Key Recommendation:
Improve the Efficiency, Effectiveness and Sustainability of Transportation Investments

Overview

The transportation network is one of our region's most important assets, moving people and goods to and from jobs, markets, and recreation. While this advanced system of highways, trains, and buses retains an excellent national and global reputation, it is aging quickly and losing stride with 21st century needs. Our transportation infrastructure is key to the region prosperity, yet it has fallen behind other industrialized parts of the world, many of which have invested significantly to create, operate, and maintain modern, world-class systems.

The symptoms of decline include the dehumanizing effects of ever-worsening traffic congestion, painful cuts to public transit, a backlog of deferred maintenance on roads and bridges, and antiquated buses, trains, and stations. Inadequate investment in transportation infrastructure is partly to blame. But ballooning costs, inefficient investment decisions, and a lack of consensus about priorities are at least equally at fault, and maybe more so.

CMAP urges the federal government, the State of Illinois, transit agencies, and local governments to develop innovative ways of financing world-class transportation investments for this new century. The "costs of congestion", which include lost time and fuel, decreased productivity, inefficient freight movements, and pollution, are real and serious. Transportation user fees should reflect these costs more than they currently do. Certain revenue sources like the federal and state gas tax should be bolstered to bring a halt to continual declines in their purchasing power. At the same time, as vehicles become more fuel-efficient over time, alternatives to traditional financing mechanisms should be explored.

Regarding expenditures, the allocation of transportation funds needs to be made more wisely, based more on performance-driven criteria and less on arbitrary formulas or political horse-trading. Transportation implementers should prioritize efforts to maintain and modernize the existing system. Expensive new capacity projects should be built only if they yield benefits outweighing their costs. The region needs to unite around its transportation priorities, particularly regarding the construction of *GO TO 2040* projects that will improve operations, access, and mobility.

CMAP recommends changing how transportation is funded by:

- **Creating cost and investment efficiencies.** To prioritize spending on maintenance, modernization, and (to a lesser extent) expansion of the system, project-evaluation criteria should be improved, including quantitative models to predict impacts. Performance criteria should guide how funds are allocated by the federal and state

governments and how they are programmed locally and regionally. Allocations should be based on need, including a reassessment of the non-statutory but entrenched State of Illinois split that sends 55 percent of road funding downstate and 45 percent to northeastern Illinois.

- **Implementing congestion pricing.** Applying supply-and-demand economic principles can reduce congestion by providing an incentive for some drivers to alter their travel behavior. Near-term implemention of congestion pricing on various parts of the transportation network will enhance mobility and also help to fund needed improvements.

- **Implementing pricing for parking.** "Free" parking perpetuates automobile dependency, increases congestion, and leads to economic inefficiencies. The true costs of parking construction and maintenance are passed along to taxpayers. Pricing and related strategies can manage demand, promote efficient use of parking, and help to fund needed improvements, particularly around existing commuter and transit rail stations.

- **Increasing motor fuel taxes (and indexing them to inflation) in the short term.** As primary sources of transportation funding, the levels of federal and state motor fuel taxes (MFTs) have not been sufficient to fund maintenance, operations, and capital improvements. Until a replacement for this source is identified, MFT rates need to be increased in the near term. The State of Illinois should increase the existing 19 cents per gallon MFT by 8 cents and index it to keep pace with inflation. The federal gas tax should also be raised and indexed to inflation.

- **Instituting a replacement for motor fuel taxes in the long term.** MFTs will likely need to be replaced within 20 years as vehicles switch to alternative energy sources. One "pay as you drive" strategy is to fund transportation through fees based on vehicle miles traveled (VMT). If implemented carefully, VMTs would be a more efficient user fee than MFTs, which do not require users to bear the full costs of their road use.

- **Pursuing public-private partnerships (PPPs) as appropriate.** Among various PPP strategies, each has its pros and cons, and some can be extremely complicated and costly to enact. CMAP recommends particular consideration of the "design-build," which has been used elsewhere to reduce costs and drastically shorten the duration of projects. The focus of PPPs should be on funding transportation-system improvements, not on generating revenue for non-transportation purposes by leasing or privatizing transportation assets. At present, while cities and municipalities are able to execute PPPs, the State of Illinois has no such enabling legislation.

CMAP's *GO TO 2040* recommendations address on-going fiscal shortfalls and economic inefficiencies of the current system. These changes are vitally important to improve the

economic growth, the fiscal efficiency, and the safety and security of our region's transportation system.

This section describes benefits in detail, in addition to summarizing current conditions such as the sources of revenue, the costs of operations and maintenance, the mechanisms for allocating federal and state funds, the regional role in financing, and the potential for innovative approaches. The section also explores how to measure the success of transportation finance by gauging the system's condition (including roads, transit, and bridges) and by calculating congestion trends (including vehicle hours traveled, or VHT). Finally, this section looks at details of cost and financing in the context of federal requirements for prioritizing transportation investments.

Public Support and Benefits

Residents in northeastern Illinois want more focused investment in transportation infrastructure. 95% favor "expanding" or "maximizing" funding for transit improvements, while 70% favor "expanding" or "maximizing" funding for road improvements.

Beyond the clear support from the region's public for increased levels of investment and improved service, investments in transportation infrastructure also have other important benefits:

<u>Economic Benefits</u>

Infrastructure investment yields economic returns via short term job creation but also via long run economic productivity, largely through reducing the costs of congestion and making the region more attractive to businesses and residents. In the short term, transportation projects- whether maintenance projects, service enhancements, or capital expansions- require engineers, construction workers, and/or other labor. This employment then supports additional workers

in retail, health care, entertainment, and other local service industries. Transportation infrastructure is a good economic stimulus, which is why the recent American Recovery and Reinvestment Act (ARRA) placed such a high priority on "shovel-ready" projects, which can create and retain direct, on-project jobs in the short run. Recent analysis estimates that every billion dollars in ARRA highway spending created or retained roughly 8,781 direct, on-project job-months, and nearly twice that amount for transit projects.[1]

While short term job creation is an important goal particularly during economic downturns, investment in transportation infrastructure can yield significant benefits for years to come. Careful targeting of investments is key to long term economic vitality. Over the long term, investments in transportation infrastructure, including the implementation of congestion reduction strategies, makes the movement of goods and people to and within the region more efficient. The resulting economic benefits include the attraction and retention of businesses and a skilled, innovative workforce, efficiency of freight movement which can enhance just-in-time inventory management, increased worker productivity resulting from fewer hours spent stuck in congestion, and other positive effects on quality of life including enhanced access to jobs, education and medical care, and cultural and social interactions.

Empirical evidence bolsters the justification for increased transportation infrastructure investment, as it demonstrates clear linkages between the investment and lasting economic impacts, beyond the construction period. A $2 billion investment in transportation infrastructure is estimated to result in a **$2.2 billion** (a benefit to investment ratio of **1.1**) in long-term economic output from nine different sectors of the economy, particularly the sectors of services, trade, and nondurable goods. This number does not include any short-term construction impacts. The impacts are driven by efficiencies in the commercial trucking industry and reductions in commuting times.[2]

Long term economic productivity increases further when transportation investments are more targeted. CMAP's analysis of the economic impacts of *GO TO 2040*'s recommended major capital projects estimates a **$13.3 billion** increase in long-term economic activity (as measured by Gross Regional Product) from an public sector expenditure of $10.5 billion. This produces a benefit to investment ratio of **1.26**, larger than the 1.1 shown above, which makes sense since the major capital projects are highly targeted and selected based on a range of evaluation criteria.

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[1] Center for Neighborhood Technology, Smart Growth America, and U.S. Public Interest Research Group. January 5, 2010. "What We Learned From the Stimulus". This analysis compares ARRA funds spent on public transportation and highway infrastructure. STP funds are used as the unit of analysis for highway spending. Transit is found to create or retain more direct jobs per dollar spent because the systems tend to spend less money on land acquisition, be more complex, and buy and maintain vehicles.

[2] See the CMAP strategy paper "Infrastructure including Telecommunications", produced by RCF Economic and Financial Consulting: http://www.goto2040.org/WorkArea/DownloadAsset.aspx?id=17551. Impacts on output and income include both "direct" and "indirect" impacts. The impacts were calculated with the Chicago Regional Economic Impact Model (CREIM), developed by the Regional Economics Applications Laboratory of the University of Illinois at Urbana-Champaign.

Reducing the various costs due to traffic congestion is what drives these positive economic impacts. They include not only increased shipping costs and time delays but also decreased productivity and pollution. These costs due to congestion are serious- one recent study estimates our *regional* "cost of congestion" at $7.3 billion annually.[3] Investments must be carefully targeted toward reaching congestion mitigation, reduction or other closely related performance outcomes. Building expensive new projects in inefficient locations will not make an appreciable dent in these figures. Transportation projects, especially expansion projects, must be judged against their long-term economic impact.

A modern, well functioning system of roads and public transit simply makes good economic sense for attaining our region's long term goal of remaining a vibrant and vital global destination. Surveys consistently indicate that businesses want good infrastructure systems providing rapid access to airports and allowing goods to move efficiently. Residents also want a more modern, world-class system. The region should strive toward fostering an environment to attract residents who will create innovative new technologies and industries- one where ease of mobility is ensured and where car ownership, not to mention lengthy, congested commutes, are not necessary preconditions for living, working, and recreating.

Fiscal Benefits

Transportation outlays by the public sector are large, to the point that they can be difficult to comprehend. CMAP estimates $385 billion in core and reasonably expected transportation revenues, for operating and capital, will accrue to the region from federal, state, and local sources between the years 2011-2040. This $385 billion figure is calculated in "year of expenditure", which includes the effects of inflation and other forecasted increases due to population and economic growth. Transportation typically composes the largest domestic discretionary spending program by the federal government[4], yet these federal revenues make up less than one fifth of the transportation expenditure here in northeastern Illinois. The dollars are large, in large part, because the system is simply massive- northeastern Illinois is home to 3,233 miles of expressway, 18,719 miles of arterial and collector roads, 17,781 miles of local roads, nearly 1,500 miles of passenger rail track, over 6,000 vehicles of rolling stock, 311 full interchanges, 3,281 bridges, and 7,732 traffic signals.

Simply investing more, without goals or indicators of success, is obviously not the answer. However, making smarter investments, particularly ones focused on maintenance, modernization, and enhancements that increase mobility and access as opposed to expensive major new expansions which will prove costly to maintain and operate, can save money over the long run. Furthermore, when users assume more of the costs of their infrastructure use, through strategies like congestion or parking pricing, this will also save the public sector

[3] *Moving at the Speed of Congestion*. August 2008. Metropolitan Planning Council.
[4] Budget of the United States Government, FY 2011. Table 8.7- Outlays for Discretionary Programs: 1962-2015.

money. The Federal Highway Adminstration has estimated that the institution of congestion pricing could cut annual investment in transportation infrastructure by 28%.[5]

Safety and Security Benefits

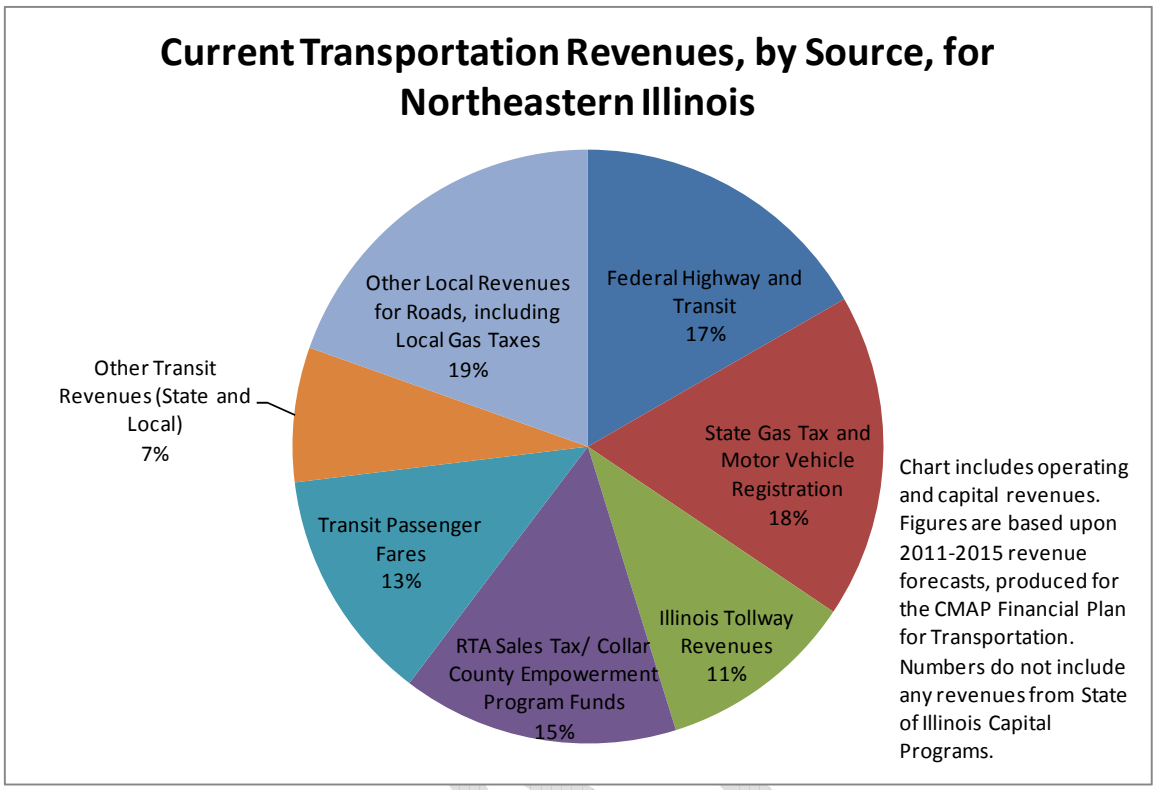
The maintenance and operation of a safe and adequate system is of paramount importance to all transportation implementers. Over 1,000 fatalities occur on Illinois roadways each year. Safety is not something which can be "traded off" within the regional planning process- available funds are allocated first to maintaining the system at a safe and adequate level before other projects involving modernization, enhancements, or major capital projects are considered. At the same time, investments which modernize the system and bring roads and transit toward a "state of good repair"can only help, not hinder, in making the transportation system safe and secure for all users.

Current Conditions

Where Revenues Originate

The federal government, State of Illinois, and our local governments all play a major role in financing the transportation system of northeastern Illinois. The private sector plays a minimal role, limited to operating the Chicago Skyway (a toll road formerly operated by the City of Chicago) and the City of Chicago's recent 75 year, $1.15 billion lease of 36,000 metered parking spots. Revenues originate in large part from user fees, like gas taxes, transit fares, tolls, and vehicle registration fees. However, non user fees, like the sales tax and local tax revenues, also a play a major financing role. The following pie chart reflects the existing conditions, by funding source, for the transportation system in northeastern Illinois:

[5] U.S. Department of Transportation. 2007. "2006 Status of the Nation's Highways, Bridges and Transit: Conditions and Performance". Federal Highway Adminstration, Washington D.C. (January).



While federal transportation programs arguably receive the most attention from a public policy perspective, the majority of our system is financed by state and local revenues. The amount of funding raised through State motor fuel tax and vehicle registration fees is about the same as federal revenues received for both the highway and transit programs. The two major local sources for funding for our transit system come from passenger fares and the RTA sales tax, equivalent to 1 cent in Cook County and 3/4 cent in the collar counties, excluding Kendall. One third of the collar county sales tax (equivalent to ¼ cent) is disbursed by the State to the county governments, and is used for transportation purposes and public safety. This is known as "Collar County Transportation Empowerment Program". Kendall County also imposes its own sales tax for transportation, at a rate of ½ cent. Almost a fifth of total funding comprises "other local revenues for roads". This includesvarious revenue sources used for maintaining and reconstructing local roads, such as local and county option gas taxes, and other sources of general revenue, such as property tax, sales tax, and state/local revenue sharing funds from state sales tax, income tax, and other sources.

The majority of transportation revenues flowing to Northeastern Illinois are generated by user fees, reflecting expenditures made directly by users for using the transportation system. User fees, such as federal highway and transit revenues (financed through the federal gas tax), state and local gas taxes and vehicle registration fees, tollway revenues, and transit passenger fares, comprise roughly three fifths of the region's transportation revenues. "Non user fees" reflect other tax revenues that, while generated for the purposes of funding transportation, do not accrue based on any direct transaction for the privilege of using the system. Non-user fees

include the RTA sales tax, and other state and local revenues used for transit or local road maintenance.

GO TO 2040's Financial Plan for Transportation estimates that the region will receive just over $385 billion in revenues between 2011 and 2040. Over 90% of these revenues are considered "core revenues", based on historical trends and no major changes to tax rates or funding formulas. This figure is a "year of expenditure" figure, factoring in inflationary and other revenue increases due to population growth. While this number certainly seems large, an analysis of needed expenditures shows that these revenues will not allow the region to make much progress in addressing our substantial transportation needs.[6]

Costs of Operating and Maintaining the System

At present, existing revenues appear sufficient over the long term for operating and maintaining our present system roughly at the level it is today, but not accomplish much more. The implication is a "bare bones" level of service which will not allow the region to make much additional progress in bringing the system toward a state of good repair, or modernizing or expanding the system to the level demanded by our residents and businesses. Furthermore, maintenance to this "safe and adequate" level requires conservative assumptions, particularly regarding the future growth in operating and capital costs. Large jumps in these costs will continue to result in an added maintenance backlog and an inability to keep the operating service at present levels. The reality is that our revenues are drastically insufficient for minimizing maintenance backlogs, enhancing, modernizing, or expanding the system beyond what we have today.

CMAP analysis estimates that of the $385 billion[7] estimated to be available between 2011-2040, $333 billion (86% of this total) will be needed to simply operate and maintain our system of highways (including local roads) and transit at a safe and adequate level out to the year 2040. This leaves only 14% of revenues to scale up existing maintenance cycles, enhance or modernize the system, or construct new major capital projects.[8]

Recent trends showing rapidly increasing transportation costs, on both the capital and operating side, are worrisome. Until 2002, construction costs, as measured by the Engineering News Record (ENR) construction cost index (CCI), mostly followed general inflation trends, as measured by the consumer price index (CPI). Since then, construction costs have significantly outpaced inflation. Economists believe this dynamic has been caused largely by volatility in global prices of steel and oil (which drives asphalt prices to a large extent). Other analyses of construction costs that focus on primary transportation inputs, like asphalt, steel, concrete, and

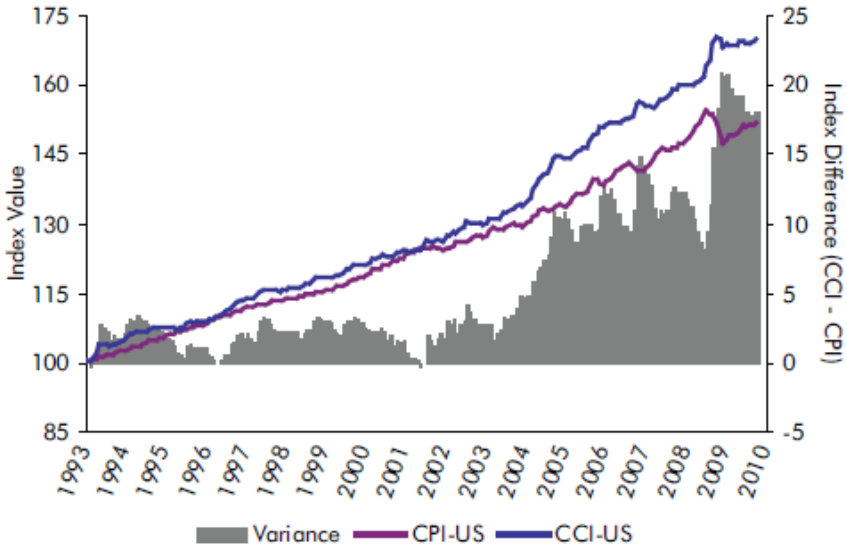
[6] More details on assumptions and historical trends are included in the *GO TO 2040* Financial Plan for Transportation. ADD FOOTNOTE.

[7] The $385B includes $350B in core revenues (estimates of the revenues the region receives today) plus an additional $35B in "reasonably expected revenues" which include a gas tax increase, the institution of congestion pricing, and other financing strategies.

[8] *GO TO 2040* Financial Plan for Transportation.

the cost of labor and equipment, actually find that these costs are even outpacing construction costs as a whole.[9] The following graph of the 1993-2010 period demonstrates how construction costs have recently begun to outpace consumer prices:

U.S. Construction Costs (CCI), Consumer Prices (CPI), and Variance, 1993-2009[10]



CPI, CCI, and variance between the two from 1993-2009 — source: BLS, ENR

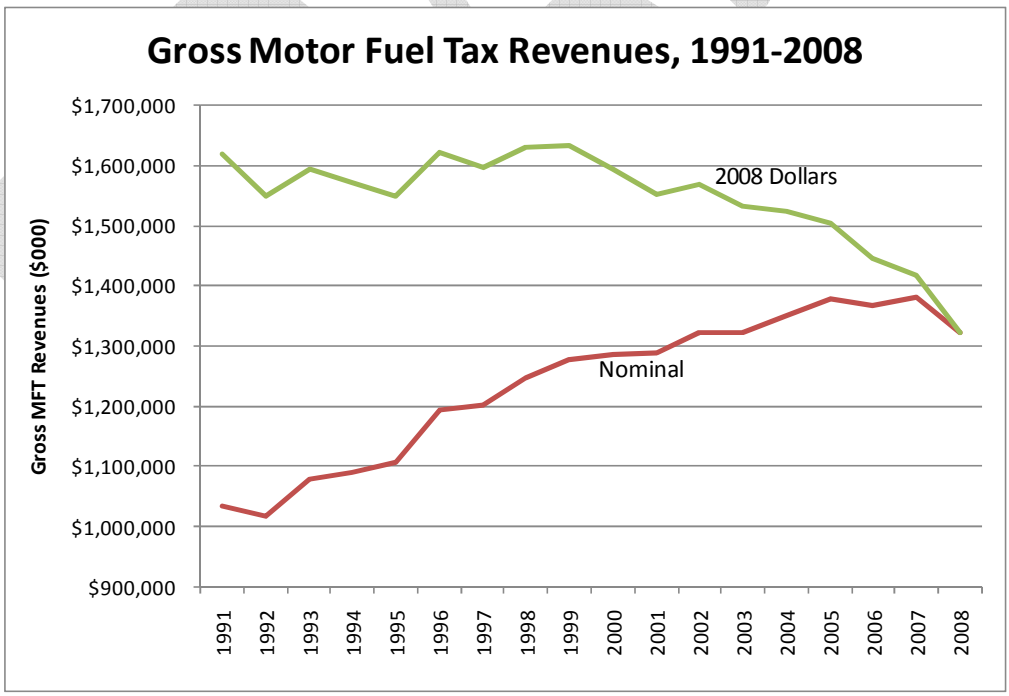
Operating costs, which are driven largely by workforce but also by inputs like fuel and security costs, have also shown large increases, particularly in recent years. Over two thirds of transportation "operating expenditures" comprise costs related to operating public transit, which includes the labor, fuel and other related costs of operating and maintaining the region's large system of trains and buses. Over the last fifteen years, the transit service boards have often experienced large annual operating cost increases, on the average of 4.5% but reaching as high as 9% .[11] While some inputs like fuel prices will remain volatile and susceptible to wild fluctuations in the future, it is crucially important to note that few revenue sources promise to yield annual growth rates at these levels. As a result, this region will continue to experience transit funding crises and cuts in service unless a better solution for controlling operating costs is found. While it is vital to focus on revenues, particularly those sources that have been declining in their purchasing power, protecting against skyrocketing operating costs is absolutely crucial for maintaining the integrity of the transit system over the long term.

[9] Gunasekera, Kumudu and Brad Ship. December 2009. *Construction Economic Review and Highway Cost Escalation Forecast*. Parsons Brickerhoff. Economic Forecasting Review. Volume 3 Issue 2.
[10] Ibid.
[11] Based on RTA annual reports

Federal and State Gas Taxes

The rising cost of construction and operations, coupled with inflation, has significantly undercut the purchasing power of federal and state motor-fuel-tax receipts. The federal Highway Trust Fund (HTF), which funds various programs for both highways and transit, is currently supported by an 18.4 cent per gallon gas tax which was last increased in 1993. The tax accumulates in the Highway Account (15.5 cents), the Mass Transit Account (2.8 cents), and the relatively small Leaking Underground Storage Tank Trust Fund. The National Surface Transportation Infrastructure and Finance Commission calculates that the actual purchasing power of the federal gasoline tax has declined by 33 percent since 1993.[12] In 2008, 2009 and 2010, Congress has supplemented the HTF with general funds to keep it solvent.

In Illinois the two major sources for state transportation revenues are the motor fuel tax (MFT) and motor vehicle registration fees. These revenues are used primarily for road maintenance and construction. The State MFT has a current rate of 19 cents per gallon plus an additional 2.5 cents per gallon for diesel. The State MFT was last increased in 1991. After a variety of deductions, 45.6% of the MFT revenues allocate to the Illinois Department of Transportation's Road Fund and State Construction Fund, and the remaining 54.4% allocate to local governments. Similar to the federal gas tax, the state's gas tax revenues have greatly declined in their purchasing power between 1991 and 2008. The following graph shows gross state motor fuel tax revenues, in both nominal and 2008 constant dollars:



[12] National Surface Transportation Infrastructure Finance Commission. February 26, 2009. "Paying Our Way: A New Framework for Transportation Finance".

Motor Vehicle Registration Fees vary according to vehicle type and weight. Unlike State MFT, these revenues are not shared with local governments by formula. They accrue directly to the State Road Fund and Construction Accounts. The State's motor vehicle registrations have been raised several times in recent years. The most recent increase occurred in July 2009 which raised the annual auto license plate fees from $78 to $98. However, this recent increase in motor vehicle title, license plate, and drivers' license fees is scheduled to be used for debt service on the 20-year bonds for the State's most recent capital bill, *Illinois Jobs Now*. The fee increases will accrue in a new capital project fund, which will provide revenues for both transportation and non-transportation projects, such as schools and state buildings.

State Capital Program Funding

Roughly once every 10 years, the State of Illinois provides a state capital funding package for transportation and other infrastructure projects. The most recent packages, enacted in April and July 2009, provide over $9.5 billion in bonds for state and local roads, transit, high speed rail, the CREATE freight initiative, and airports. The bonds must be paid down through debt service from existing and new funds, including the General Revenue Fund, Road Fund, and new "Capital Projects Fund", which is to be financed through increased motor vehicle fees, video gaming, lottery, and other sources.

Highway and transit implementers depend upon the large outlays provided through the state capital program to supplement other revenues received through federal, state and local sources. Besides the fact that the state capital program monies are insufficient for bringing the system to a state of good repair, the program's time horizon (typically once every ten years, to last a period of five years), financing mechanisms, and project selection criteria deserve brief mention.

First, the time horizon for the program is a clear admission that we are not adequately funding our system at the necessary level on a regular basis. It would make more sense to raise adequate revenues on a continual basis, rather than rely on the state legislature for "boom and bust style" fixes, which also can create economic distortions within the construction industry. Second, capital programs are typically financed almost entirely through bonds, which require long term debt servicing to fund a 5 year program. While bonding remains a perfectly practical way to finance certain capital improvements, overreliance on the practice can put an undue burden on future generations. While "pay-as-you-use" bond financing reflects the future benefits from today's capital expenditures, this practice should be balanced by "pay-as-you-go" financing, which reflects fiscal prudence and usually necessitates more careful planning and prioritization. Third, the program lacks a transparent project selection process- projects are generally earmarked rather than based upon a metric of actual need.

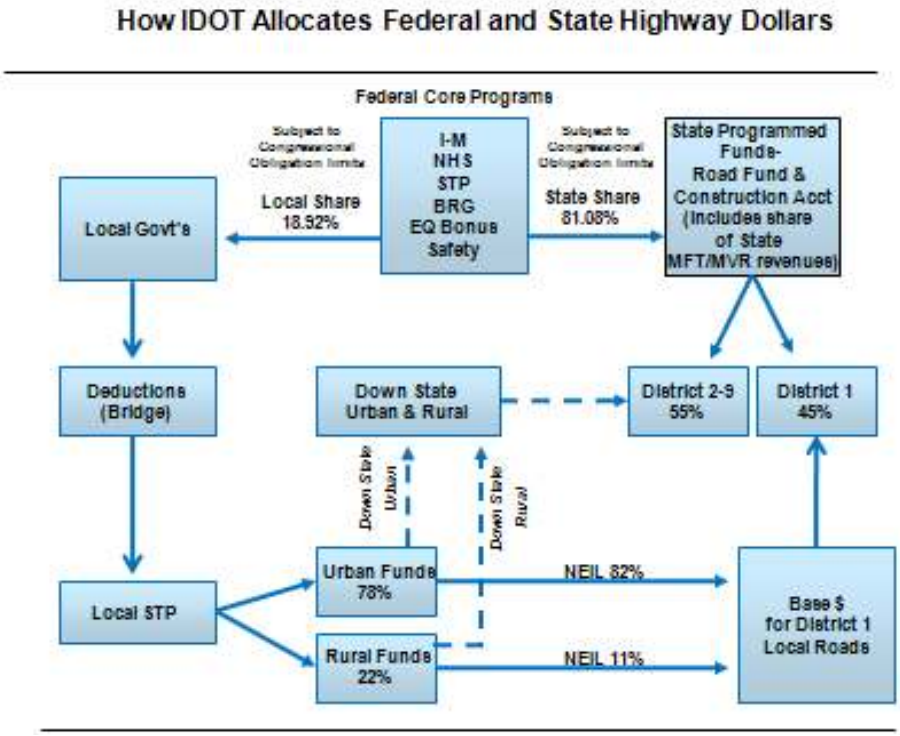
Allocation Mechanisms for Federal and State Funds

The most recent federal transportation act (SAFETEA-LU), like its predecessors, allocates federal dollars via a multitude of different programs. Most highway funding is allocated to State Departments of Transportation based on formula, which differs by program but typically

includes criteria like total lane miles, vehicle miles traveled, and fuel use. The Illinois Department of Transportation is the primary recipient of the funds and generally holds the most responsibility of programming, financing, and implementation. Some programs or program set-asides are allocated at the discretion of the Secretary of Transportation or by Congressional earmark.[13]

While funds are apportioned out to the States using different metrics, Illinois, like other states, is then given fairly wide latitude in how the different funds are used. States have authority to transfer funds among different programs- for example, Interstate Maintenance (IM) funds or National Highway System (NHS) funds can be transferred to the Surface Transportation Program (STP), which can then be programmed for a variety of transportation purposes, including highway, transit, or bike/pedestrian. While this flexibility would allow for allocating this funding based on cost/benefit or other metrics of performance or impact, in practice the federal government requires little accountability from the States in terms of how projects are selected or what outcomes are being achieved.

In practice, the State chooses a rather arbitrary way of distributing this funding. In northeastern Illinois, this outcome is sometimes referred to as the "55-45" split, where northeastern Illinois ("District 1") receives 45% of the federal and state allocation (including state MFT[14] and vehicle registration revenues deposited in the Road Fund), while downstate Illinois ("Districts 2-9") receives 55%. The complex funding flow is explained in the graphic below:



[13] See http://www.fhwa.dot.gov/federalaid/guide/guide_current.cfm for a current list of FHWA grant programs.
[14] State MFT dollars also have a local allocation. This is not displayed in the flowchart.

The Federal Transit Administration also sponsors a number of grant programs, some allocated by formula and some allocated on a discretionary basis. While upwards of nineteen different programs currently exist[15], a smaller number of these programs typically provide funds to the RTA and service boards of northeastern Illinois. The major funding programs include Urban Formula (Sec 5307), Fixed Guideways Modernization, Bus & Bus Facilities, and New Starts (Fixed Guideways) (all are Sec 5309 funds).

The discretionary New Starts program provides funds for construction of new fixed guideway systems or extensions to existing fixed guideway systems. The funds are not intended for maintenance or modernization projects. Projects become candidates for funding under this program by successfully completing the appropriate steps in the major capital investment planning and project development process. Funding allocation recommendations are made in an annual report to Congress: "Annual Report on New Starts." While the statutory match for New Starts funding is 80 percent Federal, 20 percent local, it should be noted that the Congressional Conference Report that accompanied the FY 2002 Department of Transportation Appropriations Act instructs "FTA not to sign any new full funding grant agreements after September 30, 2002 that have a maximum Federal share of higher than 60 percent."[16] This New Starts criterion differs from highway funding projects, which are funded with a federal share of 90% for interstate maintenance and improvements, and 80% for most other projects.

The Regional Role in Allocating Transportation Funding

While most federal highway revenues, state motor vehicle registration revenues, and state motor fuel tax revenues flow to the State Road and Construction Accounts, some funds devolve project selection authority to CMAP (the region's metropolitan planning organization, or "MPO") or to the Subregional Councils of Mayors. The Local Surface Transportation Program (Local STP) is administered through CMAP and IDOT.[17] Each of the 11 subregional councils and the City of Chicago receive individual funding and each council has a self determined methodology for selecting the most beneficial projects.[18] CMAP also manages and monitors the federal Congestion Mitigation and Air Quality Improvement (CMAQ) program through the CMAQ Project Selection Committee, which recommends CMAQ projects in northeastern Illinois.

The CMAP Board and the region's MPO Policy Committee track the use of local, state, and federal transportation funds through the Transportation Improvement Program (TIP). The purpose of the TIP is to help transportation professionals, service implementers, and planning organizations establish a short-term transportation program to reflect the long-range

[15] See http://www.fta.dot.gov/funding/grants_financing_263.html for a current list of FTA grant programs.
[16] http://www.fta.dot.gov/funding/grants/grants_financing_3590.html
[17] "Local STP" differs from "State STP". State STP funds are deposited into the IDOT Road Fund and Construction Account and used primarily for state highway projects.
[18] See http://www.cmap.illinois.gov/stpresources.aspx for more about STP as well as links to subregional criteria for project selection under this grant program.

transportation goals identified in the long range plan. The CMAP Board and MPO Policy Committee[19] retain the ability to judge whether or not the allocation of federal and state monies align with regional priorities. It does this through approval of the TIP, including ongoing changes and amendments to projects within it. Projects supporting the long range plan are included in the TIP. The MPO also can, in theory, disallow the inclusion of projects that fail to support the plan.

Other Innovative Financing

To date, very little of what might be called "innovative financing", sources beyond traditional gas taxes, vehicle registration fees, passenger fares, or other taxes, is utilized in northeastern Illinois. One can easily imagine a laundry list of potential possibilities for raising more revenues for transportation. However, only a small number of these options really promise to tackle the problems inherent in the economics of today's transportation system, namely, the large gap between what users of the system pay versus the full cost of what that use entails. While the current average user fee is only a few cents per vehicle mile traveled, one recent study pegs the full cost of using highways (during congested times) as somewhere between 13-29 cents per mile.[20] Transportation strategies which better address this "externality" problem- a chief example of this is the large societal cost due to congestion- can also raise revenues for additional operating and capital needs on roads and transit. These strategies which truly "kill two birds with one stone" should be prioritized.

Other innovative financing strategies include:

- Congestion Pricing
- Parking Pricing
- Value Capture Strategies and Transit Impact Fees
- Public Private Partnerships
- A Long Term Replacement for Gas Taxes, including Vehicle Miles Traveled (VMT) Fees

Measuring Success

The outcomes we want to achieve through increased and smarter investment in the region's transportation infrastructure include a more modern system, one that is moving toward a state of good repair and also maximizing performance to satisfy the demand of residents and businesses. Making smarter, more targeted investments can help move the region toward these goals. Measuring the region's success in changing the current surface transportation system's

[19] The CMAP Board and the MPO Policy Committee are currently operating under a Memorandum of Understanding (last reaffirmed in March 2010). By federal law, the MPO Policy Committee takes final action on all transportation related plans, programs and documents.

[20] HDR|HLB Decision Economics. 2005. "Road Pricing on a National Scale". Prepared for the U.S. Department of Transportation, Washington, D.C.

funding mechanisms can focus on the condition of the existing system and whether or not it is in state of good repair. Another important measure of success is the degree of congestion on the system.

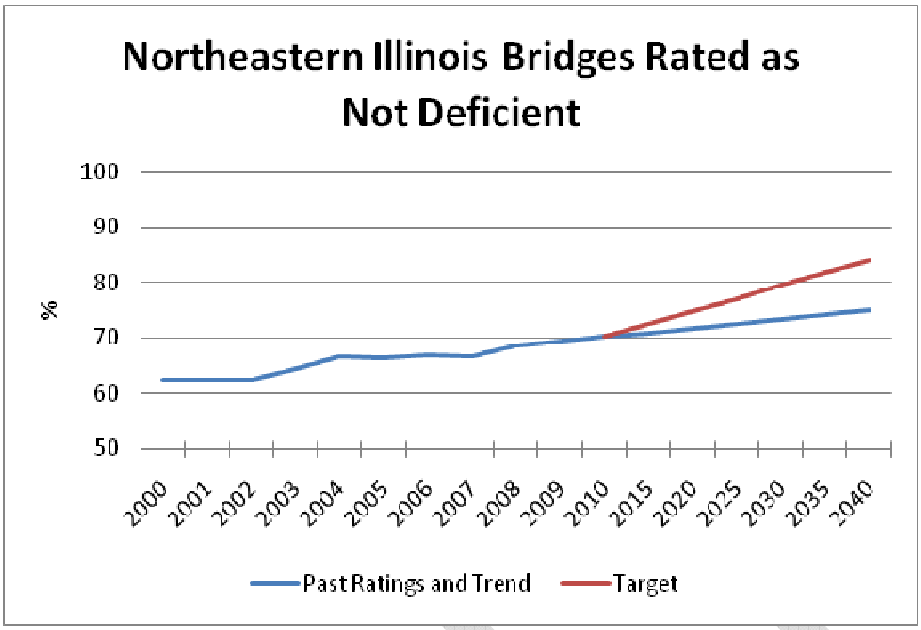
Transportation System Condition

Three separate indicators can be employed to measure the condition of the transportation system. The Regional Indicators project will track road conditions through the acceptable ride quality index measure and the deficiency rating of bridges. The Federal Highway Administration (FHWA) has defined "acceptable" ride quality as pavement with International Roughness Index (IRI) values of less than or equal to 170. For the purpose of comparison IRI data was collected from FHWA's Highway Performance Monitoring System (HPMS) for the year 2003 and from the Illinois Roadway Information System (IRIS) for the year 2006 for both freeway and principal arterials. The CMAP region's freeway route miles have a very high acceptable ride quality rating while only 62% of the principal arterials' route miles are acceptable. By 2040, *GO TO 2040* seeks to increase the percentage of principal arterials that are acceptable, **from 61.9% to 90%.**

Acceptable Ride Quality by Percent of Route-Miles

	Cook	DuPage	Kane	Kendall	Lake	McHenry	Will	Chicago Region
Interstate Freeway IRIS 2006	88.6%	89.9%	87.3%	100.0%	87.5%	100.0%	97.7%	90.5%
Interstate Freeway HPMS 2003	82.6%	89.1%	86.6%	100.0%	94.5%	100.0%	100.0%	88.4%
Principal Arterial IRIS 2006	44.8%	75.9%	70.7%	72.2%	71.2%	75.3%	64.7%	61.9%
Principal Arterial HPMS 2003	53.6%	77.2%	82.8%	85.7%	79.3%	67.9%	72.2%	68.2%

The region's bridges can be assessed for deficiency based upon FHWA's National Bridge Inventory database. In 2007 66.5% of the region's bridges were rated as "not deficient". By 2040, *GO TO 2040* seeks to increase the share of bridges found to be not deficient to **86%.**



The final indicator will measure the **percentage of transit assets** in good condition. Actions are underway to collect and analyze this data.

Congestion

The performance of the transportation system can be measured by the congestion of the highway network. The travel time index is a Regional Indicator that measures the ratio of travel time in the peak period to travel time during free-flow conditions. For example, a travel time index of 1.5 indicates that a 20-minute free flow trip takes 30 minutes, on average, in the peak period. The implementation of targeted improvements, expansions, congestion pricing and other managed lanes strategies should lower the travel time index for the region.

Expressway Travel Time Index, Metropolitan Chicago, 1982-2040

	1982	1997	2006	2007	2008**
TTI*	1.12	1.33	1.45	1.43	1.3-1.5 (a.m.) 1.5-1.6 (p.m.)
CMAP***	n/a	n/a	n/a	n/a	1.43 (a.m.) 1.59 (p.m.)

* Texas Transportation Institute (TTI)
**TTI data through USDOT Mobility Monitoring reports
***Weighted by expressway segment vehicle miles travelled. Not available for all expressways.

The transportation investments and more efficient land use pattern laid out in *GO TO 2040*'s preferred Regional Scenario are expected to *reduce congestion* compared to a reference scenario that projects current trends. While congestion is expected to rise in absolute terms compared to today, it will rise at a lower rate than population growth, meaning that congested hours per capita will decline.

Recommendations

Achieving the goal of a modern, world class transportation system requires serious action from all levels of government. Estimates of available "core revenues", which consist of current revenue sources trended out over the 2011-2040 planing horizon, will not allow the region to make much progress in addressing our substantial transportation needs given expected population growth. The region should continue to make the case for increased revenues for transportation. While a multitude of options for raising revenues exist, the region should prioritize the ones which compel users to pay an amount closer to the full cost of using the system, particularly on the highway system, where each additional user imposes congestion costs on others. These types of strategies would both help raise more revenue and also enable the system to operate more efficiently. The institution of congestion pricing and parking pricing mechanisms, along with raising motor fuel taxes and indexing them to inflation, help to address the twin issues of fiscal shortfalls and economic inefficiency of the system. The long term sustainability of reliance on motor fuel taxes for funding transportation should also be addressed.

While finding new revenues is important, the region needs to get more serious about setting priorities for how existing funds are spent, on both the operating and capital side. The region's transportation decisionmakers should stress the use of performance-driven criteria, rather than arbitrary formulas, when making investment decisions. *GO TO 2040* strongly recommends a focus on maintaining the existing system first, and using most of our remaining resources to modernize the system. While some expansions are necessary, and these will be recommended in the plan's list of major capital projects, very few of these projects require building brand new facilities from scratch. Instead, the emphasis is on making the existing system operate more efficiently given the amount of funding we can reasonably expect to receive.

Below, these courses of action are broken into five categories: 1) finding cost and investment efficiencies, 2) implementation of congestion pricing, 3) implementation of parking pricing, 4) raising the federal and state gas tax, and 5) other innovative financing options.

Finding Cost and Investment Efficiencies

Making our system "world-class" does not simply require raising taxes or fees for more revenue, nor does it require expanding the system much beyond what is here today. Instead, the primary goal should be to prioritize spending on maintenance and modernization efforts. "Modernization" comprises a range of enhancements, including more comfortable and

attractive trains, buses and stations, traveler information systems, state of the art pavement materials with longer life spans, signal timing improvements, and a variety of other strategies, which can improve mobility, access, and the reliability of our transportation network.

The process of targeting which elements to improve or expand is not always straightforward. Evaluation criteria and quantitative models for predicting the impact of varying investment scenarios exist today. But the results of these evaluations should be taken more seriously and the decision-making tools should be improved. When making decisions on major projects, the region should make a shift away from stand-alone transportation models and toward integrated models with transportation, land use, and economic components; these can make more robust predictions of regional productivity gains as well as economic externalities like congestion, air pollution, and impact on sensitive natural areas. CMAP and other implementers should continue to refine decision-making criteria, as well as the quantitative models, so that different investment scenarios can be tested against the outcomes we want to achieve. As the region's metropolitan planning organization, CMAP must have the ability to ensure that investment decisions are based upon good criteria and align with the regional priorities of the long range plan.

Performance criteria should not only guide the programming of funds, but should also be used to optimize the way transportation funds are allocated, particularly by the federal and state governments. The federal government appropriates a multitude of different programs to States using a variety of different criteria, particularly road miles, fuel usage, and vehicle miles traveled. While this may not directly incentivize states to prioritize system expansion rather than maintenance, it does not create a disincentive either. Furthermore, the discretionary federal "New Starts" program for transit funds only expansion projects, and local match requirements remain much higher here than for highway projects.

While the State of Illinois has a great deal of flexibility in how federal and state funds are used, northeastern Illinois continues to be plagued by a non-statutory funding split which allocates 55% of road funding to downstate districts and 45% to northeastern Illinois. This split is arbitrary and not based on any metrics of need. Highway and transit funds also continue to be compartmentalized. The main reason for this is the breakdown of different federal funding programs, but it should be remembered that certain programs like the Surface Transportation Program (STP) enjoy a considerable degree of built-in flexibility in terms of project selection- both highways and transit can be funded through STP. The STP program, particularly State STP funds, represents one opportunity for making better programming decisions, more in line with the vision of the long range plan.

Lastly, transportation implementers must find ways to control costs on both the capital and operating sides. On the transit side, the recent growth in operations is unsustainable- there is no available revenue source which can reliably cover the magnitude of recent operating cost increases. No doubt, much of this reality is driven by global economic conditions as well as current labor laws, post 9/11 security requirements, and pensions. However, RTA and the

service boards should seek better solutions to this problem. The continuing escalation in the capital cost of construction for both highway and transit also remains of great concern. While the region may be largely powerless over these cost increases, it should be stressed that some innovative arrangements, such as "design-build" public private partnerships, life cycle costing, and the construction of longer lasting facilities, can consolidate and ease the engineering and construction processes, and keep costs for some major projects more under control.

Implement Congestion Pricing

Users of the highway system are currently not paying the full cost of their use. Gas taxes, vehicle registration fees, and tolls are used almost exclusively for activities like resurfacing and reconstruction, yet other costs remain unaccounted for- the most serious and visible cost is congestion, which continues to slow the movement of goods and people. Decades of road building and adding lanes to existing facilities have not kept pace with population growth and land use patterns which continue to prioritize the automobile over other modes. Congestion pricing seeks to apply economic principles of supply and demand to force drivers to internalize the cost of extra congestion they impose on others. The outcome is to reduce congestion to a level where drivers can engage in other activities, rather than sitting in traffic, which prove more productive to the regional economy.[21]

No new tax or fee is politically popular, but if Chicagoland is to keep pace with other industrialized and emerging economies around the world, it's going to need to get much more serious about implementing congestion pricing, in the near term, on various parts of the network. It must be stressed that congestion pricing is based on free market principles- the outcome of this strategy, when implemented prudently, is more efficient throughput of travel. Transportation experts and economists from across the political spectrum support the institution of congestion pricing. Congestion pricing has already been implemented in different places around the U.S.- the region can and should learn from these experiences.

Two potential, yet related pitfalls to congestion pricing are often raised- the first relates to its potential regressivity (the fees would likely impact low income people more than high income people). The second relates to a lack of clarity over how revenues should be distributed. There can be no doubt that the successful implementation of congestion pricing requires significant buy-in from adjacent local governments, public transportation providers, and low income users. As the policy can make some people better off and some people worse off, highway and transit improvements along the affected corridors can work to ameliorate these potential social equity pitfalls. A portion of the revenues should be used to make transportation improvements which might be necessary to address the spillover of some traffic onto adjacent arterials. Public transit providers should also receive a portion of the revenues specifically to offer service along the affected corridor.

[21] For more background on congestion pricing, see CMAP's "Managed Lanes" strategy paper: http://goto2040.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=10182

While the implementation of congestion pricing in northeastern Illinois is not unanimously supported, there has been a considerable level of coordination among local transportation agencies in studying its impacts and proposing specific projects to the federal government for implementation dollars. In December 2007, CMAP, in coordination with the Illinois Tollway, Illinois Department of Transportation, Regional Transportation Authority, and Pace submitted a Congestion Reduction Demonstration proposal to the United States Department of Transportation. The submittal proposes congestion pricing along the I-90/Jane Addams Memorial Tollway.[22] While the proposal was not selected by USDOT for funding, it demonstrates a regional commitment among both planners and implementing agencies to a careful implementation of congestion pricing.

Furthermore, The Illinois Tollway, in partnership with the Metropolitan Planning Council and Wilbur Smith Associates (WSA), is in the final stages of a two-year study to develop strategies that will reduce congestion in the region. The study models the impacts of congestion pricing on the Tollway, as well as IDOT expressways, and considers the diversion to local roads. It considers a range of scenarios, routes, and configurations to help reach desired goals.[23]

Implement ParkingPricing

The provision of free parking only serves to perpetuate automobile dependency, increase congestion, and lead to economic inefficiencies. Research indicates that an estimated 99% of parking in the United States is free[24], although the true costs of parking (i.e. construction, maintenance, etc.) are passed along to consumers and taxpayers via increased taxes and higher prices for goods and services. Parking management strategies, particularly those using variable pricing, can allow the price of parking to reflect its true market value. Using such market mechanisms has been demonstrated to be quite effective in managing parking demand; in one study, it was found that a 1% increase in parking fees resulted in a 0.3% decrease in demand.[25]

Local governments can utilize parking pricing along with other parking management strategies to promote efficient use of existing parking. Examples of parking management strategies include shared parking plans, improved information on availability of parking and reforming city ordinances to reduce parking requirements for new developments, which are typically designed to accommodate rare peak demand. Revenues generated can assist local governments in the maintenance and management of their existing transportation infrastructure or help improve transit service.

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[22] The proposal can be found here: http://tinyurl.com/2m2bxu

[23] See more information about this study here: http://www.cmap.illinois.gov/WorkArea/DownloadAsset.aspx?id=16529

[24] Shoup, Donald 2005. *The High Cost of Free Parking.* Washington DC, American Planning Association

[25] Pratt, Richard H. 2003. "Parking Management and Supply" *Traveler Response to Transportation System Changes.* Transit Cooperative Research Program Report 95, Chapter 18. Transportation Research Board.

Similar to congestion pricing, the mechanism of "variable pricing" for parking can be used as a demand management tool for congested road facilities, and also raise considerable revenues. Variable parking pricing seeks to apply a free market-inspired pricing system to more efficiently allocate parking supply, with higher prices charged at times and locations of peak demand. Variable pricing has the promise of both effective congestion mitigation and the ability to raise considerable sums for local government.

Northeastern Illinois currently has over 3.2 million off-street commercial and industrial parking spaces in more than 32,000 facilities, close to 95,000 spaces at transit parking lots and millions more in on-street parking spaces. On-street parking, as close to a business as possible, is the most convenient type of parking for potential customers, and keeping these spots available for short-term use should be a high priority. If on-street commercial parking is not managed or priced, commuters, employees and spillover parkers avoiding fees will use the parking spaces and desired patrons will not have a place to park. Some economists have suggested that municipalities charge a price that will ensure that approximately 15% of the spaces are always vacant.[26] This could be in the form of variable pricing that maintains a high enough price so that there will always be some vacancy, but not so high as to send business to other locations.

Increase Federal and State Gas Taxes and Index Rates to Inflation

As a primary revenue sources for transportation funding, federal and state motor fuel taxes have not been imposed at appropriate levels to fund the maintenance and operations of our current system and provide for necessary capital improvements. The levels are not appropriate because the revenues are falling behind inflation, much less the pace of recent escalating construction costs. Federal and State gas taxes remain cents per gallon taxes, thus when fuel consumption slows, revenues drop, regardless of the price of gasoline. While continued reliance on gas taxes may not be an attractive solution over the long run (largely based on its growing inefficiency as a "user fee" once more alternative sources of fuel are utilized), in the short and medium term, MFTs must be increased because they hold the most near-term revenue potential for transportation funding.

Unlike many of the potential alternatives that could replace or supplement the tax, gas taxes already have administrative systems in place for collection. The MFT also has the ability to directly charge for negative air quality impacts caused by the burning of fossil fuels, particularly carbon dioxide and other greenhouse gas emissions. The failure of the MFTs in keeping up with the rate of inflation can be solved by indexing the tax rates to institutionalize annual adjustments that would at least maintain the purchasing power of the generated revenues. *GO TO 2040* recommends that the State increase the existing 19 cents per gallon tax by 8 cents and index the tax to inflation, either the consumer price index, construction cost index or a transportation materials cost index. The federal gas tax should also be raised, and indexed to inflation.

[26] Shoup, Donald. 2003. "The High Cost of Free Parking". Presentation to the International Symposium on Road Pricing. November. www.trb.org/conferences/roadpricing/presentations/shoup.ppt

Pursue Appropriate Public Private Partnerships

Public Private Partnerships (PPPs) offer several different approaches for funding transportation infrastructure improvements and operations.[27] In northeastern Illinois, the most well-known example involves the City of Chicago's long-term lease agreements of the Chicago Skyway. Currently the State of Illinois lacks the necessary enabling legislation that would allow the State the broad authority to enter into PPPs. Like the City of Chicago, individual cities and municipalities have the ability to execute these financing agreements.

PPP comprises a range of different strategies, from "design-build", which works to consolidate typically disparate engineering and construction processes into one contract, to "design-build-operate-maintain", where the responsibilities for the designing, building, financing and/or operating a new transportation facility are bundled together and transferred to private sector partners. Long term lease agreements (like the leasing of the Chicago Skyway) involve an publicly-financed transportation facility that is leased to a private sector entity for a prescribed period of time during which the private entity has the right to collect revenue from the operation of the facility. In exchange, the private entity must operate and maintain the facility and in some cases make improvements to it.

The focus of PPPs should not only be on the leasing or privatization of transportation infrastructure assets and the revenue generating aspects. Several of the PPP strategies are concerned with shifting financial risk from the public to the private sector, leveraging private sector dollars and realizing cost savings from reduced project construction schedules. A range of pros and cons exist for each kind of PPP strategy, and contracts between public and private entities can be extremely complicated and costly to enact. However, some PPP strategies are worth exploring- in particular, the most simple strategy- "design-build"- has shown the ability to reduce costs and drastically shorten the duration of projects, due to the elimination of a second procurement process for the construction contract.[28] One example of design-build, the recent Transportation Expansion Project (T-Rex) in Denver (expansion of I-25 and I-225 along with the construction of a new light rail line connecting the Denver Tech Center and downtown), was completed 22 months ahead of schedule and 3.2% under budget. The project sponsors estimated that the entire project would have taken 20 years or more to construct under a standard design, bid, and build process.[29]

Pursue "Value Capture" Strategies and Transit Impact Fees

"Value capture" refers to a range of financing strategies by which transportation implementers (particularly transit operators) can acquire capital or operating revenues from increases in property values caused by the transportation infrastructure investment. Access to

[27] For more information, see the Public Private Partnership strategy report, produced by the Volpe Center for CMAP: www.goto2040.org/WorkArea/DownloadAsset.aspx?id=14844
[28] See http://www.fhwa.dot.gov/reports/designbuild/designbuild.htm
[29] Need Footnote

transportation is a valued amenity in the real estate market. Numerous studies have found that property values increase in proximity to rail and highway access points (though not immediately adjacent to them due to noise pollution and congestion issues). These impacts dissipate as the distance from the transportation access grows.[30] The range of strategies include the creation of special assessment districts, tax increment financing (TIF) districts, and applying a proximate "land value tax", or a property tax assessed to a much greater degree on land rather than improvements.

One particularly intriguing "value capture" strategy is imposing development impact fees. Impact fees are a one-time tax assessed on property development for the additional strain the new development puts on infrastructure. Impact fees are assessed on developers (though ultimately passed through to land owners and house buyers), are instituted by taxing authorities, assessed before the property is developed but often after the transportation infrastructure is, and usually must be applied to on-site properties or those immediately adjacent. Transit impact fees have been utilized in other parts of the U.S., including San Diego County, counties in Washington State, and in the City of San Francisco. Imposing a transit impact fee in the Chicago metro could generate a large amount in capital funds for the RTA system.

Pursue A Long Term Replacement for Gas Taxes

While raising gas taxes in the short term makes good policy sense given declines in purchasing power and the administrative mechanisms already in place , motor fuel taxes will likely need to be replaced within the next twenty years as vehicles switch to alternative energy sources. "Pay as you drive" strategies, including the imposition of a vehicle miles traveled (VMT) fee, could raise large annual revenues, depending on the fee schedule.[31] A VMT fee would likely be more efficient in making users bear the full costs of their road use. The gas tax currently fails the test as an efficient "user fee" given the varying levels of fuel efficiency in cars and trucks. However, new administrative procedures for instituting a new fee structure would need to be enacted. The gas tax is currently easily administered and similar mechanisms would need to be developed to adopt a VMT fee. While not a short-term solution to the transportation financing problem, analysis on the benefits of these types of new financing strategies should continue.

[30] For a review of studies that look at railroad access, and an explanation in the variation in findings, see Ghebreegziabiher, Derezion, Erik Pels, and Piet Rietveld (2007) "The Impact of Railway Stations on Residential and Commercial Property Value: A Meta-Analysis," *Journal of Real Estate Finance and Economics*, vol. 35, pp. 161-180.

[31] See CMAP strategy paper on Travel Demand Management for more information. http://www.goto2040.org/WorkArea/DownloadAsset.aspx?id=14950

Implementation area #1: Find cost and investment efficiencies.

Action	Imple- menters	Specifics
Prioritize maintenance and modernization projects when making investment decisions	IDOT, RTA, CTA, Metra, counties, local governments	Investments that maintain and modernize the transportation system should be prioritized over major expansion projects. This modernization focus should serve as a policy backdrop for our transportation investment decisions on both the highway and transit side. Furthermore, research and planning staffs from implementing agencies should conduct more in-depth studies on the impacts of cost-effective modernization strategies, including the procurement of more state-of-the-art buses and trains. Other modernization strategies include traveler information systems, better pavement materials, signal timing, and other intelligent transportation (ITS) improvements.
Develop and utilize transparent evaluation criteria for the selection of road projects, particularly ones adding capacity.	IDOT, CMAP, RTA, Metra, Pace, RTA	Well defined criteria are needed for the selection of projects, particularly new roads, projects adding capacity to existing facilities, and new or increased transit service. This will help make the process of allocating state and federal funds more transparent for the general public and allow for the most crucial improvements and projects to be completed first with the finite resources available. CMAP has developed a set of criteria for evaluating major capital projects. IDOTand CMAP should coordinate on the use of these criteria and evaluate existing quantitative models for their degree of rigor and robustness.
Ensure that the region's transportation projects are based on the above performance measures and align with the priorities of *GO TO 2040*	CMAP	CMAP has an important role to play in terms of whether or not finances should be allocated to transportation projects based on the above performance criteria, and whether the projects satisfy the direction of the long range plan, *GO TO 2040*. Changes or amendments to the Transportation Improvement Program (TIP) is the process by which such decisions can be made. CMAP staff should use criteria to measure the performance of projects, particularly larger, capacity-adding projects, in the TIP and make recommendations on action to the CMAP Board and MPO Policy Committee, who hold final say on whether or not projects should be included.
Improve decision making models used for evaluating transportation projects.	CMAP	CMAP should continue to lead in developing the analytical tools and techniques for project evaluation. As the agency coordinates planning for transportation, land use, environment, and economic development, the quantitative models employed to make these evaluations should be upgraded, toward integrated

		models with transportation, land use, and economic components.
Identify methods and technologies to improve operational efficiency of the transit system	RTA	The RTA should focus its efforts on addressing the system's fiscal health, particularly pursuing strategies for improving operating efficiencies and ending the continual cost increases that have compromised the integrity of the system.
Revise the federal "New Starts" program for transit.	USDOT	Change the criteria for federal New Starts grants, which are a significant funding source for transit, to support reinvestment in existing infrastructure rather than solely new expansions.
Develop regional infrastructure funding programs for plan implementation	IDOT, CMAP	Create a pilot program meant to focus infrastructure funds to implement local comprehensive plans, modeled on programs in Atlanta and San Francisco. Allocate a portion of funds currently programmed by the state (STP) and by CMAP (CMAQ) for this purpose. Retain the current programming of local STP funds, but encourage programmers to consider livability in their funding decisions.
End the "55-45" split for Illinois transportation dollars and make investment decisions based on metrics of need.	IDOT	Northeastern Illinois continues to be plagued by a non-statutory funding split which allocates 55% of road funding to downstate districts and 45% to northeastern Illinois. Transparent performance driven criteria should be used to drive investments rather than an arbitrary split.
Revise the process of state capital program funding in Illinois	State elected officials	Funding for transportation capital improvements should be included as part of the annual budgetary process, rather than in the form of "state capital program" bills, which typically occur only every ten years. Furthermore, project selection should be based upon performance based criteria rather than on earmarks.

Implementation area #2: Increase Motor Fuel Taxes in the Short Term, and Institute a Replacement in the Long Term

Action	Imple-menters	Specifics
Implement an 8 cent increase of the State's motor fuel tax and index it to inflation.	State elected officials	This would require an act of the State Legislature and the Governor. An increase in the State's motor fuel tax presents the best option for short-term increase in revenues for transportation funding. The tax should be indexed to the rate of inflation to combat the decrease in purchasing power that occurs over time.
Implement an increase of the federal motor fuel tax and index it to inflation rate.	Federal elected officials	This would require an act of the U.S. Congress and the President. The federal motor fuel tax was last increased in 1993. Index the tax to the rate of inflation.
Conduct a detailed study of potential gas tax replacement revenue mechanisms, particularly "pay-as-you-drive" fees like a vehicle miles traveled (VMT) fee.	CMAP, USDOT	As the fuel efficiency of automobiles increases along with the use of non-petroleum based fuels, there will be a long term need to replace the MFT. This could take the form of a vehicle miles traveled (VMT) fee. Existing GPS technology has the dynamic potential to charge fees based upon location/roadway and time of day.

Implementation area #3: • Implement congestion pricing on select road segments

Action	Imple-menters	Specifics
Complete operational study of the potential congestion pricing projects.	ISTHA, IDOT, CMAP	Complete the operational impact study on the three alternatives identified by the Regional Congestion Pricing Study undertaken by ISTHA, MPC and Wilbur Smith. The three alternatives are I-90/94 Kennedy Reversibles between Edens I-94 and Ohio St, I-90 Jane Addams between I-290 and I-294 and I-55 Stevenson between I-294 and I-90/94.
Implement congestion pricing pilot projects.	ISTHA, IDOT, CDOT, CMAP, RTA	Utilizing information collected in the regional and project level studies conducted, implement regional congestion pricing pilot projects . I-290, I-90, and I-55 are managed lanes projects specifically recommended in *GO TO 2040*- these should be prioritized.
Fund supportive transit projects with revenues generated.	RTA, Metra, Pace, CTA, ISTHA, IDOT	To alleviate potential equity issues created by the higher fees on road segments there will be a need to increase transit service in the vicinity of the congestion pricing. Congestion user fees will be used to fund the increased service.
Fund arterial improvements with revenues generated.	IDOT, Counties, Local governments	Congestion pricing can cause increase traffic diversion on to parallel arterials in local communities. The increase traffic may cause unintended congestion problems for local users of the arterials and infrastructure solutions maybe required. Congestion fees will be used to fund the mitigation solutions.
Conduct further study of congestion pricing and managed lanes strategies with special attention paid to major capital projects.	CMAP, ISTHA, IDOT, CDOT, RTA	Many of the constrained and unconstrained road expansion projects would lend themselves to congestion pricing as a potential revenue source. Continued study of these projects is needed to identify the best candidates.

Implementation area #4: • Implement pricing for parking

Action	Imple-menters	Specifics
Conduct detailed studies on potential parking pricing projects.	CMAP, Local governments, Counties	Identify potential locations/areas where pricing for parking could be implemented and study the potential effects.
Implement parking pricing, including variable pricing parking projects.	Local governments, Counties	In almost all cases, local governments have authority over parking and would be the implementer and collect the generated fees. On-street parking, as close to a business as possible, is the most convenient type of parking for potential customers, and using pricing to keep these spots available for short-term use should be a high priority.
Include supportive transit projects as part of any project	RTA, Metra, Pace, CTA, Local governments, Counties	To alleviate potential equity issues created by the higher fees on road segments there will be a need to increase transit service in the vicinity of the congestion pricing. Congestion user fees will be used to fund the increased service.
Require that subregional planning studies include a parking pricing component.	CMAP, RTA	The use of both on and off-street parking should be analyzed as part of any subregional planning study that considers transportation. This may include studies at the corridor or downtown business district or even the industrial/office park planning levels.

Implementation area #5: Find Other Innovative Finance Mechanisms

Action	Imple-menters	Specifics
Pass state enabling legislation for public-private partnerships.	State elected officials, IDOT, ISHTA	For the State agencies like IDOT and ISTHA to even consider the different types of public private partnerships would require special enabling laws from the State. State agencies are restricted by specific contracting, procurement and purchasing rules and regulations that act as barriers to public private partnerships.
Provide objective analysis of potential projects and strategies.	CMAP	CMAP as the regional planning agency can provide objective analysis on potential projects and the different finance models available to state, local and private agencies. A strong focus should be placed on major capital projects.
Consider public private partnerships in project development	CMAP IDOT, ISTHA, RTA	Based upon the analysis of potential projects and financing strategies, agencies should consider the use of public-private partnerships on a project-by-project basis.
Conduct detailed value capture studies.	RTA	To generate new funding for transit, the region needs to consider different value capture techniques on potential new or expanded transit infrastructure projects. The increased revenues can be used to offset operations deficits.

Costs and Financing

The recommendations for transportation finance include strategies for raising revenue, as well as strategies for increased cost efficiencies and better investment decisions through regional priorities, evaluation criteria, and more sophisticated quantitative modeling. CMAP is required by federal law to prepare a detailed financial plan for transportation, which compares the estimated revenue from existing and proposed funding sources with the estimated costs of constructing, maintaining and operating the total transportation system. This process is known as the plan's "fiscal constraint". Constraint for plans is important because it forces regional decisionmakers to set priorities and make trade-offs, rather than including a laundry list of projects and activities.

CMAP estimates that **$350.4 billion** in core federal, state and local revenues will be available between 2011-2040. These "core revenues" are ones the region receives today, forecasted out based on historical trends. Federal guidance also permits MPOs to calculate revenues that can "reasonably be expected". What is "reasonable" usually constitutes a judgment call, based upon the current political and policy climate at various levels of government. The inclusion of "reasonably expected revenues" is vital for the region to make additional needed investments, though it still will not be enough to move the system to a state of good repair, make all of the strategic improvements or construct all of the major capital projects that are desired.

"Reasonably expected" sources primarily include an 8-cent increase (and subsequent annual inflation indexing) of the State motor fuel tax and revenues from the institution of congestion pricing on some segments of the region's expressway system. A small amount of revenue is also expected from more aggressive pricing of parking in the region, as well as from transportation revenues expected through federal climate change legislation. The sum of these "reasonably expected revenues" totals an additional **$34.6 billion.** Together, CMAP expects a total of **$385 billion** in revenues over the plan horizon.

The total of transportation expenditures must be constrained by the predicted amount of future funding. CMAP estimates that while the total of core and reasonably expected revenues will be sufficient to operate and maintain the system safely and adequately, they will prove insufficient in bringing the system to a state of good repair or approach the desired level of enhancements and expansions- the amount of funding needed to get to this level can be called "unconstrained". CMAP estimates that the first category (maintenance and operations of the transportation system at a "safe and adequate" level) will cost **$332.2 billion** over the 30 year planning horizon. This number does not include assumptions of shorter lifecycles on maintenance schedules, upgrades to capital materials, equipment, rolling stock or facilities or any enhancements or expansions to the system.

The remaining **$52.8 billion (13.7% of total funding)** will be used to bring the system toward a state of good repair, enhance the system, and expand the system via the construction of major capital projects. This remaining envelope of funding constitutes the "regional budget", over the

next 30 years, for maintaining or operating the system at a higher level, modernizing, enhancing, or expanding the system. While it is important to acknowledge the overall scale of the estimated investment, CMAP stresses that regardless of any estimated funding totals, the paramount challenge for the region is to set priorities.

The priorities of *GO TO 2040's* preferred scenario are to maintain the existing system and make systematic improvements. The bulk of the region's transportation investment should be to maintain, improve, and modernize our infrastructure. Pursuing new major capital projects, while important, should remain a lower priority than these other activities. Achieving a "world-class" transportation system necessitates improving, modernizing, and increasing service on existing assets, rather than building expensive new projects which will be difficult to finance, operate and maintain over the long term.

Given the policy direction of *GO TO 2040* and CMAP's charge to establish regional priorities, the recommendation is for **$41.8 billion (10.9% of total funding)** of the remaining funding be allocated toward "state of good repair" capital maintenance and strategic enhancement projects and **$10.5 billion (2.7% of total funding)** toward major capital projects.

The remaining funding which is needed (but not covered under the plan's fiscal constraint), is called "unconstrained" funding. CMAP estimates that these needs amount to **$100-$220 billion** in additional revenue. This fact requires the region to get more serious about finding more cost efficiencies and implementing more aggressive strategies like congestion pricing and parking pricing. Value capture approaches, publc private partnerships, and other strategies should also be pursued. The following table summarizes *GO TO 2040*'s fiscal constraint for transportation, including the amount of funds which remain "unconstrained". Please note that all estimates of revenues and costs are stated in *year of expenditure* dollars – in other words, inflation as well as other forecasted revenue/cost increases have already been assumed in these figures.

Transportation Revenues and Expenditures (Constrained and Unconstrained) for *GO TO 2040*
(All Numbers in Year of Expenditure for Period 2011-2040. Numbers are in Billions of Dollars)

REVENUES	
Core Revenues	
Federal Highway and Transit	$66.4
State Motor Fuel Tax and Vehicle Registration Fees	$50.9
RTA Sales Tax & Collar County Empowerment Fund	$50.3
Transit Farebox Revenue	$43.7
Toll Revenues	$28.0
State Capital Program	$16.1
Other Transit Revenues	$24.4
Other Local Revenues for Roads	$70.6

Subtotal- Core Revenues	**$350.4**
Reasonably Expected Revenues	
Motor Fuel Tax Increase & Index to Inflation	$19.4
Revenues from Congestion Pricing	$12.0
Variable Parking Pricing	$2.0
Transportation Allowances- Federal Climate Change Legislation	$1.2
Subtotal- Reasonably Expected Revenues	**$34.6**
TOTAL REVENUES	**$385**
EXPENDITURES	
Operating Expenditures	
Transit	$116.7
Highway	$56.9
Safe and Adequate (Capital Maintenance)	
Transit	$31.6
Highway	$127.5
Subtotal- Operating and Safe and Adequate Expenditure	**$332.7**
Moving the System Toward a State of Good Repair/Systematic Enhancements	**$41.8**
Major Capital Projects	**$10.5**
TOTAL EXPENDITURES	**$385**
UNCONSTRAINED EXPENDITURES	**$100-$220**