program, prior to application. Statewide funds are limited to funding for Missouri Welcome Centers and other high priority statewide significant projects.

Additional Information Available Through:

Sara Edwards
Ozarks Transportation Organization
PO Box 8368
840 Boonville
Springfield, MO 65801
(417) 864-1453
sedwards@ci.springfield.mo.us

Dawne Gardner
MoDOT District 8
PO Box 686
3025 E. Kearney
Springfield, MO 65801
(417) 895-7662
Dawne.Gardner@modot.mo.gov

TMA Boundary



Schedule

January	OTO Technical Committee and Bicycle and Pedestrian Advisory Committee review the Enhancement Fund Guidelines and Application for needed revisions or to change funding priorities.
February	OTO Board reviews any suggested changes to the Enhancement Fund Guidelines and Application.
Late February	Applications Solicited
June 1st	Application Deadline
Mid June	Applications Reviewed and Rated by the Enhancement Subcommittee.
July	OTO Technical Committee reviews and recommends Transportation Improvement Program to the Board of Directors
August	OTO Board of Directors grant Transportation Improvement Program approval
October	Applicants notified of application status

Application Requirements

- Must meet at least one of the twelve enhancement categories. (See categories listed on page 17).
- Must have a direct relationship to the surface transportation system in terms of function, proximity, or impact.
- Involve activities that are over and above normal transportation practice and what is considered routine construction or maintenance.
- Must be open for public access in perpetuity.
- Local match of at least 20% of the total project cost.
- The sponsor must be a local, state, or federal government or public agency.
- The minimum federal funding request is $25,000. The maximum federal funding request is limited by the availability of funds. However, the intent of the Ozarks Transportation Organization is to do as many projects as possible.
- Photographs of the proposed project site are required.
- A project implementation schedule must be submitted with each application.
- An adopted local resolution of support is required from the sponsoring agency.
- ROW shall have already been acquired or able to be acquired within 12 months of project approval date.
- Project must be in accordance with the Ozarks Transportation Organization's Long Range Transportation Plan.

Important Information for Applicant

- This program **reimburses** the project sponsor for costs incurred. It does not provide money up front.
- A very large or expensive project may be split into phases. Each phase must be applied for and approved individually. Each phase is subject to the annual allocation available to the Ozarks Transportation Organization.
- The funds allocated to a project are fixed. The project sponsor must pay all costs incurred in excess of the funding allocated to the project. Therefore, it is important to develop a good estimate for the project application.
- The majority of projects will go through a competitive bid process for construction. In some cases, volunteer or public forces may do construction.
- All projects (including right of way acquisition) are governed by the Local Public Agency Manual and Land Acquisition Manual for Right of Way published by MoDOT. These may be found at http://www.modot.mo.gov/business/manuals/localpublicagency.htm#LocalPublicAgencyManual http://www.modot.mo.gov/business/manuals/documents/LPA%20LAND%20ACQUISITION.pdf
- Once approved by the Ozarks Transportation Organization Board of Directors and placed on the Transportation Improvement Program, the agency managing the project must fill out a Project Programming Form and submit it to MoDOT. The programming form may be found at http://www.modot.mo.gov/business/manuals/documents/Fig3-1-1.pdf
- No work may begin on the project until MoDOT and FHWA or FTA approves the project and a notice to proceed is issued.
- All projects must comply with MoDOT's Reasonable Progress Policy (See page 9). In the event a project is not progressing in accordance with the reasonable progress policy, the

funds may be reallocated to the next highest rated project that has not yet received funding.

- All projects are required to have a project maintenance plan for a minimum of 25 years.

Project Selection

All project applications which are received by the application deadline will be considered for funding. The Ozarks Transportation Organization Enhancement Subcommittee will review and select projects in accordance with the evaluation criteria and funding guidelines.

Evaluation Criteria

The evaluation criteria used in rating enhancement-funding applications was based on several factors. In late 2003, the Ozarks Transportation Organization staff conducted a series of eight public meetings where the public was asked in the form of a survey what types of alternative transportation projects they considered to be the most important in the next 25 years. Approximately, **40% of respondents identified sidewalks and crosswalks to be the most important.** Of the 40% who felt sidewalks were the most important: 7% thought that sidewalks on school routes were the most important and 13% thought that sidewalks to transit stops were most important. Other survey results revealed, **29% thought the expansion of the trail system was most important,** with 13% of those identifying intercity trails. An additional, **15% felt the removal of bicycle and pedestrian barriers was most important.** Also, **10% felt that the provision of bicycle lanes was most important.**

Due to the identified need of additional bicycle and pedestrian facilities within the Ozarks Transportation Organization study area, the Ozarks Transportation Organization decided that bicycle and pedestrian improvements should be the primary use of enhancement funds. It is for that reason the evaluation criteria are weighted to give priority to projects which accommodate bicycles and pedestrians.

Other factors used in the evaluation criteria stem from federal and state requirements. The criteria are also weighted to reward partnerships and cost sharing between multiple public agencies as well as matching above the minimum 20% requirement.

The specific criteria that are used to evaluate projects may be found in on the Enhancement Funding Score Sheet at the end of this document.

Funding Guidelines

In the event that projects receive exactly the same rating, the project will be awarded to the jurisdiction that has not had a project in the past 2 years.

Projects will not necessarily be funded in the order of their associated scores. Due to the availability of funds and the Ozarks Transportation Organization's desire to spend all of the allocated funds, projects may be selected which will best obligate the funds available.

Projects which do not meet the intent of the Ozarks Transportation Organization to fund bike and pedestrian improvements may not be funded.

The percentage of population served will be determined by plotting the project on a Geographic Information System (GIS) and obtaining total population within a 1/2 mile radius based on the 2000 census. A growth rate will be applied for each jurisdiction based on those rates as outlined in the OTO Long Range Transportation Plan. Those projects serving larger populations will receive more points. The projects will be divided into quartiles according to population served. Those, which fall into the top quartile, will receive 1 point. Those in the second quartile will receive 3/4 of a point. Those in the third will receive 1/2 of a point and those in the fourth will receive 1/4 of a point.

Selection Committee

The Enhancement Selection Committee shall be comprised of representatives from the following organizations/ agencies:

City of Nixa Technical Committee Representative or Designee

City of Ozark Technical Committee Representative or Designee

City of Republic Technical Committee Representative or Designee

City of Springfield Technical Committee Representative or Designee

City Utilities Bicycle and Pedestrian Advisory Committee Representative or Designee

Greene County Bicycle and Pedestrian Advisory Committee Representative or Designee

MoDOT Bicycle and Pedestrian Advisory Committee Representative or Designee

Missouri State University Technical Committee Representative or Designee

Ozarks Greenways Bicycle and Pedestrian Advisory Committee Representative or Designee

City of Willard Technical Committee Representative or Designee

Citizen Representative from the Bicycle and Pedestrian Advisory Committee

Funding Levels

Current funding

Remaining Balance FY 06	$ 18,114
Remaining Balance FY 07	$ 114,739
Available Funding FY 08	$ 1,390,000
TOTAL	**$ 1,522,853**

There is $18,114 in funds there were not allocated from FY 06 and $114,739 in funds that were not allocated in FY07. The allocation for FY 08 is $1,390,000. Therefore the total amount that will be made available for programming in FY 08 is $1,522,853.

In order for all funds to be spent by the expiration of the next transportation bill, MoDOT has decided to award two years worth of funding for the first several years of the bill. Therefore all funds will be awarded in fiscal years 2006, 2007 and 2008. The Ozarks Transportation Organization's fiscal year begins in October. Fiscal year 2008 will begin October 1, 2007 with applications due June 1, 2007. We do not expect any enhancement funding to be programmed after FY 08 unless funds need to be re-appropriated due to failure to meet the reasonable progress policy or we do not receive sufficient applications to exhaust the funding available.

All projected funding levels are subject to federal law and appropriations.

Reasonable Progress Requirements

This policy is to ensure the State of Missouri is getting the maximum benefit of its federal transportation funds. The policy has two objectives: (1) ensure that federal funds will be programmed for a project within one year of the funds being allocated by MoDOT; (2) ensure that once a project is programmed, it will reach construction.

The time of programming shall be when the entity's Programming Data Form is submitted and approved and assigned a federal project number. Failure to meet any of these requirements will result in funds being withdrawn and reprogrammed at the sole discretion of MoDOT.

The project will be considered programmed when it's approved for the Transportation Improvement Plan (TIP) and when the entity's Programming Data Form is submitted and approved and assigned a federal project number. The programming data form shall be submitted within 60 days of TIP approval. Failure to meet any of any of these requirements will result in funds being withdrawn and reprogrammed at the sole discretion of the OTO. The federal fiscal year ending balance will not be allowed to exceed a total of three years of allocation. Any funds over the three-year allocation may be reprogrammed in TMA area at the discretion of MoDOT and the OTO.

PROCEDURES

The time frames shown represent maximum expected times for implementation approvals and concurrences; schedules will vary depending on project type. Actual progress towards implementation will be measured against the schedule submitted by the entity.

Project Development Implementation Schedule:

	Phase	Maximum Time Frame	Funds Obligated
1.	Allocation of Funds	0 Months	No
2.	Project Programming*	12 Months	No
3.	Engineering Services Contract Approval	15 Months	Yes
4.	Preliminary Plans Submittal	24 Months	No
5.	Right-of-Way Plans Submittal	24 Months	Yes
6.	Plans, Specifications & Estimate (PS & E) Submittal	34 Months	No
7.	Plans, Specifications & Estimate (PS & E) Approval	36 Months	Yes
8.	Construction Contract Award	48 Months	Modified

* The completion of the Project Programming phase is defined by submitting the approved project's programming data form to MoDOT and the project receiving a federal project number from MoDOT.

1. Reasonable Progress

For all federal-aid funds, "reasonable progress" shall have been made if a project has been programmed within one year of funding allocation. Once programmed, a project must advance to the point of submitting preliminary plans within one year. Verifiable steps toward achieving reasonable progress shall include submittal of all required documents to the appropriate MoDOT district office, entering into an Engineering Services Contract (if retaining outside engineering services) and initiation of the development of preliminary plans.

The development of right-of-way plans, if required, should be concurrent with preliminary plan development. Once the preliminary design plans are approved, the right-of-way plans may be submitted for review and approval. Right-of-way negotiations should begin after MoDOT approves right-of-way plans. The award of the construction contract should occur no later than one year after the plans, specifications and estimate approval.

2. Policy Enforcement

If the allocated federal funds are not programmed for a specific project within one year, MoDOT will request information from the MPO or TMA or entity as to the planned use of the allocated funds. The MPO or TMA or entity will be required to provide a written explanation within 30 days of the notification as to the status of funds and a time line for their use. If adequate information is not received, MoDOT will pull the allocated funds from the entity and redistribute them at the department's discretion.

If a project falls six months behind schedule at any point in its development, without a written explanation provided by the entity and approved by MoDOT, the entity and/or the

OTO will be contacted by MoDOT requesting information as to the cause of the delays. A letter will notify the entity of the schedule lapse and the possible implications of further delays. The entity and/or OTO will be required to reply in writing within 30 days of the letter date as to the project status and provide a revised timeline for the project. The entity will be allowed to reschedule a project one time after MoDOT has programmed a project. Any shifts in subsequent phases of a project caused by that rescheduling (if identified at the time of the rescheduling) will not be considered a separate change.

If a project falls one year behind the Project Development/Implementation Schedule at any phase, MoDOT will notify the entity and/or OTO of the schedule lapse by letter. The notification will serve as a final notice, giving the entity an opportunity to respond to the situation before MoDOT takes action. The notification will include:

1. Project status,
2. Current phase of project implementation, and
3. Funds obligated and spent on the project.

The entity and/or OTO must make a valid response to MoDOT including reasoning for why the project has not complied with the project schedule. Information about the project will be submitted to MoDOT in writing within 30 days of the notification letter date.

Actions taken by MoDOT may include removal of the project, which, per federal requirements, would require the entity to repay any federal funds spent on the project. The MPO or TMA and MoDOT will make the ultimate decision regarding the disposition of each project.

It is not the responsibility of MoDOT to keep the entity informed as to the status of the project. The entity will keep MoDOT informed as to any delays and/or unforeseen conditions that may hinder the project's progress. Failure to provide the required documentation will cause the project to be withdrawn and the funds redistributed at the discretion of MoDOT or the OTO. Federal regulations require the entity to repay any federal funds spent on a cancelled project. The project sponsor would be required to repay these funds prior to the programming of any future projects.

In addition, project sponsors failing to fulfill the obligations as stated in the contract agreement or showing reasonable progress for any project will not be allowed to request future project funds for a minimum period of one year, and then only with the approval of MoDOT.

Application Instructions

Section A

It is important to accurately list the project sponsors contact information so that they may be contacted with questions relating to the project proposal.

Section B

Please list all of the project partners contributing to this project.

Please list all federal, state or nonprofit agencies contributing to this project.

Section C

Please list the information requested and answer all questions completely.

Section D

1. A general description of the project location is needed as well as a project map, which shows the projects location in reference to specific roads, water features and public buildings.
2. If a previous phase of the project was funded with federal enhancement funds, a STP number has been assigned. Basic right of way acquisition and utility relocation information is needed.

Section E

Please check all Enhancement Categories that apply. More information regarding Enhancement Categories may be found at the following websites:
http://www.fhwa.dot.gov/environment/te/guidance.htm
http://www.modot.state.mo.us/business/manuals/documents/Final%20Enhancement%20Guide.pdf

Section F Project Description

A project description should be attached to the project application with any supporting maps and photos. All projects are required to comply with the Americans with Disabilities Act of 1990.

Project Length, Width and Material Type. Provide Description.

Link to Surface Transportation. All projects funded through the Transportation Enhancements Program must have a link to the surface transportation system – highways and roads, railroads and bicycle or pedestrian facilities. A project must have a strong link

to surface transportation in order to adequately compete for this funding. The relationship that the project has to surface transportation may be a combination of function, proximity and/or impact.

• Function – The project will serve as a functional part of the transportation system, for example the construction of bicycle and pedestrian facilities.

• Proximity – The project is located within the immediate vicinity of the transportation system, and may be visible to the general public, such as the acquisition of scenic easements or landscaping. Proximity alone is not enough to establish the relationship to surface transportation. For example, a hotel located adjacent to a state highway would not automatically be eligible to receive enhancement funds just because it is located within the view of the highway.

• Impact – The project has a physical impact on the transportation system, such as retrofitting an existing highway by creating a wetland to filter runoff from the highway. In this example, the enhancement funds would be used to mitigate the pollution from the runoff.

Connection to other modes of transportation or Connectivity with other transportation facilities. Please describe how the project connects to other transportation modes or transportation facilities. For example a sidewalk might connect with a transit stop, a trail might connect with a commuter lot or a trail project might connect two existing trails.

Promotion of Urban Redevelopment. If applicable, please describe how the project will promote urban redevelopment. A project can promote redevelopment if it will foster further development or revitalization around it. The project must be in an urban area to receive points.

Addresses Potential or Existing Safety Problem. If applicable, please describe how this project will help an existing or potential safety problem. For example building a pedestrian overpass will help to correct the problems of car/pedestrian conflicts.

Addresses barriers to mobility. If applicable, please describe how this project will address a barrier to mobility. For example, the project might remove a barrier preventing people from getting across a river, major roadway, or railroad. Another type of barrier might be to connect underserved populations with an employment center via an alternative transportation project.

Enhances/ Improves the Natural Environment. Please describe how the project enhances or improves the natural environment. Points will be dependent upon the degree of improvements above federal requirements.

Section G
Describe any methods the project sponsor has used to involve the public and how the sponsor has solicited public input. This may include the project being listed in an approved plan, which included a public involvement component. Projects submitted without a public involvement component may be disqualified.

Section H
Please fill out as requested.

Section I Cost Estimates
In the cost estimate section of the application, several categories have been set up in which to enter information pertaining to the project. Most project costs will fall into these categories. Try to break down the project costs into the specific cost categories. For example, "$80,000 for landscaping" without stating how much is for materials, labor or equipment is not acceptable. If information submitted in a proposal is unclear, the application may not be scored correctly. Break down the costs for each category in the appropriate columns according to who will pay for that portion – either the federal share (to be reimbursed), the sponsor (as non-federal match) or a third party donation (as non-federal match). Attach one additional sheet that details the costs. Remember the transportation enhancement funding is a reimbursement program, so the applicant must have funding available for the nonfederal match and the federal share. Be sure to indicate the specific source(s) for the applicant's non-federal match. Non-federal match may come from private fund donations, city or county funds, force account or in-kind services. Describe any additional funds available for use if the project cost exceeds those estimated in the general cost-estimate. The person who prepared the cost-estimate must sign in the space provided at the bottom of the page.

Section J
All applications must be signed to be considered.

IMPORTANT SUBMITTAL INSTRUCTIONS

15 copies of each application with all attachments must be submitted to:

Ozarks Transportation Organization
PO Box 8368
840 Boonville
Springfield, MO 65801
(417) 864-1453

Application Deadline JUNE 1st

TRANSPORTATION ENHANCEMENT FUNDS
PROGRAM APPLICATION

Project Name: _____
Application Date: _____

A. PROJECT SPONSOR INFORMATION

First Sponsor Name: _____
Contact Person: _____
Title: _____
Address: _____
Phone: _____
Fax: _____
Email: _____

Second Sponsor Name: _____
Contact Person: _____
Title: _____
Address: _____
Phone: _____
Fax: _____
Email: _____

B. PROJECT PARTNERS

Please list all local agency partners whom are contributing money to this project.

_____
_____
_____

Please list all federal, state or nonprofit agencies whom are contributing to the funding of this project._____

_____

_____

C. BASIC PROJECT INFORMATION

MoDOT District # _____
County _____
Total Federal Funds Requested $_____

Will the project be open to the public for at least 25 years? Yes ☐ No ☐

Will a fee be charged for public access? If yes, how much? _____ Yes ☐ No ☐
If yes, explain how the fees charged will be used.

_____

_____

What governmental entity will be responsible for the short- and long-term project maintenance?

_____

_____

Identify all maintenance participation and the source of funds supporting long-term maintenance.

_____

_____

Has the right of way for the project been acquired in its entirety? Yes ☐ No ☐

Can the right of way be acquired within 12 months from the approval date of this application?

Yes ☐ No ☐

Attach supporting documentation to this application.

D. PROJECT LOCATION INFORMATION

1. Where is the project located? Attach a map no larger than 8 ½ inches by 11 inches.

_____

_____

2. Please check the appropriate box for each question.

- Is the project a component or extension of a previously awarded transportation enhancement project?
  If so, give the project number: STP-_____ Yes ☐ No ☐
- Does all right of way necessary for the project fall within public ownership or lease? Yes ☐ No ☐
- Does the project sponsor own the right of way? Yes ☐ No ☐
- If no, does the applicant have an option on the property executable within one year of application? Yes ☐ No ☐
- Have utilities been cleared or considered for the project? Yes ☐ No ☐
- If right of way acquisition is necessary, is the applicant willing to exercise condemnation authority to acquire? Yes ☐ No ☐

E. ENHANCEMENT CATEGORIES BY GROUP - 1 point for each activity met. A maximum of 3 points is available. Check all that apply. A project may overlap groups. A project may be awarded additional points if multiple categories apply, provided the applicant effectively demonstrates how the project will be successful and how the multiple categories will complement one another.

- ☐ Transportation facilities for pedestrians and bicycles
- ☐ Safety and educational activities for pedestrians and bicyclists
- ☐ Preservation of abandoned railway corridors, including conservation and use thereof for pedestrian and bicycle trails
- ☐ Scenic and/or historic highway programs, including the provision of tourist and welcome centers
- ☐ Acquisition of scenic easements and scenic or historic sites
- ☐ Landscaping and other scenic beautification
- ☐ Control and removal of outdoor advertising
- ☐ Mitigation of water pollution due to highway runoff, including projects that reduce vehicle-caused wildlife mortality, while maintaining habitat connectivity
- ☐ Historic preservation
- ☐ Rehabilitation and operation of historic transportation buildings, structures or facilities.
- ☐ Archaeological planning and research
- ☐ Establishment of transportation museums

F. PROJECT DESCRIPTION

Please provide a concise overview of the project. Include major components such as project width, length and material types. Describe the project's link to surface transportation, connection to other modes of transportation, connectivity with other transportation facilities, if and how the project promotes urban redevelopment, addresses an existing or potential safety problem, addresses barriers to mobility and enhances or improves the natural environment. Drawings no larger than 8 ½ inches by 11 inches may be attached to the back of this application. **Please see the Enhancement Funding Score Sheet for available points.**

G. PUBLIC OUTREACH AND INPUT

Please describe how the public has been involved and how the project sponsor has demonstrated public outreach and input.

H. DISTANCE FROM SCHOOL

If the project is within 1½ miles of a school, please fill out the following information.

Nearest School _____

Type of School (public, private, etc)_____

Project distance from school _____

I. GENERAL COST ESTIMATE

List the cost of the applicant's project components in the table provided below. Not all budget categories may apply to all projects. Transportation enhancement funds can reimburse up to 80 percent of the total project cost. Non-federal matching funds may come from the applicant's resources or from a third-party donation to the applicant for cash, materials or labor.

The minimum federal share request is $25,000. (Tip: Add the rows across and then add the columns down. Both sums should be the same and equal the total project cost in the bottom right-hand corner of the grid).

A project with a total cost of $100,000 and a federal-share request of $50,000 would score 3 points (50 percent federal share request). A project with a total cost of $100,000 and a federal share request of $75,000 would receive 2 point (75 percent federal share request). Please round to whole dollar amounts.

LIST OF ITEMS IN ORDER OF COMPLETION	FEDERAL SHARE REQUEST	NON-FEDERAL MATCH		Other Funding	TOTAL (ADD EACH ROW)
		Applicant Budget	Donation		
1. Right of Way Acquisition	$	$	$	$	$
2. Design/Preliminary Engineering (No more than 10% of items 3-5 below)	$	$	$	$	$
3. Utility Relocation	$	$	$	$	$
4. Materials	$	$	$	$	$
5. Labor/Construction	$	$	$	$	$
6. Construction Engineering (No more than 15% of items 3-5 above)	$	$	$	$	$
7. Construction Contingency (No more than 10% of items 3-5 above)	$	$	$	$	$
8. Value of any land already acquired	$	$	$	$	$
TOTALS	$	$	$	$	$

Note: Please attach an additional sheet detailing the costs described above. Describe all local groups/agencies identified to complete work as part of the applicant's plan. Please document all funding sources that will be utilized in the project.

This project is phased _____YES _____NO
This project represents Phase _____.
Other phases include _____
_____
_____

Completed for the phase represented on this application only.

TOTAL FEDERAL SHARE: $_____ ___%
TOTAL LOCAL SHARE: $_____ ___%
TOTAL PROJECT COST: $_____ 100%

Completed for previous or future phases.

Phase _____
TOTAL FEDERAL SHARE: $_____ ___%
TOTAL LOCAL SHARE: $_____ ___%
TOTAL PROJECT COST: $_____ 100%

Phase_____
TOTAL FEDERAL SHARE: $_____ ___%
TOTAL LOCAL SHARE: $_____ ___%
TOTAL PROJECT COST: $_____ 100%

Phase _____
TOTAL FEDERAL SHARE: $_____ ___%
TOTAL LOCAL SHARE: $_____ ___%
TOTAL PROJECT COST: $_____ 100%

Phase _____
TOTAL FEDERAL SHARE: $_____ ___%
TOTAL LOCAL SHARE: $_____ ___%
TOTAL PROJECT COST: $_____ 100%

SECTION I

We, the Undersigned:

- *Hereby submit this project application to the Ozarks Transportation Organization (OTO) for approval of the project concept.*
- *Understand that the transportation enhancement funds program is not a grant program, and that enhancement funds are administered by MoDOT.*
- *Understand that enhancement funds payments will be made by MoDOT as work progresses, and that no payments will be made until all local requirements have been met and proper documentation has been submitted to MoDOT.*
- *Hereby assure OTO and MoDOT that the required match will be available for all enhancement funded phases of this project at a time and through a process mutually agreed to by both MoDOT and the local government(s).*
- *Understand that the project costs in this proposal are preliminary estimates only, and that actual final costs may be more or less than those reflected herein. We understand that any variance in enhancement- funded projects will also affect the amount of the required local match and we are prepared to accommodate any additional local matching requirements.*
- *Hereby assure MoDOT that the local government(s) will maintain (or cause to be maintained) this project in a way and for a period of time mutually agreed to by all parties. We further understand that there will be a formal written agreement between the Missouri Highway and Transportation Commission (MHTC) and the local government(s) prior to project implementation.*
- *By signing this application, your organization (local government, state agency or federal agency or department) agrees to assume all responsibility for all environmental and cultural resource impacts that this project may have and understands that this program is subject to availability and eligibility of federal funding.*

Name	/ Title	Date

Enhancement Funding Score Sheet

Evaluation Criteria	Maximum Points Available	Points Received
Project has more than one local agency partner contributing to the match dollars (1 point for each local partner) **Section B**	3	
Diversity of Funding (project has more than one federal, state, or nonprofit agency contributing to funding) (1 point for each agency) **Section B**	3	
Right of Way for the project has already been acquired in its entirety. **Section C**	1	
Project meets one or more of the 12 transportation enhancement activities (1 point for each activity met) **Section E**	3	
Projects degree of linkage to transportation (directly linked 3 points, indirectly linked 1 point) **Section F**	3	
Projects is multimodal, connects other modes of transportation or provides connectivity with other transportation facilities (1-3 point) **Section F**	3	
Project promotes urban redevelopment (1 point) **Section F**	1	
Does the Project address an Existing or Potential Safety Problem (1-3 point) **Section F**	3	
Is the project helping to remove a barrier to mobility? (1 point) **Section F**	1	
Is the project enhancing or improving the natural environment? (1-3 point) **Section F**	3	
Project sponsor has demonstrated public outreach and input (1 point) **Section G**	1	
Does the project help promote safe routes to school? (Must be within 11/2 mile of a public or private educational institution or an educational program) (2 points if project is within 1/2 mile or is on a designated school walking route, 1 point if within 11/2 miles) **Section H**	2	
Project has more than the required 20% match. (21-29%= 1pt. 30%-49%=2pt, 50-74%= 3points, 75-95%= 4points) **Section I**	4	
Number of Users Served. **(See Guidelines Page 7)**	1	
Project provides a Transportation facility or safety or educational activity for pedestrians or bicycles (2 points) **Section E**	2	
TOTAL	34	

INFORMATION ITEMS

Attached for Technical Committee member review are various information items regarding transportation in our region, state, and nation. These information items are typically drawn from newspapers, special reports, and mailings received by MPO staff. They are provided for the sole purpose of keeping MPO Technical Committee members apprised of transportation issues currently under review by MPO staff and/or other transportation organizations. The focus is on information that may have a direct impact on the Ozarks Transportation Organization study area.

Editorial

This week's survey asked for respondents to identify urban transportation problems and how these problems can be solved. A wide variety of problems were stated by respondents and an equally wide variety of solutions for these problems were proposed.

The single problem most frequently mentioned by respondents is funding. There were some themes that emerged from the replies. A number of respondents stated the need for a reliable source of funds. Typical statements were: "establish consistent funding for transit service," and "insufficient sustainable funding." Another item mentioned by respondents is the need and desire to provide legislative authority for local jurisdictions to raise their own funds for transportation. Finally, some respondents also indicated the importance of specifying the consequences of inaction on funding and the positives of urban transportation investments. A typical statement: "the profession needs to be meticulous in specifying the consequences of inaction on funding."

Respondents noted problems most transportation professionals would agree with and know about. However, some respondents also mentioned some less prominent problems such as "globalization and its effect on freight shipments."

Respondents came up with some unique and creative solutions to specified problems. Could it be that if it was left to transportation professionals to solve urban transportation problems they would solve them efficiently and that the real problem lies with the elected officials who disrupt the efficient planning, operation and funding of transportation projects?

Daniel B. Rathbone, Ph.D., P.E.
Editor/Publisher

The publisher and staff of
The Urban Transportation Monitor
wish all our readers the joys and blessings of the holiday season.
The next issue will appear on
Jan. 19th 2007.
Happy New Year!

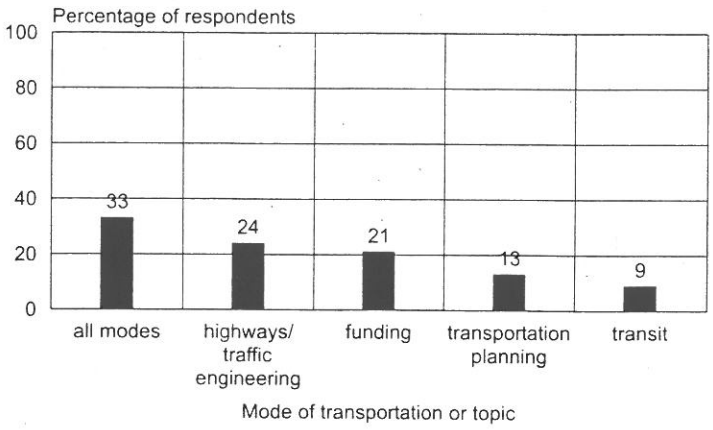
This Week's Survey Results

Urban Transportation Problems and Potential Solutions

Last month, *The Urban Transportation Monitor* sent survey questionnaires to transportation professionals to obtain information and opinions on urban transportation problems and potential solutions.

Surveys were sent to 500 transportation professionals (at cities, counties, transit agencies, MPO's, state DOTs, consulting firms and at universities and research organizations). Altogether 54 transportation professionals replied, specifying 87 transportation problems and potential solutions, for a response rate of 11%. The results of the survey are published here.

Types of urban transportation problems addressed by respondents.



Urban Transportation Problems and Potential Solutions

Problem	Mode of Transportation/ Topic	Potential Solution
Congestion - needs to be addressed at planning level, but is often too late.	all	Transit is a viable alternative. Carpooling, HOV, etc. have very slight effect, to my knowledge, but can only help.
It is a problem that driving alone is much more convenient than all other modes of transportation (in most cities, even those with >200K population). Drivers will only willingly and happily shift to other modes if transit, car sharing, carpooling, bike and walk modes are as convenient or alluring as driving alone. We see examples of how this is possible in other countries.	all	Policy: educate people about the real cost of driving (read STTP Driven To Spend) and how this impacts affordable housing and land use. Traffic engineering: create more equitable traffic movement assignments for alternate modes (TSP for transit, bike loops for bicyclists, and count-downs for pedestrians). Where possible, reduce block lengths and reduce street widths to make it safer for pedestrians to cross streets. Planning: design for easy pedestrian access to buildings (i.e. building entrances should front sidewalks near the street and near bus stops); install bike lanes and bike racks; implement more paid parking (require that there be user fees); provide priority parking for carpoolers Transit: design attractive bus stops/stations - install bus only lanes and other features of Bus Rapid Transit as possible and integrate this with commercial and residential development. Land Use: educate policy makers and other decision makers about Transit-Oriented Development (TOD) benefits to relieving road congestion, reducing emissions, and promoting healthier lifestyles (i.e. more walking).
Roadway congestion.	all	1. Land use coordination with highway planning. 2. Transit improvements. 3. Higher residential and employment densities.
Intercity freight volumes are adding significantly to local congestion, and local congestion is impeding intercity freight with economic consequences outside the local area.	all	More robust consideration of freight issues in metropolitan transportation planning; collection of data on local freight activity to integrate with national freight flow data for a more complete understanding of freight to support planning; involvement of shippers and carriers in developing improvements to infrastructure and traffic operations to move the goods.
Balancing roadway improvements with context sensitive design -- taking into consideration public opposition to capacity improvements.	all	Public involvement from planning to design level take politics out of the decision. ITS solutions.
Shortage of qualified and willing employees for public sector transportation jobs.	all	1) Greater emphasis on engineering majors with transportation specialization. 2) More competitive pay and benefits packages.
Insufficient technology involvement to solve congestion in the movement of goods and people.	all	Brainstorming new technologies and ideas may identify some new approaches beyond more concrete, buses, and trains. Linear magnetic induction to move and control road and rail vehicles may offer some long term new choices.
Safety - vehicular, pedestrian, and bicycle.	all	Bicycle and ped safety need to be considered at the very beginning of the planning stages, and as with congestion, we are often past that point. Thus they need to be given extra consideration. Codes and enforcement are about all that is possible sometimes.
Increased workload and job responsibilities while budgets require maintaining or cutting staff.	all	Hire better qualified staff (usually comes with a higher salary). Educate existing staff on time management techniques and make sure the techniques are implemented. Increase staff (and budgets). Utilize technological advances that improve workflow and communications.
The lack a transportation message that includes all modes and defines the economic and social benefits of transportation to the multiple constituencies of the industry.	all	National dialogue with modal leaders that brings modal messages together to define a consistent message. This isn't a PR firm or marketing message - it is an industry consensus.
Overall increase in traffic demand, by all modes.	all	Increase fuel tax, congestion pricing, land use planning, increase transit usage.
Pedestrian and bicycle safety.	all	Better traffic enforcement, slower traffic speeds, better driver behavior, better pedestrian and bicyclist behavior.
It is a problem that our streets are often not safe or they are perceived as unsafe for pedestrians, especially children, to be walking alone.	all	Police: provide safety officers that connect with the community and make people feel safe enough to walk or have their children walk to/from school Traffic engineering: Where possible, reduce block lengths and reduce street widths to make it safer for pedestrians to cross streets. Install traffic calming, tighter turns, bike lanes, and side walks. Make streets more beautiful and inviting. Provide attractive and effective street lights. Planning: design for easy pedestrian access to buildings (i.e. building entrances should front sidewalks near the street and near bus stops); install bike lanes and bike racks; Transit: design attractive bus stops/stations with shelters that have good lighting and have security cameras. Funding: create programs that will encourage people to walk.
Inability/lack of political will to charge true costs of transportation to road users.	all	A tolling policy that states that all projects that can be shown to be cost recoverable should be tolled regardless of other conditions such as free alternatives, etc...
Highway related environmental impacts.	all	Land use coordination with highway planning. 2. Transit improvements. 3. Higher residential and employment densities.

Urban Transportation Problems and Potential Solutions

Problem	Mode of Transportation/ Topic	Potential Solution
Decline in systems thinking and objective planning and evaluation capabilities. The profession has moved to an advocacy orientation in many modes and projects. The zeal to please and win funding has resulted in a temptation to placate or advocate rather than plan and evaluate.	all	True integrated funding of modes, reduced earmarking, stronger programmatic focus.
Increased liability in civil engineering field discourages younger generation from pursuing a career in civil engineering.	all	Tort law reform. Increased salaries to compensate for the career risk.
How to attract and retain young engineers? How to facilitate research activities in a public agency environment?	all	Improve efficiency of work, and be involved in national research activities.
Globalization and effect on freight shipments.	all	Congestion pricing, incorporation of freight issues and logistics planning into the overall transportation planning process.
Forecasting the future.	all	There is a greater need to recognize the inherent uncertainty in the future and the fact that investment strategies might best be altered to acknowledge those uncertainties. We should be planning for the decline or elimination of internal combustion engines and the energy and air quality consequences. We should recognize the cultural changes in development patterns and activity levels and their impact on travel.
Identifying and preparing senior level transit and transportation professionals to assume top roles in transportation organizations.	all	Early identification of emerging industry leaders. Cross-training of leaders in all modes. Catalogue existing available training and development opportunities. Create a dialogue among all mode leaders to set an agenda for the future leadership of the industry.
Transportation vision.	all	Federal, State, Local and Business partners need to jointly decide national, state, and local interrelated vision.
Land Use is low-density and auto-oriented. This is a disincentive for anyone with the means to drive to not drive. It relegates public transit use to the underclass, leading to more congestion and more class separation.	all	Statewide mandates for densification, including monies for local jurisdictions to provide incentives to developers for infill and high density housing and commercial projects. Also, laws that outlaw "minimum off-street parking requirements" and require cities to participate in regional land use collaboration.
Professional shortage.	all	Employees (mostly government) need to be creative to attract, train and retain transportation professionals.
Training and supplying the next generation of transportation professionals.	all	1. Outreach at the high school level 2. Provision of scholarships by professional transportation organizations 3. Formal internships programs with transportation organizations.
Traffic congestion.	all	Provide options for people to shift modes.
Traffic congestion.	all	Dedicated transit lanes Priority given to transit vehicles.
Poor city roads.	all	Buy heavier duty buses, build own roads.
Although many regions and/or cities have taken steps to provide a dedicated funding source for transit, year to year funding is still spotty at best. This causes staffing fluctuations that drive many experienced professionals away from the industry as they seek more stable work, as I am seriously considering doing after 20 years as a transit professional. Also, planning for necessary projects becomes difficult as there may be no funds for projects as they come down the pipeline.	funding	As was done for the highways in the 1950's, establish a national policy for transit. The Interstate Highway Act provided the much needed push and stability in the planning for the nations highways. A national transportation policy needs to be similarly established to make transit, an equal arm of our nations transportation infrastructure and network, not just treated as an ugly stepchild to highways and airports.
Obtaining funding to operate the transit system - even maintaining the current level of service requires an increase in funding each year, not to mention the funding required to increase current services.	funding	Additional state funding and additional local funding.
Lack of funding to address urban transportation needs in a flexible, multi-modal fashion that responds to urban land use and context.	funding	From a Federal perspective -- ensure that states are directing funding categories to MPOs for prioritization and programming as Congress intended in ISTEA, TEA-21, and SAFETEA-LU. From a State perspective -- funding to the most important statewide facilities (Interstates, intercity rail systems, etc) while downloading funding and project development for regional and subregional facilities to the appropriate urban (or rural) regional or local agencies. Provide broad legislative authority for local governments to raise funds through local option mechanisms.
Transportation funding and erosion of fuel tax.	funding	Public-private partnerships, increase fuel tax, congestion pricing.
Under funding of urban transportation capacity development and operations improvements.	funding	Demonstrate the benefits of urban transportation investments. Build a strong constituency of business and citizen representatives. Propose innovative public/private partnerships. Campaign untiringly for removal of state-level legal roadblocks (e.g., Virginia legislature refusal to allow local jurisdictions the right to raise their own funds).

Urban Transportation Problems and Potential Solutions

Problem	Mode of Transportation/ Topic	Potential Solution
Resources, adequacy, timing, use constraints, etc.	funding	The profession needs to be meticulous in their specification of the consequences of inaction on funding. The public needs to understand the tradeoffs and the time lag between decisions to increase revenues and when that will impact system performance.
Insufficient sustainable funding.	funding	Think outside of the box. PPPs are not the silver bullet. Public and policy makers need to be informed of issues, consequences and solutions.
Funding for transit is not considered important in this community.	funding	Member jurisdictions should consider other funding streams including sales tax, development impact fees and additional local funding.
Establishing consistent funding for transit service.	funding	Establish laws or "bankable" policies that provide ongoing commitment that State & Federal dollars can be counted on to establish and maintain transit service to meet environmental and community sustainability goals.
Lack of transportation funding to expand transportation facilities.	funding	Gas tax increase and impact fees.
Drastically different Federal rules guiding investments in roadways and public transit.	funding	Equalize standards for Federal investment in both roads and public transit in urban areas. Allow the MPO decision-making process to identify the appropriate mix of Federal highway and transit investment that accomplishes the goals of the urban area.
City does not include improvement and maintenance of City public streets in its annual budget.	funding	Find a source of funding.
Funding for transportation-related costs is definitely lacking.	funding	Increase Chapter 90 funding and be sure to allow for appropriations put directly into traffic improvements, such as upgrading signal equipment.
Funding large road improvements.	funding	More emphasis on developer paying through impact fees.
Insufficient operating funds for public transit.	funding	Increased operating subsidies, reduced operating costs.
Public Transit is funded fairly adequately for CAPITAL, but Operations funding is woefully inadequate! So we get the new bus running on 30-60 minute headways and only occupied by the transit dependent. Choice riders need frequencies that allow them to use transit.. we need a doubling of operations funding to allow attractive route frequencies to attract more choice riders.	funding	Increase federal transit formula funding and allow operators of any sized metropolitan area to access federal funding for operations (currently only smaller areas can spend up to 50% of their federal transit money on operations). Raise the gas tax! Index it to inflation so that it keeps up and dedicate most of these increased funds to transit operations! Quit bowing to the auto dependency.
Federal and state funding processes are cumbersome and laden with restrictions that often hamper an agency's ability to provide effective public transportation. And of course there is not enough funding to meet the needs.	funding	Continued effort to allocate a fair share of DOT money to transit, and a lessening of the onerous restrictions on funding.
Educating the public on basic rules of right-of-way and other items that should be common motorist knowledge.	highways/ traffic engineering	More strict driver's examinations. Driver's education courses are more detailed-oriented. Frequent and effective public outreach campaigns.
Establish multi-year pavement marking and sign maintenance program that will be well coordinated with street maintenance and capital improvement plans.	highways/ traffic engineering	First establish clear and approved standards and materials specifications. Then inventory pavement marking and signs. Then establish maintenance budget and time frame (program).
Speeding on county roads.	highways/ traffic engineering	Traffic calming programs.
Lack of funding to keep transportation system optimized (i.e. traffic signals).	highways/ traffic engineering	Better education of politicians and funding organizations on societal and economic impacts of a poorly optimized transportation system (i.e. traffic signals).
Inventory of pavement marking and signs and what software will be good in maintaining pavement marking and sign maintenance history.	highways/ traffic engineering	Use GPS/GIS software to collect and log inventory.
Everyone in the City wants crosswalks in front of their driveways. The MUTCD has some guidelines but no warrants to check against such as pedestrian volumes like that of traffic signals.	highways/ traffic engineering	I would think that the warrant should include some criteria (including numbers) like that of warrant #4 for traffic signals (the pedestrian warrant).
Neighborhood Traffic Issues (Speeding).	highways/ traffic engineering	Enforcement Education Physical Solutions (i.e. mini roundabouts, speed humps) traffic controls
Lack of on-street space for bicycle lanes.	highways/ traffic engineering	Remove on-street parking - widen roads - remove traffic lanes.
Marked vs Unmarked crosswalks.	highways/ traffic engineering	Warrants for installation.
Accident Reduction (Safety vs Capacity).	highways/ traffic engineering	Enforcement; education; red light running systems; innovative vehicle detection/phasing combinations; restricting turning movements; grade separation; access control; in-vehicle safety systems; ITS solutions.

Urban Transportation Problems and Potential Solutions

Problem	Mode of Transportation/ Topic	Potential Solution
Reduce emissions in sensitive areas to improve quality of life and reduce respiratory health problems.	highways/ traffic engineering	Look at choices of operating hours, vehicles and fuel used, and engine exhaust outputs.
Overcapacity problem at two specific locations.	highways/ traffic engineering	Construct an overpass and interchange at the future crossing of an Interstate Highway. This would help to divert traffic to a separate route, and reduce the traffic volume at one interchange during peak hours.
Delivery vehicle access in high-density developments. With the increasing use of express delivery services by businesses and households, small trucks need access for pickup and delivery. Curbside parking contributes to congestion when loading docks or other forms access are not available.	highways/ traffic engineering	Off-street access requirements as part of plans and building permits. Accommodation of delivery vehicles in parking structures.
Fuel conservation - Every time a vehicle uses friction brakes energy is thrown away as heat and brake wear.	highways/ traffic engineering	Everything from road design (energy efficiency figure of merits) to on-board energy storage offers potential help to consume less fuel.
Construct a missing link on a highway that would be connected to an existing four lane divided state primary arterial.	highways/ traffic engineering	Obtain funding for design and construction.
Failing infrastructure, e.g., bridges.	highways/ traffic engineering	Fixing existing infrastructure doesn't get the funding it needs. Marketing is necessary to direct available dollars to remediate this situation.
Truck parking near urban gateways. Roadside rest areas near cities are often overflowing with trucks waiting for rush hour to end before making deliveries.	highways/ traffic engineering	More parking.
High volume of truck traffic on downtown streets due to location of commercial port.	highways/ traffic engineering	Relocate port - transfer freight from port to inland terminal by rail.
Lack of enforcement.	highways/ traffic engineering	Depend on IT (e.g. cameras) or hire more police officers.
43,000 highway deaths a year is a public health epidemic in this country which is not being adequately addressed. there is a need for a safety culture change .	highways/ traffic engineering	Require all occupants in vehicles to be in seat belts , motorcycle helmet laws , camera enforcement .
Lack of road capacity for vehicle demand resulting in long delays.	transportation planning	Add more road capacity - shift more demand to transit and other modes.
There is still a significant disconnect between highway and transit planning and development. At worst, the relationship is adversarial and at best, it is respectfully separate.	transportation planning	Clear policy development at the state and federal levels that mandate cooperation.
Lack of traffic capacity on main line roadways in the developed community.	transportation planning	Purchase additional right of way for wider roadways. Develop one-way couplets to increase traffic capacity. Develop transit alternatives.
The overall land use/growth management issue.	transportation planning	It is a national policy issue. Locally controlled land-use has to be balanced by state or nation-wide considerations.
The failure of establishing a national transportation policy has resulted in myopic thinking among most MPOs and caused paradigms to form around outdated and inefficient/costly transit alternatives. Current FTA policy tilts planning decisions often in the wrong direction, due to its policy of only funding initial cost, not O&M. This encourages state/local governments to go for the most expensive alternatives like rail instead of lower cost BRT, since why would you choose a Chevy, when Uncle Sam can just as easily buy you a BMW.	transportation planning	Having attended a Transit Conference in Bogota, Colombia (South America), I saw first hand the state of the art in true Bus Rapid Transit. It took a lot to impress me, since I've been in the rail industry for 20 years. The system, "El Transmilenio", is a highly advanced derivative of the Brazilian system installed with great success and international acclaim in Curitiba (Brazil). The Bogota system after only three years, is carrying 1,200,000 passengers per day!! The three concessions have recouped their ten year investment in just three years. Very few people in the States have even heard of this system or the one in Curitiba, for that matter, although many cities and transit agencies elsewhere across the globe have taken notice.
State DOTs tend to have a poor understanding of transportation planning and roadway design appropriate for the urban context.	transportation planning	Recognize that state DOTs tend to do a good job of designing roads that connect cities and towns to each other but a poor job of designing appropriate roads within those cities and towns. The transportation planning and design profession should embrace and use the recently released joint ITE/CNU guidance on using context sensitive solutions for designing urban thoroughfares. Also state DOTs should establish transportation planning and design offices in each of their state's urban areas. These offices should be staffed with professionals that are experts in the urban context and who live and work within those metropolitan areas.
Unwieldy and unresponsive urban transportation planning process.	transportation planning	Research to investigate the strengths and weaknesses of scenario planning and sketch planning. Prepare educational materials. Documentation of the actual technical content of scenario and sketch planning (most available materials fall short of this).

Urban Transportation Problems and Potential Solutions

Problem	Mode of Transportation/ Topic	Potential Solution
Multi-modal transportation network issue, which is related to land use and growth management.	transportation planning	All the congestion and traffic problems are symptoms, and could be solved by proactive planning and growth management.
Concerns about parking demand related to new development cause neighborhood residents to oppose new housing.	transportation planning	Require developers to provide more off-street parking, require that residents not own vehicles, expand car share programs so residents won't need parking, improve public transit, limit residential parking demand by charging market rates for on-street parking in residential areas, revise Residential Permit Parking programs so new developments cannot participate, limit the number of residential permit parking permits to one or two per unit.
Including freight transportation in urban transportation plans.	transportation planning	Develop a freight planning constituency. Develop easy to use tools and guidelines for incorporating freight in UTP.
There is a lack of long term planning for urban transit solutions. This community already has the population - 500,000 - of some major metropolitan areas. There is no thought of right-of-way dedication, or other planning for dedicated transitways, light rail or other more heavy duty transit operations.	transportation planning	Engage officials through the use of GIS and other planning tools to "paint the picture" of what this community is likely to look like in 20 years.
Serving mobility device riders when non-dial-a-ride buses have limited capacity. Tough to accommodate variety of device designs and sizes.	transit	Provide optional seating areas where these devices can be located. Keep the design of devices more uniform to avoid boarding riders that don't fit the bus interior design. Change state/federal guidelines for who qualifies for dial-a-rider service to enable more mobility device users to participate in this program. Be active in standardization of mobility device design. Provide more bus interior design, larger space and options. Minimize lift deployment delays due to slow speed and breakdowns. Larger people and their volume of carry-ons aren't fitting into the current spaces. Design wider doors.
It is a problem that Amtrak and other rail carriers on the US West Coast is in such a sad state of service resulting in many hours of delay. Passenger travel should be a priority especially as more and more people rely on it as they get older.	transit	Passenger transport on rail systems often compete with freight travel. I don't know what a solution to this would be (need an analysis of transportation of freight and future needs). It seems that other countries have figured out solutions as rail systems work overseas marvelously (like Canada). Also, people seem to like rail systems (even though the subsidy per passenger is much higher than it is for bus systems and this has potential equity issues for low-income folks who tend to use buses more often then rail). We should be looking at improving our rail system as well as improving the bus system (i.e. implementing more Bus Rapid Transit - BRT). Improvements in real time information and online trip planning (more similar to Google Transit, with integrated service carriers) can help with this by making it easier to plan a trip - assuming the runs will be on time.
Transit is not built into the fabric of suburban areas.	transit	Include transit oriented goals in the General Plan and other planning documents of the member agencies (we are a JPA). Have development pay for incremental costs of improved transit.
To have cut-a-way buses that are heavier duty.	transit	Use short school buses if affordable and 4 steps are not a problem.
Too much reliance on technology. As if technology will solve all problems, when it can create many other problems. Sometimes there is no problem, but technology creates a quasi-solution looking for a problem.	transit	Only use new technologies if there really is a problem and if the solution will really do what it promises and does not create a nest of new problems.
Competition of funds between expenditures for technology (software and hardware) and providing more frequent or more coverage bus service for transit riders.	transit	Go much slower in implementing new technologies. Give the riders what they want first reliable frequent bus service.
The federal government's lack of attention to transit security can have serious repercussions to the nation's transportation network and its economy. As part of the ugly step-child syndrome, transit does not get the attention that the nations aviation industry is getting, even after serious incidents in Madrid, London, etc. The lack of attention to safeguarding the transit rail networks could cause serious problems and impacts to the us economy, in the wake of an attack by terrorists. Why we have not done much to date confirms that we are indeed myopic.	transit	Fund investments in transit security, for all of the nations systems, spurting development of new security systems, training of personnel and development of professionals in this new and emerging field.
Vandalism at bus stops.	transit	Discontinue offering enclosed waiting areas.
Privatization and other macroeconomic factors have driven most transit bus operators wages down to a level that is unattractive to talented and responsible job seekers. Constant turnover degrades transit services. Transit operators can no longer consider that job with the transit agency as a career.	transit	More operations funding! Less support of privatization.

January 2007

Is That a Good Assumption?

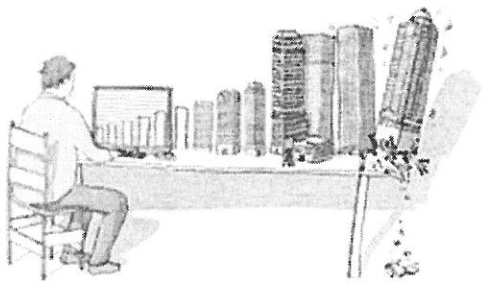
How to make sure you don't confuse projections with actual planning.

By Chris Williamson, AICP

If Census Bureau projections are correct, the U.S. will add an average of 2.5 million new residents a year for the next 40 years. That is like adding another city of Chicago onto the continent every year — except that the newcomers will be spread out.

What does that mean for your community? If you want to figure that out with any accuracy, and your community wants some control over the numbers, then statistically speaking, there is both good and bad news from the Census Bureau.

Good news



The Census Bureau interim state projections, which address intrastate migration, are available to the year 2030. Both national and state projections are based on assumptions about birth and death rates and legal and illegal international immigration and are often used as a starting point for city- and county-level projections.

Since birth and death rates are relatively stable, and since immigration quotas and border controls are not controlled locally, planners generally feel safe treating these macrolevel projections as close to fact, at least in the short run. That means you can relax: You may be adding the equivalent of only a few blocks of Chicago to your community!

The Census Bureau last August released 2005 state and county housing unit and population estimates, which can serve as mid-decade numbers for creating short-term trend projections to 2010 and 2015.

To test the validity of your community's projections, the census's short-term projections can be compared to five- and 10-year build-out projects that your community has already approved or is about to approve. In these cases, growth decisions have already been made and the projection is serving as a forecast.

Ambiguities

Not all the census estimates are so useful. Last September, the Census Bureau released its American Community Survey estimates for cities, counties, and census-designated places with populations over 65,000. Most notable was the ACS's published margin of error, which allows the data user to construct the low-to-high error range of the estimate.

Technically, any number within the range is correct, but the popular press had a field day with that definition of "correct." Reporters found cities where the low end of the error range was below the city's current population and the high end of the range showed a dramatic increase. The September 10, 2006, *Los Angeles Times* ran a story entitled "The Consensus is Census is Flawed." The article noted: "But factoring in the margin of error, federal officials acknowledged that [one] city might have as many as 100,119 residents. On the other hand, it might have shrunk to 76,387 people."

The bottom line is that you cannot confidently project future population (especially in small- and medium-sized communities) using the range of numbers in the ACS population estimates.

A matter of definition

Keep in mind that a projection is a conditional statement about the future based on a set of assumptions. A projection is basically math run on a set of data and assumptions. In applied demography, the beginning year census data and math are seldom wrong. The real art is in choosing assumptions, which are often implied future planning decisions.

This should be no surprise to planners familiar with ICMA's *Practice of Local Government Planning* (the "Green Book"). On pages 82 and 83 of the third edition, there is this warning: "Planners, elected officials, and the public adopt analyst's hypothetical projections of possible futures without understanding their conditional nature or evaluating their underlying assumptions."

Most local planners are caught between high-level projections from credible, competent agencies and the difficulties of preparing good small area projections that reflect local realities.

Projections are not fixed; they can be accurate or inaccurate. In 2002, California's Demographic Research Unit found that previous projections of total state population were quite accurate; it now cites an error rate of 0.7 percent for current projections for each year removed from a census. On the other hand, 30-year county-level projections have been off by as much as 65 percent largely because intrastate migration assumptions were wrong. Other state agencies have similar track records.

In some states and regions, state-level projections are passed down to local governments as planning targets. The California Department of Housing and Community Development uses the Demographic Research Unit's county-level population projections to develop housing production targets for counties and regional governments, which in turn allocate housing targets for local governments. Each city and county is required to make a good faith effort to meet its housing allocation.

This is a classic top-down, planning-by-projections program. By basing plans on the goal of meeting population projections, the state housing department is implying that local and county governments should base future policy and program decisions on the state's official projected growth numbers.

It's implied

Let's take a closer look at planning-related assumptions that are often implied in a population projection. Population projections include assumptions about future collective behavior and about the decisions made by individuals, households, businesses, and governments. Projections start with a base year, usually a decennial census year. A projection methodology is either bottom-up (housing unit or cohort-component survival), top-down (trend or shift-share), or a combination of both.

Ongoing population, household, and business behavior is measured by the Census Bureau by means of a variety of surveys. All of them have sampling and nonsampling errors. Therefore, if beginning year census data are accurate, if projection math is appropriate and done correctly, and if behavior-measuring survey data are accurate, then assumptions are the most variable part of a projection.

Most assumptions are considered technical, a rate or number to be "found" by the analyst and explained in a footnote. However, it is a huge misconception to suppose that technical assumptions are neutral. More than a few such assumptions are really hiding major policy recommendations for future growth.

What are the implied variable assumptions embedded in a typical population projection? At a minimum, they include the following:

- Past net migration patterns continue.
- Jobs grow to accommodate change.
- Incomes are adequate to match housing costs.
- Raw land urbanizes as needed.
- Density increases as needed.
- Transit develops when and as needed.

- Roadway capacity expands as needed.
- Schools are provided as needed.
- Parks are provided as needed.
- Water and wastewater services developed.
- Solid waste disposal is available as needed.

Each implied variable assumption can be placed in the matrix under either stable or variable. The stable implied assumptions are events that are likely to remain fairly constant, or have been so in the past. Still, each stable implied assumption is subject to a government or market activity that could undermine the assumption and, hence, the projection.

For example, migration is subject to federal border control and immigration laws, while at the local level density may occur incrementally, one project at a time. Both factors could be considered stable assumptions. But in some communities, increasing density is controversial. In these places, continued opposition to individual projects could change the rate at which density increases — and make the density assumptions variable.

Likewise, jobs and income are related, but (except for the land-use component) they are subject to forces largely outside a community's control. Local governments typically welcome all land-use changes that generate jobs, but suppose a community realizes that adding employment-producing land uses leads to more traffic jams while benefiting local people very little. That notion, too, could force a reexamination of assumptions. (See table above.)

Let's dig deeper

The implied variable assumptions typically buried in projections are actually local and intergovernmental policies and decisions that have major financial implications. Choosing between transit and expanded roadways; between raw land conversion and infill development; and where, when, and how parks, schools, and water and sewer facilities are built and paid for are probably the largest decisions made by local governments. The implied assumption buried in a projection assumption is that these services and infrastructure will always be provided, somehow, by the local governments involved.

Planners and others who create and use projections should be aware of the implied assumptions and should prominently list and discuss them rather than let them remain unstated or buried in a technical appendix. Assumptions could be discussed with six sets of questions in mind:

• Have the assumptions been scrutinized? Do credible public data or past events define and support the assumptions?

• Are the assumptions internally valid? Will residents' incomes support the housing prices? Are there enough housing units for the workforce that the projected jobs will attract?

• Are the assumptions externally valid? Are similar communities anticipating the same growth? The county? The state?

• How accurate were the assumptions in the past? What is the track record of previous projections based on similar assumptions?

• Could the assumptions cumulatively produce large errors? Are several assumptions dependent on one overriding assumption, such as future water supply?

• Are the assumptions subject to significant political decision making? Do voters control key assumptions?

Finally, think ahead. If communities create entitlements to accommodate projection-based growth for 10 or 20 years into the future, that growth is likely to occur. In other words, growth will become a self-fulfilling prophecy.

Isn't it irresponsible to ignore projections in planning? Yes, it is. What is the alternative? The alternative is old-fashioned planning that takes projections into account, but is not driven by projections.

Suppose planners asked these questions: Can we have our vision in the context of these population projections? What will happen if we try? How much and what kind of projected demand should we accommodate to keep our economy healthy and to house our own children?

That is a very different paradigm from this one: "We must plan to accommodate [number] housing units over [years] based on the [source] projection."

In short, projections are a means to an end, not an end in themselves. Know your assumptions.

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Definitions

An *estimate* is a measure of a present or past status or condition. Unlike a projection, an estimate does not look forward.

A *forecast* is the future that is considered most likely to occur.

A *projection* is a conditional statement about the future based on a set of assumptions.

A *plan* may be defined as the preferred projection. All forecasts are projections, but not all projections are forecasts.

A *trend* is a general direction, tendency, or inclination created by a mathematical extension of past observations. Although trend-based procedures are analytically crude, they often suffice for short-term projections.

Shift-share analysis assumes that an area's population change is the product of three forces: growth of the higher level geographic area, the relative growth of local population cohorts, and local circumstances.

Cohort survival analyzes the aging of a population by applying death, birth, and migration rates. A cohort is usually defined as all people born in a given year in a specific geographic area. Cohort analysis can be quite accurate if most people stay put, if age- and sex-specific migration data are available, and if death and birth rates remain relatively stable over time.

The *housing unit method* is similar to a forecast or plan except it is based on the count of housing units expected at a future time. The most recent census and ACS data will supply the average household size, and local building permit records are the source for future completed and occupied housing units (or group quarters).

This method relies on three key assumptions: that household size is known, that the rate of housing permits being completed is known, and that vacancy rates are known. This is a bottom-up approach, although the household size and vacancy rates are often adjusted so that the sum of local housing unit projections matches a higher level projection, usually based on a top-down method such as shift-share analysis or cohort survival.

Testing Assumptions

A projection that assumes past development rates will stay on course is really a policy recommendation to continue developing at past rates — to continue to provide water and sewer service hook ups and to build the required highways and schools. If a city plans to a projection, is it also implicitly recommending growth policies for future city councils? Is that planning by means of projection assumptions?

Assumptions may be classified as either explicit or implied and as stable or variable, and placed into a four-cell matrix. The table below shows the major explicit assumptions used in a cohort-component survival projection.

Birth and death rates and household size will vary by ethnicity and age but remain relatively stable over typical planning horizons of 20 years or so in most communities. Because each of these statistics is calculated with a

large denominator (total population, all women of childbearing age, and all households), even a large change takes time to significantly move the statistic.

In contrast, in- and out-migration and vacancy rates may change relatively quickly, largely in response to economic activity. A large enough migration could also change the stable rates.

Resources

Images: Drawing by Leif Parsons.

Interim Projections of the U.S. Population to 2050: www.census.gov/ipc/www/usinterimproj.

State Interim Population Projections by Age and Sex: 2004–2030 are at www.census.gov/population/www/projections/projectionsagesex.html

July 1, 2005, Housing Unit Population Estimates are at www.census.gov/popest/estimates.php.

American Community Survey 2005 Estimates: www.census.gov/acs/www/Products.

The Federal State Cooperative Program for Population Projections is at www.census.gov/population/www/fscpp/fscpp.html

The California Regional Housing Needs Assessment Program's website is www.scag.ca.gov/Housing/rhna.htm.

Courses in applied demography are offered at www.popassoc.org/cadweb/courses.html and www.planetizen.com.

Two valuable sources are *The Methods and Materials of Demography* by Henry Shryock and Jacob Siegel (1976) and Peter Morrison's contribution to *Population Forecasting for Small Areas* (1975).

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JAMES HOWARD KUNSTLER
PHOTOGRAPHS BY DAVID MAISEL

Making Other Arrangements

A wake-up call to a citizenry in the shadow of oil scarcity

VIEW MORE PHOTOGRAPHS FROM DAVID MAISEL

AS THE AMERICAN PUBLIC CONTINUES sleepwalking into a future of energy scarcity, climate change, and geopolitical turmoil, we have also continued dreaming. Our collective dream is one of those super-vivid ones people have just before awakening. It is a particularly American dream on a particularly American theme: how to keep all the cars running by some other means than gasoline. *We'll run*

them on ethanol! We'll run them on biodiesel, on synthesized coal liquids, on hydrogen, on methane gas, on electricity, on used French-fry oil . . . !

The dream goes around in fevered circles as each gasoline replacement is examined and found to be inadequate. But the wish to keep the cars going is so powerful that round and round the dream goes. *Ethanol! Biodiesel! Coal liquids . . .*

And a harsh reality indeed awaits us as the full scope of the permanent energy crisis unfolds. According to the U.S. Department of Energy, world oil production peaked in December 2005 at just over 85 million barrels a day. Since then, it has trended absolutely flat at around 84 million. Yet world oil consumption rose consistently from 77 million barrels a day in 2001 to above 85 million so far this year. A clear picture emerges: demand now exceeds world supply. Or, put another way, oil production has not increased despite the ardent wish that it would by all involved, and despite the overwhelming incentive of prices having nearly quadrupled since 2001.

There is no question that we are in trouble with oil. The natural gas situation is comparably ominous, with some differences in the technical details—and by the way, I am referring here to methane gas (CH4), the stuff that fuels kitchen stoves and home furnaces, not cars and trucks. Natural gas doesn't deplete slowly like oil, following a predictable bell-curve pattern; it simply stops coming out of the ground when a particular gas well is played out. You also tend to get your gas from the continent you are on. To import natural gas from overseas, it has to be liquefied, loaded in a special kind of expensive-to-build-and-operate tanker, and then offloaded at a specialized marine terminal.

Half the homes in America are heated with gas furnaces and about 16 percent of our electricity is made with it. Industry uses natural gas as the primary ingredient in fertilizer, plastics, ink, glue, paint, laundry detergent, insect repellent, and many other common household necessities. Synthetic rubber and man-made fibers like nylon could not be made without the chemicals derived from natural gas. In North America, natural gas production peaked in 1973. We are drilling as fast as we can to keep the air conditioners and furnaces running.

What's more, the problems of climate change are amplifying, ramifying, and mutually reinforcing the problems associated with rapidly vanishing oil and gas reserves. This was illustrated vividly in 2005, when slightly higher ocean temperatures sent Hurricanes Katrina and Rita slamming into the U.S. Gulf Coast. Almost a year later, roughly 12 percent of oil production and 9.5 percent of natural gas production in the gulf was still out, probably for good. Many of these production platforms may never be rebuilt, because the amounts of oil and gas left beneath them would not justify the cost. If there is $50 million worth of oil down there, why spend $100 million replacing a wrecked platform to get it?

Climate change will also ramify the formidable problems associated with alternative fuels. As I write, the American grain belt is locked in a fierce summer drought. Corn and soybean crops are withering from Minnesota to Illinois; wheat is burning up in the Dakotas and Kansas. Meanwhile, the costs of agricultural "inputs"—from diesel fuel to fertilizers made from natural gas to oil-derived pesticides—have been ramping up steadily since 2003 to the great distress of farmers. Both weather and oil costs are driving our crop yields down, while the industrial mode of farming that has evolved since the Second World War becomes increasingly impractical. We are going to have trouble feeding ourselves in the years ahead, not to mention the many nations who depend for survival on American grain exports. So the idea that we can simply shift millions of acres from food crops to ethanol or biodiesel crops to make fuels for cars represents a staggering misunderstanding of reality.

Still, the widespread wish persists that some combination of alternative fuels will rescue us from this oil and gas predicament and allow us to continue enjoying by some other means what Vice-President Cheney has called the "non-negotiable" American way of life. The truth is that no combination of alternative fuels or systems for using them will allow us to continue running America, or even a substantial fraction of it, the way we have been. We are not going to run Wal-Mart, Walt Disney World, Monsanto, and the Interstate Highway System on any combination of solar or wind energy, hydrogen, ethanol, tar sands, oil shale, methane hydrates, nuclear power, thermal depolymerization, "zero-point" energy, or anything else you can name. We will desperately use many of these things in many ways, but we are likely to be disappointed in what they can actually do for us.

The key to understanding the challenge we face is admitting that we have to comprehensively make other arrangements for all the normal activities of everyday life. I will return to this theme shortly, but first it is important to try to account for the extraordinary amount of delusional thinking that currently dogs our collective ability to think about these problems.

The widespread wish to just uncouple from oil and gas and plug all our complex systems into other energy sources is an interesting and troubling enough phenomenon in its own right to merit some discussion. Perhaps the leading delusion is the notion that energy and technology are one and the same thing, interchangeable. The popular idea, expressed incessantly in the news media, is that if you run out of energy, you just go out and find some "new technology" to keep things running. We'll learn that this doesn't comport with reality. For example, commercial airplanes are either going to run on cheap liquid hydrocarbon fuels or we're not going to have commercial aviation as we have known it. No other energy source is concentrated enough by weight, affordable enough by volume, and abundant enough in supply to do the necessary work to overcome gravity in a loaded airplane, repeated thousands of times each day by airlines around the world. No other way of delivering that energy source besides refined liquid hydrocarbons will allow that commercial system to operate at the scale we are accustomed to. The only reason this system exists is that until now such fuels have been cheap and abundant. We are not going to replace the existing worldwide fleet of airplanes either, and besides, there is no other type of airplane we have yet devised that can work differently.

There may be other ways of moving things above the ground, for instance balloons, blimps, or zeppelin-type airships. But they will move much more slowly and carry far less cargo and human passengers than the airplanes we've been enjoying for the past sixty years or so. The most likely scenario in the years ahead is that aviation will become an increasingly expensive, elite activity as the oil age dribbles to a close, and then it will not exist at all.

Another major mistake made by those who fail to pay attention is overlooking the unanticipated consequences of new technology, which more often than not add additional layers of problems to existing ones. In the energy sector, one of the most vivid examples is seen in the short history of the world's last truly great oil discovery, the North Sea fields between Norway and the UK. They were found in the '60s, got into production in the late '70s, and were pumping at full blast in the early '90s. Then, around 1999, they peaked and are now in extremely steep decline—up to 50 percent a year in the case of some UK fields. The fact that they were drilled with the latest and best new technology turns out to mean that they were drained with stunning efficiency. "New technology" only hastened Britain's descent into energy poverty. Now, after a twenty-year-long North Sea bonanza in which it enjoyed an orgy of suburbanization, Great Britain is again a net energy importer. Soon the Brits will have no North Sea oil whatsoever and will find themselves below their energy diet of the grim 1950s.

If you really want to understand the U.S. public's penchant for wishful thinking, consider this: We invested most of our late twentieth-century wealth in a living arrangement with no future. American suburbia represents the greatest misallocation of resources in the history of the world. The far-flung housing subdivisions, commercial highway strips, big-box stores, and all the other furnishings and accessories of extreme car dependence will function poorly, if at all, in an oil-scarce future. Period. This dilemma now entails a powerful psychology of previous investment, which is prompting us to defend our misinvestments desperately, or, at least, preventing us from letting go of our assumptions about their future value. Compounding the disaster is the unfortunate fact that the manic construction of ever more futureless suburbs (a.k.a. the "housing bubble") has insidiously replaced manufacturing as the basis of our economy.

Meanwhile, the outsourcing of manufacturing to other nations has spurred the development of a "global economy," which media opinion-leaders such as *New York Times* columnist Tom Friedman (author of *The World Is Flat*) say is a permanent state of affairs that we had better get used to. It is probably more accurate to say that the global economy is a set of transient economic relations that have come about because of two fundamental (and transient) conditions: a half century of relative peace between great powers and a half century of cheap and abundant fossil-fuel energy. These two mutually dependent conditions are now liable to come to an end as the great powers enter a bitter contest over the world's remaining energy resources, and the world is actually apt to become a lot larger and less flat as these economic relations unravel.

This is approximately the state of the nation right now. It is deeply and tragically ironic that the more information that bombards us, the less we seem to understand. There are cable TV news networks and Internet news sites beyond counting, yet we are unable to process this deluge of information into a coherent public discussion about the fundamental challenges that our civilization faces—not to mention a sensible agenda for meeting these hardships. Meanwhile, *CBS News* tells millions of viewers that the tar sands of Alberta will solve all our problems, or (two weeks later) that the coal beds under Montana and Wyoming will sustain business as usual, and CNN tells another several million viewers that we can run everything here on ethanol, just like they do in Brazil.

Of course, the single worst impediment to clear thinking among most individuals and organizations in America today is the obsession with keeping the cars running at all costs. Even the environmental community is guilty of this. The esteemed Rocky Mountain Institute ran a project for a decade to design and develop a "hyper-car" capable of getting supernaturally fabulous mileage, in the belief that this would be an ecological benefit. The short-sightedness of this venture? It only promoted the idea that we could continue to be a car-dependent society; the project barely gave nodding recognition to the value of walkable communities and public transit.

The most arrant case of collective cluelessness now on view is our failure to even begin a public discussion about fixing the U.S. passenger railroad system, which has become so decrepit that the Bulgarians would be ashamed of it. It's the one thing we could do right away that would have a substantial impact on our oil use. The infrastructure is still out there, rusting in the rain, waiting to be fixed. The restoration of it would employ hundreds of thousands of Americans at all levels of meaningful work. The fact that we are hardly even talking about it—at any point along the political spectrum, left, right, or center—shows how fundamentally un-serious we are.

This is just not good enough. It is not worthy of our history, our heritage, or the sacrifices that our ancestors made. It is wholly incompatible with anything

describable as our collective responsibility to the future.

We have to do better. We have to start right away making those *other arrangements*. We have to begin the transition to some mode of living that will allow us to carry on the project of civilization—and I would argue against the notion advanced by Daniel Quinn and others that civilization itself is our enemy and should not be continued. The agenda for facing our problems squarely can, in fact, be described with some precision. We have to make other arrangements for the basic activities of everyday life.

In general, the circumstances we face with energy and climate change will require us to live much more locally, probably profoundly and intensely so. We have to grow more of our food locally, on a smaller scale than we do now, with fewer artificial "inputs," and probably with more human and animal labor. Farming may come closer to the center of our national economic life than it has been within the memory of anyone alive now. These changes are also likely to revive a menu of social and class conflicts that we also thought we had left behind.

We'll have to reorganize retail trade by rebuilding networks of local economic interdependence. The rise of national chain retail business was an emergent, self-organizing response to the conditions of the late twentieth century. Those conditions are now coming to an end, and the Wal-Mart way of doing business will come to an end with them: the twelve-thousand-mile merchandise supply line to Asian factories; the "warehouse on wheels" made up of thousands of tractor-trailer trucks circulating endlessly between the container-ship ports and the big-box store loading docks. The damage to local economies that the "superstores" leave behind is massive. Not only have they destroyed multilayered local networks for making and selling things, they destroyed the middle classes that ran them, and in so doing they destroyed the cultural and economic fabric of the communities themselves. This is a lot to overcome. We will have to resume making some things for ourselves again, and moving them through smaller-scale trade networks. We may have fewer things to buy overall. The retail frenzy of recent decades will subside as we struggle to produce things of value and necessarily consume less.

We'll have to make other arrangements for transporting people and goods. Not only do we desperately need to rebuild the railroad system, but electrifying it—as virtually all other advanced nations have done—will bring added advantages, since we will be able to run it on a range of things other than fossil fuels. We should anticipate a revival of maritime trade on the regional scale, with more use of boats on rivers, canals, and waterways within the U.S. Many of our derelict riverfronts and the dying ports of the Great Lakes may come back to life. If we use trucks at all to move things, it will be for the very last leg of the journey. The automobile will be a diminishing presence in our lives and, increasingly, a luxury that will be resented by those who can no longer afford to participate in the "happy motoring" utopia. The interstate highways themselves will require more resources to maintain than we will be able to muster. For many of us, the twenty-first century will be less about incessant mobility than about staying where we are.

We have to inhabit the terrain of North America differently, meaning a return to traditional cities, towns, neighborhoods, and a productive rural landscape that is more than just strictly scenic or recreational. We will probably see a reversal of the two-hundred-year-long trend of people moving from the country and small towns to the big cities. In fact, our big cities will probably contract substantially, even while they re-densify at their centers and along their waterfronts. The work of the New Urbanists will be crucial in rebuilding human habitats that have a future. Their achievement so far has been not so much in building "new towns" like Seaside, Florida, or Kentlands, Maryland, but in retrieving a body of knowledge, principle, and methodology for urban design that had been thrown away in our

mad effort to build the drive-in suburbs.

It is harder to predict exactly what may happen with education and medicine, except to say that neither can continue to operate as rackets much longer, and that they, like everything else, will have to become smaller in scale and much more local. Our centralized school districts, utterly dependent on the countless daily trips of fleets of yellow buses and oppressive property taxes, have poor prospects for carrying on successfully in an energy-scarce economy. However, we will be a less affluent nation in the post-oil age, and therefore may be hard-pressed to replace them. A new, more locally based education system may arise instead out of home-schooling, as household classes aggregate into new, small, neighborhood schools. College will cease to be a mass-consumer activity, and may only be available to social elites—if it continues to exist at all. Meanwhile, we're in for a pretty stark era of triage as the vast resources of the "medical industry" contract. Even without a global energy crisis bearing down on us, the federal Medicaid and Medicare systems would not survive the future as currently funded.

As a matter of fact, you can state categorically that anything organized on a gigantic scale, whether it is a federal government or the Acme Corporation or the University of Michigan, will probably falter in the energy-scarce future. Therefore, don't pin your hopes on multinational corporations, international NGOs, or any other giant organizations or institutions.

Recent events have caused many of us to fear that we are headed toward a Big Brother kind of governmental tyranny. I think we will be lucky if the federal government can answer the phones, let alone regulate anyone's life, in the post-oil era. As power devolves to the local and regional level, the very purpose of our federal arrangements may come into question. The state governments, with their enormous bureaucracies, may not be better off. Further along in this century, the real political action will likely shift down to the local level, as reconstructed neighborly associations allow people to tackle problems locally with local solutions.

It's a daunting agenda, all right. And some of you are probably wondering how you are supposed to remain hopeful in the face of these enormous tasks. Here's the plain truth, folks: Hope is not a consumer product. You have to generate your own hope. You do that by demonstrating to yourself that you are brave enough to face reality and competent enough to deal with the circumstances that it presents. How we will manage to uphold a decent society in the face of extraordinary change will depend on our creativity, our generosity, and our kindness, and I am confident that we can find these resources within our own hearts, and collectively in our communities.

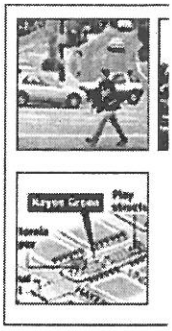
COMMENT ON THIS ARTICLE

JAMES HOWARD KUNSTLER is the author of *The Long Emergency* and *The Geography of Nowhere*, as well as the novel *Maggie Darling: A Modern Romance*. His work has appeared in *The New York Times Magazine* and *Rolling Stone*. He lives in Saratoga Springs, New York.

San Francisco Chronicle

SAN FRANCISCO
An urban success story
Octavia Boulevard an asset to post-Central Freeway area

John King, Chronicle Urban Design Writer
Wednesday, January 3, 2007



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John King

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In the 15 months since it opened, San Francisco's Octavia Boulevard has been hailed as a model for other cities. It has been honored at the local and national level, including an award last month from the American Planning Association.

But here's the real measure of success: The thoroughfare that replaced the elevated Central Freeway feels like it belongs. It's not perfect, but it keeps cars moving while making the neighborhood around it a better place to be.

That's exactly what was promised on Sept. 9, 2005, when politicians and community members gathered for a ribbon-cutting ceremony where Octavia Boulevard begins on the north side of Market Street, across from broad ramps leading to and from Highway 101.

The event was the culmination of a long battle to rid Hayes Valley of the Central Freeway, a double-deck structure that opened in 1959. The freeway connected western San Francisco to the center of the city -- but it split apart the neighborhood below, creating blight and a magnet for crime.

The fight began in earnest in 1996, when the freeway was closed temporarily to strengthen it against earthquakes. Three years and four competing ballot measures later, San Francisco's government and the California Department of Transportation agreed to build a ground-level thoroughfare instead.

That campaign is what brought last month's recognition from the American Planning Association, which gave Octavia Boulevard the group's first "achievement award for hard-won victories."

It also cleared the way for the roadway that now exists, a short boulevard that draws on pre-freeway-era traffic engineering.

At the most basic level, the boulevard connects the ramps that touch down at Market Street with Oak and Fell streets a few blocks to the north. Those roads serve as the main east-west link between downtown San Francisco and the neighborhoods around Golden Gate Park.

But the idea is also to make the boulevard an urbane centerpiece to the blocks around it.

Commuters use Octavia's four central lanes, two in each direction, separated by low shrubs and elm trees. On the commute lanes -- buffered by poplar trees and more shrubs -- is a "local lane" for neighborhood traffic, one and one heading south.

The final touch, on the northern block: a neighborhood square with picnic tables and a play structure, two small paved area reserved for temporary art installations.

Any driver who relies on the boulevard can testify it's not a panacea. The morning commute often backs onto O the evenings, northbound lanes clog to the extent that impatient drivers often hop onto the local lane.

Part of the problem is unavoidable: American drivers expect throughways to be designed for convenience and s Octavia's openness may invite impatient drivers to accelerate -- though that openness will fade as trees mature rises on empty lots created by the freeway demolition.

The confusion also results from decisions at the city level.

For starters, the local lanes are too alluring. They're wider than what was proposed by planners Allan Jacobs ar Macdonald, who designed the boulevard in collaboration with city staff led by the Department of Public Works; t any sort of rough texture or wide bumps that would send a tactile signal to slow down. It's a change worth maki budget allows.

Another problem is unavoidable: the location. This is a short boulevard that starts at San Francisco's central art Street. There are bans on making turns from Market onto the freeway on-ramp and from the boulevard onto Ma dictates otherwise. No wonder there's confusion and frayed tempers.

But congestion doesn't mean the system is a failure. It means the boulevard is filling a need; a six-month study Department of Parking and Traffic found it attracts 45,000 vehicles on a typical weekday. And for whatever reas moving traffic is more irritating when you're on a city street than when you're on a freeway.

A better way to gauge the boulevard's success involves the condition of the landscaping and public spaces. In (are they as enticing after real-life wear as they were on opening day?

The heartening answer is yes. Shrubs are filling in. Trees are spreading out. It's easy to imagine thick bands of five years that offer visual screens and a true sense of place.

The small park has blossomed as well. You'll see people with dogs and people with cell phones, shoppers pass and locals settled on a bench with coffee and friends. A street person can be napping on a bench while kids cla play structure, and life goes on.

Even here, though, not everything is idyllic. The patch of green next to the play structure is a natural place for tc off steam -- but some dog owners treat it as a track and bathroom for their pets.

In other words, Octavia Boulevard could be better. There's congestion on the roadway and tension at the park. cases, the problems are a result of popularity. They're heavily used.

The larger picture is this: Things work. Hayes Valley has a gathering place. The landscape is well-maintained. T continues to flow.

Octavia Boulevard began as a beguiling idea. Today, it's a promise fulfilled. In a city like San Francisco, that's p good kind.

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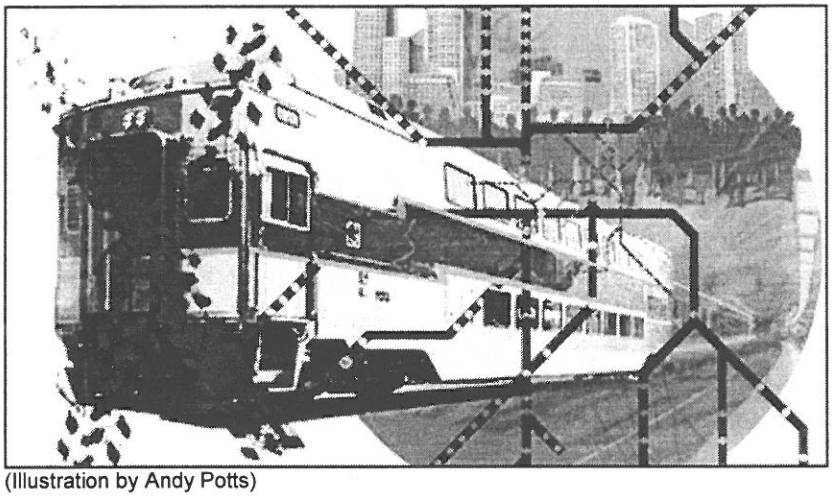
PERSPECTIVE

Commuter Rail's False Promise

Why more rail lines won't prod more folks to take the train - and why we should make peace with cars.



(Illustration by Andy Potts)

By Tom Keane | December 31, 2006

As we all know, commuter rail is a Good Thing and the automobile is a Bad Thing. Trains are clean, provide cheap transportation, and get us to our destination quickly and efficiently. They discourage sprawl, with each station serving as a nexus for the "smart growth" so beloved by the new urbanist crowd. Cars, on the other hand, are the polluting, expensive, congestion-producing banes of the environment. These are the certainties that have been behind much of our public transportation policy and are behind, for example, the state's $500 million investment in the soon-to-be-opened Greenbush Line.

In fact, though, many of these certainties may be untrue. A surprising analysis by Harvard-educated urban planner Eric Beaton adds more meat to the bones of some faint but persuasive arguments that call into question the value of fixed-rail mass-transit systems. Beaton looked at development patterns around commuter-rail terminals over the past 100 years. His study, published in September by the Rappaport Institute for Greater Boston, contained some disconcerting results. (Disclosure: I'm an unpaid member of Rappaport's board of advisers.) One would think, for instance, that new commuter-rail stations might encourage development nearby. It turns out they don't. Areas around train stations are only modestly more developed than anywhere else. One would also think that new stations might encourage more use of public transit. That is also untrue. The number of people using transit to get to work is largely unchanged by the addition of new stations.

Those results may seem counterintuitive but, upon reflection, make enormous sense. Take a look at the MBTA's lovely color-coded maps

of its rail system. All lines run into Boston. That would be smart planning if Boston were where all of the employers were. However, though that may have been largely true a century ago, today just a quarter of the jobs in the metropolitan region are downtown. Instead, you'll find them along the beltways – Route 128 and Interstate 495 – and at office parks in between.

Besides, according to the Bureau of Labor Statistics, a typical worker holds a job for just four years. So, when it comes time to buy a house, there is little value in getting something close to a rail station. After all, most jobs can't be accessed from one (try, for example, taking the T from Medway to the Westborough Technology Park – it can't be done). And even if your current job happens to be downtown, the odds are that your next job will be elsewhere.

There's more. Commuter rail is skewed toward serving the affluent. Unlike buses or subways, rail largely connects well-off suburbanites to downtown jobs in high-paid fields such as finance and law. Moreover, new rail stations have a trivial effect on automobile use, meaning they do little to help the environment. (In fact, according to the MBTA's own data, commuter rail – which relies on diesel-powered trains – often increases the emissions of nitrogen oxides, which can contribute to the formation of smog.) And travel by rail is not as inexpensive as its advocates would have you believe. If you own a car already, the cost of driving may actually be cheaper.

Yet, what's the alternative? More cars? Perhaps. As Beaton's study points out, back before widespread adoption of the automobile, rail stations were popular places for development. But cars changed the ways we live and work. Employers began to locate outside of cities, where land was cheap. People moved to the suburbs, lured by the prospect of owning their own plot of land. Today, even with high gas prices and crowded roads, people love the privacy, comfort, and extraordinary freedom they get from their automobiles.

Can we put the genie back in the bottle? I doubt it. And if that's the case, rather than fruitlessly trying to get people out of their cars, perhaps we should simply concede the battle and make the best of it. Encourage carpooling and hybrids, raise fuel standards, introduce congestion pricing on toll roads, and (I know this makes some gasp) expand our highway system. But more commuter rail? That's just a train in vain.

Tom Keane, a Boston-based freelance writer, contributes regularly to the Globe Magazine. E-mail him at tomkeane@tomkeane.com. ■

New German community models car-free living

By Isabelle de Pommereau | *Correspondent of The Christian Science Monitor*

FREIBURG, GERMANY – It's pickup time at the Vauban kindergarten here at the edge of the Black Forest, but there's not a single minivan waiting for the kids. Instead, a convoy of helmet-donning moms - bicycle trailers in tow - pedal up to the entrance.

Welcome to Germany's best-known environmentally friendly neighborhood and a successful experiment in green urban living. The Vauban development - 2,000 new homes on a former military base 10 minutes by bike from the heart of Freiburg - has put into practice many ideas that were once dismissed as eco-fantasy but which are now moving to the center of public policy.

With gas prices well above $6 per gallon across much of the continent, Vauban is striking a chord in Western Europe as communities encourage people to be less car-dependent. Just this week, Paris unveiled a new electric tram in a bid to reduce urban pollution and traffic congestion.

GOING TO TOWN: A youngster pedals over the tram tracks that lead to Freiburg's center.
ISABELLE DE POMMEREAU

"Vauban is clearly an offer for families with kids to live without cars," says Jan Scheurer, an Australian researcher who has studied the Vauban model extensively. "It was meant to counter urban sprawl - an offer for families not to move out to the suburbs and give them the same, if better quality of life. And it is very successful."

There are numerous incentives for Vauban's 4,700 residents to live car-free: Carpoolers get free yearly tramway passes, while parking spots - available only in a garage at the neighborhood's edge - go for €17,500 (US$23,000). Forty percent of residents have bought spaces, many just for the benefit of their visiting guests.

As a result, the car-ownership rate in Vauban is only 150 per 1,000 inhabitants, compared with 430 per 1,000 inhabitants in Freiburg proper.

In contrast, the US average is 640 household vehicles per 1,000 residents. But some cities - such as Davis, Calif., where 17 percent of residents commute by bike - have pioneered a car-free lifestyle that is similar to Vauban's model.

Vauban, which is located in the southwestern part of the country, owes its existence, at least in part, to Freiburg - a university town, like Davis - that has a reputation as Germany's ecological capital.

In the 1970s, the city became the cradle of Germany's powerful antinuclear movement after local activists killed plans for a nuclear power station nearby. The battle brought energy-policy issues closer to the people and increased involvement in local politics. With a quarter of its people voting for the Green Party, Freiburg became a political counterweight in the conservative state of Baden-Württemberg.

Reporters on the Job

The Monitor gives the story behind the story.

In the Monitor
Tuesday, 01/09/07

Too prosperous, Massachusetts is losing its labor force

Life at America's bottom wage

Third round in Iraq to test

At about the same time, Freiburg, a city of 216,000 people, revolutionized travel behavior. It made its medieval center more pedestrian-friendly, laid down a lattice of bike paths, and introduced a flat rate for tramways and buses.

Environmental research also became a backbone of the region's economy, which boasts Germany's largest solar-research center and an international center for renewable energy. Services such as installing solar panels and purifying wastewater account for 3 percent of jobs in the region, according to city figures.

Little wonder then, that when the French Army closed the 94-acre base that Vauban now occupies in 1991, a group of forward-thinking citizens took the initiative to create a new form of city living for young families.

"We knew the city had a duty to make a plan. We wanted to get as involved as possible," says Andreas Delleske, then a physics student who led the grass-roots initiative that codesigned Vauban. "And we were accepted as a partner of the city."

US troops

On Aussie beaches, burqa plus bikini equals burqini

Editorial: Flood insurance that works

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In 1998, Freiburg bought land from the German government and worked with Delleske's group to lay out a master plan for the area, keeping in mind the ecological, social, economic, and cultural goals of reducing energy levels while creating healthier air and a solid infrastructure for young families. Rather than handing the area to a real estate developer, the city let small homeowner cooperatives design and build their homes from scratch.

In retrospect, "It would have been much simpler to give a big developer a piece of land and say, 'Come back five years later with a plan,' " says Roland Veith, the Freiburg city official in charge of Vauban.

But the result is a "master plan of an ecological city ... unique in its holistic approach," says Peter Heck, a professor of material-flow management at Germany's University of Trier, pointing out that this was a community-wide effort involving engineers, politicians, city planners, and residents - not just an environmental group's pilot program.

Today, rows of individually designed, brightly painted buildings line streets that are designed to be too narrow for cars. There are four kindergartens, a Waldorf school, and plenty of playgrounds - a good thing, because a third of Vauban's residents are under age 18, bucking the trend in a graying country.

As Germany's population ages - and shrinks - experts say Vauban's model will become more important as officials increasingly tailor-make communities in an effort to attract citizens .

"We have fewer young people. What you need now is a good quality of life with good services, a good infrastructure for kids and older people," says Thomas Schleifnecker, a Hannover-based urban planner.

Across Europe, similar projects are popping up. Copenhagen, for instance, maintains a fleet of bikes for public use that is financed through advertising on bicycle frames.

But what makes Vauban unique, say experts, is that "it's as much a grass-roots initiative as it is pursued by the city council," says Mr. Scheurer. "It brings together the community, the government,

and the private sector at every state of the game."

As more cities follow Vauban's example, some see its approach taking off. "Before you had pilot projects. Now it's like a movement," says Mr. Heck. "The idea of saving energy for our landscape is getting into the basic planning procedure of German cities."

Ten Noteworthy Trends of 2006

From the Metropolitan Policy Program

- 2006 Year End Review
- 2006 Ten Most Visited Publications

- For the first time in 2005 there are more poor residents of suburbs than central cities.

- Six percent of the population of large U.S. metropolitan areas lives in exurbs.

- More than one-third of the nation's loss of manufacturing jobs between 2000 and 2005 occurred in seven Great Lakes states: Illinois, Indiana, Michigan, New York, Ohio, Pennsylvania, and Wisconsin.

- America's older, inner-ring first suburbs make up 20 percent of the nation's population and are more diverse and older than the nation as a whole.

- The average U.S. household spends 19 percent of its budget on transportation, rendering household location a key component of housing affordability.

- Nationwide, more than 4.2 million lower income homeowners pay a higher than average APR for their mortgage.

- The leading refugee destination metro areas have shifted away from traditional immigrant gateways, like New York and Los Angeles, over the past two decades to newer gateways—such as Atlanta, Seattle, and Portland.

- The fastest growing metropolitan areas for minority populations from 2000 to 2004 now closely parallel the fastest growing areas in the nation.

- Middle-income neighborhoods as a proportion of all metropolitan neighborhoods declined from 58 percent in 1970 to 41 percent in 2000, disappearing faster than the share of middle class households in these metro areas.

- Of the $109 billion in federal appropriations dedicated to Gulf Coast funding In the first year after Hurricane Katrina, only $35 billion, approximately, went toward the long-term recovery of the region.

The fuel tax America needs?

Posted by Ron Steenblik at 1:14 PM on 28 Dec 2006

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A political commentator named Rick Gray has proposed imposing a federal surtax of $1.00/gallon on gasoline and diesel, exempting each licensed adult driver from the surtax on the first 30 gallons purchased each month. His idea is to discourage "excessive" driving -- but I wonder about unintended consequences. Do you, fellow gristers, see merit in this idea?

The first third of Gray's column makes the case for cutting back oil consumption, which I reckon need not be repeated here. The rest is quoted below:

> We must begin cutting back on our consumption of oil, and every thinking American knows it.
>
> The problem is, of course, that our two political parties prefer to focus on replacing foreign oil with something else. Preferably, something produced domestically. Ideally, something produced in abundance in the politically-vital state of Iowa.
>
> Which is simply no answer at all. A gallon of corn-based ethanol requires nearly a gallon of gasoline to produce - making the ethanol subsidy a poor bargain, but a magnificent political boondoggle.
>
> Besides, even if we could grow our own, switching fuels would do little to slow the melting of polar ice-caps, the rising intensity of violent weather systems, the lengthening life-cycles of destructive insects, and the spread of tropical diseases into once-temperate zones.
>
> To reduce our dependence on oil, while addressing global environmental catastrophe, we must use less energy. To use a word grown curiously hateful to modern conservatives, we must *conserve*.

Great line, that!

> The most effective first step toward conservation would be to engage ordinary Americans in thinking seriously about how to reduce their individual reliance on gasoline. If we could do that, the rest would follow.
>
> The proof? Consider what happened to the market for gas guzzlers during last summer's spike in oil prices. Or the less dramatic, but equally significant, changes in driving behavior.
>
> Market forces work. But that does not -- must not -- mean we should be entirely at the mercy of unregulated markets. We can manipulate markets to provide incentives for conservation -- and the obvious way to do that is artificially to raise the price of gasoline and diesel fuel at the pump.

Hmm, phrases like "we can manipulate markets" make me nervous. But read on.

> The problem with this obvious solution is politics. Big Oil, Detroit, and the Club for

> Greed would go after a surtax the way Big Pharma and the insurance industry went after the Clinton health reforms.
>
> You can picture the TV ads.
>
> Still, a gasoline surtax is the obvious answer. And, since Americans aren't very good at trading short-term pain for long-term gain, we need a surtax that doesn't hurt too much, too quickly, or cause massive disruptions in our lives.
>
> Indeed, we need a surtax that is easy to avoid. Because, as much as Americans hate taxes, they love avoiding taxes even more. What we need is a surtax that seriously influences energy consumption, but is relatively easy to beat.

OK, get ready for it ...

> Something like this ...
>
> A Federal surtax of $1.00 per gallon on gasoline (and diesel) -- exempting each licensed, adult driver from the surtax on the first thirty gallons purchased each month.

NB: the overall specific-tax burden, even including existing state and federal taxes, would still be lower than is typical across most of the European Union.

> With modern technology, it should be a simple matter to issue each licensed driver a magnetized card -- like a valued customer discount card -- which gas station pumps could be adjusted to read. The card would automatically exempt the bearer from the surtax for the first thirty gallons purchased each month. Beginning with the thirty-first gallon, the surtax would kick in.

The idea of rationing gasoline is not new: it was practiced during WWII. In the spring of 1942, 17 eastern states instituted some form of mandatory gas rationing. By the end of the year, mandatory controls were in effect across the entire country. On average, motorists who used their cars for "nonessential" purposes were restricted on average to 3 gallons of gas a week (i.e., about 13 gallons a month).

Thirty years later, during the 1973-74 oil crisis, the idea of gas rationing returned. In 1979, during the next oil-price crisis, gas-ration coupons were printed but never used.

An important difference between the war-time rationing system and the one proposed by Rick Gray is that the former involved price controls, while the latter involves, in effect, a two-tier pricing scheme. People would still be able to buy as much gasoline or diesel as they want; it's just that they would have to pay more for it once their quota was fulfilled. In trade-economist language, it is analogous to a tariff-rate quota, or TRQ. One could call it a "tax-rate quota", I suppose.

Nonetheless, the potential for evasion, e.g. through black-market sales, would be real. Consider this description of war-time gas rationing from "Rationing: A Necessary But Hated Sacrifice":

> Gas rationing, particularly disliked, fell victim to many of the schemes. The government claimed that "the gasoline black market involves, in many cases, experienced criminal

> rings, and is even drawing teen-age youngsters into its operations in dangerous numbers." Predictably, criminals soon produced counterfeit rationing coupons, which they then sold to gas stations and drivers. The OPA estimated that fake coupons accounted for five percent of all gasoline sales in the country. Criminals also stole vast amounts of coupons. The Washington D.C. office of the OPA lost real coupons worth 20 million gallons of gas to theft while thieves in Cleveland stole coupons for five million gallons.

Let's assume, for the sake of argument, that the ration cards would be made difficult to counterfeit. Surely such a system would be expensive to set up and administer. At the very least, it would necessitate installing new card readers at each pump (like pre-paid telephone cards, units would be subtracted after each purchase), other machines for allocating monthly credit, and 24-hour hotlines for dealing with complaints and reporting lost and stolen cards.

Would or should the under-quota rights be tradable? Efficiency suggests they should be. Would that lead to an increase in people who do not drive (yes, such people exist) applying for drivers' licenses in order to obtain credits they could then sell for a windfall profit? (That, one could argue, would be more "fair" than subsidies to biofuels, which are financed from general tax revenues, meaning non-drivers are cross-subsidizing drivers.)

Would purchases by companies or independent truck drivers be subject to a larger quota, or be exempt from the surtax? If so, could we expect to see the formation of a large number of new businesses created just to avoid the quota or surtax?

> The average American drives around 10,000 miles a year -- about 30 gallons a month in a reasonably fuel-efficient vehicle. Thus, most Americans could avoid paying the tax by making minor modifications in their driving habits. Those who prefer driving gas guzzlers would have to get more creative -- but most people could avoid the tax, with a bit of effort.
>
> Such an easily avoided surtax would produce relatively little revenue, but it would work a gradual change in individual consciousness. Like dieters counting carbs, drivers would start keeping track of how many gallons they consumed each month.

They're not already?!

> Families would give more thought to consolidating trips. Those in the market for cars would look more seriously at fuel efficiency. Intelligent drivers would slow down a bit, which would make us all safer.
>
> A surtax would also exercise a slight, but continuous pressure against long-distance commuting -- thus working subtly to curtail suburban sprawl.

Of course, all of these effects would follow from a simple rise in gasoline and diesel prices, or an increase in fuel-excise taxes.

> But the immediate impact of the surtax would be nothing compared with its long-term utility. Having established a method of encouraging conservation, we could gradually ratchet down the number of gallons exempted -- say, one gallon every two years -- until, in twenty years, the surtax applied to every gallon over twenty.

> That's a serious reduction in gasoline consumption -- but one which allows plenty of time for Detroit to design sexy, fuel-efficient vehicles, and for developers to discover the potential of reviving our cities and close-in suburbs. Time, indeed, for our metropolitan areas to get serious about mass transit.
>
> A surtax along these lines would provide a flexible tool for gradually moving America toward serious energy conservation. It wouldn't be painless, but it would minimize disruption while imposing a slow, steady market pressure in favor of energy conservation.
>
> And it would square with what we know about Americans' attitudes toward taxes. By involving all of us in a perpetual hunt for new ways to avoid using more than the exempted number of gallons each month, it would enlist American ingenuity in a permanent search for ways to reduce our dependence on oil.
>
> Worth a try, don't you think?

Well, what do you think? Is a hybrid instrument like a tax-rate quota the only politically feasible way to raise taxes on transport fuel? Do changes in technology since the 1940s and 1970s make administering this kind of rationing system more viable and more likely to be fair?

Finally, a necessary disclaimer: by posting this I am not endorsing Mr. Gray's proposal. Indeed, I am generally a skeptic of heavy-handed market manipulation. But I do think his proposal raises some interesting questions for discussion.