

Regional Mobility

Getting Around

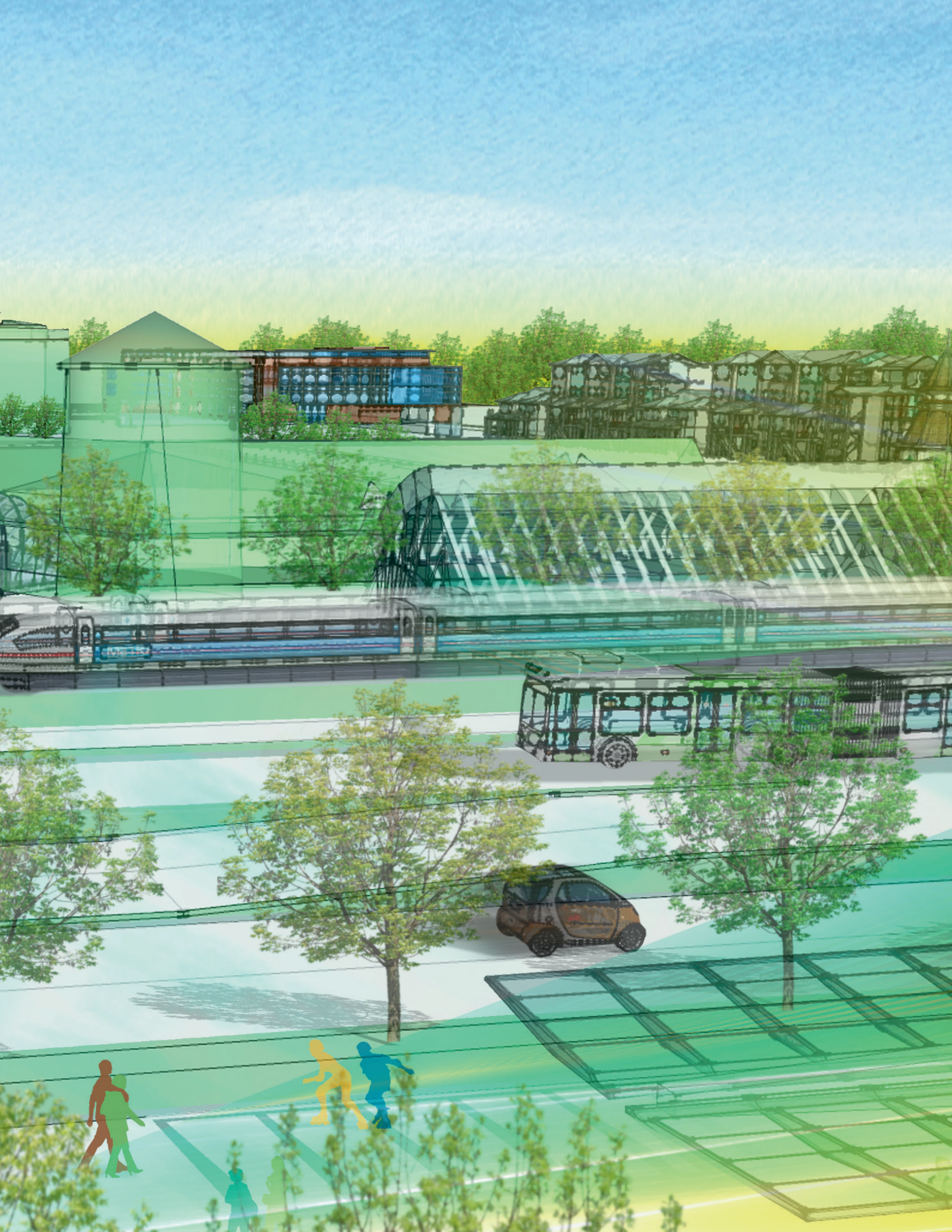
This theme addresses the efficiency and effectiveness of our region’s transportation system, which is crucial for economic prosperity and overall quality of life. The chapter on Regional Mobility includes three sections of recommended actions:

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The Regional Vision describes a future multimodal transportation system that is “safe, accessible, easy to navigate, affordable, and coordinated with nearby land use,” reduces congestion and improves regional mobility, and supports “reinvestment in our existing communities...leading to environmentally sensitive and fiscally efficient outcomes.”

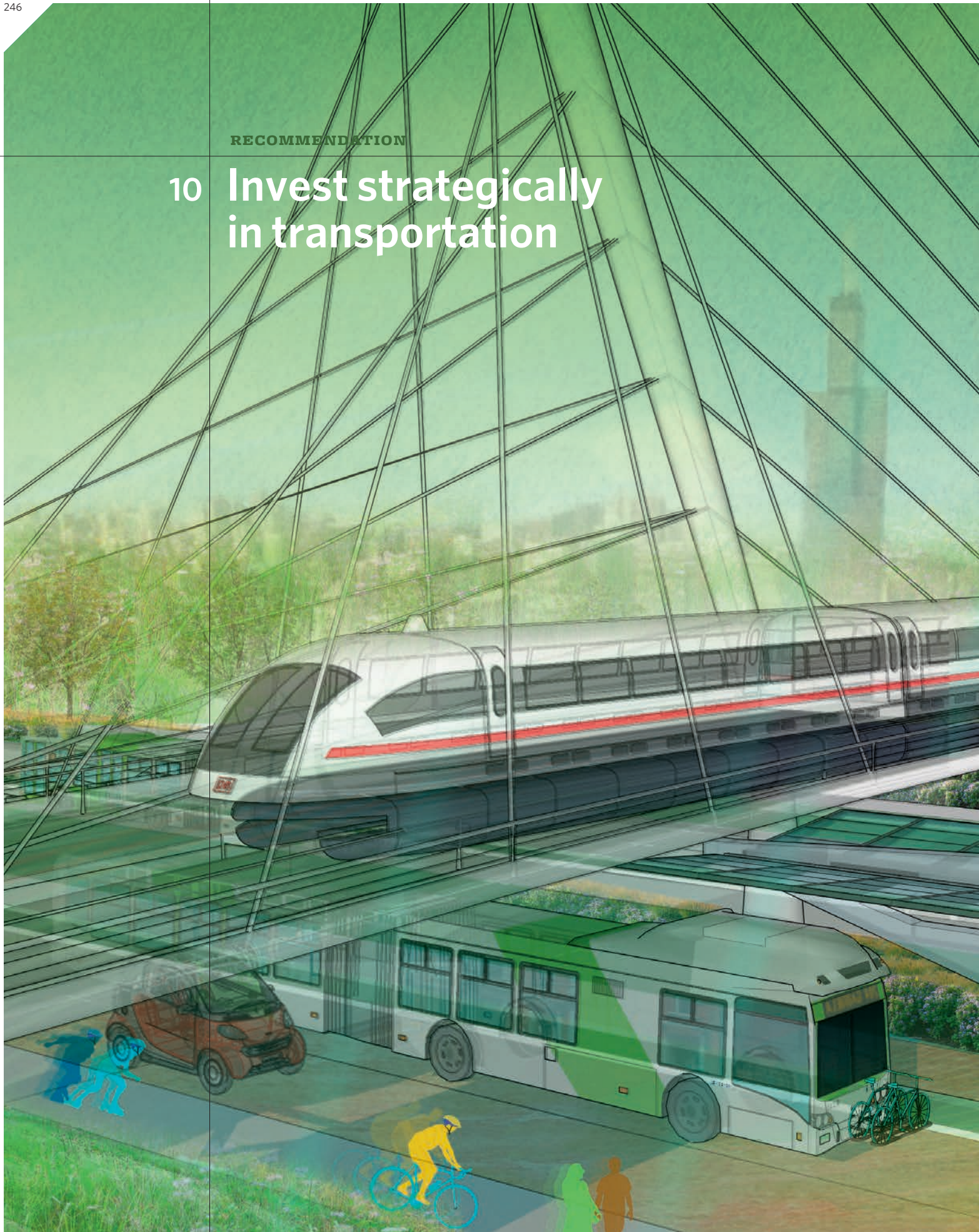
To achieve this, GO TO 2040 seeks to maintain existing infrastructure of all types and gain operational efficiencies from it, make additional investments in transit and freight, use innovative and sustainable finance and system management ideas, link transportation investments with housing and land use, and encourage choices that result in livable, walkable, transit-supportive communities.





RECOMMENDATION

10 Invest strategically in transportation



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's prosperity, yet it has fallen behind other industrialized parts of the world, many of which have invested significantly to create and preserve modern, world-class systems.

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 financing to support a world-class transportation system for this new century. The "costs of congestion" are real and serious, and include lost time and fuel, decreased productivity, inefficient freight movements, and pollution. 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, funds for transportation need to be allocated more wisely, using performance-driven criteria rather than arbitrary formulas. Transportation implementers should prioritize efforts to maintain, enhance, and modernize the existing system. Expensive new capacity projects should be built only if they yield benefits that outweigh their costs. Examples of enhancements and modernizations that should be pursued include more attractive and comfortable buses and trains that improve the passenger experience, better traveler information systems, targeted transit extensions and arterial improvements, and multimodal approaches such as integrating bicycling and pedestrian accommodations in roadway design.

CMAP recommends changing how transportation is funded by:

Creating cost and investment efficiencies

To prioritize spending on system preservation, modernization, and (to a lesser extent) expansion, 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 implementation 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 all users to bear the full costs of their road use.

Pursuing public-private partnerships as appropriate

Among various public-private partnership (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 project development and construction. 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 general enabling legislation.

CMAP’s GO TO 2040 recommendations address ongoing 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 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). This section also explains the details of cost and financing in the context of federal requirements for prioritizing transportation investments.

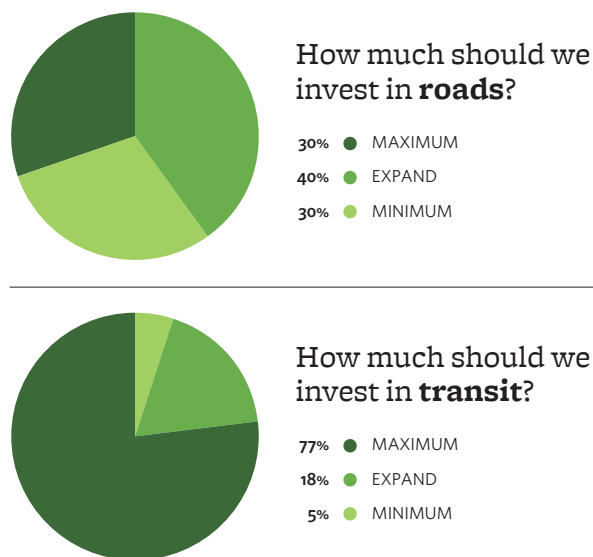
Finally, the region needs to unite around its transportation priorities, particularly regarding the construction of major capital projects recommended in GO TO 2040, which have been carefully evaluated to improve operations, access, mobility, and economic opportunity. The “fiscally constrained” major capital projects, as required by federal regulations, have the highest priority to move toward completion. The projects that our region should pursue between now and 2040 are described in this section.

10.1 Benefits

Residents in northeastern Illinois want more focused investment in transportation infrastructure. About 95 percent favor expanding or maximizing funding for transit improvements, while 70 percent favor expanding or maximizing funding for road improvements (see **Figure 48**).

As indicated by this clear public support for increased levels of investment and improved service, investments in transportation infrastructure have numerous important benefits, described as follows.

Figure 48. Preferences of amount and allocation of transportation investment



Source: CMAP GO TO 2040 "Invent the Future" participants, 2009

Economic

Infrastructure investment yields economic returns via short-term job creation but also via long-term economic productivity, largely by 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 other labor. This employment then supports additional workers in retail, health care, entertainment, and other local service industries. Transportation infrastructure stimulates the economy, which is why the recent American Recovery and Reinvestment Act of 2009 (ARRA) placed such a high priority on “shovel-ready” projects to 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

\$7,300,000,000

Annual Cost of Congestion
Source: Metropolitan Planning Council

While short-term job creation is an important goal particularly during economic downturns, wise investment in transportation infrastructure yields significant benefits for years to come. Careful targeting of investments is key to long-term economic vitality. Transportation infrastructure investments, including implementation of strategies to reduce congestion, increase the efficient movement of goods and people. Economic benefits include:

Improved attraction and retention of businesses and skilled, innovative workers, who value a well-functioning transportation system.

Greater efficiency of freight movement which can enhance just-in-time inventory management.

Increased worker productivity due to fewer hours spent stuck in congestion.

Other positive effects on quality of life such as environmental benefits and enhanced access to jobs, education and medical care, and cultural and social interactions.

The need for increased transportation infrastructure investment is supported by empirical research, which demonstrates clear linkages between such investments and long-term economic impacts that last beyond the construction period. A \$2 billion investment in transportation infrastructure is estimated to result in **\$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 short-term economic impacts of construction. 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 a public-sector expenditure of \$10.5 billion. This produces a benefit-to-investment **ratio of 1.26**, larger than the 1.1 shown previously because the major regional plan’s capital projects are highly targeted and were selected using a range of evaluation criteria. Reducing the various costs of traffic congestion is what drives these positive economic impacts. They include not only decreased pollution, shipping costs, and time delays, but also increased productivity. These costs due to congestion are serious — one recent study estimates our regional “costs of congestion” at \$7.3 billion annually.³ Investments must be carefully targeted toward congestion reduction and 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 impacts.

Achieving a modern, well-functioning system of roads and public transit simply makes good economic sense in light of our region’s long-term goal to remain a vibrant and vital global destination. Surveys consistently indicate that businesses want good infrastructure systems, including rapid access to airports and efficient movement of goods. Residents want a more modern, world-class system for many similar reasons. 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 is not a requirement for living, working, and recreation.

¹ Center for Neighborhood Technology, Smart Growth America, and U.S. Public Interest Research Group, “What We Learned From the Stimulus,” January 5, 2010. This analysis compares stimulus funds spent on public transportation and highway infrastructure. Surface Transportation Program 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 GO TO 2040 Infrastructure including Telecommunications Strategy Report, 2009. See <http://www.goto2040.org/infrastructure/>. Impacts on output and income include both “direct” and “indirect” impacts. The impacts were calculated with the Chicago Regional Economic Impact Model, developed by the Regional Economics Applications Laboratory of the University of Illinois at Urbana-Champaign.

³ Metropolitan Planning Council, “Moving at the Speed of Congestion,” August 2008.

Household and Public Cost Savings

Transportation outlays by the public sector are large, to the point that they can be difficult to comprehend. From 2011 to 2040, CMAP estimates that the region will accrue about \$385 billion in core and reasonably expected transportation revenues for operating and capital from federal, state, and local sources. 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 expenditures in the region. The dollars are large, in large part, because the system is simply massive — northeastern Illinois is home to 3,233 lane miles of expressway, 18,719 lane miles of arterial and collector roads, 35,856 lane miles of local roads, nearly 1,500 miles of passenger rail track, over 5,000 vehicles of rolling stock (i.e., all powered and unpowered rail vehicles such as locomotives, railroad cars, coaches, and wagons), 311 interchanges, 3,281 bridges, and 7,732 traffic signals.

Simply increasing investment, without goals or indicators of success, is obviously not the answer. The region can save money in the long term by making smarter investments focused on maintenance, modernization, and enhancements to mobility and access, compared to expensive major new expansions that prove costly to maintain and operate.

Furthermore, making users assume more of the costs of their infrastructure use (e.g., through congestion pricing or parking pricing) will also save the public sector money. The Federal Highway Administration (FHWA) has estimated that congestion pricing could cut annual investment in transportation infrastructure by 28 percent.⁵

Additionally, targeted strategic enhancements that emphasize multimodal approaches like transit improvements or bicycling and pedestrian accommodations can save households money. These modes of travel are less expensive for an individual than owning and maintaining an automobile. One study estimates the average savings of commuting by transit instead of by car at over \$11,000 per year in the metropolitan Chicago area.⁶ Furthermore, other types of cost savings, such as reductions in health care costs, have been found to be associated with investments in more active forms of transportation like bicycling and walking.⁷

Safety and Security

The maintenance and operation of a safe and adequate system are of paramount importance to all transportation implementers. Over 1,000 fatalities occur on Illinois roadways each year. Safety is not something that 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 that modernize the system and bring roads and transit toward a “state of good repair” can only help in making the transportation system safe and secure for all users.

4 FY 2011 Budget of the U.S. Government, Table 8.7 — Outlays for Discretionary Programs: 1962-2015.

5 Federal Highway Administration of the U.S. Department of Transportation, “2006 Status of the Nation’s Highways, Bridges and Transit: Conditions and Performance,” January 2007.

6 American Public Transportation Association, “Riding Public Transit Saves Individuals \$9,242 Annually,” media advisory, January 12, 2010. See <http://tinyurl.com/yznlg5a>.

7 Thomas Gotschi, PhD. “Cost-effectiveness of Bicycle Infrastructure and Promotion to Increase Physical Activity.” http://www.activelivingresearch.org/files/ALR2010Conf_PlenaryAbstract_Gotschi.pdf. Accessed 7/29/2010.

10.2 Current Conditions

Where Revenues Originate

The federal government, the State of Illinois, and local governments all play a major role in financing the transportation system of northeastern Illinois.

The private sector plays a minimal role, limited to the City of Chicago's long-term leases of the Chicago Skyway toll road and 36,000 metered parking spots.

Public revenues originate in large part from user fees such as gas taxes, transit fares, tolls, and vehicle registrations. However, non-user fees, like the sales tax and local tax revenues, also play a major financing role. **Figure 49** reflects the existing conditions, by funding source, for the region's transportation system.

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 of Illinois MFT 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

Regional Transportation Authority (RTA) sales tax, equivalent to one cent in Cook County and three-quarter cent in the collar counties, excluding Kendall. One-third of the collar county sales tax (equivalent to one-quarter cent) is disbursed by the State of Illinois to the county governments, and is used for transportation

purposes and public safety. This is known as the "Collar County Transportation Empowerment Program." Kendall County also imposes its own sales tax for transportation, at a rate of one-half cent. Almost one-fifth of total funding for the region comprises "other local revenues for roads." This includes 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.

The GO TO 2040 Financial Plan for Transportation estimates that the region will receive just over \$385 billion in revenues between 2011 and 2040. Over 90 percent 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 \$385 billion is certainly a large amount, CMAP's analysis of needed expenditures shows that relying solely on these revenues would not result in much progress toward addressing the substantial transportation needs of individuals and businesses across the region.⁸

Figure 49.
Current transportation revenues by source for northeastern Illinois

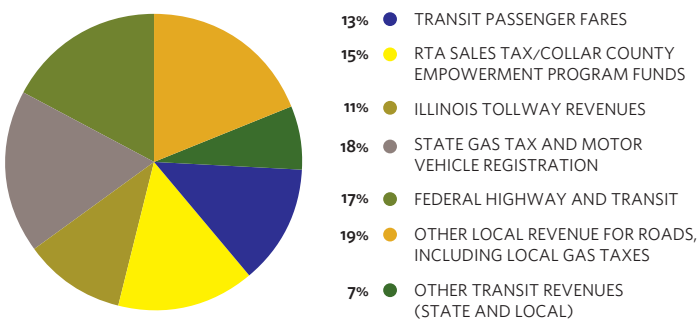


Chart includes operating and capital revenues. Figures are based upon 2011-2015 revenue forecasts, produced for the CMAP Financial Plan for Transportation. Numbers do not include any revenues from State of Illinois Capital Programs.

Source: GO TO 2040 Financial Plan for Transportation, 2010

⁸ More details on assumptions and historical trends are included in the GO TO 2040 Financial Plan for Transportation. See http://cmap.illinois.gov/financial_plan_transportation/.

Costs of Operating and Maintaining the System

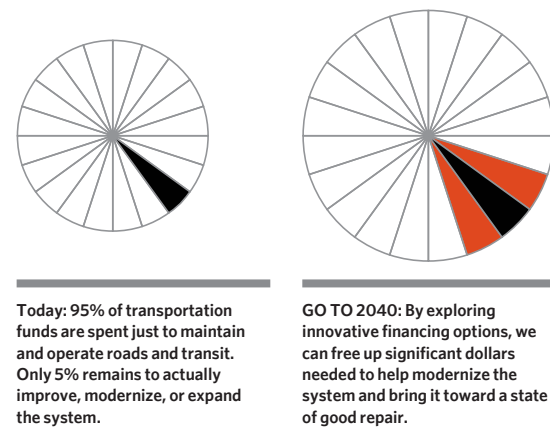
At present, existing revenues appear sufficient over the long term to operate and maintain our present system roughly at the level it is today, but not accomplish much more. The implication is a “bare bones” level of service which will not allow the region to make much additional progress in bringing 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.

CMAQ analysis estimates that of the \$385 billion⁹ estimated to be available between 2011-2040, \$333 billion (86 percent 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 percent of revenues to scale up existing maintenance cycles, enhance or modernize the system, or construct new major capital projects.¹⁰

Recent trends showing rapidly increasing transportation costs are worrisome, on both the capital and operating sides. Until 2002, construction costs (measured by the *Engineering News-Record* construction cost index) mostly followed general inflation trends, as measured by the consumer price index. 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 the cost of labor and equipment, actually find that these costs are even outpacing construction costs as a whole.¹¹

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 15 years, the transit service boards have often experienced large annual operating cost increases, on the average of 4.5 percent but reaching as high as nine percent.¹² 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.¹³

Figure 50. Available transportation funding, today and 2040



9 The \$385 billion includes \$350 billion in core revenues (estimates of the revenues the region receives today) plus an additional \$35 billion in “reasonably expected revenues” which include a gas tax increase, the institution of congestion pricing, and other financing strategies.

10 GO TO 2040 Financial Plan for Transportation.

11 Kumudu Gunasekera and Brad Ship, “Construction Economic Review and Highway Cost Escalation Forecast,” *Economic Forecasting Review* 3 (2; December 2009.)

12 Based on Regional Transit Authority annual reports, 1992-2008.

13 For more discussion on this topic, see the GO TO 2040 section Increase Commitment to Public Transit.

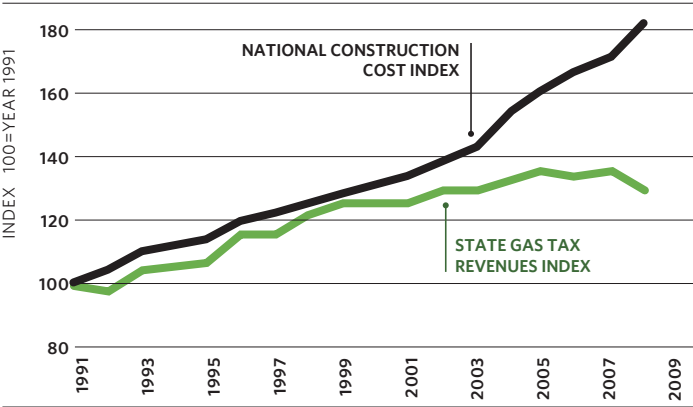
Federal and State Gas Taxes

The rising cost of construction and operations, coupled with inflation, has significantly undercut the purchasing power of federal and state MFT 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 1993.¹⁴ 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 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 percent of the MFT revenues allocate to the Illinois Department of Transportation's (IDOT) Road Fund and State Construction Fund, and the remaining 54.4 percent allocate to local governments. Similar to the federal gas tax, the state's gas tax revenues have greatly declined in their purchasing power. **Figure 51** shows how inflation and construction costs have outpaced state MFTs since 1991.

Motor vehicle registration fees vary according to vehicle type and weight. Unlike State MFT, these revenues are not shared with local

Figure 51. State motor fuel tax revenues relative to inflation, 1991-2008



The 19-cent-per-gallon state Motor Fuel Tax has not been changed since 1990. MFT and CCI indices are set to 100 for the year 1991.
Source: Illinois Department of Transportation, *Engineering News-Record*, Bureau of Labor Statistics

governments by formula. They accrue directly to the state Road Fund and Construction Accounts. State of Illinois 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 driver's 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.



Figure 52. Estimated 50-year lifetime costs of an expressway, in current dollars

\$65,000,000/mile	Construction
\$6,500,000/mile	Resurfacing over 50 Years
\$16,000,000/mile	Reconstruction after 50 Years
\$87,500,000/mile	Total

Source: Chicago Metropolitan Agency for Planning

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

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 Chicago Region Environmental and Transportation Efficiency Program (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 10 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 five 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, Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users), 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. IDOT 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.¹⁵

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 projects. 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 percent of the federal and state allocation (including state MFT¹⁶ and vehicle registration revenues deposited in the Road Fund), while downstate Illinois (“Districts 2-9”) receives 55 percent. The complex funding flow is shown in **Figure 53**.

¹⁵ For a current list of Federal Highway Administration programs, see <http://tinyurl.com/28tgbw2/>.

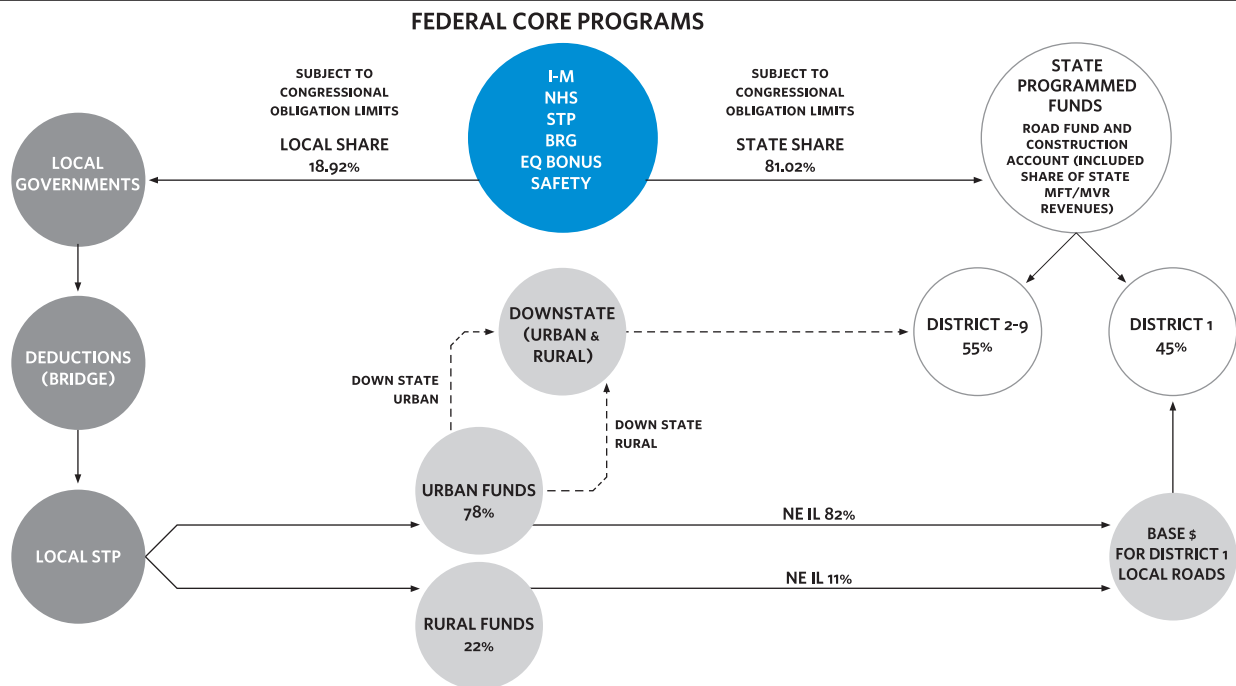
¹⁶ State motor fuel tax dollars also have a local allocation. This is not displayed in Figure 53.

The Federal Transit Administration (FTA) 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,¹⁷ 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 and 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 and 20-percent local, it should be noted that the Congressional Conference Report that accompanied the FY 2002 U.S. DOT 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.”¹⁸ This New Starts criterion differs from highway funding projects, which are funded with a federal share of 90 percent for interstate maintenance and improvements, and 80 percent for most other projects.

Figure 53. How IDOT allocates federal and state highway dollars



Source: Chicago Metropolitan Agency for Planning, 2010

17 For a current list of Federal Transit Administration projects, see <http://tinyurl.com/2hgqsf>.

18 For an overview of the Federal Transit Administration's New Starts program, see <http://tinyurl.com/23blsgj>.

The Regional Role in Allocating Transportation Funding

While most federal highway revenues, state motor vehicle registration revenues, and state MFT revenues flow to the State Road and Construction Accounts, some funds devolve project selection authority to CMAP (the region's metropolitan planning organization [MPO]) or to the Subregional Councils of Mayors. The Local STP is administered through CMAP and IDOT.¹⁹ 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.²⁰ 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 transportation goals identified in the long range plan.

The CMAP Board and MPO Policy Committee²¹ 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 and 29 cents per mile.²² 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 that 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 VMT Fees

19 “Local Surface Transportation Program” (STP) differs from “State STP.” State STP funds are deposited into the Illinois Department of Transportation Road Fund and Construction Account and used primarily for state highway projects.

20 For more information on work done by CMAP on STP, as well as links to subregional criteria for project selection under this grant program, see <http://www.cmap.illinois.gov/stpresources.aspx>.

21 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. See <http://tinyurl.com/27bmhfq>.

22 HDR|HLB Decision Economics, Inc., “Road Pricing on a National Scale,” prepared for the U.S. Department of Transportation, 2005.

10.3 Indicators and Targets

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 funding mechanisms can focus on the condition of the existing system and whether or not it is in a 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. 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 percent of the principal arterials' route miles are acceptable.

PRINCIPAL ARTERIALS ARE ACCEPTABLE RIDE QUALITY

65 % by 2015

90% by 2040

The region's bridges can be assessed for deficiency based upon FHWA's National Bridge Inventory database. In 2007, 66.5 percent of the region's bridges were rated as "not deficient."

BRIDGES FOUND TO BE IN "NOT DEFICIENT" CONDITION

70% by 2015

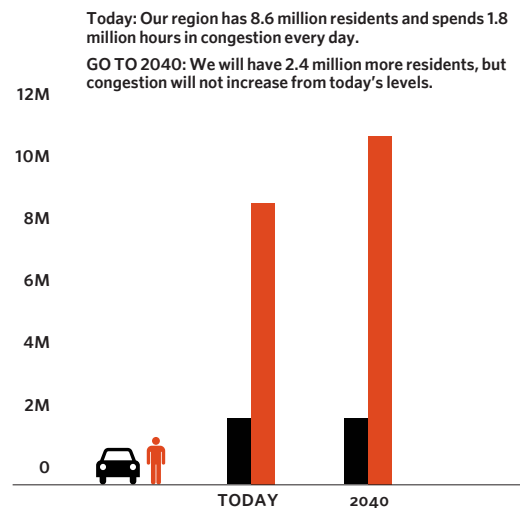
80% by 2040

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

Congestion

The performance of the transportation system can be measured by the congestion of the highway network. Currently, the region experiences approximately 1.8 million congested hours of travel per day. The more efficient land use pattern laid out in GO TO 2040 and the implementation of targeted improvements, expansions, congestion pricing, and other managed lanes strategies are expected to reduce congestion. GO TO 2040's goal is to increase efficiencies in our highway network to the point where we maintain our level of congestion today. This may not seem like an aggressive goal, but with the anticipated population and economic growth, this would be an achievement.

Figure 54. Time spent in congestion, today and 2040



10.4 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 planning 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. Among the many options for raising revenues, the region should prioritize ones that require users to pay an amount closer to their actual 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. Congestion pricing and parking pricing mechanisms, along with raising MFTs and indexing them to inflation, would help to address the twin issues of fiscal shortfalls and economic inefficiency of the system. The long-term sustainability of reliance on MFTs 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 decision makers should stress the use of performance-driven criteria, rather than arbitrary formulas, when making investment decisions. CMAP 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.

These courses of action are broken into five categories:

- 1) creating 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.**

Creating 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, accommodations for bicyclists and pedestrians, state of the art pavement materials with longer life spans, signal timing improvements, bus stop improvements, corridor upgrades, and a variety of other strategies that can improve mobility, access, and the reliability of our transportation network. Investments of all types should take a multimodal approach, with consideration for the needs of transit users, bicyclists, and pedestrians.

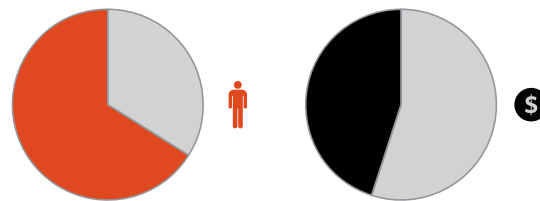
The process of targeting which elements to improve or expand is not always straightforward. Evaluation criteria and quantitative models for predicting the impact of varying investment scenarios exist today. But the results of these evaluations should be taken more seriously and the decision-making tools 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. These evaluation criteria should be developed and vetted using a transparent, regional process. As the region’s MPO, 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 distributes a multitude of different programs to states using a variety of different criteria, particularly road miles, fuel usage, and VMT. 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, not needed maintenance, and local match requirements remain much higher here than for highway projects. Also, FTA rules concerning use of federal funds for engineering of transit projects are stricter than those used by FHWA for roadway projects, and should be changed to allow regions to more easily pursue transit improvements.

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 percent of road funding to downstate districts and 45 percent 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 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” PPPs, 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.

Figure 55. “55/45 split” for transportation funding in Illinois



Despite having 66% of the state’s population, our region receives only 45% of the state’s road funding. This so-called “55/45 Split” needs to be addressed.

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 that, unlike sitting in traffic, prove productive to the regional economy.²³

No new tax or fee is politically popular, but if metropolitan Chicago is to keep pace with other industrialized and emerging economies around the world, it should implement 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. Because congestion pricing has already been implemented in different places around the U.S., our 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

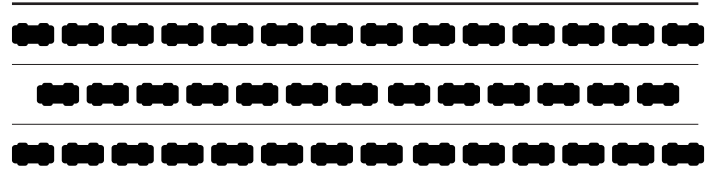
offer service along the affected corridor or to improve connections to service in the corridor.

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, IDOT, RTA, and Pace submitted a Congestion Reduction Demonstration proposal to the U.S. DOT. The submittal proposes congestion pricing along the I-90/Jane Addams Memorial Tollway.²⁴ While the proposal was not selected by U.S. DOT for funding, it demonstrates a regional commitment among both planners and implementing agencies to a careful implementation of congestion pricing.

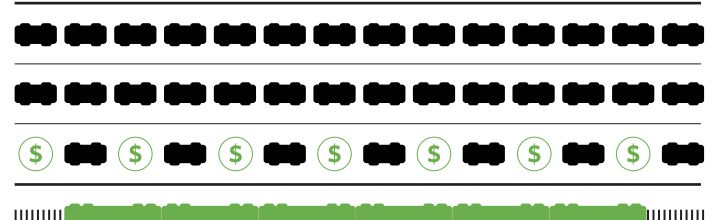
Furthermore, the Tollway, in partnership with the Metropolitan Planning Council (MPC) and Wilbur Smith Associates (WSA), is in the final stages of a two-year study to develop strategies that will reduce congestion in the region. The study models the impacts of congestion pricing on the Tollway, as well as IDOT expressways, and considers the diversion to local roads. It considers a range of scenarios, routes, and configurations to help reach desired goals.²⁵ Currently, the Tollway uses congestion pricing, to a certain degree, by charging trucks a variable fee depending on the time of day.

Figure 56. Congestion pricing

Today: During peak travel times, congestion slows the driving commute.



GO TO 2040: With congestion pricing, drivers pay a premium to use an express lane during peak travel times. This will reduce congestion by giving people an incentive to travel at off-peak times and will help to pay for road and transit system improvements.



²³ GO TO 2040 Managed Lanes Strategy Report, 2009. See http://www.goto2040.org/managed_lanes/.

²⁴ The Congestion Reduction Demonstration proposal is available online; see <http://tinyurl.com/23l2sju>.

²⁵ For more information on the two-year congestion pricing study being conducted by the Illinois Tollway, Metropolitan Planning Council, and Wilbur Smith Associates, see <http://tinyurl.com/2vehj9t>.

Implement Pricing for Parking

The provision of free parking only serves to perpetuate automobile dependency, increase congestion, and lead to economic inefficiencies. Research indicates that an estimated 99 percent of parking in the U.S. is free,²⁶ 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 one percent increase in parking fees resulted in a 0.3 percent decrease in demand.²⁷

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.

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 percent of the spaces are always vacant.²⁸ 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.

Parking pricing should be customized by location, and GO TO 2040 recommends that CMAP work with interested local governments to explore its implementation.

26 Donald Shoup, “The High Cost of Free Parking,” American Planning Association, 2005.

27 Richard H. Pratt, “Parking Management and Supply,” Traveler Response to Transportation System Changes. Transit Cooperative Research Program Report (2003): 95.

28 Donald Shoup, “The High Cost of Free Parking,” presentation to the International Symposium on Road Pricing, November 2003. See <http://www.trb.org/conferences/roadpricing/presentations/shoup.ppt>.

Increase Federal and State Gas Taxes and Index Rates to Inflation

As the 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 revenues are not keeping pace with 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 of Illinois increase the existing 19 cents per gallon tax by eight cents and index the tax to inflation, either the consumer price index (CPI), construction cost index (CCI), or a transportation materials cost index. A portion of the revenues should be used to fund transit. The federal gas tax should also be raised and indexed to inflation.

Pursue Appropriate Public Private Partnerships

PPPs describe a range of contractual agreements between government and a private firm for the provision of public infrastructure or services. PPP contracting methods are designed to shift some amount of risk — often in terms of project costs or project schedule — away from the public sector, and provide opportunities and value to the private sector not previously available. The private sector is already heavily involved as contractors in the design and construction of transportation facilities. PPPs expand this role by leveraging private investment in a range of other project elements, including financing, management, or by transferring some project risk, such as construction costs and schedules, to a private firm.²⁹

The decision to authorize the use of PPPs rests with individual states. Currently, approximately 24 states have significant PPP authority, which can include the ability to enter into “design-build” contracts; accept and respond to unsolicited proposals from the private sector; or take advantage of innovative Federal financing programs (like the SEP-15 program, or TIFIA). While Illinois currently does not have broad PPP authority, or, at a minimum, the ability to enter into design-build contracts, Governor Quinn recently signed legislation allowing IDOT to actively use PPP financing mechanisms for a proposed Illiana Expressway. This action may represent a first step toward a statewide policy. Neighboring states (Indiana, Missouri, and Minnesota) allow different types of PPP activity to be undertaken and have carried out projects with connections to Illinois.

Individual municipalities in Illinois may still pursue these types of financing arrangements with virtually no state involvement. The City of Chicago has been the legal party to the region’s major PPP projects, including the long term lease agreement for the Chicago Skyway and the current CREATE program. Long term lease agreements involve the leasing of a publicly-financed transportation facility 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.

While long term lease agreements attract the most attention (and political controversy), other less risky PPP models should not be ignored, and they may have practical application in the Chicago region. “Design-build” arrangements consolidate typically disparate engineering and construction processes into one contract. In other places, this has shown the ability to reduce costs and drastically shorten the duration of projects, due to the elimination of a second

29 See the GO TO 2040 Public-Private Partnerships Strategy report, 2009, for more information and case studies at <http://www.cmap.illinois.gov/strategy-papers/public-private-partnerships>.

procurement process for the construction contract.³⁰ 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 percent 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.³¹

A+B contracting (or “cost + time bidding”) is another PPP strategy that sets goals and incentives for the date of completion of the project, allowing the public entity to shift some construction risk to the private sector. This type of contracting can create incentives for the private sector to complete projects more quickly. Many state DOTs, including Florida, Arizona, Indiana, Washington, New York, and North Dakota have bid projects using this method, and it has been used extensively by the Office of Federal Lands Highway in FHWA.

Other PPP arrangements are more comprehensive in scope, and involve a private firm assuming not only design and build risks, but also the financing, operations and maintenance of the facility. Where private financing is involved, the public partner reduces the need for public monies to finance the project, conserving highway capital funds. A number of highway and transit projects in the U.S. have been constructed and operated in this manner. The SR 91 express lanes in southern California, which include variable congestion pricing, opened in 1995 as the first privately funded tollway built in the U.S. in nearly 50 years. Ownership and operation of SR 91 was reassumed by the public sector in 2003, though a private firm continues to manage and operate the express lanes under contract today.

GO TO 2040 recommends that the General Assembly pass legislation that gives broad authority for IDOT and Illinois Tollway to pursue PPPs in northeastern Illinois. These project-specific arrangements should be handled with a high degree of transparency and care. The costs and benefits of recent PPP deals are still under debate, and for many of these deals it remains premature to make any final judgment on the outcome. PPP contracts can be extremely complex, and performance standards on all aspects of operations and maintenance should be stated in detail. For long term lease agreements, the fiscal benefits of an up-front revenue infusion must always be carefully weighed against the public benefits over the lifespan of the project.

While it is true that many of these deals have led to imperfect outcomes, in many cases PPPs have demonstrated significant cost savings, and enabling them would add needed flexibility to the way transportation projects are designed, constructed, financed, operated, and maintained.

30 Federal Highway Administration, “Design-Build Effectiveness Study,” prepared for U.S. Department of Transportation. See <http://tinyurl.com/28vqh6a>.

31 Metro Denver, Colorado Department of Transportation, and Regional Transportation District, Transportation Expansion Project (T-REX) Project Fact Book, 1999 to 2006, 2007.

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 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.³² The range of strategies include creating special assessment districts and tax increment financing (TIF) districts, and applying a proximate “land value tax” — 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, 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, are assessed before the property is developed (but often after the transportation infrastructure is developed), and usually must be applied to on-site properties or those immediately adjacent. Transit impact fees have been used 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 metropolitan Chicago region could generate a large amount in capital funds for the RTA system. Appropriate methods to apply value capture should be examined and implemented on a project-by-project basis.

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, MFTs will likely need to be replaced within the next 20 years as vehicles switch to alternative energy sources. “Pay as you drive” strategies, including the imposition of a VMT fee, could raise large annual revenues, depending on the fee schedule.³³ 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.

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

33 GO TO 2040 Travel Demand Management Strategy Paper, 2009. See strategy paper on Travel Demand Management. See <http://www.goto2040.org/tdm/>.

10.5 Implementation Action Areas

The following tables are a guide to specific actions that need to be taken to implement GO TO 2040. The plan focuses on five implementation areas for investing strategically in transportation:

Find Cost and Investment Efficiencies

Increase Motor Fuel Taxes in the Short Term, and Institute a Replacement in the Long Term

Implement Congestion Pricing on Select Road Segments

Implement Pricing for Parking

Find Other Innovative Finance Mechanisms

Implementation Action Area #1: Find Cost and Investment Efficiencies

<p>Prioritize maintenance and modernization projects when making investment decisions</p> <p>LEAD IMPLEMENTERS: State (IDOT, Tollway), RTA, CTA, Metra, Pace, counties, municipalities</p>	<p>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 enhancement and modernization strategies include traveler information systems, bicycling and pedestrian improvements, better pavement materials, signal timing, and other intelligent transportation system (ITS) improvements. Projects of all types should take a multimodal approach, seeking to improve conditions for all travelers, including bicyclists and pedestrians.</p>
<p>Develop and utilize transparent evaluation criteria for the selection of projects, particularly ones adding capacity</p> <p>LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP, RTA, Metra, Pace, CTA</p>	<p>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. IDOT, CMAP, and the transit agencies should coordinate on the use of these criteria and evaluate existing quantitative models for their degree of rigor and robustness. These evaluation criteria should be developed and vetted using a transparent regional process.</p>
<p>Ensure that the region's transportation projects are based on the above performance measures and align with the priorities of GO TO 2040</p> <p>LEAD IMPLEMENTERS: CMAP</p>	<p>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 and amendments to the 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.</p>
<p>Improve decision making models used for evaluating transportation projects</p> <p>LEAD IMPLEMENTERS: CMAP</p>	<p>CMAP should continue to lead in developing the analytical tools and techniques for project evaluation. As the agency coordinates planning for transportation, land use and housing, 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.</p>

Implementation Action Area #1: Find Cost and Investment Efficiencies (continued)

Identify methods and technologies to improve operational efficiency of the transit system LEAD IMPLEMENTERS: 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 LEAD IMPLEMENTERS: Federal (U.S. DOT)	The Federal New Starts program is a competitive grant process that funds transit system expansions. While expansions are vital for many parts of the U.S., older and more well-developed systems should have the option to use these funds for badly needed maintenance and modernization efforts. The current New Starts program creates a strong incentive to pursue expansions, when maintenance and modernization should be the region's top priority. The criteria for federal New Starts grants should be expanded to support reinvestment in existing infrastructure rather than solely new expansions. Further, FTA regulations concerning use of funds for engineering of transit projects are stricter than those governing highway projects, and should be changed to create a “level playing field.”
Develop regional infrastructure funding programs for plan implementation LEAD IMPLEMENTERS: State (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 LEAD IMPLEMENTERS: IDOT	Northeastern Illinois continues to be plagued by a non-statutory funding split which allocates 55 percent of road funding to downstate districts and 45 percent 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 LEAD IMPLEMENTERS: State (General Assembly)	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 10 years. Furthermore, project selection should be based upon performance based criteria rather than on earmarks.

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

Implement an eight cent increase of the state's motor fuel tax and index it to inflation LEAD IMPLEMENTERS: State (General Assembly)	This would require an act of the Illinois General Assembly and the Governor. An increase in the state's MFT 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. A portion of these proceeds should be devoted to funding transit.
Implement an increase of the federal motor fuel tax and index it to inflation rate LEAD IMPLEMENTERS: Federal (Congress)	This would require an act of the U.S. Congress and the President. The federal MFT 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 fee LEAD IMPLEMENTERS: Federal (U.S. DOT), CMAP	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 VMT fee. Existing Global Positioning System (GPS) technology has the dynamic potential to charge fees based upon location/roadway and time of day.

Implementation Action Area #3: Implement Congestion Pricing on Select Road Segments

Complete operational study of the potential congestion pricing projects LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP	Complete the operational impact study on the three alternatives identified by the Regional Congestion Pricing Study undertaken by the Tollway, MPC and WSA. The three alternatives are I-90/94 Kennedy Reversibles between Edens I-94 and Ohio Street, 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 LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP, RTA, Pace, CTA, CDOT	Utilizing information collected in the regional and project level studies conducted, implement regional congestion pricing pilot projects. 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 LEAD IMPLEMENTERS: State (IDOT, Tollway), RTA, Metra, Pace, CTA	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 LEAD IMPLEMENTERS: State (IDOT, Tollway), counties, municipalities	Congestion pricing can cause increased traffic diversion on to parallel arterials in local communities. The increased traffic may cause unintended congestion problems for local users of the arterials and infrastructure solutions may be 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 LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP, RTA, Metra, Pace, CTA, counties, municipalities	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 Action Area #4: Implement Pricing for Parking

Conduct detailed studies on potential parking pricing projects LEAD IMPLEMENTERS: CMAP, municipalities	Identify potential locations/areas where pricing for parking could be implemented and study the potential effects.
Implement parking pricing, including variable pricing parking projects LEAD IMPLEMENTERS: Municipalities	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.
Encourage subregional planning studies to include a parking pricing component LEAD IMPLEMENTERS: 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 Action Area #5: Find Other Innovative Finance Mechanisms

Pass general state enabling legislation for public private partnerships LEAD IMPLEMENTERS: State (General Assembly, IDOT, Tollway)	For the state agencies like IDOT and the Tollway to even consider the different types of PPPs would require special enabling laws from the State of Illinois. State agencies are restricted by specific contracting, procurement, and purchasing rules and regulations that act as barriers to PPPs.
Provide objective analysis of potential projects and strategies LEAD IMPLEMENTERS: 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 finding innovative finance mechanisms for major capital projects.
Consider public private partnerships in project development LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP, RTA	Based upon the analysis of potential projects and financing strategies, agencies should consider the use of PPPs on a project-by-project basis.
Conduct detailed value capture studies LEAD IMPLEMENTERS: RTA, CMAP	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.

10.6 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 decision makers 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 eight cent increase (and subsequent annual inflation indexing) of the State of Illinois MFT 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 **\$332.7 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 **\$52.3 billion (13.7 percent 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 Regional Scenario are to maintain the existing system and make systematic improvements. The bulk of the region's transportation investments 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 that would 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 percent of total funding)** of the remaining funding be allocated toward "state of good repair" capital maintenance, modernization, and strategic enhancement projects and **\$10.5 billion (2.7 percent of total funding)** toward major capital projects, which are described later in this section.

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 find more cost efficiencies and to implement more aggressive strategies like congestion pricing and parking pricing. Value capture approaches, PPPs, and other strategies should also be pursued. **Table 7** 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 (YOES) — in other words, inflation as well as other forecasted revenue/cost increases have already been assumed in these figures.

Table 7. 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		EXPENDITURES	
Core Revenues		Operating Expenditures	
Federal Highway and Transit	\$66.4	Transit	\$116.7
State Motor Fuel Tax and Vehicle Registration Fees	\$50.9	Highway	\$56.9
RTA Sales Tax & Collar County Empowerment Fund	\$50.3	Safe and Adequate (Capital Maintenance)	
Transit Farebox Revenue	\$43.7	Transit	\$31.6
Toll Revenues	\$28.0	Highway	\$127.5
State Capital Program	\$16.1	Subtotal—Operating and Safe and Adequate Expenditure	\$332.7
Other Transit Revenues	\$24.4	Moving the System Toward a State of Good Repair/ Systematic Enhancements	\$41.8
Other Local Revenues for Roads	\$70.6	Major Capital Projects	\$10.5
Subtotal—Core Revenues	\$350.4	TOTAL EXPENDITURES	\$385.0
Reasonably Expected Revenues		UNCONSTRAINED EXPENDITURES	\$100.0—220.0
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	\$385.0		

Source: GO TO 2040 Financial Plan for Transportation

10.7 Strategic Enhancements and Modernization

GO TO 2040 recommends that the region prioritize investments toward strategic enhancements and modernization of the transportation system. If carefully targeted, these types of projects will improve access, mobility, and the overall experience for all users.

GO TO 2040 allocates \$41.8 billion (in year of expenditure dollars/YOE\$) over the next thirty years for projects that bring the system toward a state of good repair as well as those that enhance and modernize. The following subsection provides examples of the types of projects that can be pursued with this portion of the regional transportation budget. Projects of this type are not identified individually in the plan, but are identified and implemented through the region's Transportation Improvement Program.³⁴

Significant improvements can be made to the *public transit* system through enhancements and modernizations. These can include enhancements to stations or commuter parking facilities, purchases of more modern vehicles, strategic improvements to the rail system that are not large enough to be considered major capital projects, new or expanded bus routes (including Arterial Rapid Transit), and others. More specific recommendations concerning public transit can be found in Section 11 of GO TO 2040, Increase Commitment to Public Transit, which supports increasing investment to improve the region's transit system.

Most improvements to the *bicycle and pedestrian* system are also in this category. These can include sidewalks and other pedestrian facilities, off-street bicycle or multiuse paths, on-street facilities, or other efforts to provide accommodation for non-motorized transportation. Both bicycling and pedestrian travel are important components of an integrated, intermodal transportation system. GO TO 2040 supports improving the bicycle and pedestrian environment through projects such as these. The plan also supports policy-based efforts to improve the bicycle and pedestrian systems, such as the use of Complete Streets principles to accommodate non-motorized travel in roadway design.³⁵

Roadway improvements of many types are also included in this category. This essentially includes any type of roadway improvement beyond preservation and maintenance that is not considered a major capital project. For example, projects that add lanes to arterials or other streets, addition of turn lanes, access management programs, intersection improvements, new or improved interchanges, and new or improved bridges are included within this funding category. GO TO 2040 recommends implementing these projects strategically, following principles of Context Sensitive Solutions (CSS), using innovative design features, and seeking to include multimodal alternatives — including provisions for transit, bicycling, and pedestrians — within them.

Improvements related to *Intelligent Transportation Systems (ITS)* are also considered strategic enhancements and modernization. These include the use of real-time traveler information for both highway and transit, signal improvements such as interconnects or Transit Signal Priority (TSP) systems, traffic management centers, and many others. In recent years, real-time data about traffic conditions, travel time, and transit arrival times has dramatically increased with the explosion of information technology, and this trend will likely continue. GO TO 2040 supports continuing to advance ITS projects of all types, and recommends a continued role for CMAP in coordinating these efforts regionally.

³⁴ The Transportation Improvement Program (TIP) is described online, see <http://www.cmap.illinois.gov/tip>.

³⁵ For more information on CMAP's ongoing work to improve the bicycle and pedestrian system, see the Soles and Spokes program, online at <http://www.cmap.illinois.gov/solesandspokes>.

10.8 Major Capital Projects

To support the region's expected growth and improve the quality of transportation service to people and businesses, GO TO 2040 identifies capital investments expanding the capacity of regionally significant transportation facilities.

This capital element of GO TO 2040 is required for projects in the region to be eligible to receive federal transportation funds or obtain federal approvals. It identifies the major transportation capital projects that will be pursued between now and 2040. These projects must meet the federal requirement of fiscal constraint and conform to certain air quality requirements.³⁶

Although these major capital projects account for only a small fraction of the total investment in transportation, they have been thoroughly investigated and evaluated in terms of how they support the GO TO 2040 Regional Vision. Due to the length of time required to develop major capital transportation projects, accurately identifying a system of improvements within the long-range plan promotes efficient, cost-effective implementation of these projects.

This subsection includes descriptions of high-priority major capital projects that our region should pursue between now and 2040; these include a balance of transit, highway, and multimodal projects, distributed throughout the region.

Program Development

Definition of Major Capital Projects

Only a small number of transportation projects are considered "major capital projects." They are large projects with a significant effect on the capacity of the region's transportation system, including extensions or additional lanes on the interstate system, entirely new expressways, or similar changes to the passenger rail system. Arterial expansions and intersection improvements are not defined as major capital projects; neither are bus facilities, unless they involve a dedicated lane on an expressway.

Fiscal Constraint

Essential to the development of the program of capital projects and meeting federal requirements is a detailed transportation financial plan that has been prepared as part of GO TO 2040. The conclusion of this work is that approximately \$10.5 billion (in YOES) in funding from existing or reasonably expected sources is likely to be available for major capital projects between now and 2040. This is in comparison to an anticipated \$385 billion in funding from existing or reasonably expected sources for all transportation investments between now and 2040.

While the nature of a long range plan draws attention to the proposed major capital projects, the vast majority of the transportation investment between now and 2040 will go to maintain, operate and modernize both the highway and transit systems. The RTA's report, *Moving Beyond Congestion*, estimates that, just for transit, \$8.4 billion is needed over the next five years to maintain and enhance the existing system. In its Statewide Transportation Plan, IDOT estimates that over 13 percent of its roadways and 10 percent of its bridges need improvement. Pursuing new major capital projects, while important, is a lower priority than other strategic improvements such as the following: transit system operations improvements; other systematic capital improvements to transit facilities (e.g., designated bus only lanes, transit signal priority); pedestrian and bicycle improvements; expansion of paratransit service; arterial widenings and operational improvements in congested areas; traveler information services; variable pricing on expressways; interchange reconstructions with operational improvements; intersection treatments; or signal interconnects.

³⁶ For more detailed information and analysis, see the GO TO 2040 capital project page at <http://www.goto2040.org/scenarios/capital/main/>.

Project Prioritization

Projects were prioritized based on their support for GO TO 2040, the results of the individual evaluations, and information from other project analyses. The priorities of GO TO 2040 are to maintain, improve, and modernize our infrastructure; pursuing new major capital projects, while important, is a lower priority than these other activities.

Using the list of capital projects contained in the previous regional transportation plan as a starting point, implementers, stakeholders, and the general public were asked to submit projects for analysis and consideration. The result was a list of projects that would have taken over \$80 billion to implement and operate. Therefore, a prioritization process was needed, which included evaluation measures, to select the best combination of projects within the fiscal capacity of the region.

There were three phases to the project prioritization process. First, projects were evaluated based on their support for the Preferred Regional Scenario, which among other things calls for more compact, mixed-use development and transportation investments targeted to achieve outcomes such as economic growth, environmental protection, and congestion reduction. Second, an extensive array of performance measures or indicators was developed with the assistance of the Volpe Center, part of the U.S. DOT's Research and Innovative Technology Administration. Each project was evaluated in terms of how it performed against these measures.³⁷ Finally, since a number of projects have undergone extensive study, information from these other project analyses was considered. The final selection process was not a simple mathematical exercise but rather the result of professional judgment which considered projects within each of the three phases described above. The result is a cohesive mix of projects exhibiting a number of distinct themes.

Several themes can be seen in the prioritization of fiscally constrained projects. First, there are few “new” projects or extensions. The majority of the constrained projects involve improvements to existing facilities. Second, there are a number of “managed lanes” projects. These are envisioned to incorporate advanced tolling strategies such as congestion pricing, transit alternatives like Bus Rapid Transit (BRT), or special accommodations for truck travel. Third, there is considerable public investment in transit. Of the 18 projects recommended, there are seven highway projects, eight transit projects, and three managed lane or multimodal corridor projects that will accommodate both highway and transit modes. Of the estimated \$21 billion (in year of expenditure \$)³⁸ available for major capital projects, over \$12 billion is allocated to transit projects and an additional \$4.5 billion for managed lane and multimodal corridor projects. These priorities are consistent with the direction of GO TO 2040, which calls for investment in the existing system, use of innovative transportation finance methods, support for freight, and a focus on improving the public transit system.

37 For more detailed information and analysis, see the GO TO 2040 capital project page at <http://www.goto2040.org/scenarios/capital/main/>.

38 An explanation of the \$21 billion figure — rather than the \$10.5 billion cited earlier — is contained in a March 2010 memo to the MPO Policy Committee: <http://tinyurl.com/3xlzakh>.

Priority Projects

Evaluation results for individual projects are included in the Appendices. Note that these are high-level informational results, and ranking projects based solely on these results was not attempted. As projects proceed, they will require extensive additional detailed study and engineering. Project-level studies produce different results, appropriate to the level of detail needed for implementation. The results in the individual evaluations are intended to provide only a general idea of comparative benefits.

The selected high-priority capital projects were also evaluated together using the same measures that were calculated for the individual project evaluations.³⁹ The combined impact of the projects on the region's transportation system is generally positive. In combination, they result in economic growth, reduced congestion, shorter commutes, and improved job accessibility. Both auto and transit trips increase, and transit's mode share grows slightly. The high-priority projects support GO TO 2040's focus on reinvestment in existing communities, and they have limited impact on sensitive natural areas. As required by federal regulations, the major capital projects were combined with the proposed FY 2010 – 2015 Transportation Improvement Program and tested for conformity to the State's Implementation Plan to achieve the National Ambient Air Quality Standards. The analysis demonstrates that the region meets all required tests for air quality.⁴⁰

Also, the “environmental justice” impacts of the constrained project list were calculated. This was done by calculating the jobs-housing access measure for only those areas that were defined as “environmental justice” areas — those with a concentration of low-income or minority residents. The purpose of this calculation is to ensure that the benefits of the region's transportation investments are shared fairly among socioeconomic groups. The results demonstrate that job accessibility is improved, particularly in terms of transit.

The following capital projects are recommended to be included for the fiscally-constrained list for GO TO 2040:

New Projects or Extensions

Central Lake County Corridor: IL 53 North and IL 120 Limited Access

CTA Red Line Extension (South)

Elgin O'Hare Expressway Improvements (includes Western O'Hare Bypass, EOE East Extension, and EOE Add Lanes)

I-294/I-57 Interchange

West Loop Transportation Center

Expressway Additions and Improvements

I-190 Access Improvements

I-80 Add Lanes (US 30 to US 45)

I-88 Add Lanes

I-94 Add Lanes North

Managed Lanes and Multimodal Corridors

I-55 Managed Lanes

I-90 Managed Lanes

I-290 Multimodal Corridor

Transit Improvements

CTA North Red/Purple Line Improvements

Metra Rock Island Improvements

Metra SouthWest Service Improvements

Metra UP North Improvements

Metra UP Northwest Improvements/Extension

Metra UP West Improvements

Figure 57 is a map of these projects. A further description of the improvements involved, financing issues, project performance, and project status follows.

³⁹ For evaluation measures see the April 2010 staff memo to CMAP Transportation Committee at <http://tinyurl.com/2dvm3l8>.

⁴⁰ Details on the air quality conformity analysis can be found at http://www.goto2040.org/conformity_analysis.

Figure 57. GO TO 2040 fiscally constrained major capital projects



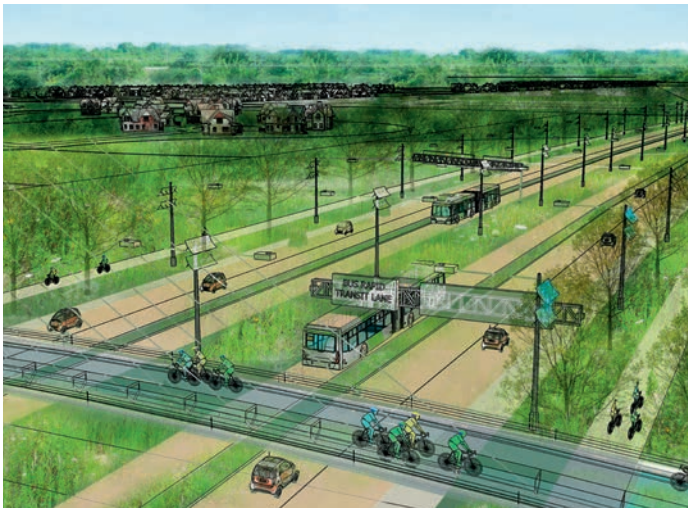
*Added as a plan amendment, March 2013. Source: Chicago Metropolitan Agency for Planning, 2010

New Projects or Extensions

Central Lake County Corridor: IL 53 North and IL 120 Limited Access

This project will extend IL 53 from its current terminus at Lake-Cook Road to central Lake County. It includes a dual terminus with I-94 to the east and IL 120 at Wilson Road to the west. Toll revenues are expected to cover a large portion of the project cost. The project is intended to provide improved accessibility for Central Lake County and improved mobility within the county; the current terminus of IL 53 at Lake Cook Road diverts travelers onto several local roadways. The project performs extremely well using the adopted performance measures, including ranking highest among all projects in its effect on regionwide congestion. Sixty-nine percent of elected officials attending the Lake County Transportation Summit in September of 2005 supported the extension of IL 53. Lake County voters approved of the county's commitment to pursue the completion of the project via referendum approval in April 2009. The County Board has passed a resolution urging IDOT "to initiate a planning process that engages all affected communities in an effort to build consensus around development of an environmentally sound and context sensitive integrated system of roads and transit improvements from the terminus of Rt. 53 to Rt. 120."

Central Lake County Corridor



In response to the Lake County Transportation Summit held in September of 2005, the Lake County Division of Transportation established a Route 120 Corridor Planning Council to build consensus on a recommended alternative. The feasibility study concluded in October of 2009 that the facility should be constructed as a four-lane, limited access arterial highway with a by-pass along seven miles of the present state highway.⁴¹ The value of the Corridor Planning Council should be recognized, and the results of this work should become the basis for future work on both sections of this corridor. The IL 120 improvement can proceed more quickly through planning and engineering than the IL 53 extension, though they should be planned to be complementary.

However, the project does have potential negative impacts on the natural environment and on immediately adjacent communities. CMAP recommends that IDOT and Tollway work closely with Lake County and affected communities to use an aggressive Context Sensitive Solutions (CSS) approach for the planning and design of this facility, and that environmental protection and preservation of nearby community character should be high priorities. More specifically, there are significant environmental mitigation and enhancement opportunities in the vicinity of the project that have been noted in the Green Infrastructure Vision (GIV). Funds for wetland mitigation should be directed to high-priority biological areas, so that mitigation projects are focused in the GIV and in the same subwatersheds. Mitigation should help protect and restore key areas, such as the Kemper Property and Liberty Prairie Reserve, identified in the GIV.

Various design alternatives, including non-expressway alternatives, designing for lower speeds and using innovative interchange/intersection ideas, should be strongly considered during project planning. In addition, since high-capacity, high-speed transit options are limited in these corridors, especially the IL 120 corridor, transit accommodations need to be considered during project development. This corridor may be a good candidate for a congestion pricing mechanism to manage demand.

41 More details are available on the project website, <http://www.120now.com/>.

CTA Red Line Extension (South)

The South Extension project extends the Red Line, which is currently 22 miles long and is the Chicago Transit Authority's (CTA) most heavily-used rail line, for an additional 5.5 miles. It would travel from its current terminus along I-57, following the Union Pacific (UP) corridor to 130th Street, operating on an elevated structure for its entire length. A key component of the plan is an intermodal terminal and a major park-and-ride lot at 130th Street. Intermediate stations are planned at 103rd, 111th, and 115th.

The project will streamline bus-to-rail connections for several bus routes south of 95th Street. Currently, 95th Street is the station with the highest ridership outside of downtown Chicago; additionally, 13 CTA and six Pace routes serve the 95th Street station, and nearly 9,000 riders transfer from bus to rail at this station on an average weekday. Bus access to the 95th Street terminal is a key problem that would be addressed by the Red Line extension, which would reduce the number of bus to rail transfers that would need to occur at this location.

The South Extension strongly supports GO TO 2040's recommendations for infill development. A number of vacant and underutilized lots, some under city ownership, have been identified as having redevelopment potential near several of the proposed new stations. Much of the surrounding area is within TIF districts and economic development in these areas is sought. The new stations and 95th Street station may have the potential to support innovative financing, such as value capture strategies, lease of facilities for commercial uses, and advertising and station naming rights.

The Locally Preferred Alternative for this project was selected in August 2009, completing the Alternatives Analysis process. This led to the UP railroad corridor being selected over several other potential alternatives. The next step in the process is to prepare a draft Environmental Impact Statement and begin preliminary engineering through the federal New Starts process. More documentation on the Alternatives Analysis process, including detailed reports and maps, is available at <http://w.transitchicago.com/Redeis/documents.aspx>.

CTA Red Line South Extension



Elgin O'Hare Expressway and West O'Hare Bypass Improvements

This multi-component project will improve access to areas west of O'Hare Airport and also to a proposed West O'Hare Terminal. This project consists of several elements: (1) a western expressway bypass of O'Hare Airport; (2) an extension of the Elgin O'Hare Expressway from I-290/IL 53 to the Western O'Hare bypass and West O'Hare Terminal; and (3) adding one lane in each direction — from four to six lanes total — on the existing Elgin O'Hare expressway. Toll revenues are expected to cover a large portion of the project cost.

For planning and implementation, the three projects are being analyzed by IDOT as a joint project. Since this project centers around O'Hare Airport, which is a major economic driver in this region, it is important to relieve congestion and improve accessibility throughout this corridor. By implementing this project, the benefits will extend throughout the region in terms of accessibility and the economy. Tier One Alternatives Analysis has been completed, with a Draft Environmental Impact Statement published in September 2009. Public involvement activities remain underway in advance of project engineering. See www.elginohare-westbypass.org for more information on these ongoing activities.

The Elgin O'Hare East extension has been endorsed as a major project by the Cook-DuPage Policy Committee as part of the RTA Cook-DuPage corridor study. Land use and economic development planning have also accompanied IDOT's planning of the facility.

While the project would be in a mostly developed area, there are still potential natural resource impacts. Within northeast DuPage County, several properties of the county's Forest Preserve District (Salt Creek, Salt Creek Marsh, and Silver Creek Forest Preserve) may be affected by the project. Wetlands in the western portion of the project area may also be affected. It is important to target mitigation funds in ways that meet regional priorities.

I-294/I-57 Interchange

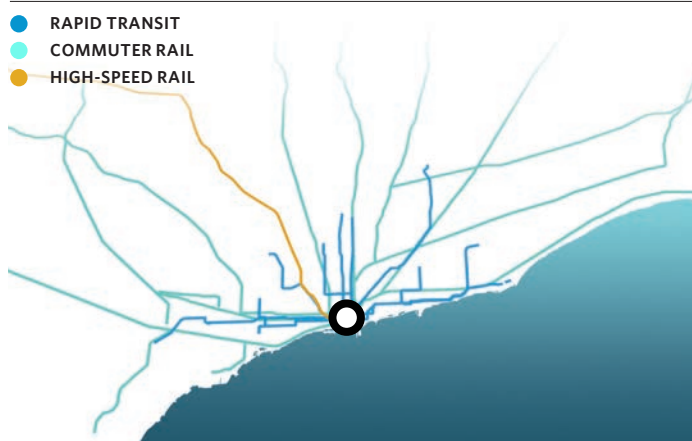
The I-294 at I-57 Interchange project calls for a full interchange at the juncture of these two interstates for improved accessibility to and from the south suburbs and also for improved north-south regional travel. Improvements will also be made to connecting arterials at the new interchange. The Tollway has this project listed as a component in their Congestion Relief Program.⁴² The Tollway, with IDOT, completed an environmental assessment of the project in August 2008.

West Loop Transportation Center

The West Loop Transportation Center is a proposed transportation terminal located between the Eisenhower Expressway and Lake Street in Chicago. The terminal structure for the West Loop Transportation Center is envisioned to improve transfers between intercity rail, potential high-speed rail, commuter rail, rapid transit, and bus services. The proposal also includes increased capacity for Chicago Union Station, which serves several commuter and intercity passenger rail services.

This project will provide a focal point and a gateway into the Chicago region and facilitate movements and connections throughout the region. Incorporating and integrating seamless transit connections with elements of urban design focused on this transit center will be important to facilitating the Chicago region as the Midwest hub for high-speed rail, as well as increasing transit usage and promoting economic development opportunities. Travelers from outside the region can safely arrive at this station and have a number of connection options at their discretion to access the city or the suburbs. For those residents within the region, this project will offer easier access from Metra commuter trains and various points within the city whether by bus or El line.

West Loop Transportation Center



42 Illinois Tollway, Congestion-Relief Program. See <http://tinyurl.com/23t59mu>.

Expressway Additions and Improvements

These projects collectively provide additional capacity on smaller segments of the expressway system in northeastern Illinois. In several cases, they bring the segments in question to the same number of lanes as immediately adjacent segments, thus avoiding artificial bottlenecks. Project completions are envisioned to occur in the earlier years of the plan.

I-190 Access Improvements

The I-190 Access Improvements project consists primarily of redesigning and reconfiguring arterial access to I-190 and O'Hare International Airport to improve mobility and reduce congestion and collisions. Project planning is advancing; several elements have already been funded through IDOT, Chicago Department of Transportation (CDOT), and the Chicago Department of Aviation, using Passenger Facility Charge funds.

I-80 Add Lanes

On I-80, two (one each direction) lanes are proposed from US 30 east to US 45 to serve traffic utilizing I-355 north and east-west cross-county traffic. This will complete the widening of I-80 from the Grundy County Line (River Road) to I-294, providing capacity in the corridor to serve demand from the recently-completed I-355 extension.

I-88 Add Lanes

Two (one each direction) lanes are proposed from IL 56 east to Orchard Road along the Ronald Reagan Memorial Tollway (I-88). The 4.1 miles of additional capacity on I-88 comes after completion by the Tollway of a larger reconstruction and add lanes project on the facility from I-294 west to Orchard Road. The Kane County's 2030 Long Range Transportation Plan and 2030 Land Resource Management Plan concur in the construction of this project.

I-94 Add Lanes North

Two additional lanes (one each direction) are proposed for I-94 in far northern Lake County from IL 173 to the Wisconsin border. The project will provide capacity continuity between the recently-completed add-lanes project on the Tri-State Tollway from Balmoral Avenue north to IL 173 and a project underway to add lanes on I-94 from the Illinois border to I-894/Mitchell Airport in Wisconsin.

Circle Interchange Improvements

On March 13 and 14, 2013, the CMAP Board and MPO Policy Committee voted to amend GO TO 2040 by adding Circle Interchange improvements to the plan's list of fiscally constrained projects. The Circle Interchange project — I-90/94 at I-290/Congress Parkway in downtown Chicago — will rehabilitate, improve safety and mobility, and address operational and facility deficiencies of the mainline and interchanges. IDOT proposes making several improvements to this interchange, which has not had a major rehabilitation since its initial design in the late 1950s. IDOT proposes adding one lane each to two ramps — Northbound I-90/94 to westbound I-290 and eastbound I-290 to northbound I-90/94. IDOT will also seek to add one to two lanes to both the northbound and the southbound mainline I-90/94.

Managed Lanes and Multimodal Corridors

These projects will address capacity issues on major corridors of the existing highway network in the region. However, rather than simply adding further general-purpose highway capacity, two of these corridors are recommended for a “managed lane” treatment. “Managed lanes” are distinct from general purpose travel lanes in that they are designed to address the specific congestion issues in the corridor. For example, if peak-hour demand is the dominant issue, the facility can be tolled to regulate demand, or lanes can be reserved for high-capacity vehicles — carpools, vanpools, or buses, for example. Other facilities with heavy demand focused on particular origins and destinations can have transit components. If freight movements are high, some of the capacity can be restricted to certain types of vehicles. The third corridor is recommended for a multimodal improvement, with a mode still to be chosen.

I-55 Managed Lanes

The I-55 managed lanes project consists of two (one each direction) additional managed lanes from Weber Road east to I-90/94. A similar project was previously studied by the RTA and IDOT in 1993. Currently, studies are ongoing with the RTA, in cooperation with IDOT and the FHWA, to implement a shoulder-riding bus service between I-355 and I-90/94 as an initial option. Development of a Bolingbrook South Park and Ride Center along I-55 within the proposed corridor is identified as a key transit element in the Will County 2030 Transportation Framework Plan component of the Will County Land Use Plan.

I-90 Managed Lanes

Two managed lanes (one each direction) are included on I-90 from I-294 to the Elgin Toll Plaza west to I-39 near Rockford. Access to the facility will be improved by: reconstructing the interchange at I-290/IL 53; expanding the interchanges at IL 47, Barrington Road, Elmhurst Road, and IL 72/Lee Street; and providing new interchanges at Irene Road, IL 23, and Meacham Road. Depending on the timing, reconstruction of the existing facility along this corridor should be undertaken as a concurrent activity.

This project shows broad regional support. It is concurred upon within the Kane County 2030 Long Range Transportation Plan and 2030 Land Resource Management Plan. The Village of Hoffman Estates’ 2007 Comprehensive Plan recommends continuing work with the Tollway toward implementing additional lanes. Interchange access improvements are recommended in the Infrastructure section of the McHenry County 2030 Comprehensive Plan.

I-290 Multimodal Corridor

IDOT is currently conducting an I-290 Preliminary Engineering and Environmental Study. The study is employing the CSS principles adopted by IDOT and will examine a number of feasible alternatives to address the needs in the corridor. Among the transit alternatives under review are an extension of the CTA Blue Line, and BRT. Also under consideration is an expansion of the expressway by adding two (one each direction) managed lanes from Mannheim Road east to Austin Avenue. The managed lanes would also be capable of serving a BRT option.

The expansion of I-290 is a significant concern for a number of communities in the project corridor. Of particular concern is that if an I-290 expansion were implemented first, it might preclude future transit extensions in the corridor. The need to preserve this option will be maintained throughout IDOT’s Phase I engineering work. The results of this work and the Cook-DuPage corridor study will determine the specific mode to be chosen.

Regardless of mode, the project should require careful attention to minimizing any negative project impacts on the adjacent communities. Transportation improvements in this corridor are clearly needed, and a multimodal approach is favored over simply adding lanes to the highway.

Transit Improvements

Several commuter rail lines are recommended for infrastructure upgrades, accompanied by service improvements for some of the lines. Depending on the line, the upgrades can include additional tracks, improved train controls, grade separations and yard improvements. Some of these improvements expand capacity to accommodate increased passenger service; others improve reliability and reduce conflicts with on-road vehicles. Many of the improvements also benefit freight traffic, which may share tracks with passenger transportation, or cross passenger lines. The CREATE program identifies a number of specific improvements included in these projects.

CTA North Red and Purple Line Improvements

The Red Line and Purple Line Improvements project includes mainly reconstruction improvements to the shared right of way segment between the Addison and Howard stations, as well as the Purple Line segment between the Linden and Howard Station. Also being considered are varied limited stop and express service improvements and bus transfer facility improvements.

A vision study for the Red/Purple Lines is currently underway.⁴³ This study is expected to be completed in 2010.

Metra Rock Island Improvements

For the Rock Island District line, proposed improvements include adding a third track to the nine-mile double-track portion (between Gresham Junction and a point north of 16th Street Junction) of the Rock Island District (RID) Line, north from Gresham, where the Beverly Branch trains connect with the RID Main Line. The additional track will accommodate future expansion of RID service, the proposed SouthEast Service, and the eventual connection of the SouthWest Service with LaSalle Street Station. Other elements of the proposed upgrade include a new flyover bridge over the Norfolk Southern railroad at 63rd Street (part of the CREATE program), new bi-directional signals, and centralized traffic control to integrate with existing RID operations, plus several new or rehabbed bridges over city streets and an expanded and modernized 47th Street Yard.

Metra SouthWest Service Improvements

SouthWest Service Improvements will upgrade infrastructure and service levels between Manhattan (southern Will County) and downtown Chicago. Service will also be rerouted to terminate at LaSalle Street station. The improvements include constructing a 2-mile segment beginning west of Belt Junction (Belt Railway of Chicago, BRC) to carry trains over the parallel Norfolk Southern service along 74th Street over to the RID tracks to provide improved reliability with fewer operating conflicts. Rerouting the SouthWest

service into Chicago's LaSalle Street Station will relieve congested operations at Union Station. The project is consistent with subregional plans; the project is recommended in the Will County 2030 Transportation Framework Plan portion of the Will County Land Use Plan.

Metra UP North Improvements

The UP North Improvements will improve the operating capacity of the line between Ogilvie Transportation Center and Kenosha through a number of coordinated projects. Line capacity and reliability will be improved by installing additional crossovers and other track improvements. A new upgraded replacement outlying coach yard will be provided to allow for more efficient servicing of equipment and to accommodate expansion of service. Additional upgrades to existing stations will accommodate the increase in passengers in both the traditional commute and reverse commute direction. The renewal of bridges between Balmoral Avenue and Ogilvie Transportation Center within the City of Chicago will improve safety. A new station at Peterson and Ridge Avenues is proposed, and improvements to the existing Hubbard Woods Station are proposed to expand transportation options to these communities.

Metra UP Northwest Improvements/Extension

Two improvements are proposed on the UP Northwest: infrastructure upgrades and a 1.6 mile extension to Johnsburg from McHenry. Infrastructure upgrades include improvements to the existing signal system and additional crossovers and other track improvements to increase the operating capacity and reliability. The extension to Johnsburg will allow improved operations on the entire line. New yards are planned for the Woodstock and Johnsburg areas. Two additional stations will be added to the line: Prairie Grove (McHenry branch) and Ridgefield (Woodstock branch).

Metra UP West Improvements

The UP West Improvements include improving signal systems and upgrading existing track, including new crossovers. A third track will be added to an existing double-track portion of the line east of Elmhurst. Also proposed is moving the current A-2 crossing with the Milwaukee District and North Central lines at Western Avenue to a new location one mile east. These improvements will enable the UP West to better serve as an alternative to the BNSF line and also to operate more effectively in coordination with freight rail movements.

⁴³ Chicago Transit Authority, North Red & Purple Line Vision Study. See <http://tinyurl.com/2bz4ejw>.

Other Recommended Projects

Among the systematic improvements necessary to bring the transportation system up to a state of good repair are a number of significant initiatives that will serve to improve transportation in northeastern Illinois. Note that these are not major capital projects but are specifically recommended within GO TO 2040 and deserve specific mention here.

CREATE

Addressing the region's rail infrastructure, CREATE will invest in capital improvements reducing freight bottlenecks and raising train operating speeds. In doing so, the program improves the economic competitiveness of the region's manufacturing and transportation industries. In addition, CREATE will reduce the freight industry's impact on metropolitan communities by reducing grade-crossing delay and by reducing freight engine vehicle emissions. CREATE is a project of regional and national significance and although the project has made substantial progress, it still needs additional funds leading to completion. Specific work will include:

25 new roadway overpasses or underpasses at locations where auto and pedestrian traffic currently cross railroad tracks at grade level.

Six new rail overpasses or underpasses to separate passenger and freight train tracks.

Viaduct improvements.

Grade crossing safety enhancements.

Extensive upgrades of tracks, switches and signal systems.

High-Speed Rail

As part of ARRA, in January of 2010, U.S. DOT announced the award of \$8 billion nationally to develop a program of high-speed intercity passenger rail service. Recognizing that Chicago is the preferred hub for the Midwest portion of such a network, IDOT was awarded \$1.1 billion to develop passenger rail service from Chicago to St. Louis, operating at speeds of up to 110 mph. Improvements include upgrades to track, signal systems, and existing stations; implementation of positive train control technology; and upgrades to rail cars. The improvements will allow Chicago to St. Louis customers to reach their destination 30 percent faster than is now possible by rail and 10 percent faster than driving. On-time performance will also be improved. GO TO 2040 recognizes the need for the region to aggressively pursue high-speed rail and has included in its list of capital projects the West Loop Transportation Center in the City of Chicago. This transportation hub would bring together Amtrak services, both high-speed and conventional, Metra commuter rail, CTA rapid transit, and bus service. A facility of this nature is necessary if Chicago is to be successful as a Midwest hub for high-speed rail.

Unconstrained Projects

A number of projects were evaluated but are not included in the fiscally-constrained priority list for GO TO 2040.⁴⁴ The placement of a project on the fiscally unconstrained list does not mean that it is undesirable or not recommended. Some projects on this list showed regional benefits, but are not far enough along in the study phase to have firm cost estimates, alignment, or limits. Other projects may have potential for innovative financing arrangements that would significantly change their public sector cost or implementation schedule. For both of these cases, more detailed information or changes in financing status would justify reconsidering whether the project should be placed on the fiscally constrained list. More detail on each unconstrained project is provided below.

The extent of this list of unconstrained projects highlights the magnitude of unfunded major capital needs. Preliminary work on many of these projects has already begun, indicating that these are identified needs with substantial support justifying an expenditure of scarce resources. Clearly the funding available to maintain, operate and improve the transportation system is severely inadequate. Project sponsors are encouraged to explore PPPs or other innovative financing methods for their projects, as these will become increasingly important ways to finance transportation improvements.

As conditions change, such as an increase in available funding or an opportunity for a project to utilize a PPP, there could be a need to modify the list of constrained projects. The region is required, by federal regulation, to review and update its long range plan at least every four years. This provides an opportunity to adjust the list of constrained projects as appropriate. Additionally, the MPO Policy Committee has established a process whereby in certain situations the plan could be modified in-between regular updates. This would require meeting all federal requirements including fiscal constraint, air quality conformity and public involvement.

Central Area Transitway

This project includes a number of elements meant to improve circulation in downtown Chicago, including exclusive busways or priority lanes on city streets. Several elements of this project, including any bus improvements on surface streets, can proceed at any time; the only elements of this project which are unconstrained are the construction of major capital facilities including exclusive and separated busways.

CTA Blue Line West Extension

This project would extend the CTA Blue Line to the west along the I-290 and I-88 corridors, with either Maywood, Oak Brook, or Lombard being used as a western endpoint. It should be evaluated further as part of the continuation of the Cook-DuPage corridor study. The initial evaluation of the project showed it to be beneficial, but a more detailed feasibility study is needed.

44 For more detailed information and analysis, see the GO TO 2040 capital project page at <http://www.goto2040.org/scenarios/capital/main/>.

CTA Brown Line Extension

This project would extend the CTA Brown Line along Lawrence Avenue to connect with the CTA Blue Line at the Jefferson Park station. The project shows benefits in a heavily-travelled corridor, and improves transit connectivity, but it is quite costly. The project is in early stages of development, and further investigation of the feasibility of this project, as well as alternative bus-based service such as ART or BRT, is needed.

CTA Circle Line (Phase II; south)

This project would travel south from the Ashland station of the CTA Green and Pink Lines, connecting to the CTA Blue Line and continuing to the CTA Orange Line. After this, the route will use the CTA Orange Line alignment to travel into the Loop. This segment of the Circle Line is progressing through the Alternatives Analysis phase of the federal New Starts process; the next step in the process will be the selection of a Locally Preferred Alternative.

CTA Circle Line (Phase III; north)

This project would connect the Ashland station of the CTA Green and Pink Lines (also the northern terminus of the southern portion of the Circle Line) to the CTA Red, Brown, and Purple Lines in the vicinity of North Avenue within Chicago. Planning for this segment of the Circle Line is in an early stage and its benefits and costs cannot yet be assessed.

CTA Orange Line Extension

This project would extend the CTA Orange Line to the Ford City shopping center, in southwest Cook County, from its current terminus at Midway Airport. It has completed the Alternatives Analysis process required to access federal New Starts funding, and a Locally Preferred Alternative has been identified. Per FTA regulations, the project may not initiate Phase I engineering unless it is on the fiscally constrained list, but other scoping and planning activities are permitted and may continue. In particular, performing supportive land use and economic development planning around the proposed terminus would improve the project's effectiveness and should be pursued.

CTA Yellow Line Enhancements and Extension

This project would extend the Yellow Line from its current terminus in Skokie to Old Orchard Mall in northern Cook County. It has completed the Alternatives Analysis process required to access federal New Starts funding, and a Locally Preferred Alternative has been identified. Per FTA regulations, the project may not initiate Phase I engineering unless it is on the fiscally constrained list, but other planning scoping activities are permitted and may continue.

DuPage “J” Line

This project involves the construction of a new bus-only lane on I-88 through DuPage County from Naperville Road to IL 83. It also includes service on nearby arterial streets and improvements to these streets, though these are not considered part of the major capital project. The DuPage “J” Line may initiate operations as an express bus or ART-type service at any time, and this is supported by GO TO 2040; the only portion of this project which is fiscally unconstrained is the construction of a new lane on I-88. As indicated in the Cook-DuPage corridor study, there is a significant need for north-south transit alternatives in western Cook and eastern DuPage Counties, and this project may be able to address this need.

Elgin O’Hare Expressway Far West Extension

This project would build on the Elgin O’Hare Expressway West Extension (described below) by upgrading US 20 through northwest Cook County. It is contingent on the completion of other projects and is in an early stage of planning.

Elgin O’Hare Expressway West Extension

This project would extend the Elgin O’Hare Expressway west from its current terminus in Hanover Park to a location along US 20 near Bartlett Road in Streamwood. A transit element may be included as part of this project, which is in an early stage of planning.

Express Airport Train Service

This project would provide express service along the CTA Blue and Orange lines, speeding connections to downtown Chicago. It also would include upgraded vehicles and a new downtown terminal that would allow airline and baggage check-in. Private financing may be necessary for this project to become financially feasible.

I-55 Add Lanes and Reconstruction

This project would reconstruct I-55, add a lane in each direction, and improve interchanges through western Will County, from the I-80 interchange south. This project follows similar projects that have been completed on segments of I-55 farther north. Project planning should include consideration of a managed lane, due to high freight volumes in this area. Planning for portions of the project is currently underway. Per FHWA regulations, the project must be included as a fiscally constrained project before Phase II engineering of the add-lanes portion of the project may begin. Other project elements that do not involve adding a lane on I-55, including interchange improvements or additions, may occur at any time.

I-57 Add Lanes

This project would add one lane in each direction to I-57 in eastern Will County, from I-80 south to the proposed South Suburban Airport. Project planning for this project is in its early stages.

I-80 Add/Managed Lanes

This project would add a lane to I-80 through southwestern Cook and Will Counties, from I-294 to the Grundy County line. This may be considered as a managed lane over some or all of its length. This project is in an early stage of planning. (Improvements to a shorter segment of I-80, from US 30 to US 45 in Will County, are in the fiscally constrained portion of GO TO 2040.)

I-80 to I-55 Connector

This project would connect the Illiana Expressway (which has a western terminus at I-55) and Prairie Parkway (which has a southern terminus at I-80). It is contingent on the completion of these other projects.

IL 394

This project would add lanes to IL 394 from I-80 south in southern Cook and Will Counties, and convert the roadway from an arterial to an expressway. Local officials in the area have expressed concern about the effect of the conversion of the roadway to an expressway on nearby economic development. This project should be examined to determine if operational alternatives to expressway conversion are available. Per FHWA regulations, conversion of the facility to an expressway may not advance to Phase II engineering unless the project is fiscally constrained. However, any operational or arterial-based improvements may occur at any time.

Illiana Expressway

This project would create a new expressway from I-65 in Indiana to I-55, passing east-west through Will County. Funding for Phase I engineering for the Illiana Expressway — the next step in development of the project — is included within the fiscally constrained project list. The inclusion of engineering costs for the Illiana on the fiscally constrained project list demonstrates the region's support for its continued development. The project's construction costs are on the fiscally unconstrained list. The rationale for including construction costs on the unconstrained list is two-fold:

First, while the project's assumptions include tolling of some sort, initial revenue projections show that tolls significantly higher than those charged on the rest of the Tollway system would be necessary to cover construction and maintenance costs. Additional analysis of financing options needs to take place. CMAP also supports state legislation that would allow the use of PPPs for this and other projects. On June 9, 2010, the Governor of Illinois signed legislation authorizing IDOT to "enter into one or more public private agreements with one or more contractors to develop, finance, construct, manage, or operate the Illiana Expressway on behalf of the state." This is a necessary first step; identification of potential private funding sources is now needed.

Second, the segment of the project between I-55 and I-57 has not been studied and a wide variety of alignments and interchange points with I-55 are possible. The cost of the project, as well as its benefits, is dependent on the option chosen. CMAP supports initiating Phase I engineering for the project in order to narrow the project scope to a few feasible alternatives, and recommends that these activities begin as a high priority.

Inner Circumferential Rail Service

This project would create a new north-south transit connection through western Cook County, also connecting to both O'Hare and Midway airports. Both this project and the Mid-City Transitway appear to have potential to serve the need for north-south transit travel in central and western Cook County. A feasibility study for this project has been completed, but further planning is needed to advance it. This project should be evaluated further as part of the continuation of the Cook-DuPage corridor study.

McHenry-Lake Corridor

This project would create a new expressway through McHenry and western Lake Counties, from the terminus of the U.S. 12 freeway at the Wisconsin border to the upgraded IL 120 roadway (see the Central Lake County corridor project for a further description). This project is in early stages of planning and relies on the completion of the Central Lake County corridor.

Metra BNSF Extension

This project would extend Metra BNSF service from its current terminus in Aurora to Oswego, in Kendall County. The project is nearly ready to begin Phase I engineering. It has been exempted from the New Starts evaluation process by federal action. However, Kendall County is currently outside of the RTA service area, and should pursue joining the RTA to expedite this project.

Metra Heritage Corridor

This project would improve operations on the Metra Heritage Corridor, which currently serves southwest Cook and Will Counties. The project includes reducing freight conflicts (including addressing some elements of CREATE), upgrading infrastructure, increasing service levels, and adding stations. Many elements of this project (including those associated with CREATE) are not considered stand-alone major capital improvements and therefore can be pursued at any time. It is currently in early stages of planning.

Metra Electric Extension

This project would extend Metra Electric service to the proposed South Suburban Airport in Will County from its current terminus in University Park, as well as create a new rail yard facility. Supportive land use planning should accompany this and other transit extension projects.

Metra Milwaukee District North Extension

This project would extend the Metra Milwaukee District North line to Wadsworth in Lake County from the Rondout junction. A feasibility study for this project has been completed, but further planning is needed to advance it. Supportive land use planning should accompany this and other transit extension projects.

Metra Milwaukee District North Improvement

This project would improve service along the Metra Milwaukee District North line between Fox Lake and the Rondout junction in Lake County by making track, signal, and other improvements. Many elements of this project are not considered stand-alone major capital improvements and therefore can be pursued at any time. This project is currently in early stages of planning.

Metra Milwaukee District West Extension

This project would extend the Metra Milwaukee District West line from its current terminus in Elgin to Marengo in McHenry County. An extension along a different route to Hampshire is also under consideration. A feasibility study of the Marengo extension is underway. Supportive land use planning should accompany this and other transit extension projects.

Metra North Central Service Improvements

This project would upgrade Metra North Central Service to allow for full service levels. This project is currently in early stages of planning.

Metra Rock Island Extension

This project would extend the Metra Rock Island District line from its current terminus in Joliet to Minooka in Will and Grundy Counties. This project is currently in early stages of planning. Supportive land use planning should accompany this and other transit extension projects. (Improvements to the Rock Island District line which do not include an extension are included among the fiscally constrained projects.)

Metra SouthEast Service Corridor

This project would create a new rail line that provides service to communities in southern Cook and northern Will Counties. It has been undergoing Alternatives Analysis by Metra, and the identification of a Locally Preferred Alternative is in process. The project should remain a fiscally unconstrained project until such time as a Locally Preferred Alternative is accepted by the FTA and the project demonstrates financial feasibility. The Alternatives Analysis work should include detailed cost estimates; a demonstration of the financial capacity to cover the capital and operating costs; and a financial commitment detailing the availability of state and local funds to match federal New Starts funds. Innovative financing options should also be explored.

Metra SouthWest Service Extension and Full Service

This project would extend Metra SouthWest Service to Midewin in Will County from its current terminus in Manhattan. This project is currently in early stages of planning. Supportive land use planning should accompany this and other transit extension projects. (Improvements to SouthWest Service which do not include an extension are included among the fiscally constrained projects.)

Metra STAR Line Corridor

This project would create a new rail service from Joliet to Hoffman Estates through western Will, DuPage, and Cook Counties, and also connect from Hoffman Estates to O'Hare airport along I-90. The project has been undergoing Alternatives Analysis by Metra, and the identification of a Locally Preferred Alternative is in process. Though the project does demonstrate benefits and has strong local support, significant funding issues concerning the STAR Line need to be resolved. As with other strong projects on the unconstrained list, innovative financing options should be considered in the STAR Line corridor. Also, other options — such as including a transit component with the I-90 Managed Lanes project, or the O'Hare Schaumburg Transit Service project (which travels along the Elgin O'Hare Expressway rather than I-90) — should be considered to improve transit service in the larger corridor. In particular, opportunities to initiate bus-based transit service as part of the I-90 Managed Lane project should be strongly considered, even if these serve primarily to test the market and build ridership for a larger capital investment later.

Mid-City Transitway

This project would create a new north-south transit corridor in the vicinity of Cicero Avenue in central Cook County, and also connecting east to the CTA Red Line. Both this project and the Inner Circumferential Rail Service appear to have potential to serve the need for north-south transit travel in central and western Cook County. The mode of this project is not yet certain, ranging from an on-street BRT service to rail service. This project is in the early stages of planning, and should be evaluated further as part of the continuation of the Cook-DuPage corridor study.

O'Hare to Schaumburg Transit Service

This project would include both a transit component of the Elgin O'Hare eastern extension (part of the Western Access project on the fiscally constrained list) and a new transit service on IL 53 from the Elgin O'Hare Expressway to Schaumburg. Project development should be accelerated to attempt to take advantage of the opportunity to plan for this project as part of the Elgin O'Hare eastern extension, even if the transit service only includes operations (rather than major capital construction) in its early stage.

Prairie Parkway

This project would create a new expressway between I-88 and I-80 in Kane and Kendall Counties. Phase I engineering for this project has been completed, and federal earmarks to cover a portion of project costs have been received, but funding is insufficient to construct the entire project. However, one element of this project, involving a bridge over the Fox River in Yorkville to connect US 34 and IL 71, has independent utility. This project element may be pursued at any time. For the remainder of the project, corridor preservation activities should be continued in order to preserve a transportation corridor in this area for future use. **NOTE:** This project description was revised as part of the GO TO 2040 plan amendment approved in March 2013.

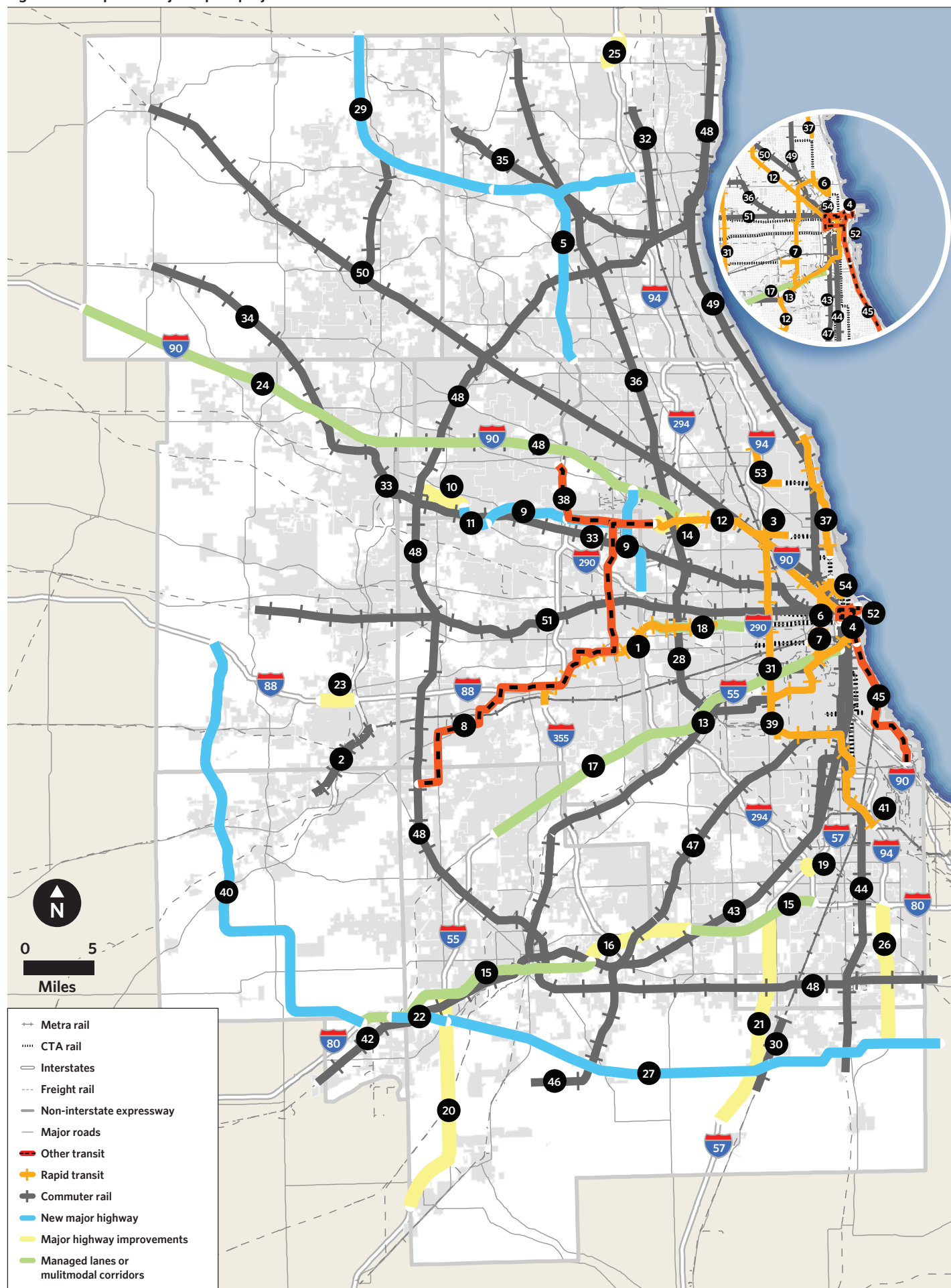
South Lakefront Corridor

This project would improve service along Chicago's lakefront from downtown Chicago to the south. It could include a new light-rail service or operational improvements to existing Metra services; variations of this concept have been referred to as the Gray Line or the Gold Line. It is recommended that service in this area be studied with participation by CDOT, CTA, and Metra, considering whether operational improvements can be made rather than a major capital project.

Figure 58 is a map of the projects that have been proposed and carried throughout the evaluation process. The project key is below.

- | | |
|--|---|
| 1 Blue Line Extension | 19 I-294/I-57 Interchange Addition |
| 2 BNSF Extension | 20 I-55 Add Lanes and Reconstruction |
| 3 Brown Line Extension | 21 I-57 Add Lanes |
| 4 Central Area Transitway | 22 I-80 to I-55 Connector |
| 5 Central Lake County Corridor | 23 I-88 Add Lanes |
| 6 Circle Line North | 24 I-90 Managed Lanes |
| 7 Circle Line South | 25 I-94 Add Lanes North |
| 8 DuPage J Line | 26 IL-394 |
| 9 Elgin O'Hare Expressway Improvements | 27 Illiana Corridor |
| 10 E.O.H. Expressway Far West Ext. | 28 Inner Circumferential Rail |
| 11 E.O.H. Expressway West Ext. | 29 McHenry-Lake Corridor |
| 12 Express Airport Train Service | 30 Metra Electric Extension |
| 13 Heritage Corridor Improvements | 31 Mid-City Transitway |
| 14 I-190 Access Improvements | 32 MD North Extension |
| 15 I-80 Add/Managed Lanes | 33 MD West Extension |
| 16 I-80 Add Lanes | 34 MD West Improvements |
| 17 I-55 Managed Lanes | 35 MD North Improvements |
| 18 I-290 Multimodal Corridor | 36 North Central Line Service Imp. |
| | 37 North Red/Purple Line Imp. |
| | 38 O'Hare to Schaumburg Transit Service |
| | 39 Orange Line Extension |
| | 40 Prairie Parkway |
| | 41 Red Line Extension (South) |
| | 42 Rock Island District Extension |
| | 43 Rock Island Improvements |
| | 44 SouthEast Service |
| | 45 South Lakefront Rail Corridor |
| | 46 SouthWest Service Extension |
| | 47 SouthWest Service Improvements |
| | 48 STAR Line |
| | 49 UP North Improvements |
| | 50 UP Northwest Imp./Ext. |
| | 51 UP-West Improvements |
| | 52 West Loop Transportation Center |
| | 53 Yellow Line Ext./Imp. |
| | 54 Circle Interchange Improvements |

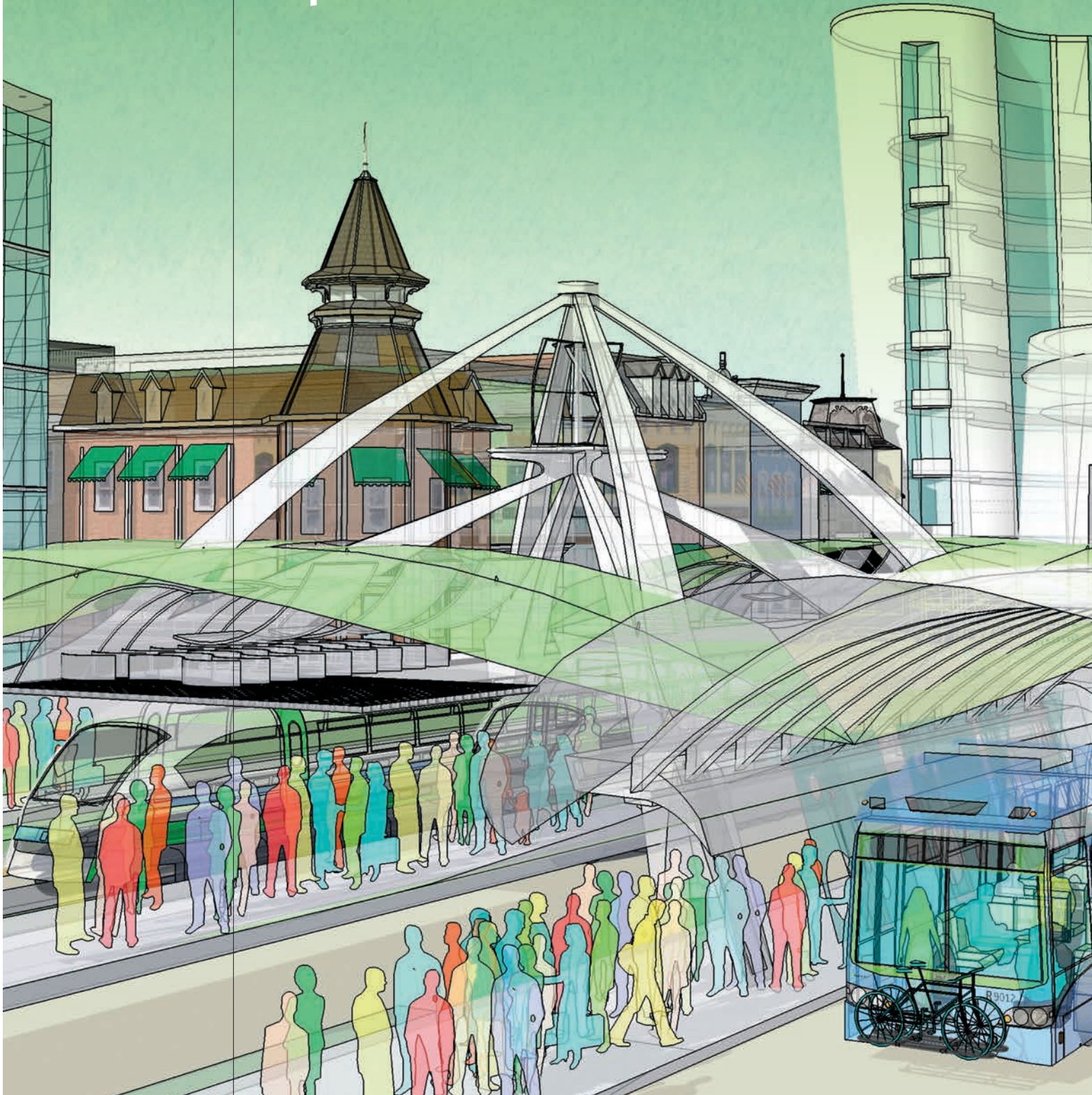
Figure 58. Proposed major capital projects



Source: Chicago Metropolitan Agency for Planning, 2010

RECOMMENDATION

11 Increase commitment to public transit



The northeastern Illinois region needs and deserves a world-class transit system. This requires attention to not only how transit operates, but how it is perceived. A system that functions well, with on-time and frequent service and seamless connections between modes, is a necessity. But so are features that make transit attractive, such as clean stations, modern transit vehicles, and clear information.

For many people today, transit is an option of last resort due to concerns (whether real or perceived) about personal safety, delays, or infrequent service. Many others would like to use transit but lack access to service that meets their needs. GO TO 2040 recommends making transit the preferred travel option for as many of the region's residents as possible. The region's transit system should be strengthened through the following recommended actions:

Improve the fiscal health of transit by increasing investment levels and addressing cost increases.

Improve the operations of the region's transit system, focusing investments on maintenance and modernization.

Pursue a limited number of high-priority major capital expansion projects.

Conduct supportive land use planning, make small-scale infrastructure investments, and provide other local support to make transit work better.

The continual financial challenges facing the transit system have been caused by both insufficient funding and rapid increases in costs. Both of these need to be addressed to restore the transit system to fiscal health. Additional funding is needed to support the transit system, and a portion of revenue from new transportation funding sources, including implementing congestion pricing on some expressways and increasing the state gas tax, should be devoted to transit. The transit operators, including the Chicago Transit Authority (CTA), Metra, and Pace, as well as the Regional Transportation Authority (RTA), should also make a concerted and unified effort to control costs and improve service efficiency.

Public transit should be improved through maintenance, modernization, and expansion. By steadily moving toward “a state of good repair” — in which all facilities are maintained in good condition, with no backlog of capital maintenance — the region can save more costly repairs and benefit from operational improvements, including increased reliability and comfort that contribute to riders' confidence in the system. Modernization of transit includes technological improvements that improve system performance but also those that improve user perceptions of transit. Expansion of bus service into underserved areas, using the state-

of-the-art technologies and operational concepts, is supported by GO TO 2040; these expansions should be carefully prioritized to ensure their success. The plan also supports new high-speed rail and encourages the federal government to pursue this, but cautions that new federal spending on high-speed rail should not come at the expense of support for the regional transit system.

While maintenance, modernization, and strategic improvements are the main priorities of GO TO 2040, a limited number of major projects are recommended, including the West Loop Transportation Center, CTA Red Line South extension, CTA north Red and Purple Line improvements, and improvements to Metra's Union Pacific (UP) rail lines, SouthWest Service, and Rock Island line. For the most part, these projects improve existing infrastructure rather than add extensions or new services. The advent of high-speed rail prompts CMAP to recommend creation of the West Loop Transportation Center. A necessary project for our region to become the hub of a Midwest high-speed rail network, it also will have significant immediate benefits to Metra service and will improve connections between Metra and CTA. Recommended capital improvements also include managed lanes on the I-90 and I-55 expressways and a multimodal corridor on I-290 that may include Bus Rapid Transit (BRT) or other transit options.

Land use planning and small-scale infrastructure improvements to support transit are critical, and often make the difference in the success of transit service. CMAP supports transit oriented development (TOD), and seeks to broaden the definition of transit-supportive land use beyond areas around train stations; in considering transit-supportive land use, GO TO 2040 includes support for bus service, including Arterial Rapid Transit (ART) and BRT, as well as rail. The plan recommends the development of funding and incentive programs for transit-supportive local planning.

The following section describes benefits, defines current conditions, explains the importance of investing in transit, and provides details about the recommended actions, including costs and financing.

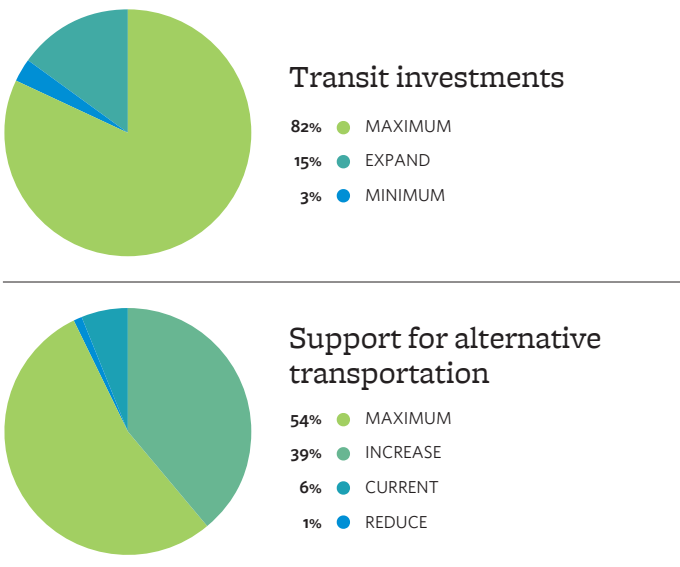
11.1 Benefits

Public transit is identified as an important part of the transportation system in the GO TO 2040 Regional Vision, which calls for a “broad range of integrated and seamless transportation choices that are safe, accessible, easy to navigate, affordable, and coordinated with nearby land use.”

Strong public support for transit was expressed during the engagement activities that CMAP conducted during summer 2009. Over three-fourths of workshop and online participants favored maximizing our investment in transit, and many emphasized the importance of transit in their comments (see **Figure 59**). In communities that already had transit coverage, participants wanted to preserve their existing service and improve it; in communities with limited transit service, there was strong support for expanding transit to include new areas.

- A strong transit system provides many benefits to the region, including:
- Improvements to mobility, allowing travelers to avoid congested roadways, and improving travel times both for people who use transit and for those who drive.**
 - A high return on public investment through simple maintenance of the current transit system, and an even higher return when increased investment is tied to land use policies that encourage transit use.**
 - Lower household transportation costs compared to automobiles, providing important travel options for lower-income residents.**
 - Reduced emissions of pollutants and greenhouse gases through decreased energy consumption.**
 - Increased value of land, helping to support transit oriented development or reinvestment projects.**

Figure 59. Preferences of transit investments and policy



Source: CMAP GO TO 2040 "Invent the Future" participants, 2009

Economic

The primary economic benefits of transit come through the additional mobility that it permits. With a strong transit system, residents have more choices concerning where they can live and work and how they travel, and can avoid the harmful effects of congestion. In a 2007 report on public transit's impact on the economy, *Chicago Metropolis 2020* found that simple maintenance of the current transit system would provide a 21-percent return on investment (i.e., a \$1 investment would yield \$1.21 in saved jobs, new jobs, and time saved for commuters), while greater levels of funding could return up to 61 percent if the funding was tied to land use policies that encourage transit use.¹ Essentially, the more money that is invested in the public transportation system, the greater the potential return on investment for the region. Much of this economic benefit is due to reduced congestion, because providing transit options improves travel even for people who continue to drive.²

Using transit is also less expensive for an individual than owning and maintaining an automobile, and transit systems provide important travel options for lower-income residents.

The annual cost of owning, maintaining, and commuting by car averages \$12,500 per year in the region; in comparison, regular commuting on the CTA costs around \$1,000 per year with monthly passes. One study estimates the average savings of commuting by transit instead of by car at over \$11,000 per year in the metropolitan Chicago area.³

Lower-income households, particularly those without access to cars (either because they do not own a car, cannot afford fuel prices, or other reasons), depend heavily on public transit, and it often provides their only link to jobs, health care, education, or other important assets. The same is true of disabled or elderly residents without the ability to drive. This is both an equity and economic consideration; the inability to travel has negative impacts on individuals, but also prevents them from participating fully in the region's economy.

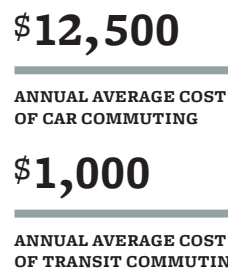
Environmental

Transit creates environmental benefits by reducing emissions of pollutants and greenhouse gases, reducing oil and gasoline consumption, and shifting some petroleum usage to electricity. Transportation is one of the largest single sources of greenhouse gas emissions, and shifting from automobile to transit is often the action that a household can take to most dramatically reduce their greenhouse gas emissions.⁴ Public transportation uses about half as much fuel per passenger mile as private vehicles, and in addition to fuel savings accrued from shifting drivers to transit, there would be savings due to reduced congestion for those continuing to drive.⁵

Quality of Life

Public transit can also have many positive impacts on nearby communities. Transit increases the value of nearby land, helping to support TOD or reinvestment projects. Particularly around rail stations, a number of economic studies have shown that land values nearby are higher than in comparable areas that are not near transit.⁶ It also supports non-motorized transportation systems, as most transit trips begin or end with walking or biking, and improved walking and biking systems are linked with positive health outcomes. Transit is a central component of livable communities, one of the main themes of GO TO 2040.

Figure 60. Costs of commuting, car vs. transit



Source: American Public Transportation Association

1 Chicago Metropolis 2020, "Time is Money: The Economic Benefits of Transit Investment," 2007.

2 More discussion of the economic benefits of reducing congestion can be found in the GO TO 2040 section "Invest Strategically in Transportation."

3 American Public Transportation Association, "Riding Public Transit Saves Individuals \$9,242 Annually," media advisory, January 12, 2010. See <http://tinyurl.com/yznlg5a>.

4 Todd Davis and Monica Hale, "Transportation's Contribution to U.S. Greenhouse Gas Reduction," 2007.

5 Robert J. Shapiro, Kevin A. Hassett, and Frank S. Arnold, "Conserving Energy and Preserving the Environment: The Role of Public Transportation," American Public Transportation Association, 2002.

6 Daniel P. McMillen and John McDonald, "Reaction of House Prices to a New Rapid Transit Line: Chicago's Midway Line, 1983-1999," *Real Estate Economics*, 32 (3; 2004): 463-486. John F. McDonald and Clifford I. Ousji, "The effect of anticipated transportation improvement on residential land values," *Regional Science and Urban Economics*, 25 (1995): 261-278. David R. Bowes and Keith R. Ihlanfeldt, "Identifying the Impacts of Rail Transit Stations on Residential Property Values," *Journal of Urban Economics* 50 (2001): 1-25. Robert Cervero and Michael Duncan, "Transit's Value-Added Effects: Light and Commuter Rail Services and Commercial Land Values," *Transportation Research Record* 1805 (2002): 8-15.

11.2 Current Conditions

The metropolitan Chicago region has one of the nation's oldest and most extensive public transportation systems. Service is provided by three operating agencies — CTA rapid transit and bus, Metra commuter rail, and Pace suburban bus and Americans with Disabilities Act (ADA) paratransit — under the umbrella of the RTA. Each has specific authorities and responsibilities:

The CTA offers bus and heavy rail service within Chicago and 40 nearby communities. The CTA system is the second largest public transportation system in the country and provides 1.6 million rides on an average weekday.

Metra provides commuter rail service throughout the region. Operating from four downtown Chicago transit stations, Metra serves 240 stations throughout the region and averages over 300,000 rides per weekday.

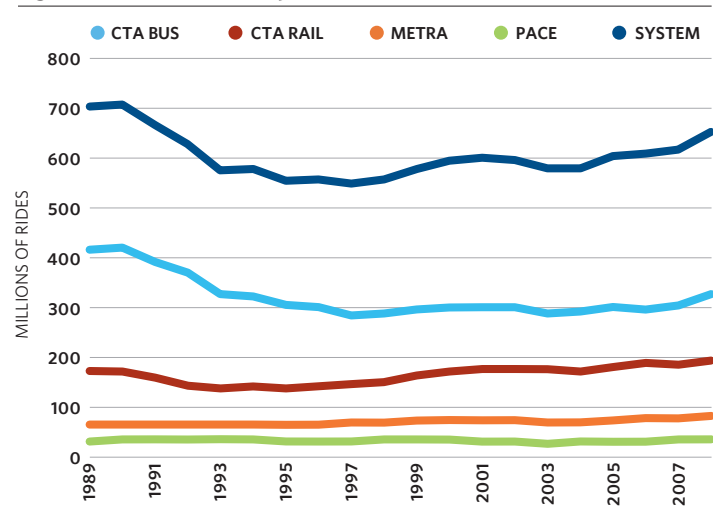
Pace offers bus service in the suburban parts of the region, as well as providing vanpool and ride matching (carpooling) information for the entire region. Pace also is responsible for demand-responsive paratransit service (vehicles dispatched on request) throughout the region including Chicago, including service required by the ADA. Pace's bus service averages around 100,000 rides per weekday, with an additional 10,000 riders per day using paratransit.

The three service providers are governed by the RTA whose primary mission is to manage the financial aspects of the transit system and to facilitate coordination among the service providers. While CTA, Pace, and Metra are each responsible for setting their levels of service, fares, and operational policies, the RTA provides oversight of these decisions, particularly budgeting issues. Additionally, the RTA is responsible for decisions requiring a regional perspective, including coordination of transportation services across the three agencies. In 2008 the State Legislature required the RTA to make permanent its strategic planning process and to use the strategic plan to guide and evaluate service board programs and projects.

Together, this system provides two million rides on an average weekday, accounting for nearly nine percent of all weekday trips and over 13 percent of commute trips.⁷ (Please note that Kendall County is in the CMAP region but not in the RTA service area.) There are other transit providers beyond these agencies — including counties, municipalities, townships, and private providers — but the vast majority of service is provided by the CTA, Metra, and Pace.

Use of the transit system has not kept pace with the region's growth. Overall ridership is lower than it was 20 years ago, though it has rebounded substantially from a low point in the mid-1990s (see **Figure 61**). Meanwhile, the region's population and employment have grown and become more dispersed, often in development patterns that were designed solely for the automobile and are therefore difficult to serve with transit. As a result of these growth patterns, reverse commute trips (residents of urban areas commuting to jobs in suburban areas) or intersuburban commute trips (between different suburbs) make up an ever-increasing share of transit trips but are more difficult to serve than the traditional commute.

Figure 61. Transit ridership, 1989-2008



Source: Regional Transportation Asset Management System

⁷ These statistics are based on CMAP's transportation modeling and may differ slightly from observed data.

Funding

Transit expenditures are often divided into two types, though the lines can be blurry; operating funds are those used to run the system, including staffing, fuel costs, and other ongoing costs, and capital funds are those used to purchase vehicles as well as for major maintenance, improvement, or expansion projects.

Each year, more than \$2 billion is spent to operate the transit system. Approximately half of this is made up from fares collected from riders and other system-generated revenues (from advertising, concessions, etc.), termed “farebox recovery.” This is supplemented by a portion of the RTA sales tax collected in the region, applied at the rate of one and one quarter percent in Cook County and one-half percent in the collar counties, and a real estate transfer tax applied only within Chicago. The majority of this funding is then allocated based on geography, with funds collected in Chicago, suburban Cook County, and the collar counties being distributed to the service boards at varying rates. The state matches the sales tax collected in the RTA’s six-county region and the real estate transfer tax applied in the City of Chicago. The state also makes other contributions.

Transit capital funds primarily come from state and federal sources. While federal capital funding has been fairly consistent, state transit capital funding can vary significantly from year to year. In addition to capital improvements, capital funds are also used for the purchase of buses and rail cars, which typically makes up a significant portion of the capital expense in any given year. A significant capital funding source is the federal New Starts program, but this is restricted only to capital expansions.

The RTA’s 2007 *Moving Beyond Congestion* initiative highlighted the transit system’s considerable capital and operating funding needs, caused by years of underinvestment. This initiative resulted in new operating funding from increases in the sales tax and Chicago’s Real Estate Transfer Tax. This averted the immediate operating funding crisis but did not fully solve the problem of sustainable funding, especially for the backlog of capital maintenance needs. It also did not halt the cost increases that have bedeviled the transit system. Over the past decade, transit operating costs have risen at an average rate of 4.5 percent per year, considerably above the rate of inflation. Cost increases have generally been due to elements outside the direct control of the operators of the transit system, including material and fuel price inflation, liability claims, rising demand for federally-mandated ADA paratransit services, and costs of health insurance and pension obligations. These problems are not unique to this region, as transit agencies in many other U.S. metropolitan areas face similarly increasing costs. Addressing these issues while still maintaining good service levels and affordable fares is a difficult challenge, but one which the region’s transit agencies will need to face; GO TO 2040 supports the RTA and the service boards as they address these difficult issues.

Currently, tax revenues across the nation have fallen significantly due to the ongoing recession, while costs continue to rise. Severe service cuts were put in place in 2010 by the CTA and Pace to address this new reality. In this environment, even maintaining the current transit system — let alone expanding it to meet demands for service in underserved areas — is a critical challenge.



11.3 Indicators and Targets

CMAP proposes to measure the region's success in improving the transit system using two indicators: transit ridership and transit access.

Transit ridership is defined as the number of trips served by transit on an average weekday. Transit access is defined as the number of people who live and work within walking distance of transit. Together, these two indicators measure both the effectiveness and the coverage of the region's transit system.

Transit Ridership

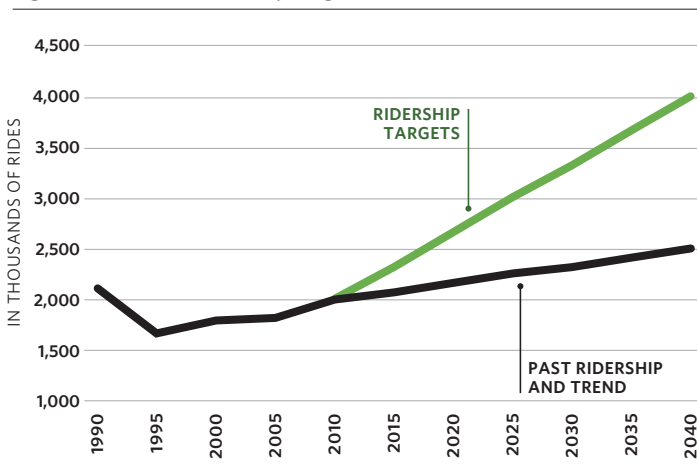
Ridership is a standard measure of the use of a transit system. Currently, weekday ridership on the region's transit system is approximately two million (ridership on weekends is considerably lower). This is approximately nine percent of trips made each weekday. By 2040, the region should increase transit ridership's share to 13.5 percent of trips made each weekday — or approximately four million trips (see **Figure 62**).

TRANSIT RIDERSHIP PER WEEKDAY

2.3 million by 2015

4.0 million by 2040

Figure 62. Transit ridership targets, 1990-2040



Sources: Regional Transportation Asset Management System, Chicago Metropolitan Agency for Planning analysis, 2010

Transit Access

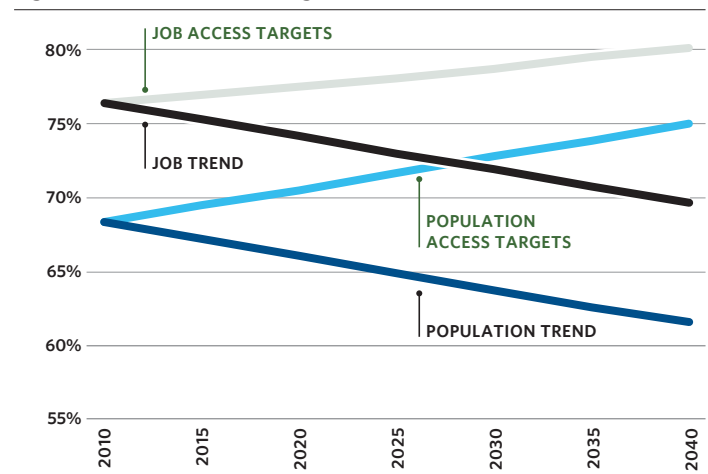
Another measure of the region's transit system is the number of people who live and work within walking distance of fixed-route transit, defined as a quarter mile from a fixed-route transit stop or station. While this does not account for the quality of the transit service or the presence of vanpools or other non-fixed-route services, and also does not measure those who drive to transit stations, it does provide a simple measure of transit accessibility. Currently, 5.9 million people (68 percent of the region's population) live within walking distance of transit, and 3.2 million people work in these areas (or 76 percent of total jobs). By 2040, the region should increase the number who live within walking distance of transit to 8.25 million people (or 75 percent of the region's 11 million people in 2040) and the number who work there to 4.3 million people (or 80 percent of jobs in 2040). This can be accomplished by encouraging development in areas with transit service, and also by expanding the transit network through new bus service to cover additional parts of the region (see **Figure 63**).

POPULATION AND JOBS WITH ACCESS TO TRANSIT

69 % of residents and 77 % of jobs by 2015

75 % of residents and 80 % of jobs by 2040

Figure 63. Transit access targets, 2010-2040



Source: Chicago Metropolitan Agency for Planning analysis, 2010

11.4 Recommendations

Dramatic improvements to the region's transit infrastructure and operations are needed to create a truly world-class system. These improvements are broken into two categories: maintaining and modernizing the system; and pursuing major expansion projects, including high-speed rail.

This section also makes recommendations for financing, identifying new sources of revenue to support transit and also calling for the region's transit agencies to directly address rising costs; this will be needed for any of the recommended improvements to the transit system to occur. Finally, recommendations for supportive land use, infrastructure improvements, and other local support, all of which are essential to the success of transit but usually beyond the direct control of the transit agencies, are discussed.

Maintaining and Modernizing

A top priority of GO TO 2040 is to maintain and operate the existing transportation system, and transit is no exception. The region's transit infrastructure represents a \$36 billion investment,⁸ and protecting this investment is a high priority. The goal is to move the system toward a "state of good repair," the point at which all transit facilities are in good condition and there is no backlog of capital maintenance. For many years, the region has been moving in the wrong direction in relation to this goal; due to underinvestment in maintenance and implacably rising operation costs, funds that should have been used for capital investment have instead been diverted to keep the system operating. A state of good repair for all facilities may not be reached within the plan's horizon, but it is an ongoing goal that should be strived for.

Improving the condition of transit infrastructure is important, not only because it saves more costly repairs in future years, but because it improves transit operations. A better maintained system would reduce equipment breakdowns and remove "slow zones" (areas where conditions necessitate slower operating speeds than desired), allowing services to more closely adhere to their schedules and making more frequent service possible. Even beyond its practical benefits, a well-maintained system also projects a more positive image of the quality of service, making transit more appealing to potential users.

Maintenance can also serve as an opportunity to modernize, improve, and enhance the transit system at the same time. For example, rather than simply replacing buses or rail cars at the end of their useful lives with identical vehicles, transit agencies should continue to upgrade them. As another example, routine rehabilitation of stations can provide an opportunity to install real-time vehicle arrival signs or other real-time passenger information technology. If paired with maintenance activities, these improvements can be accomplished at lower cost than if they were stand-alone projects. This also applies to projects undertaken by agencies that maintain roadways, namely the Illinois Department of Transportation (IDOT), counties, and municipalities; road improvement projects can be an opportunity to improve sidewalks, bicycle facilities, and bus stop conditions as well.

8 Regional Transportation Authority, "Moving Beyond Congestion," 2007.

Taken together, small-scale improvements can be very effective at improving the transit system. A variety of technological improvements, including real-time traveler information, transit signal priority, use of ART and BRT, and flexible scheduling of demand-responsive service, can make transit easier to use and more efficient to operate. Many of these innovations have already been applied in the region and should continue to be expanded. While it is difficult to predict future advances in communications technology, GO TO 2040 recommends that transit agencies stay on the cutting edge of applying technological solutions to make transit work better. As discussed earlier in this section, user perception of transit is critically important, and well-designed stations with attractive and vibrant surroundings, modern vehicles, safe and convenient pedestrian access, and even the inclusion of public art in transit facilities helps to improve the image of transit. Coordination between service providers to allow seamless transfers between services is necessary. A specific improvement that would help with both user perception and experience is the integrated coordination of fares between the service boards, and the RTA should work with service providers to implement this improvement. Ultimately, fare coordination should result in a universal “smart card” that could be used for tolls, parking fees, and other transportation expenses. These improvements would make transit operate more smoothly and attract riders, but do not replace the basic need to have an adequate supply of service. Increases in frequency on existing bus services, or reduction of “bus bunching” on bus routes that experience this problem, would provide a higher quality of service and also help increase ridership.

Bus service should be expanded into underserved areas with high transit potential and where it is complemented by land use planning and local infrastructure investment that supports transit. Several factors make expansion of transit in suburban areas important, including demographic changes, the rise in demand for reverse commute and intersuburban trips, and growing support for transit in the suburbs.⁹ Many suburban areas have densities that are high enough to support transit, either for all-day bus service or for shuttle services that focus specifically on connecting residents or workers to train stations or other destinations. When conventional, fixed-route bus service is not feasible in low-density areas, other transit options such as vanpools, employer-sponsored shuttles, or demand-responsive services may be. GO TO 2040 supports implementing improvements that address the need for better suburban transit, such as more frequent reverse commute rail service, improved or new fixed-route bus services, and innovative transit service options.

Of particular importance to making transit work in suburban areas is solving the “last mile” problem, or the challenge of connecting transit passengers to their ultimate destination, which is often not directly adjacent to the transit facility; this can be accomplished through local shuttle or circulator services, improved walkability, car-sharing programs, or land use planning that allows higher densities near transit facilities. To make any new service as attractive to potential riders as possible, the technological improvements described above should be incorporated and high-quality stations, appropriate vehicles, and supportive local infrastructure should all be included. In many cases, bus service can test the market for transit, helping to determine whether a major capital investment in infrastructure is justified.

Another important element of public transit is the region’s paratransit system. The cost of providing paratransit is steep, and will only get more so as the senior population continues to grow. GO TO 2040 recommends attracting as many paratransit users as possible to the fixed-route system, by way of the service increases and improvements to user perception described above. Many paratransit riders avoid fixed-route service because of concerns about their personal safety while traveling, the difficulty of making transfers, or a lack of safe and accessible sidewalks and bus stops. The general transit improvements described elsewhere in this section will help to alleviate these concerns. Beyond this, it is clear that improving service beyond the basic requirements of the ADA will require contributions from local governments, nonprofits, or private groups (such as senior housing developments) in the areas covered. The costs of paratransit service have been increasing rapidly due to high demand, and this is expected to increase with the aging of the population; even continuing to provide ADA-mandated service at a high level will require innovative approaches to this issue.

⁹ A *Chicago Tribune* poll from June 24, 2010 found more support for investing in transit than in roadways in suburban areas. See <http://tinyurl.com/35oobh2>.

Expansion

Maintenance and modernization is a high priority, but some expansion of the system is also needed to match changing patterns of where people live and work. In general, CMAP supports expansions of the region's bus system, provided that these new projects are carefully prioritized and supported by local land use and infrastructure. In contrast, only a limited number of major capital expansions (such as new or extended rail lines) are recommended.

GO TO 2040, as the formal long-range transportation plan for the region, takes a special approach to major capital expansion, in compliance with federal guidelines in its treatment of major transportation capital projects. Essentially, the plan must include a list of major capital projects that can be pursued with available or reasonably expected funding, termed “fiscal constraint.”¹⁰

While major transit expansion projects generate a great deal of attention and interest, they are generally not the most effective or efficient ways to make improvements to the region's transit system. Maintenance, modernization, and strategic improvements are more effective, as they capitalize on existing infrastructure. But GO TO 2040 does recommend a limited number of major projects for implementation: the West Loop Transportation Center, CTA Red Line South extension, CTA north Red and Purple Line improvements, and improvements to the Metra UP-W, UP-NW (including a short extension), UP-N, SouthWest Service, and Rock Island rail lines. It also recommends pursuit of managed lanes or multimodal corridors on I-90 and I-55. These may ultimately feature full BRT service, with high-quality stations, extensive park-and-rides and transfer options, and features that give buses priority, but express bus service should be initiated in the interim as these full BRT systems are being planned. A multimodal corridor is also recommended for consideration on I-290, but the mode has not yet been determined.

The major capital projects contain few extensions or new service; instead, they typically improve and expand the capacity of existing infrastructure. The CTA north Red and Purple Line and Metra UP-W, UP-N, SouthWest Service, and Rock Island projects all improve existing rail lines, building on our existing capital investment; the Metra UP-NW project includes a short extension but is primarily an improvement project as well. The CTA Red Line South extension is the only significant extension project on the fiscally constrained project list. It extends service by providing an important new transit link for residents of a primarily low-income area, and studies have shown that the project will generate considerable ridership.

Finally, the West Loop Transportation Center is necessary for Chicago to become, as intended, the hub of a Midwest high-speed rail network, as it improves connections between proposed high-speed rail (and current interregional rail), Metra, and CTA. This project creates a multimodal transportation center in the West Loop, with direct pedestrian connections between Union and Ogilvie Stations and a new CTA rail branch. Beyond supporting high-speed rail, it is expected to provide significant immediate benefits to the many Metra lines terminating at Union Station, improves connections between Union and Ogilvie Stations, and eases transfers between Metra and CTA.

There are 24 major capital projects which were proposed but which are not on the constrained project list. Several of these exhibited significant benefits but are early in the project development process and require further study, or will need innovative financing to be feasible.¹¹

The plan also supports interregional high-speed rail, which is planned to provide connections to other Midwestern metropolitan areas. It is important for high-speed rail investments not to be viewed as a replacement for investments in the region's transit system. Continued pursuit of new high-speed rail service is recommended, but new revenue should be found for this investment, rather than diverting the region's scarce transportation resources for this purpose. Local transit connections and supportive land use planning around proposed stations — including the West Loop Transportation Center, as well as any additional stations located at airports or in suburban areas — would strengthen high-speed rail and should be pursued. GO TO 2040 also supports the continuation of traditional inter-city rail service such as that currently provided by Amtrak.

¹⁰ For more information, see the GO TO 2040 section “Invest Strategically in Transportation.”

¹¹ For more detailed information and analysis, see the GO TO 2040 capital project page at <http://www.goto2040.org/scenarios/capital/main/>.

Finance

Few or none of the improvements described above are possible within the current financial environment. Financial analysis of expected transportation revenues and costs through 2040 has shown that existing revenue sources are barely sufficient to maintain our transportation system, even assuming that future increases in cost are quite modest.¹² To solve the financial problems of the transit system, cost increases must be kept in check, and additional revenue sources must be found.

Both of these efforts should be the primary focus of the RTA, which is responsible for the financial oversight of the system. GO TO 2040 recommends a strong, central role for the RTA in understanding and solving the financial challenges facing the system. This will necessitate working closely with the transit service boards to address cost increases — many of which occur for reasons outside the control of the region's transit agencies — while exploring a variety of sources to provide increased funding for transit. As a starting point, these should include the state meeting its transit funding obligations.

GO TO 2040 recommends an increase in the state gas tax, with a portion of these proceeds devoted to transit. It also recommends the implementation of congestion pricing on selected expressways in the region and the use of a portion of these new revenues to fund nearby transit options once the operating and maintenance needs of the priced facility have been met. Further options include the pricing of parking, using public-private partnership (PPPs), or other innovative sources, and these should continue to be investigated. In the past, the transit system has relied on occasional state capital bills to meet its needs, but these have been infrequent and unpredictable and have sometimes been earmarked, instead of funding the most beneficial projects. Instead, transit (and transportation overall) should be adequately funded on a regular basis, which would remove the need to have periodic capital infusions. Finally, CMAP recommends reforms in federal funding programs that currently favor new service startups instead of maintenance (specifically, the New Starts program). Federal Transit Administration (FTA) rules concerning use of federal funds for engineering of transit projects are stricter than those used by the Federal Highway Administration (FHWA) for roadway projects and should be changed to allow regions to more easily pursue transit improvements.

Rough estimates of costs for the improvements described above are contained in the subsection 11.6, “Costs and Financing.”

Supportive Land Use, Infrastructure Investments, and Other Local Support

For transit to be successful, it requires supportive land use planning and infrastructure investments. A new transit service in an area that is low density and not walkable is unlikely to succeed. Therefore, transit expansion efforts should be accompanied by land use planning, local infrastructure investments, and other local actions that seek to create a transit-friendly environment, and transit investments should be prioritized in places where such planning is occurring. As previously noted, a significant challenge in providing transit service in much of the region involves the “last mile” problem; local support for transit is necessary to overcome this.

The principles that make up livable communities¹³ cover many of the elements that make up transit-supportive land use. Some elements are particularly important, such as development density. Rules of thumb among transit researchers are that six to eight housing units per acre (or 25 employees per acre)¹⁴ are needed to support basic bus service, and more than twice this density is needed for more frequent bus or rail service, though this can vary. Provision of affordable housing in areas served by transit is also particularly important, because transit is often the only travel option for lower-income residents.¹⁵ Beyond land use and housing, local governments can help transit to be effective by educating residents through municipal newsletters, websites, or other means; organizing transit travel trainings (particularly for elderly and disabled residents); supporting the expansion of car-sharing programs into their communities and participating in car-sharing programs; and overall working in partnership with transit agencies to find creative ways to attract their residents to transit.

One important precondition for successful transit service is an extensive pedestrian and bicycle infrastructure that makes direct connections from transit stops to nearby destinations. This goes beyond sidewalks and bicycle facilities to include roadway design, pedestrian treatments at signalized road crossings, safety islands, or other improvements that provide safe ways to cross busy streets. Other infrastructure improvements can be made locally to support transit, such as bicycle racks at train stations and bus stops, attractive bus shelters, and improvements that allow accessibility by disabled people. Typically, these improvements fall under the jurisdiction of municipalities or counties, and an active local role is needed to create a supportive pedestrian and bicycle environment.

¹² See the GO TO 2040 section “Invest Strategically in Transportation.”

¹³ Described in the GO TO 2040 chapter “Challenges and Opportunities.”

¹⁴ Victoria Transportation Policy Institute. Transportation Demand Management Encyclopedia. <http://www.vtpi.org/tdm/tdm45.htm>.

¹⁵ Additional discussion and recommendations are in the GO TO 2040 section “Achieve Greater Livability through Land Use and Housing.”

Parking deserves particular attention in this discussion because of its complex relationship with transit. Free and easily available parking is the norm in most parts of the region, even though the construction and maintenance of a parking space is far from free. In other words, free parking is actually subsidized by the local governments or businesses that provide it. It also creates a disincentive to use transit; ridership is typically highest when traveling to destinations where parking is expensive or scarce. One important transit-supportive action that local governments can take is to review parking regulations and pricing levels to examine what kinds of travel behavior they incentivize. On the other hand, parking can also help provide access to transit. While the GO TO 2040 plan supports dense development around train stations (conventional TOD), many of the region's Metra stations that attract the most riders have significant commuter parking. CMAP recommends a mixture of stations that focus on TOD and stations that provide commuter parking options, though the overall intent should be to transition stations to TOD where possible.

Despite the importance of local planning to support transit, most municipal comprehensive plans do not include detailed recommendations on the topic. Nearly every community in the region — even those without train stations — includes areas that could support some type of transit service. Most of these communities also support the improvement or expansion of transit within their community, recognizing its value to their residents. Current land use decisions affect the future viability of transit for years to come, so planning proactively is needed. GO TO 2040 recommends that local governments interested in attracting transit should plan for supportive land use, housing, and infrastructure improvements to support it, and that the region's transit agencies should consider the degree of supportive local planning when making investment decisions.

These planning activities should be supported by funding and financial incentives for local governments who plan for land use that supports transit. GO TO 2040 recommends creating a streamlined and coordinated technical assistance and funding program to support local planning and ordinance updates, with funding from CMAP (from Unified Work Program [UWP] funds), RTA, and IDOT. The program should fund planning efforts that link transportation, land use, housing, and economic development. This program should cover both planning and ordinance changes, with a focus on implementation. For example, many plans recommend changes to zoning ordinances or parking regulations; this program should provide funding or technical assistance to accomplish these regulatory changes.

Federal programs may also provide new funding sources for planning and implementation. One new federal program, the Sustainable Communities Initiative, appears to provide initial steps in this direction, and the federal government should commit sufficient funds to this or similar programs to support plan development and implementation. Opportunities for tying implementation funds to planning can even be pursued without new funding sources. Recognizing the interplay between infrastructure investments and land use, the region should use transportation funding strategically to support projects that help to implement GO TO 2040. Two examples from other regions, the Atlanta Regional Commission's Livable Communities Initiative (LCI) and the San Francisco Bay Area Metropolitan Transportation Commission's Transportation for Livable Communities (TLC) program, use a combination of state and federal funds for this purpose, and a similar program should be created in this region.¹⁶

¹⁶ For further detail on the local funding recommendations, see the GO TO 2040 subsection 1.4, "Achieve Greater Livability through Land Use and Housing."

11.5 Implementation Action Areas

The following tables are a guide to specific actions that need to be taken to implement GO TO 2040.

The plan focuses on four implementation areas for increasing commitment to public transit:

Improve the Fiscal Health of Transit

Modernize the Region's Transit System

Pursue High-Priority Projects

Conduct Supportive Land Use Planning

Implementation Action Area #1: Improve the Fiscal Health of Transit

Strengthen RTA efforts on financial oversight LEAD IMPLEMENTERS: RTA, CTA, Metra, Pace	The RTA is charged with the financial oversight of the transit system. The recent funding crisis has highlighted the importance of this responsibility. In collaboration with the service boards, the RTA should focus its efforts on addressing the system's fiscal health, including increasing efficiencies and limiting cost increases moving forward.
Direct a portion of congestion/parking pricing revenues to transit LEAD IMPLEMENTERS: State (IDOT, Tollway), RTA, counties, municipalities	Congestion pricing and parking pricing are recommended within GO TO 2040. The revenues from these sources should be used in part for supportive transit service. For example, revenues from congestion pricing should be used to support increased transit service in the same corridor as the priced facility, or to improve connections to service in the corridor.
Use other innovative funding sources LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP, RTA, CTA, Metra, Pace, counties, municipalities	The reliance of the transit system on sales tax has contributed to its current funding crisis. CMAP, in conjunction with potential funding partners, should investigate innovative financing such as value capture, or increasing the state gas tax and allocating a portion of the receipts to transit, in addition to the pricing strategies described above.
Revise the federal "New Starts" program for transit LEAD IMPLEMENTERS: Federal (U.S. DOT)	The Federal New Starts program is a competitive grant process that funds transit system expansions. While expansions are vital for many parts of the U.S., older and more well-developed systems should have the option to use these funds for badly needed maintenance and modernization efforts. The current New Starts program creates a strong incentive to pursue expansions, when maintenance and modernization should be the region's top priority. The criteria for federal New Starts grants should be expanded to support reinvestment in existing infrastructure rather than solely new expansions. Further, FTA regulations concerning use of funds for engineering of transit projects are stricter than those governing highway projects, and should be changed to create a "level playing field."

Implementation Action Area #2: Modernize the Region's Transit System

<p>Focus investments on maintenance and modernization</p> <p>LEAD IMPLEMENTERS: RTA, CTA, Metra, Pace</p>	<p>Continue to make the maintenance of the system at a safe and adequate level the top priority when making investment decisions. The transit service boards should also pursue opportunities to modernize and upgrade the system as part of routine maintenance to bring the system to a world-class level.</p>
<p>Adopt best practices in new technologies</p> <p>LEAD IMPLEMENTERS: State (IDOT), RTA, CTA, Metra, Pace, counties, municipalities</p>	<p>Use technological improvements to make the system more efficient. The use of transit signal priority systems, ART concepts, and traffic signal coordination in general are supported, particularly when integrated multimodally to form “smart corridors.” Advanced scheduling and operations practices should also be used to improve the efficiency of demand-responsive services. Coordination with agencies that maintain roadways — namely, IDOT, counties, and municipalities — will be necessary to achieve some of these improvements.</p>
<p>Widely implement traveler information systems</p> <p>LEAD IMPLEMENTERS: RTA, CTA, Metra, Pace</p>	<p>Pursue the widespread implementation of traveler information systems, which can give real-time arrival information, assist in trip planning, inform commuters about parking availability, and serve other purposes. These can include signs at stations, websites and social media, station announcements, and other technologies.</p>
<p>Consider user perception in vehicle purchases, and station design</p> <p>LEAD IMPLEMENTERS: RTA, CTA, Metra, Pace</p>	<p>Invest in improvements that make transit more attractive to potential users. State-of-the-art vehicles, clean and attractive stations, safe and convenient pedestrian access, inclusion of public art or other aesthetic features, and the overall appearance of transit has an impact on its use.</p>
<p>Establish seamless coordination between modes</p> <p>LEAD IMPLEMENTERS: RTA, CTA, Metra, Pace, counties, municipalities</p>	<p>Coordinate services and fares between the service boards, including pursuit of a universal fare payment system. Also, coordination with bicycle and pedestrian facilities and car-sharing services, which are often used by transit riders, can link transit seamlessly with other modes.</p>

Implementation Action Area #3: Pursue High-Priority Projects

<p>Prioritize among potential bus service increases, extensions, and new service using regionally consistent criteria</p> <p>LEAD IMPLEMENTERS: RTA, CTA, Metra, Pace</p>	<p>Pursue bus expansion projects in areas where they are most likely to succeed. Expansions should be prioritized in part based on supportive local land use planning and infrastructure investment. The recommendations made above concerning technology and user perception apply here as well. Potential transit markets should be tested with bus-based concepts such as ART or BRT before investing in rail infrastructure.</p>
<p>Include transit components as part of major highway capital projects</p> <p>LEAD IMPLEMENTERS: State (IDOT, Tollway), RTA, CDOT, CTA, Metra, Pace</p>	<p>Include planning for transit (in most cases BRT, but also rail in some cases) within highway projects recommended in the plan, including the Elgin-O'Hare projects, I-55 managed lane, I-90 managed lane, Central Lake County corridor, and the I-290 multimodal corridor.</p>
<p>Implement high-priority transit projects</p> <p>LEAD IMPLEMENTERS: RTA, CDOT, CTA, Metra, Pace</p>	<p>Advance recommended projects through the federal New Starts program or other discretionary funding programs. Highest priority projects for immediate action include the Red Line South extension, West Loop Transportation Center, and improvements to the north Red/Purple Lines, Union Pacific (N, NW, and W), Rock Island line, SouthWest Service, and possibly the I-290 multimodal corridor.</p>
<p>Conduct detailed studies of prioritized corridors, and continually develop and evaluate major projects</p> <p>LEAD IMPLEMENTERS: RTA, CDOT, CTA, Metra, Pace</p>	<p>Conduct feasibility studies for projects that showed high potential but are not fully understood, and pursue innovative financing for beneficial unconstrained projects. Identify potential major capital projects through corridor studies, county or COG transportation plans, or other regional efforts. Evaluate and consider these projects during regular updates to the plan.</p>
<p>Improve evaluation measures and decision-making processes</p> <p>LEAD IMPLEMENTERS: CMAP, RTA, CTA, Metra, Pace</p>	<p>In light of limited funding, it is critically important to be able to evaluate projects against a variety of evaluation measures to make the best long-term decisions. CMAP should work with the RTA to develop improved transportation models that effectively measure the benefits of a variety of types of transit projects.</p>
<p>Increase federal investment in high-speed rail</p> <p>LEAD IMPLEMENTERS: Federal (U.S. DOT, Congress)</p>	<p>The initial round of funding for high-speed rail assisted with necessary improvements, but considerably more is needed to actually implement a functioning system. A continued federal commitment is necessary for this. The region's Congressional representatives should make this a high priority, as should U.S. Department of Transportation (U.S. DOT) staff. However, federal funding for high-speed rail should not come at the expense of funding for regional public transit improvements.</p>
<p>Link high-speed rail with regional transit and land use planning</p> <p>LEAD IMPLEMENTERS: RTA, CDOT, CTA, Metra, Pace, counties, municipalities</p>	<p>Advance the West Loop Transportation Center, which improves the connections between Metra and the CTA, as well as proposed high-speed rail service, and plan for supportive nearby land use. Plan for direct and convenient links between high-speed rail, Metra, and CTA in this location. Also, identify additional station locations within the region and plan for supporting transit services and land use.</p>

Implementation Action Area #4: Conduct Supportive Land Use Planning

Align funding for planning and ordinance updates LEAD IMPLEMENTERS: State (IDOT, DCEO, IHDA), RTA, CMAP, counties, municipalities, philanthropic	CMAP, IDOT, and RTA should coordinate funding programs to fund local plans and ordinance updates. Use funds to create a new streamlined grant program for transportation, land use, and housing which assists local governments to create plans or ordinance updates that are consistent with GO TO 2040. This program should be able to fund ordinance changes, updates to local government programs or policies, or similar activities, as well as plan preparation. Supplement these funding sources with philanthropic or other public and private sources as appropriate. In particular, funding from housing and economic development sources should also be included within this streamlined program.
Identify and exploit additional opportunities for transit oriented development LEAD IMPLEMENTERS: CMAP, RTA, CTA, Metra, Pace, counties, municipalities, nonprofits	Many communities have embraced TOD as a strategy to revitalize their downtowns, and plans for many of the most obvious locations for TOD have already been prepared. CMAP and regional civic organizations should identify other potential opportunities for application of TOD strategies and initiate pilot projects in areas where TOD is more difficult (i.e., locations with difficult land assembly, bus-based TOD, etc). Opportunities for the application of TOD principles around planned ART services can be an immediate focus.
Use livability principles to plan for land use in development near transit LEAD IMPLEMENTERS: Counties, municipalities	Counties and municipalities should pursue opportunities for more dense development which mixes uses and housing types within “location efficient” areas near transit services. Counties and municipalities can increase density by providing density bonuses (in exchange for affordable units), creating transit overlay districts, or using form-based codes to address community fit. This can occur both for existing transit services and areas where transit expansion is planned, and applies to both rail and bus service.
Plan for land use specifically around major transit capital projects LEAD IMPLEMENTERS: CMAP, RTA, CTA, Metra, counties, municipalities	Prepare land use plans around stations of the CTA Red Line South extension, West Loop Transportation Center, and improvements to the CTA north Red and Purple Lines and Metra improvements to Union Pacific (N, NW, and W), Rock Island line, SouthWest Service, and possibly the I-290 multimodal corridor.
Plan for land use specifically around BRT projects LEAD IMPLEMENTERS: CMAP, RTA, CTA, Pace, counties, municipalities	Study the best way to conduct land use planning to support BRT services which may be part of the Elgin-O’Hare projects, I-290 multimodal corridor, I-55 managed lane, I-90 managed lane, and the Central Lake County corridor. There are not good regional examples of how land use planning around expressway-based BRTs could occur, and a framework for this is needed.
Promote housing affordability near transit LEAD IMPLEMENTERS: Counties and municipalities	Proximity to transit services often increases land value, making it more difficult to provide a range of housing. Counties and municipalities should analyze housing needs near transit services, and can provide a variety of incentives to developers to bring down development costs in exchange for affordable units. These tools include land donations, density bonuses, permit fee waivers, land trusts and expedited permitting processes. These should be explored, considered, and adapted to specific local situations.
Require supportive land use planning before new transit investment is made LEAD IMPLEMENTERS: RTA, CTA, Metra, Pace	Consider supportive land use when making investment and programming decisions. The service boards should prioritize investments (new service in particular) in areas that have or are planning for land use and local infrastructure that supports transit.
Update guidelines for transit-supportive land use LEAD IMPLEMENTERS: RTA, CTA, Metra, Pace	Update materials produced by the transit service boards concerning land use planning and small-scale infrastructure investments that support transit. These materials should include additional topics such as housing affordability that go beyond the density and design issues which are currently included.

11.6 Costs and Financing

A detailed transportation financial plan has been prepared as part of GO TO 2040 and is available in the Appendices. The following summarizes elements of the transportation financial plan that relate to public transit.

Within this section, the terms “fiscally constrained” and “fiscally unconstrained” are used. All figures in this section are in year of expenditure dollars (YOED), meaning that inflation has already been added.

The transportation financial plan concluded that \$385 billion was expected to be available in transportation revenues within the GO TO 2040 plan’s time horizon. Projects or recommendations that are “fiscally constrained” are those that can be funded within this \$385 billion figure. Projects or recommendations that are “fiscally unconstrained” may be desirable and beneficial but would require additional revenue. The recommendations for public transit improvements include both types. In other words, some but not all of the transit recommendations can be funded within expected revenues; others will require new sources of revenue to be identified.

This recommendation area calls for the region to invest in maintaining and modernizing the transit system; making strategic improvements and enhancements; and pursuing a limited number of major expansion projects. High-level cost estimates for these activities follow.

Cost Categories

Maintaining and modernizing the existing system is a top priority of GO TO 2040. The maintenance of the system at a level that is safe and adequate — a fundamental precondition — must be funded in full before any other improvements are made, and GO TO 2040 dedicates significant funding for this purpose. The cost of basic system maintenance and operations is estimated at approximately \$150 billion, and this is fully funded within the plan.

Beyond basic maintenance, the modernization, enhancement, and improvement of the system are high priorities. Of the recommended project types described above in this category — including signal

coordination or interconnects, passenger information systems, other technological improvements, service frequency increases, new bus service, and others — some but not all can be funded within expected revenues. Approximately \$55 billion in needs have been identified for projects in this category, but only \$15 billion to \$25 billion in funding is currently expected to be available for them. Additional revenue or savings through cost reductions will be necessary to fund the remainder of these improvements.

Finally, a limited number of major transit expansion projects are necessary to improve the transit system. Approximately \$30 billion in new capital proposals were identified through GO TO 2040, and these were individually reviewed and prioritized. Eight projects totaling \$6 billion in new capital costs are fiscally constrained, including the Red Line South extension, West Loop Transportation Center, and improvements to the north Red/Purple Lines, Union Pacific (N, NW, and W), Rock Island line, and SouthWest Service. The remaining proposals require additional revenue to be able to pursue.

Additional Financing

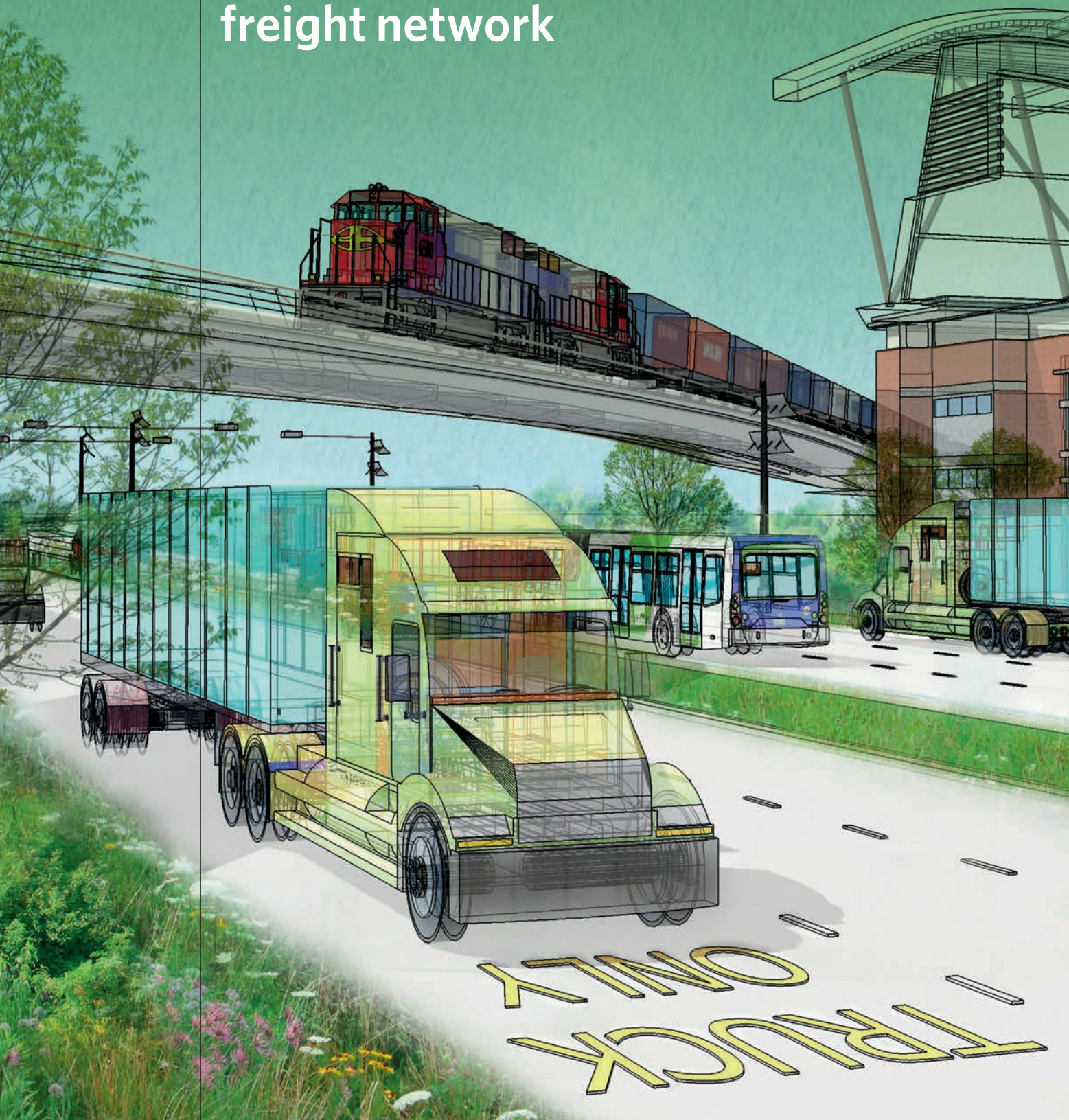
As the previous descriptions indicate, significant new funding is necessary to make all of the proposed transit improvements. Similar shortfalls exist in other areas of the transportation system as well.¹⁷

Of particular note for transit, GO TO 2040 recommends pursuing congestion pricing in appropriate corridors and dedicating a portion of the revenues to operate transit service in the same corridors. A modest approach to congestion pricing was included within the fiscally constrained revenues; a more aggressive approach would generate more revenue, which could be used for transit purposes. The plan also recommends an increase in the state gas tax and devoting a portion of those revenues to transit as well. Another relatively unexplored option which has tremendous revenue generation potential is parking pricing, and the application of this, especially in areas where new transit service is being planned, is a recommendation of GO TO 2040. Finally, GO TO 2040 recommends further investigation of innovative financing options such as PPPs, or “value capture,” which allows the transit agency to share in the property value increases that new or improved transit services create in nearby areas.

¹⁷ For more thorough discussion of the overall financial condition of the transportation system, see the GO TO 2040 section titled “Invest Strategically in Transportation” and the GO TO 2040 Financial Plan for Transportation (http://cmap.illinois.gov/financial_plan_transportation).

RECOMMENDATION

12 Create a more efficient freight network



Metropolitan Chicago's freight system links the region's industries and consumers to global markets. Highways, railroads, waterways, and airports all provide important connections to the world. Yet each of these modes of transport is intertwined with the livability of the region. Therefore, planning for an efficient, regional, multimodal freight system is a key priority of GO TO 2040.

GO TO 2040 continues a regional freight planning tradition — and builds on a legacy — stretching back to Daniel Burnham's and Edward Bennett's 1909 *Plan of Chicago*. In preparing the Plan of Chicago, Burnham studied the freight system congestion that was choking Chicago and understood that addressing the congestion was critical. Burnham suggested cooperative operations for the railroads, a series of belt rail and freight clearing systems stretching west from the city center, an improved street system, and a new port on Chicago's south side to address the city's commercial needs. These suggestions laid the foundation for improvements through the 20th Century, even leading up to today's Chicago Region Environmental and Transportation Efficiency Program (CREATE).

It is important to understand the freight system through the modern prism of livability. So addressing the freight system not only means enhancing our communities' economic competitiveness and prosperity, but assuring that the communities are healthy and safe. Efficient freight movement is significant to our regional economy. GO TO 2040 will set forth infrastructure and operations strategies to address these needs. The following are recommendations to improve the efficiency and interconnectedness of the region's freight systems:

Develop a national vision and federal program for freight.

Support CREATE rail system improvements.

Support regional trucking improvements, including truckways, truck routes, truck parking, and delivery time management.

Organize and improve public policy relating to freight.

Integrate freight needs and financing into infrastructure prioritization.

12.1 Benefits

The GO TO 2040 Regional Vision states that “the freight system will be improved to increase efficiency and interconnectedness, strengthening our position as a national and international center of goods movement and intermodal logistics.

Through investments and policies that support freight, our transportation system will be planned in a way that improves the movement of goods, minimizes conflict between freight and passenger transportation, and mitigates impacts on local communities.”

To support this vision, CMAP initiated a planning project aimed specifically at the regional freight system in 2009.¹ This project set forth the case for freight system improvements, and included both a technical evaluation and involvement of both public sector and private sector stakeholders. The stakeholder involvement was focused on group and individual interviews, and electronic surveys.² The interviewees were targeted to gather input from all four modes of freight transportation: truck, air, water, and rail. The study secured input from those that ship materials or products throughout the region as well as a number of locally elected officials. Stakeholders’ input validated and prioritized the results of the technical evaluation, and demonstrated public support for freight improvements planned in GO TO 2040.

As the mover of people and goods, metropolitan Chicago’s multimodal transportation system serves as our link to the global economy. As consumers, nearly everything we buy to sustain and improve our quality of life — including the food we eat and the clothes we wear — travels by freight. The numerous materials that are needed to make our region’s businesses thrive, including raw materials for manufacturing or office supplies, come from somewhere outside of this region via our freight system. This system and convenience is often taken for granted, but without it, we would be shut off from the rest of the world. There is a clear tension between the economic benefits (the consumption of goods that freight allows) and the negative externalities (such as increased congestion, decreased air quality, and grade crossing conflicts) associated with freight movement. Therefore, public opinions about

freight are mixed and complex. Overall, the region must consider how to improve a freight system that is vital for maintaining and improving the regional economy, while also minimizing impacts to local communities.

Economic

As of 2008, according to the U.S. Department of Commerce,³ an estimated 236,000 of the region’s jobs (four percent of total private sector employment) were in the transportation and warehousing sector. These jobs provide more than \$13 billion in personal income for our region’s residents.

The prosperity of other industry sectors — including but not limited to manufacturing and both wholesale and retail trade — is also closely tied to our position as a transportation and logistics center. These industries account for more than 30 percent of the region’s private sector employment, resulting in nearly \$80 billion in personal income for residents of northeastern Illinois.

Metropolitan Chicago’s position as the nation’s freight hub also has impacts beyond direct jobs and income for our residents. The railroads move \$350 billion and trucks move \$572 billion in goods to, from, or through the region each year.⁴ An efficient freight system enables a global supply chain to provide goods at lower costs and gives Chicago-area businesses an advantage in today’s globally competitive economy.

Since nearly all of our region’s freight travels by trucks and trains, improvements to the efficiency of our freight system will help to alleviate congestion from our roadway network. Slow trains, blocked grade crossings, and other “costs of congestion” are real and serious; they include lost time and fuel, decreased productivity, inefficient freight movements, and pollution. Goods moving more efficiently through the region can also lead to more efficient inventories and thus lower prices for consumer goods.

1 Chicago Metropolitan Agency for Planning, Freight System Planning Recommendations Project. See <http://www.cmap.illinois.gov/cmp/freightssystem.aspx>.

2 Chicago Metropolitan Agency for Planning, Freight System Planning Recommendations Project. See <http://www.cmap.illinois.gov/cmp/freightssystem.aspx>.

3 Bureau of Economic Analysis, Regional Economic Accounts. See <http://www.bea.gov/regional/index.htm>.

4 Chicago Metropolis 2020, “The Metropolis Freight Plan: Delivering the Goods,” 2004, 5. See <http://tinyurl.com/Ze5knme>.

12.2 Current Conditions

Our region is the rail freight hub of North America, and trucks make up nearly one of every six vehicles on Illinois' urban interstates. At the same time, congestion in the Chicago area is among the worst in the U.S.

Furthermore, rail tonnages moving to, from, and through our region are expected to increase by more than 60 percent by 2040, with intermodal volumes growing even faster. Tonnages carried by truck in the region may grow by more than 70 percent. Our rail and road networks are not equipped to handle these forecast volumes. Without a well conceived and implemented plan, the region's position in the global economy could be compromised.

Rail System

Six of the nation's seven Class I railroads have major terminals in Chicago. Nearly 500 freight trains per day operate in the Chicago region. In 2007, regional rail tonnage was estimated at more than 631 million tons (approximately 30 percent of the 2007 annual regional freight tonnage), with about 24,000 trailers and containers and about 16,800 carload units moving into, out of, or through the region daily. Rail terminal operations in Chicago are beset by congestion, with numerous heavily-used freight lines crossing each other at grade and being used for passenger services. However, railroads have recently worked together to mitigate congestion and improve efficiencies through improved operations coordination. In addition, the railroads have worked together to improve train travel and reduce community impacts in the Chicago terminal district through CREATE. CREATE was announced as a partnership among U.S. Department of Transportation (U.S. DOT), the State of Illinois, City of Chicago, Metra, Amtrak, and the nation's freight railroads in 2003 to upgrade four critical corridors. These upgrades include the construction of flyovers, grade separations, improved signalization, and modernization of equipment. A key element of these improvements, particularly the flyovers and grade separations, is the alleviation of conflicts between passenger and freight services on the rail system. Progress has been made to secure initial funding for this program and a small number of the projects have been completed. However, despite its strong partnership and commitment to its implementation, additional funding is necessary.

While freight services provide an economic benefit for the region, there are also community impacts that must be addressed. Railroad delay at at-grade highway-rail and at rail-rail grade crossings is a major issue affecting highway users, passenger transport, and the freight rail industry itself. In addition to the economic impacts of delay and travel time reliability, grade crossing delay can be an issue for community emergency responders. Grade crossing delay will likely be an increasingly frustrating issue for travelers as rail shipments increase and, more importantly, train lengths increase.

In addition to delay, at-grade crossings are associated with a number of highway-rail crashes, costing a number of lives each year. However, the number of annual deaths has been declining rapidly. One safety option, train whistles, often presents a serious nuisance to adjacent communities, and effective alternative safety enhancements are being undertaken by many suburban communities.

Assuming future economic growth, rail companies foresee the length of trains increasing from 125 cars to 175 cars. While railroads will need to address infrastructure issues related to longer trains (e.g., increasing siding lengths to beyond 10,000 feet), longer trains will also affect public highway at-grade crossings, likely increasing motorist delay at these crossings. Thus, at-grade crossing improvements will take on increased importance.

Finally, freight traffic impacts our existing commuter rail service and can also potentially limit our ability to expand passenger service or future high-speed rail. An increase in rail traffic could also impact the development of transit-supportive land uses that are critical to the success of our transit system.



Trucking

While the rail industry is a critical component of the region's freight system, most of the region's freight moves by truck. Trucks make up nearly one of every six vehicles on Illinois' urban interstates.

Compared to the 631 million tons moving by rail in the region, CMAP estimates that approximately 1.472 billion tons of freight was moved by truck in 2007 — more than 2.3 times the rail volume, and approximately 67 percent of the annual regional freight tonnage. Of this total, approximately 36 percent of all freight movements were through-traffic.

The biggest challenge to trucking is highway congestion. Where trucking volumes are high, congestion is often very serious. Congestion data prepared by CMAP shows that on several corridors where truck volumes are over 10,000 per day, congestion during morning peak periods increases travel times by an average of 60 percent. Further, for many of our highways, on-time arrival during the peak period requires doubling the travel time required during free-flow conditions. A number of our regional arterials are also severely congested. Thus, achieving economic efficiencies in trucking is challenged by severe congestion on interstate highways, arterial roads, and many collector streets. Congestion and unreliable travel times require buffering the time required to traverse the region to assure on-time arrivals, adding to costs.

Figure 64. Regional freight movements by mode



Efficient truck deliveries are impacted not only by congestion, but by other challenges as well. Because of deferred maintenance and outdated infrastructure, trucks must detour around both bridges with load restrictions and viaducts with low clearances. Many of our regional arterial roads are not designated truck routes and so cannot be used for truck travel except directly to a delivery. Locally-designated truck routes are sometimes not coordinated between municipalities. Further, many municipalities restrict off-peak deliveries to local merchants, forcing truckers to either add to peak-period highway congestion or to find a nearby place to park, waiting for the allowable delivery time. However, there is a critical shortage of truck parking near destinations. These restrictions may make sense when considered alone, but when combined, all of these constraints often place severe pressures on truck operators and add substantially to transportation costs for area manufacturers, distributors, and retailers.

Because of their heavy weight, heavy truck volumes put substantial stress on area pavements, impacting the roadway condition. Improving roadway design standards and increasing scheduled maintenance will be a necessity, particularly on heavy traveled roads. Longer-term, truck sizes and weights can be modified to reduce pavement wear and long-standing proposals have suggested allowing heavier trucks (and thus fewer trucks), but with weight spread over more axles, reducing pavement wear. However, we must keep in mind some of the secondary impacts, for instance implementing such proposals would likely require substantially increased bridge strengthening expenditures.

Traffic safety is also a concern for the trucking industry. The number of highway traffic crashes involving trucks in 2008 totaled 20,621, an 11 percent reduction from 2006.⁵ Truck safety improvements are a result of highway infrastructure improvements, improved driver training, improved motorist awareness of truck issues, more effective licensing and regulation (e.g., rest regulation), and safer vehicles.

⁵ Chicago Metropolitan Agency for Planning analysis of 2006 and 2008 Illinois Department of Transportation Crash Information System Data. Data from Division of Traffic Safety Bureau of Safety Data and Data Services.

Water and Air Freight

Water and air freight are also important for the region, but currently carry only three percent and less than one-half percent of freight movements respectively. Nonetheless, such freight services fill important roles for the region and present important opportunities for future regional development that can be further explored.

The Chicago Area Waterway System is used for the low-cost shipment of bulk goods to, from, and within metropolitan Chicago. The shipping industry faces several challenges, including lock delay, channel conditions, lock and dam maintenance, and deferred maintenance evident by crumbling jetties and wharves.

There is little or no movement of through goods over the waterway system, since the vessels used in the Mississippi River and Great Lakes waterway freight systems are mutually exclusive. However, the Great Lakes and Mississippi waterways are connected, and this connection has raised concerns about invasive species like Asian Carp moving into the Great Lakes, with negative economic and ecological effects. These concerns should be addressed in such a way as to preserve and expand our opportunities in waterway shipping. Furthermore, the region should work with neighboring regions to take advantage of water transportation on the Great Lakes.

Air freight services, centered at the Chicago O'Hare International Airport, carry a relatively small amount of freight on a tonnage basis (compared to rail and truck) and are used to haul lightweight, high-value, and time sensitive goods such as medical devices, pharmaceuticals, and electronics. O'Hare is in the midst of the O'Hare Modernization Program and is constructing two additional runways and a new western terminal that will significantly increase its air cargo capacity. Additionally, the Chicago Midway Airport and the nearby Gary/Chicago International Airport also provide air cargo service. The proposed South Suburban Airport, which also has the potential to handle cargo activity, is currently in the early stages of development, including environmental analysis and land acquisition.

Freight and Land Use

Since the 1909 release of the Burnham Plan, the relationship between goods movement, accessibility, and land use has been a key theme of planning in our region. One element of this theme has been the entanglement of freight, industry, and commerce in central, congested parts of the region. This entanglement presents tremendous conflict to the operational efficiency of the region's freight transportation, as well as the passenger system where services share infrastructure.

Freight volumes have grown significantly in recent years and existing central city freight facilities have been jury-rigged to serve the increased flows, primarily through operational changes that have been made to accommodate flows within existing site footprints. However, as these older, smaller sites have reached their capacity, new sites have been developed in remote greenfield sites, allowing design of the most appropriate facilities for given operations. While construction of these new suburban facilities is an obvious solution to freight industry infrastructure needs, they bring change to communities where facilities are sited, including economic development but also increased truck traffic, increased rail traffic, wear and tear on infrastructure, noise and air quality concerns, as well as overall safety concerns and other issues. Thus, it is crucial to consider the most appropriate locations to designate freight-related land use for both industry and community benefits.

Since there is an economic incentive for industry and warehousing to follow freight facilities to reduce shipping costs, there are studies underway to foster such efforts as land banking and developments complementary to the freight system in infill areas of Chicago and the south suburbs where redevelopment and complementary development opportunities are clear. For example, the Chicago Rail Economic Opportunities Plan (CREOP) program is an intensive, multiparty effort to preserve and establish rail-related land use in designated areas. Many freight-heavy rail lines have fallen into disuse or are currently underutilized. Preserving these corridors for freight rail could be important in the future in the event that industrial rail service should experience a resurgence. For example, if fuel prices increase dramatically, it is possible that fuel-efficient modes such as rail and water may face heavily increased volumes.

As noted above, many local communities experience significant impacts from freight, particularly rail delays at highway-grade crossings, heavy truck volumes on state and local routes, and impacts on passenger rail due to freight rail conflicts. The stakeholder outreach revealed that municipalities would like freight rail not terminating in the region to bypass the region as much as possible. In areas where conflict will remain, communities desire improvements to smooth flow of through-traffic to minimize the community impacts and place a high priority for grade separations where necessary.

Addressing Market Dynamics

Freight volumes, origins, destinations, and commodity types reflect the interactions between and among populations and industries. As a result, the region will need to address changing rail travel patterns and be proactive in terms of planning for changes in terms of freight travel patterns and global market dynamics. In addition, planning recommendations and investments are expected to address the resiliency of the freight system. GO TO 2040 acknowledges that future private-sector freight system investments and technological change are unknown. Further, the volumes of freight that the region will need to handle are not known. Thus, to keep metropolitan commerce moving and to ensure regional prosperity, the freight system might need to work under any number of future scenarios and a proactive approach to reducing congestion. This resiliency will be enhanced by sufficient right of way and corridor protection for freight systems; preserving and enhancing multimodal transportation options; and providing operational flexibility. By proactively planning for resiliency in the freight system, the region can substantially benefit by making the region “ready-to-go” for economic development opportunities that require global access or a central location for Midwest and national markets.

12.3 Indicators and Targets

The recommendations described in this section seek to improve the economic competitiveness of industry in metropolitan Chicago and to reduce the impacts of freight operations on local communities, addressing travel delay, pollution, and safety.

GO TO 2040 proposes tracking progress toward these goals through two indicators: the implementation progress of the CREATE program; and the amount of time spent delayed at grade rail crossings.

Implementation of CREATE

Funding and completing the CREATE program is a goal of GO TO 2040 by the year 2030. There are a total of 71 projects included in CREATE. As of March 2010, 10 projects have been completed and another 30 are underway, leaving a total of 31 remaining projects.

CREATE PROJECT COMPLETION

An additional 10 projects by 2015

All 71 CREATE projects by 2030

At-Grade Highway-Rail Crossing Delay

Railroad grade crossing delay is an important source of traffic congestion along many regional highway corridors. GO TO 2040 proposes to address grade crossing delay through rail operational improvements, in coordination with rail companies, and through grade separations where appropriate. Both operational improvements to raise train speeds (and reduce crossing gate-down time) and railroad grade separations are important components of CREATE. The Illinois Commerce Commission estimated in 2002 that of a total of 1,732 public at-grade crossings in northeastern Illinois, there were approximately 140 crossings where motorists were delayed more than 20 hours per weekday.

Forecast increases in train volumes and increased train lengths will increase motorist grade crossing delays. CREATE and other regional freight planning initiatives will abate some of this increased delay through increased train speeds, and will eliminate the delay at several high-impact crossings. GO TO 2040 seeks to cut motorist grade crossing delay in half, overall, from the 10,982 hours of motorist delay estimated by the Illinois Commerce Commission in the region in 2002.

REDUCTION IN RAILROAD GRADE CROSSING DELAYS

10,000 hours/weekday by 2015

5,500 hours/weekday by 2040

12.4 Recommendations

GO TO 2040 strongly supports increased investment in the region's freight system. Investment will be required primarily by the private sector in the normal course of private business enterprise, but public investments will also be necessary to promote the economy, public health, safety, and welfare.

The two goals of this increased investment should be (1) to improve the economic competitiveness of industry in metropolitan Chicago and (2) to reduce the impacts of freight operations on local communities, addressing travel delay, pollution, and safety. As part of the stakeholder outreach, improvements to at-grade rail crossings and improvements to reduce freight-rail and passenger-rail conflicts were judged by stakeholders to be the most important improvements. Other important ideas include rail safety improvements, public-private partnerships (PPPs) for rail improvements, greater intermodal investments, policies and investments to limit local community impacts and changes to address shifts in international freight flows. Among trucking improvements discussed, ideas judged most important by public and private stakeholders included expanded congestion management efforts (e.g., more centralized traffic information resources, changes in delivery time regulation, dedicated freight corridors, investment in additional truck parking, and better system maintenance). Additionally, within the trucking industry, the focus has moved from traditional highway infrastructure improvements to operational and focused infrastructure improvements designed to make the existing freight system work better. Therefore, GO TO 2040 seeks to address this new reality by proposing a shift in the public-sector focus to better address moving our region's goods by truck more efficiently, mirroring recent PPPs in the rail industry.

CMAA's freight approach to date has included a freight system study⁶ aimed at determining recommendations for inclusion in the GO TO 2040 plan. The study's report contains a broader list of recommendations and more details on some of the recommendations listed below. The following are the key recommendations for GO TO 2040 for freight:

National Vision and Federal Program for Freight

According to the Freight Analysis Framework (FAF), the U.S. transportation system moved an average of 53 million tons of freight worth \$36 billion per day in 2002 to serve 109 million households, 24.8 million business establishments, and almost 88,000 units of government.⁷ More than one-half of the tonnage moved within local areas, and less than 10 percent was an import from or export to another country. Trucks hauled close to 60 percent of the weight and two-thirds of the value of shipments.⁸

These statistics demonstrate that moving freight is a national, interstate commerce issue and the U.S. economy depends on the efficient movement of freight. The benefits of the freight system rarely are confined to a single jurisdictional boundary and often the negative impacts are felt locally. Freight movement requires an interconnected system throughout our nation. We need to address and resolve our freight pinch points in the region, but this is very much a problem that transcends geographical boundaries. It is inefficient to solve only part of the problem, in one part of the country, only to encounter a bottleneck here in the Chicago region. To address these problems the federal government needs to develop a vision, a plan, and funding to address freight movements across the nation. Once that has been developed, state, regional, and local actions will be needed to improve the efficiency of our freight system.

6 Chicago Metropolitan Agency for Planning, Freight System Planning Recommendations Project. See <http://www.cmap.illinois.gov/cmp/freightssystem.aspx>.

7 Federal Highway Administration, Freight Management and Operations, Freight Analysis Framework. See <http://tinyurl.com/29ox54o>.

8 U.S. Department of Transportation, Freight Story 2008. See <http://tinyurl.com/2d2dpol>.

CREATE Rail System Improvements

CREATE consists of strategic improvements to the rail system, reducing freight bottlenecks, and raising operating speeds. In doing so, it improves the economic competitiveness of the region’s manufacturing and transportation industries. In addition, CREATE will reduce the freight industry’s impact on metropolitan communities by reducing grade-crossing delay and by reducing freight engine vehicle emissions. CREATE has regional and national significance and although it has made substantial progress, it still needs significant additional funds leading to completion. Freight shipment is the backbone to our national economy and funding this program should be a high priority at the federal level to improve interstate commerce and eliminate bottlenecks throughout our region and the country.

There are a total of 71 projects included in CREATE. The work includes the following:

- 25 new roadway overpasses or underpasses at locations where auto and pedestrian traffic currently crosses railroad tracks at grade level
- Six new rail overpasses or underpasses to separate passenger and freight train tracks
- Viaduct improvements
- Grade crossing safety enhancements
- Extensive upgrades of tracks, switches and signal systems

To accomplish CREATE, the partnership⁹ should prioritize the projects within the program and aggressively identify and secure funding to expedite the implementation of this program. Since the program was announced in 2003, over \$500 million has been secured from a combination of sources including federal, state, the City of Chicago, and the railroads. Additionally, \$400 million was included in the state’s 2009 capital bill and over \$200 million in federal stimulus funds, identified in the American Recovery and Reinvestment Act of 2009 (ARRA). However, there is still an unfunded CREATE cost estimated at over \$2.5 billion dollars. The longer it takes to secure the funding for this program, the higher the costs will grow due to inflation and higher construction costs. Because the CREATE program is of national significance, GO TO 2040 recommends that the federal government take a central role in funding it.

In addition to the urgency in making these improvements to our rail system, the region will also suffer additional economic consequences if rail capacity and infrastructure issues are not addressed. An estimate of the impact on the region’s economy showed that by as early as 2021 the region would experience a potential loss in excess of \$1 billion in production and the equivalent of over 3,000 jobs per year. By 2040, these values would be close to \$7 billion and the equivalent of 12,000 jobs per year. Cumulatively, from 2018 to 2040, a total of the equivalent of 172,000 jobs could fail to be created in the Chicago region if CREATE is not constructed.¹⁰ The CREATE program was an initial step to accomplish the overall vision to enhance the main-line rail system so that it has the capacity to efficiently handle potential future traffic loads and meshes with an efficient system for local pick-up and delivery.

The implementation of this program should be a top priority for the region. As implementation occurs, planning for the next phase should commence. The CREATE Partnership, along with CMAP should begin to develop, finance, and implement projects and improvements beyond those identified in the CREATE. See **Figure 66** for a map of CREATE projects.

Figure 65. Fully implement CREATE by 2040



Source: Regional Economics Applications Laboratory

9 Chicago Region Environmental and Transportation Efficiency Program Partners include the State of Illinois, the City of Chicago, and the railroad industry.

10 Regional Economics Applications Laboratory, “Economic Impact of Improvements in Transportation Congestion in the Chicago Region on the Midwest and U.S. Economies,” Institute of Government and Public Affairs, University of Illinois, April 2010.



Regional Trucking Improvements: Truckways, Truck Routes, Truck Parking, Delivery Time Management, and Restrictions

Most freight moves by truck, so a serious effort to confront excessive Chicago-area shipping costs needs to address truck transportation issues. A combination of factors tends to drive up Chicago area truck costs. A program of truck transportation improvements, primarily operational rather than capital in nature, should be pursued to address the Chicago region's truck system issues. Such a program would bring reduced congestion on the area's roadways, safety benefits, emissions reductions, and more efficient deliveries to local suppliers. Like CREATE, this truck-oriented program is potentially a PPP and all of these efforts should work in cooperation with the locally impacted communities in order to address potential impacts to both local infrastructure and quality of life.

A full program of truck system improvements is necessary, including an enhanced and integrated geographic information system, to improve freight mobility:

Capital/Infrastructure

Dedicated and managed truckways (roads set aside for trucks) or truck lanes on existing facilities should be identified and established throughout the region that are funded through a congestion pricing revenue system. A number of potential dedicated facilities have been studied in the past, including dedicated truck-only lanes on I-55 and the proposed Illiana Expressway. Advantages of these separated facilities would include safety enhancements separating large trucks and passenger vehicles, efficiency in moving cargo by avoiding certain corridors that are congested due to peak hour passenger vehicle congestion, and maintenance considerations that would allow the specific infrastructure enhancements (such as pavement design, geometrics, sight distance, and lane widths) that are required for large trucks to be focused on these dedicated facilities. In addressing the dedicated freight facilities, it will be important to target the region's intermodal facilities and work to connect them appropriately.

Routes/Restrictions

While the Chicago region is a freight hub for transfer of goods, it is also the destination for a significant portion of goods travelling in the region. The region's truck routes need to be analyzed and updated. To address this, the regional truck route system needs to be expanded to reduce unnecessary truck travel and to improve system efficiency by providing more direct routes to destinations. As an initial step, a regional map of existing truck routes should be created to identify gaps and inconsistencies throughout the region. Since our roadway system crosses a number of jurisdictions (state to county to local, for example) the truck routes have not been designated in the most logical and efficient manner. By examining the current routes, the various jurisdictions should coordinate a more logical and efficient system for the region's truck routes.

Delivery times and parking restrictions also need to be addressed by local governments. Regional efficiencies can be gained by managing truck delivery times and reducing peak-period deliveries, while requiring quiet and clean trucks to assure compatibility with local communities. Where delivery times cannot be addressed, truck parking facilities should be established to reduce the need for peak-period truck travel. For instance, to alleviate congestion and idling, the City of Chicago should establish centralized freight distribution nodes to limit the number and size of trucks in the Chicago Central Area.

Organization and Public Policy: Regional Freight Authority and Regional Transportation Operations Coalition

Metropolitan Chicago has not traditionally had a champion to look out for the public interest regarding freight. National discussions and decisions about the movement of goods are dominated by port cities and states, partly because our region lacked a strong voice despite being the nation's hub of truck and rail freight. The Chicago region has a tremendous amount at stake and the movement of freight can have a wide range of potentially positive or negative effects, including economic ones. Freight bottlenecks make it harder for commuters in cars and trains to reach their destinations and harder for companies to get their goods into and out of our region. But if addressed effectively, freight traffic can serve as a major engine of economic prosperity.

Freight improvements are intended to produce a mix of public and private benefits, but the greatest obstacles to implementing improvements are institutional barriers (such as the challenges presented by coordinating a number of different private freight carriers within a competitive industry) and financial hurdles. CMAP should provide that leadership function on such regional matters. In particular, the issue of freight and goods movement is a regional one more than a state issue, and it is broader and more complex than a simple accumulation of the 284 municipal and seven county governments' individual interests. CMAP and its partners need to address economic needs and freight efficiency while assuring that metropolitan Chicago remains a place where a skilled workforce will want to live and where businesses want to grow.

To address the institutional and funding barriers of all freight modes, a self-financed Regional Freight Authority should be explored and designated to establish a balance of interests and a mandate to address these needs and lower operating costs by upgrading regional infrastructure. The Regional Freight Authority should have the ability to finance freight system capital improvements and to address public policy issues, such as community issues (grade crossing delay, safety, and noise). Current financing has not been adequate to provide freight mobility or address freight-related community issues, so new revenue sources (for example, instituting a freight transfer fee or increased tolling) should be established for dedicated freight improvements. Since there is a benefit to both the government and the private sector, a cooperative effort is a necessity to determine how the costs should be shared among the parties and how the required funds should be raised.

A process should be outlined to assist in moving this recommendation forward that includes convening freight stakeholders and transportation implementers to discuss the options and best course of action; examining case studies of similar authorities in other regions; and exploring potential agencies to host the Regional Freight Authority. Ideally, this authority should be integrated into an existing agency to avoid creating an entirely new organization.

Models for this type of entity exist elsewhere throughout the country. The Alameda Corridor Transportation Authority (ACTA) is the most prominent example of an entity created to initially implement and operate an innovative freight infrastructure project.¹¹ Located in southern Los Angeles County, California, it is a 20-mile-long rail line, primarily along and adjacent to Alameda Street, that was constructed from the ports of Long Beach and Los Angeles to downtown Los Angeles. The project extends through or borders eight other cities. The project originated in 1981 with the Southern California Association of Governments (SCAG), CMAP's counterpart. The PPP included local elected officials, as well as representatives of the ports, the federal government, affected railroads, trucking industry, and other city officials. ACTA was created as a public agency and the corridor began operation in 2002. The \$2.4 billion project cost was raised approximately as follows: payments from the ports, \$400 million; state and local government grants, \$400 million; proceeds of bond issues backed by corridor revenue (from container fees paid by its users), \$1.2 billion; and a federal loan, also to be repaid from corridor revenue, \$400 million. They continue to operate the corridor and in 2008 also expanded their mission to include planning for additional capital and operational improvements. ACTA charges use fees and container charges, ranging from \$4.96 to \$19.60 per twenty-foot equivalent unit (TEU) depending on the mode and whether they are full or empty. In 2009, the estimated total fees that were collected was \$82 million. Although there are some obvious differences between ACTA and the conditions in northeastern Illinois, the experience and success of the Alameda Corridor should be drawn upon as a model for future development within our region.

For lower-cost operational improvements, CMAP's Regional Transportation Operations Coalition will be an appropriate mechanism to work with regional stakeholders and/or the Regional Freight Authority to implement freight improvements. This committee should focus on cooperatively implementing the regional trucking improvements identified above.

¹¹ For more information on the Alameda Corridor Transportation Authority, see <http://www.acta.org/index.asp> and the report "Funding Options for Freight Transportation Projects" from the Transportation Research Board of the National Academies at http://www.trb.org/Main/Blurbs/Funding_Options_for_Freight_Transportation_Project_162174.aspx.

Integrating Freight Needs and Financing into Infrastructure Prioritization

CMAQ developed a number of evaluation criteria to analyze and prioritize capital projects, and other plan recommendations (transportation financing and coordinated investment) call attention to performance-based criteria to prioritize infrastructure investments. As these measures are developed, freight-related measures should be incorporated. To do this effectively, we must also improve our access and collection of freight-related data. The data can also be made publicly available through our Regional Indicators Project and used to market the region to industry, developers, and freight providers. There is extensive public sector data available, however the majority of freight systems are operated by the private sector and the ability to receive the associated data continues to be a challenge. Since this data can be instrumental in making more effective public sector investments, GO TO 2040 encourages private sources to share their data in a way that serves regional needs for informed decision-making but also respects the privacy of private firms.

Additionally, CMAQ's freight modeling capacity has evolved from the recognition that traditional network modeling tools used for regional planning are not sufficiently robust for application in a freight-rich region like Chicago. Therefore, CMAQ will work towards establishing a policy responsive demand forecasting tool that can be used to better predict local and regional impacts to our freight system based on changes in national and global freight-systems and facilitate a better understanding of regional freight movements and impacts. Freight can have a significant impact on nearby land use, and modeling and analysis should take this into account; for example, this could be used in a predictive way to help local governments identify opportunities for industrial development based on nearby freight.

12.5 Implementation Action Areas

The following tables are a guide to specific actions that need to be taken to implement GO TO 2040.

The plan focuses on five implementation areas for creating a more efficient freight network:

Create a National Vision and Federal Program for Freight

CREATE Rail System Improvements

Regional Trucking Improvements: Truckways, Truck Routes, Delivery Time Management, and Restrictions

Organization and Public Policy

Integrating Freight Needs and Financing into Infrastructure Prioritization

Implementation Action Area #1: Create a National Vision and Federal Program for Freight

Create a vision for a federal role in transportation that includes a national freight policy with dedicated funding and corridors of national significance

LEAD IMPLEMENTERS:

Federal (Congress, U.S. DOT)

Establish a method to formulate a national freight plan that can guide regional and state efforts to improve the freight systems. Create a systematic funding program for freight improvements. This will help alleviate interstate highway, rail, and airport congestion and provide redundancy for the times when other parts of the national transportation system are overburdened.

Implementation Action Area #2: CREATE Rail System Improvements

Build a larger national coalition to support CREATE

LEAD IMPLEMENTERS:

Federal (Congress, U.S. DOT), state (General Assembly, IDOT), Amtrak, Metra, CMAP, municipalities, freight railroads

To heighten the status of this program at the federal level, the importance of it and its benefits need to be communicated to stakeholders (elected officials, other MPOs, business community, public) throughout the country in order to gain broader endorsement, support, and funding.

Secure funding to complete the CREATE Program

LEAD IMPLEMENTERS:

Federal (Congress, U.S. DOT), state (General Assembly, IDOT), Amtrak, Metra, CMAP, municipalities, freight railroads

Identify funding sources for continuing implementation of the CREATE Program infrastructure improvements. Funding sources that should be explored, but not limited to, include the following: local, state, federal grants, bond or loan opportunities, railroads, other private sources, and user fees.

Prioritize and implement the CREATE Program

LEAD IMPLEMENTERS:

Federal (U.S. DOT), state (IDOT), Amtrak, Metra, City of Chicago, freight railroads

Prioritize the remaining projects based on criteria that factor in project readiness, available funding resources, and public benefit, and aggressively work to implement all of the 71 projects.

Develop the next phase of rail improvements

LEAD IMPLEMENTERS:

State (IDOT), Metra, CMAP, municipalities, freight railroads

Develop a CREATE II program so that the regional rail system has the capacity to efficiently handle potential future traffic loads and meshes with an efficient system for local pick-up and delivery. CREATE II should seek to improve operating speeds and reduce congestion on all major mainline routes traversing the Chicago region and by also increasing terminal capacity.

Implementation Action Area #3: Regional Trucking Improvements: Truckways, Truck Routes, Delivery Time Management, and Restrictions

<p>Identify opportunities for dedicated freight corridor systems</p> <p>LEAD IMPLEMENTERS: State (IDOT, Tollway), Freight Authority, CMAP, municipalities</p>	<p>Identify appropriate facilities and corridors, via truckways or truck-only lanes, in order to improve safety and increase efficiencies through separating large trucks and passenger vehicles. Provide an alternative for freight to avoid certain corridors due to peak hour passenger vehicle congestion. Engage freight-industry stakeholders and communities in early discussions.</p> <p>Suggested corridors to study:</p> <ul style="list-style-type: none"> - Illiana Expressway - I-55/Stevenson Expressway - Connections between intermodal freight terminals
<p>Implement dedicated and managed truckways</p> <p>LEAD IMPLEMENTERS: State (IDOT, Tollway), Freight Authority, CMAP, municipalities</p>	<p>Preserve right-of-way in potential corridors. Engage in feasibility studies and, if appropriate, preliminary engineering and construction. Provide freight-friendly designs, including pavement design, geometrics, sight distance, and land widths. Engage PPPs, as appropriate.</p>
<p>Manage transportation system to reduce peak-period congestion through congestion pricing</p> <p>LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP</p>	<p>Analyze, evaluate, and institute congestion pricing on selected road segments.</p>
<p>Catalog and update the region's truck routes</p> <p>LEAD IMPLEMENTERS: State (IDOT), CMAP, counties, municipalities</p>	<p>Analyze and map existing truck routes. Identify the gaps and inconsistencies in the current routes. Coordinate a logical and efficient system to update and implement a regional network of truck routes.</p>
<p>Address delivery times and parking restrictions</p> <p>LEAD IMPLEMENTERS: Counties, municipalities</p>	<p>Assess local delivery times and parking restrictions. Make changes where possible to reduce peak-period truck travel.</p>

Implementation Action Area #4: Organization and Public Policy

<p>Explore the establishment of a governance structure, such as a Freight Authority, to identify issues, guide investments and advocate on behalf of the region</p> <p>LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP, counties, municipalities, freight carriers</p>	<p>Analyze and plan to establish a Freight Authority, preferably within an existing agency, to serve as an oversight agency for coordinating freight issues and investments in the Chicago region. The Authority should bring together the public and private sectors, working together toward accomplishing goals of mutual interest and benefit to the region. In its oversight capacity, the proposed body would have the authority to collect revenue (such as user fees or tolls) and issue bonds. The agency's oversight responsibilities would include all freight modes, as well as freight-related economic development opportunities within the region.</p>
<p>Conduct further study to implement use fees or container charges</p> <p>LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP, counties, municipalities, freight carriers</p>	<p>The largest hurdle to implementing improvements for freight is identifying funding and securing a revenue stream. The region should actively study various methods to collect user fees on container shipments as potential revenue source.</p>

Implementation Action Area #5: Integrating Freight Needs and Financing into Infrastructure Prioritization

<p>Include freight-related performance measures in project evaluation process</p> <p>LEAD IMPLEMENTERS: State (IDOT, Tollway), CMAP, counties, municipalities</p>	<p>Develop measures that take into account freight needs and deficiencies in evaluating potential transportation improvements. This performance-based approach will provide a more transparent and quantitative means of project evaluation, and instill more accountability into the project selection process.</p>
<p>Enhance freight modeling capacity</p> <p>LEAD IMPLEMENTERS: CMAP</p>	<p>Develop more robust modeling tools that will better predict local and regional impacts of freight based on changes in national and global freight systems. Also, assist to facilitate a better understanding of regional freight movements and impacts on our transportation network, as well as nearby land use.</p>

12.6 Costs and Financing

The freight improvements recommended in this chapter have significant costs.

For example, over \$2.5 billion is needed to fund CREATE alone. A number of the strategies discussed in this recommendation are directly tied to the transportation network and some of the costs will be absorbed in the process of maintaining the existing transportation system and making systematic improvements. In addition, the recommendations of GO TO 2040 section Invest Strategically in Transportation — a gas tax increase, use of congestion pricing, and potentially other sources — can help to cover this cost, but are unlikely to meet all our needs.

As the recommendations pointed out, the region should initiate other financing mechanisms to accelerate the implementation of CREATE and improvements to the highway and arterial network to facilitate more efficient truck movements. A portion of this funding should be an increase in revenue for freight improvements from the federal government, reflecting the impact that our freight system has on the national economy and the need to assist in mitigating the impacts.

Finally, the Regional Freight Authority should identify and analyze other funding sources, assess the feasibility of implementation, and should pursue the ones that can be best operationalized to help finance the costs of freight improvements. These may be user fees, more aggressive congestion pricing, or others. Identifying funding to finance and maintain these improvements is pinnacle to the success of this recommendation. Without a serious increase in funding, none of these recommendations can be realized.