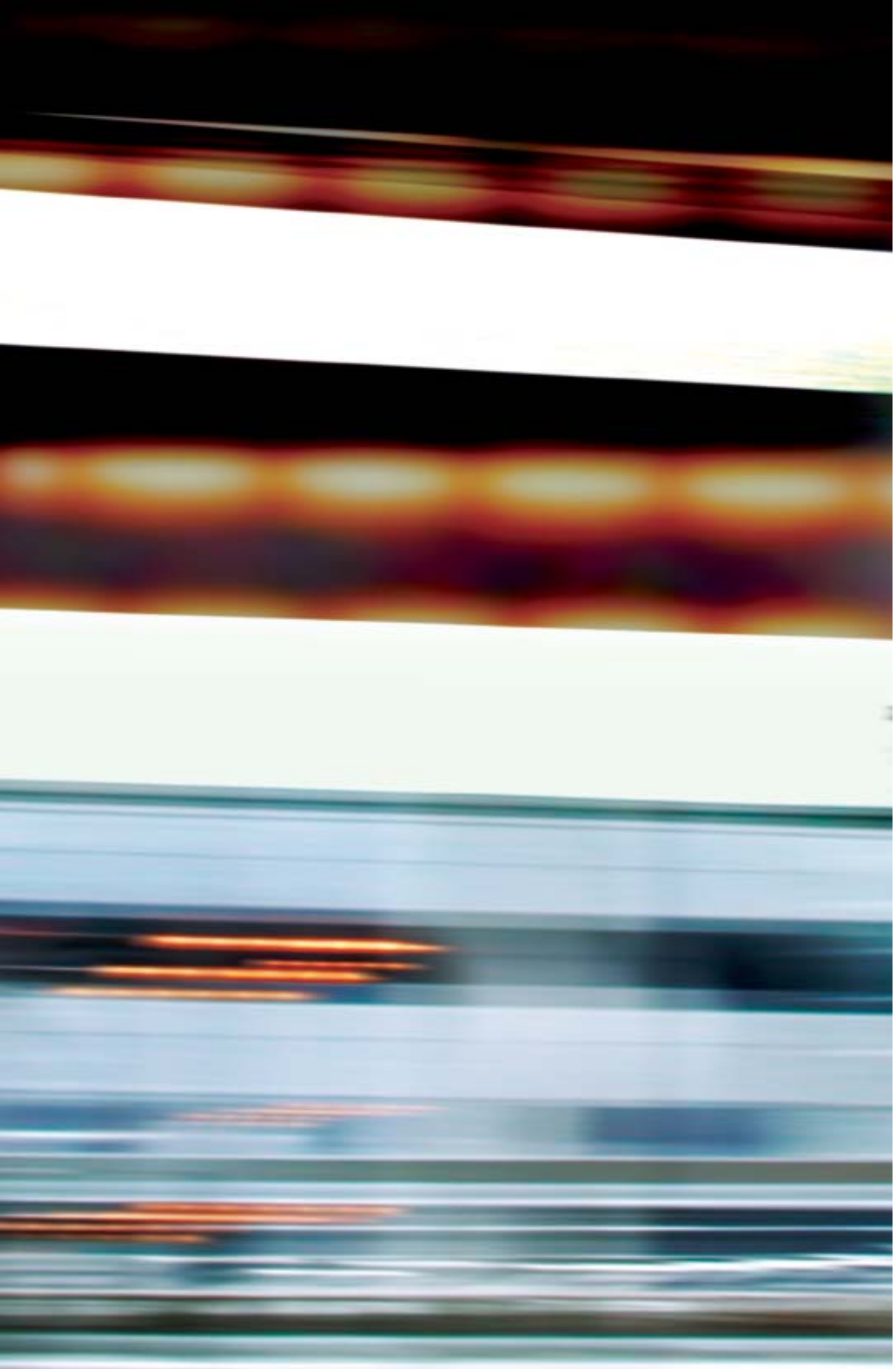
Keep It Moving

The Joyce Foundation **June 2003**



Around the Midwest, federal transportation policies have enabled communities to extend bus lines and bike paths, fix deteriorated roads and create options for faster, cleaner, safer transportation. Much more can be done.

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Roadmap

Foreword

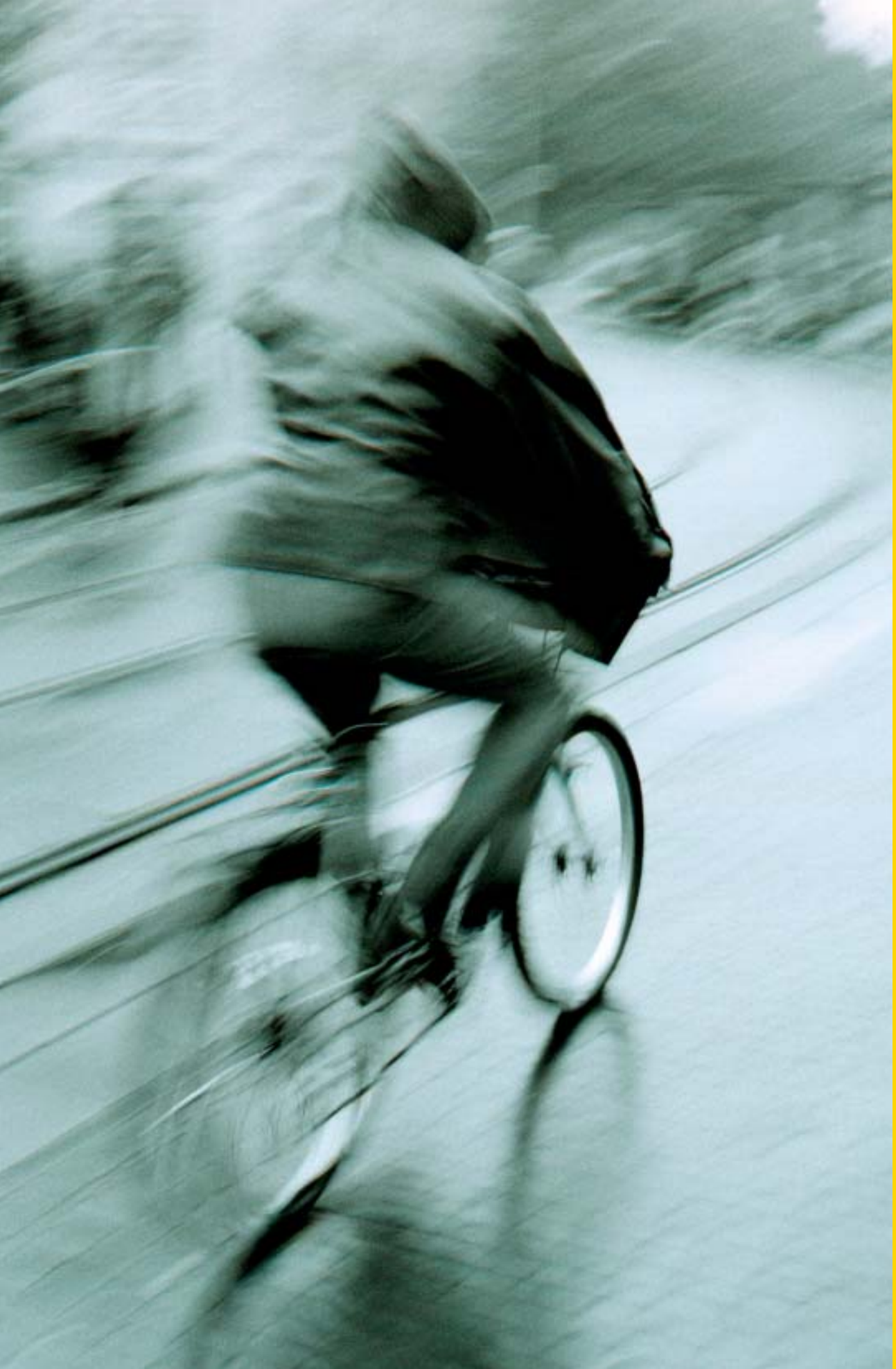
A dozen years ago, Congress passed legislation that has had far-reaching consequences in communities across the country. ISTEA (the Intermodal Surface Transportation Efficiency Act of 1991) expanded the old “highway bill” to focus on the real underlying issue: transportation. It encouraged states and localities to invest in whatever it takes to move people and goods efficiently and safely while respecting the fabric of communities and the natural environment.

The Joyce Foundation funded some of the first visionary groups that worked to bring about this dramatic change. Convinced that transportation is an issue that profoundly affects the environment, economic well-being and quality of life in our Midwest region, the foundation has invested more than $8.5 million in policy work on this issue. Coordinating the efforts has been the Surface Transportation Policy Project, an umbrella group that monitors transportation policy, state and local implementation and spending to make sure that the law (and its 1998 successor, TEA 21) genuinely serves the broad purposes that Congress intended.

This book documents how the new thinking, and new investments, have reshaped communities around the Midwest. States and localities, with input from the public, have used the funds to build transit, repair roads and bridges, create bikeways, make it easier for pedestrians to get around and explore efficient ways to keep freight moving.

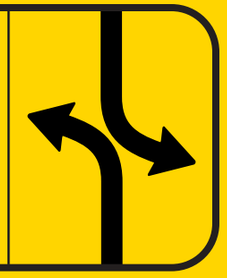
Yet while much has been accomplished, much more could be done. In some critical areas, Midwest states have not taken full advantage of the law’s flexibility. The problems aren’t getting any easier. Like their counterparts around the country, Midwesterners are spending more and more time tied up in traffic; air quality remains a problem; growing populations strain existing infrastructure; and promising strategies like high-speed rail, improved freight transfer and bus rapid transit remain more vision than reality. Meanwhile, the real, if remote, threat of terrorist disruption demands a diverse transportation system that can keep us moving even in difficult times.

Federal transportation laws have brought some dramatic improvements in communities in the Midwest, and nationally, over the past decade. The policies are working. With the right investments and improved accountability, much more can be done. Our message to policymakers is summed up in the title of this report: Keep it moving.



A Shift in Thinking

Transportation policy, once dominated by road-building, has expanded to include rail lines, transit centers and pedestrian corridors—a “multimodal” array of options.



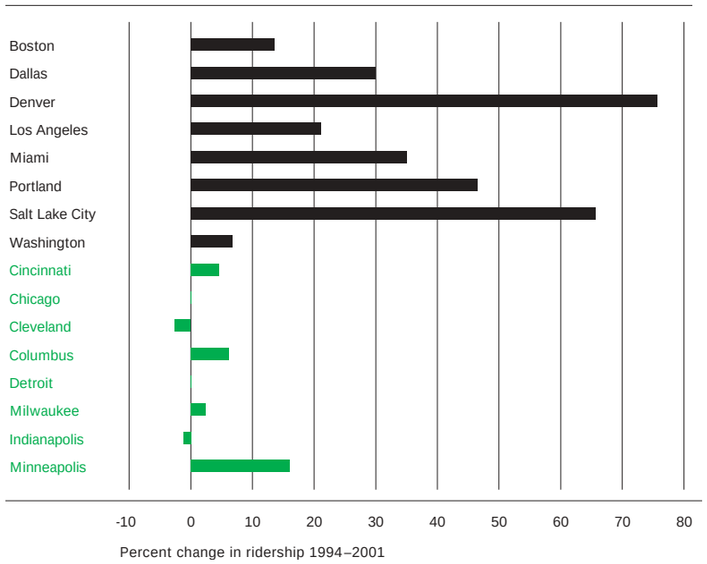
New Law Changes Landscape

Thanks to a path-breaking transportation law passed by Congress in 1991, bike lanes and hiking trails have proliferated, bus stops have become links in a broader transportation network and millions of passengers have returned to urban rail transit in cities across the country.

The Intermodal Surface Transportation Efficiency Act (ISTEA) took what used to be the "highway bill" and expanded its focus on buses, trains, bicycles and pedestrians as well as autos. The new approach sought not necessarily to build roads (or bus lines or bike paths, for that matter), but to address the nation's broader transportation needs—as well as related problems of traffic congestion, air pollution and inefficient land use. With a $155 billion six-year appropriation, ISTEA (pronounced "iced tea") turned the steering wheel of American transportation policy. A successor law in 1998, called TEA-21, put down the accelerator with $218 billion in additional funding.

Building and Rebuilding The two laws have begun reshaping transportation investments across the country and—to a somewhat lesser extent—in the seven Midwestern states covered in this report. With funding from ISTEA and TEA-21, **Chicago** is rebuilding and expanding its vast rail and bus systems. **Indiana** has become a national leader in trail development. **Michigan** cities are turning to low-emission buses, **Cleveland** is embracing the new concept of bus rapid transit and **Minneapolis** has joined the light-rail revival that is sweeping the United States. Many smaller Midwestern cities and suburbs are on board as well, adding pedestrian amenities, fine-tuning their bus systems and rediscovering the virtues of compact, mixed-use neighborhoods.

As other cities build more transit, Midwest stays flat.



Transit ridership has not grown substantially in most Midwestern cities and has fallen in some regions. This contrasts with strong growth in areas that have made commitments to building ridership through new service or improvements to older systems.

SOURCE: American Public Transportation Association, "Transit Ridership Report," 1994 and 2001.

Midwest Is Behind Pace

But a survey of transportation planning and spending also shows that other parts of the country are taking fuller advantage of the TEA laws. The Midwest, by contrast, has been slower off the line. More than $42 billion in federal transportation funding has been spent in the Midwest since 1991. But because of some problems within the law and the governing bodies that administer it, the mobility promised in the TEA laws has not yet been fully realized.

- **Some states and metropolitan areas** have aggressively used the laws' flexible funding provisions to redirect millions of dollars into expansion of their transit systems. Midwest states have only lightly tapped this resource.
- **Dozens of other cities** have built light-rail systems or added rapid-bus services to lure commuters from their cars. In the Midwest, only **Cleveland** and **East St. Louis** use light rail, and only **Minneapolis** has light rail under construction. **Chicago** is rebuilding part or all of two heavy rail lines with federal funds.
- **The TEA laws** provide a dedicated, although modest, funding stream for bike trails, pedestrian bridges and historic preservation—what's called "Transportation Enhancements." While all seven Midwest states have built such projects, they haven't built as many as they could have; instead, they've taken advantage of a loophole to divert some of these funds into other programs.
- **Aggressive local effort** and new federal funding have helped many bus systems elsewhere increase ridership dramatically. While some Midwestern cities are part of this trend, many others show flat or decreasing ridership.

New trails and transit improvements show the law's potential.

Despite these shortfalls in the Midwest, the TEA laws have helped transform national transportation policy. Their core provisions, including the "multimodal" approach (i.e., integrating roads, transit, bikes, etc.), flexible use of funds and detailed guidelines for transportation planning, are proving to be effective tools for enhancing mobility in American cities and towns.

Big Challenges, Small Steps

As we publish this book, Congress is poised to renew the surface transportation bill before it expires on September 30, 2003. How that new law is shaped and funded is critical, because some of the challenges that prompted the 1991 law still remain. Traffic congestion has worsened, air quality remains a serious challenge and trends in land use suggest that the "multimodal" future is still a work in progress.

A Sense of Urgency Nationally and in the Midwest, there is widespread recognition that without major new infrastructure investments and shifts toward transit and walking, current transportation networks will be swamped by projected growth in both population and jobs—to say nothing of increasing repair needs. As in other parts of the country, Midwesterners spend more time stuck in traffic each year than they did the year before. Experts agree that simply adding more road capacity won't solve that problem. The senior populations in every state are growing rapidly, creating pressure to develop alternative transportation that does not involve driving—transportation that would better serve teenagers and other non-drivers as well. Other reasons for urgency: the high costs of driving and congestion to businesses and individuals; the polluted air that affects more than 33 million Midwesterners; and the more than 600 pedestrians killed in traffic-related accidents in the Midwest each year.

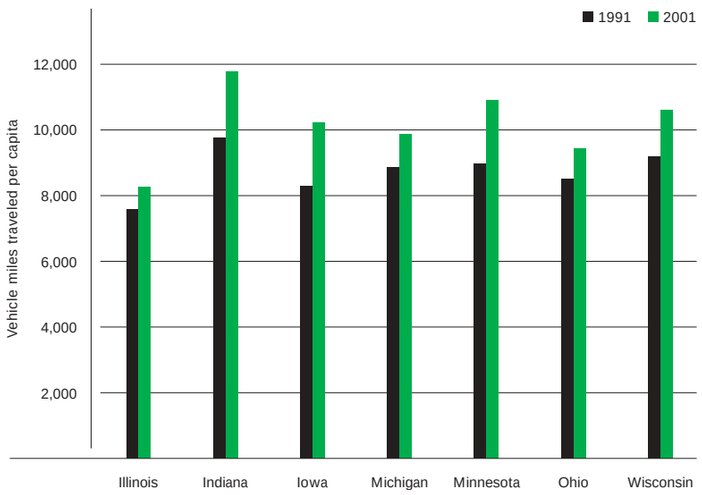
Culture Shift No region in the country has yet overcome these challenges. But the plans and projects detailed in this report—all of them results of the first two TEA laws—suggest that many areas are on the right track. The residents of **Grand Rapids,** MI, have developed a comprehensive master plan for their 153-year-old city that stresses sidewalks, neighborhoods, quality transit and parks rather than more isolated subdivisions and strip shopping centers. **Milwaukee** is using federal transportation money to demolish a downtown highway to free up land for more valuable uses. College towns including **Lafayette,** IN, **Madison,** WI, and **Champaign-Urbana,** IL, are supporting a culture of walking, bicycling and bus-riding.

Fine-tuning the Law These experiences and analysis of transportation-related data suggest a series of recommendations for policy-makers, members of Congress and local officials as the new transportation law is drafted. At the federal level, the law should be fine-tuned to better allocate resources, provide stronger accountability and target capital where it will bring the most results. At the state and local levels, supportive activities are necessary, including better coordination of transportation and land use planning, stronger public participation and increased local funding to take full advantage of the law's provisions.

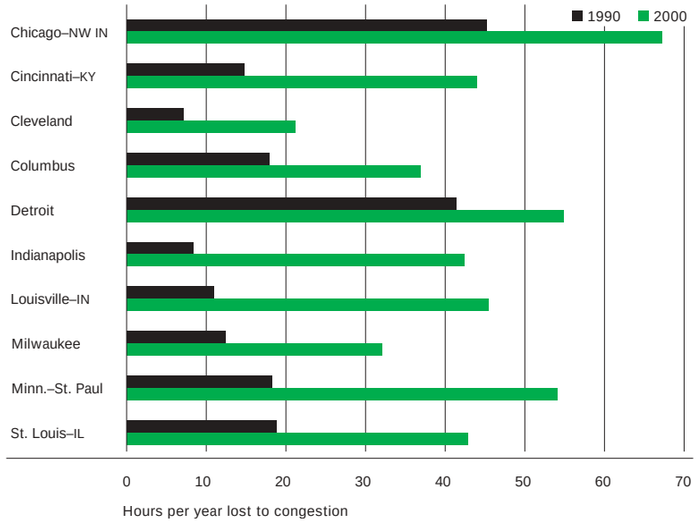
Midwest motorists are driving more...

Total miles traveled in a car or truck increased on a per capita basis in every Midwestern state between 1991 and 2001.

SOURCE: Federal Highway Administration, U.S. Department of Transportation, "Highway Statistics 1991" and "Highway Statistics 2001."



...and spending more time stuck in traffic



Congestion on roads and highways has worsened steadily in every Midwestern metropolitan area studied by the Texas Transportation Institute.

SOURCE: Texas Transportation Institute, "2002 Urban Mobility Report."

TEA Laws Rerouted Transportation Policy

Biggest change in transportation thinking since Eisenhower built the Interstates.

The 450-page TEA-21 law is an enormously complex document that few Americans have ever read. Like all major legislation, it is a compromise document that includes, among other things, more than a thousand specific earmarks and priority projects in congressional districts around the country. It creates large pots of funding to be distributed by formula, including $23.5 billion for Interstate Maintenance and $33.3 billion for the Surface Transportation Program.

TEA-21 and its predecessor ISTEA represent a fundamental change from the highway bills that preceded them. Ever since 1956, when the Federal-Aid Highway Act created the Interstate Highway System, American surface transportation policy had focused on roads and highways. The TEA laws broadened that focus to include other forms of transportation as well as roads—the "multimodal" approach.

TEA-21 identifies explicit "planning factors" that drive home the huge impact that transportation decisions have on the areas they serve. The law says transportation systems should:

- **support economic vitality**
- **increase safety and security**
- **increase accessibility and mobility**
- **protect the environment and promote energy conservation**
- **enhance connectivity among transportation modes and**
- **emphasize preservation of the existing system.**

The TEA laws substantially increased overall transportation funding, created dedicated funds for pedestrian, bicycle and other community enhancement projects, and strengthened commitments to bus systems and rail-based transit. Although roads still capture the bulk of the funding, the laws sought to level the playing field between transit and highway choices. They also allowed states and local areas substantial flexibility to shift funds from highway to transit needs. This combination of a multimodal framework and substantial new funding had the effect intended: it gave Americans more choices in how they move around.

A Quick Guide to TEA Terms

CMAQ
The Congestion Mitigation and Air Quality Improvement Program funds projects in areas that do not meet certain federal Clean Air Act standards. CMAQ has been used for bike paths, access to rail stations, new buses, rail service improvements, bike racks on buses, high-occupancy-vehicle lanes and transfer stations that enable riders to switch from one form of public transit to another. Allocated $6 billion nationally under ISTEA and $8.1 billion under TEA-21, CMAQ has been a primary driver of change.

TE
The Transportation Enhancements program funds sidewalks, bike paths, trails, historic preservation and scenic amenities, among other things. States must reserve 10 percent of their Surface Transportation Program (STP) funds for such projects. ISTEA and TEA-21 provided more than $6.6 billion for these purposes, although most states did not allocate all available resources to the program.

New Starts
This program provides the major capital funding for urban rail projects and rapid-bus systems. It has provided the bulk of funding for 20 new light-rail lines and many more rail projects in the feasibility or engineering phases. The program is severely oversubscribed; funding the backlog would require increasing the allocation by 250 percent over current levels. To secure federal commitments, most governments are raising about half of project costs locally, well above the minimum 20 percent.

JARC
The Job Access Reverse Commute program funds projects that bring workers to jobs in suburbs and other areas not well-served by traditional transit systems. One notable accomplishment: viable reverse-commute programs.

MPOs and State DOTs
Metropolitan Planning Organizations lead transportation planning in metropolitan areas; state Departments of Transportation select projects for all other areas. Both are guided by specific planning guidelines and requirements for public involvement. State DOTs control most highway funding.

"Flex" Funding
The law allows MPOs and state DOTs to reallocate funds from highways to multimodal applications and vice versa. The seven Midwest states shifted, or "flexed," about $500 million from roads to transit from 1992 to 1999, about 8 percent of eligible funds.

Interstate Maintenance
This program shifted the focus from construction of new Interstate Highways to ongoing maintenance. Other parts of the law also support a "fix it first" approach.

Balance Sheet

Liabilities

Hollowed-out cores
Many Midwest cities have seen precipitous population and employment declines that undercut transit ridership, left land idle and pushed auto traffic outward. Since 1950, Chicago and Detroit each lost 800,000 people; Cleveland, 400,000; Cincinnati, 150,000.

Spreading suburbs
Lacking mountains or other natural barriers, cities have spread at a greater rate than many in the Sun Belt. Urbanized land in Bloomington-Normal, IL, expanded 64 percent between 1982 and 1987, while population grew only 20 percent.

Brownfields and abandonment
Thousands of acres close to existing transportation are unused because of industrial contamination or widespread deterioration of housing, commercial areas and public infrastructure. Detroit has an estimated 10,000 abandoned structures.

Fractured governance
Midwest metro areas are typically split into hundreds of governments, which create barriers to regional transportation investments. Metro Minneapolis-St. Paul has 344 local governments; metro Cleveland has 267. Another hindrance to regional consensus: many cities remain segregated by race and class.

Assets

Railroads criss-cross the region, and railroad rights-of-way thread through cities and suburbs. The rail network offers several possibilities: continued use for freight and inter-city passengers; adaptation for urban or cross-suburban transit; and reuse as recreational and bike trails. Indianapolis has identified uses for 14 rail corridors.

Underutilized waterfronts on rivers and the Great Lakes can be redeveloped with mixed uses that support transit, pedestrians and environmental quality. Cleveland's Flats entertainment district flanks the Cuyahoga River; downtown Minneapolis near the Mississippi now has 27,500 residents.

Inner-ring suburbs that were compactly built around streetcar, commuter rail and bus lines represent opportunities for population growth, affordable housing and transit patronage. Newer suburbs can also benefit by clustering uses in transit-served downtowns. Many Chicago suburbs are actively promoting development around that region's 380 rail stations.

Smaller industrial cities have not died as was once predicted. With historic centers, attractive neighborhoods and viable economies, they are a potentially large housing and economic development resource. Some, like Akron, OH, Pontiac, MI, and Rockford, IL, are becoming physically linked with expanding larger cities nearby.

Midwest at the Crossroads

The Midwest region was transformed in the late 19th and early 20th centuries by spectacular growth centered around railroads and the factories of its great industrial cities. Highways and airports came in the mid-20th century, supporting a period of vast suburban expansion.

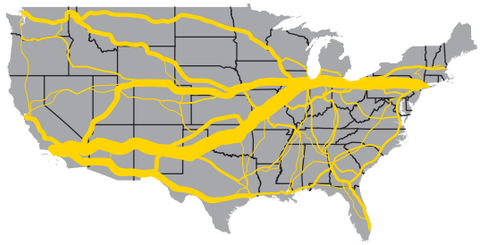
A Huge Economy Today the seven-state region remains an industrial powerhouse and has added new strengths in communications, technology and service industries. With a gross regional product of $1.8 trillion in 2000, the Midwest economy is larger than that of the United Kingdom and Russia combined. At the functional center of North America's transportation network, by air, rail, road and water, the Midwest is crucial to the nation's prosperity.

Traffic Trouble When Congress passed ISTEA in 1991, virtually every Midwestern metropolitan area and many smaller cities had already bumped up against the wall of traffic congestion, transportation-related air pollution and environmental concerns related to sprawling development. Since then, conditions have gotten worse. Today in **Cincinnati's** northern suburbs, the I-71 corridor is jammed for hours each day. Along the southern tip of Lake Michigan, the 100-mile arc of tollways, highways and arterials from **Gary,** IN, to **Kenosha,** WI, is one of the most congested corridors in the nation. The same story of overloaded roads plays out each day in the metro areas of Detroit, Milwaukee, Cleveland, Columbus, the Twin Cities and Indianapolis. And while few smaller cities experience daily gridlock, most have sprawled dramatically in recent decades. They have more cars on the road traveling longer distances than ever before.

Models for Change There are models for changing this picture of car-choked communities. Scholar Robert Cervero, in *The Transit Metropolis*, offers examples of adaptive strategies from regions around the world. Even U.S. cities once skeptical of public transit have made surprising strides. Los Angeles's controversial rail system now carries 210,000 riders per day. Transit ridership in Dallas has increased 30 percent since 1994; in Denver, 75 percent. Portland's 38-mile light rail network carries 78,000 daily commuters; transit ridership has been growing faster than miles traveled by car. The Midwest's unique challenges and assets suggest similar success is possible here.

Transport Hub

The earliest white settlements in the Midwest followed water transportation: the Great Lakes and the Ohio and Mississippi River systems. The region's economic power was unleashed in the mid-19th century by the building of the railroads (see maps below). Interstate highways came in the mid-20th century, both leading and supporting a period of vast suburban expansion.



Freight Rail Traffic

The Midwest is at the epicenter of the nation's freight-rail system. Further growth could divert thousands more trucks from highways, but infrastructure investment is needed to relieve bottlenecks. **SOURCE:** U.S. Department of Transportation map in *Critical Cargo: A Regional Freight Action Agenda,* Metropolitan Planning Council, 2002.

The Fast-Rail Alternative

High-speed trains on this proposed Midwest network would offer travelers a time-competitive alternative to highway travel and short trips by air.

SOURCE: *Midwest Regional Rail System: A Transportation Network for the 21st Century,* Midwest Regional Rail Initiative, February 2000.

Redirecting the Flow

Midwestern cities and states are building a different future that includes light-rail trains, better bus service and a new respect for walking and biking.

What the Midwest Has Done

Given their base of existing infrastructure, Midwestern states for the most part have used the TEA laws to rebuild and adapt older systems, rather than creating all-new approaches. Recognizing that the best returns are likely to come in areas with large numbers of people in motion, most metropolitan areas focused their early efforts on improvements to corridors and centers with high concentrations of jobs, homes or commercial activities.

Bus System Improvements

Modern buses and better schedules attract more riders.

While most people think transit means light rail (see page 23 for definitions of this and similar terms), buses carry far more passengers each day; nearly two-thirds of transit passengers in America travel by bus. Midwestern cities have devoted much of their efforts to improving bus systems, notably by buying new low-floor buses that allow easier access for senior citizens and people with disabilities. Many systems have installed bike racks on buses to extend the reach of their fixed routes. Virtually all have expanded their "demand-response" systems, which provide door-to-door service to people with disabilities.

Some transit systems have managed steady increases in bus usage; overall, transit ridership has gone up 23 percent nationally over the past seven years. Strategies include extending hours and frequency of service, adding comfortable transfer facilities and bus shelters, promoting multi-ride tickets and creating coordinated "pulse" scheduling, which provides quick transfers among routes. Some systems have converted their fleets to cleaner fuels such as natural gas or reformulated diesel.

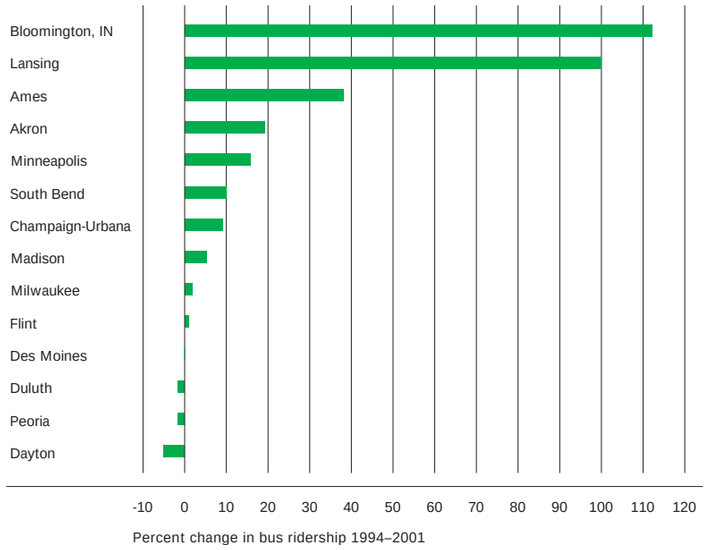
- **Residents of Kalamazoo,** MI, voted in 1986 and every three years since to pay a 0.5 mill property tax levy for transit. That leveraged federal funding for new buses and paid for extended evening service. Ridership grew from 1.4 million in 1995 to 2.4 million in 2001.
- **Iowa** has been a national leader in serving small cities and low-density rural areas through transit. Federal money has been allocated to rural planning districts, inter-city mini-bus routes and service improvements. In **Iowa City,** the addition of inexpensive bike racks to 21 buses has attracted about 250 bike travelers a month.
- **Two child care centers** have been built around bus stops in **Lafayette,** IN. New buses, downtown "trolleys," discounted transit passes for Purdue University students and restoration of a historic station—linking Amtrak, Greyhound, local buses and a pedestrian bridge—have boosted ridership 84 percent in five years, to 3.2 million a year.
- The **Chicago** Transit Authority used CMAQ funds to supplement its busy Western Avenue route with limited-stop express buses. In two years, total ridership on the route grew by 4,400 riders per day.

Bus Rapid Transit

Less expensive to build than rail systems, bus rapid transit uses high-capacity buses in exclusive lanes. It was made famous by a rapid-bus network in Curitiba, Brazil, and is already in use in Pittsburgh and Boston.

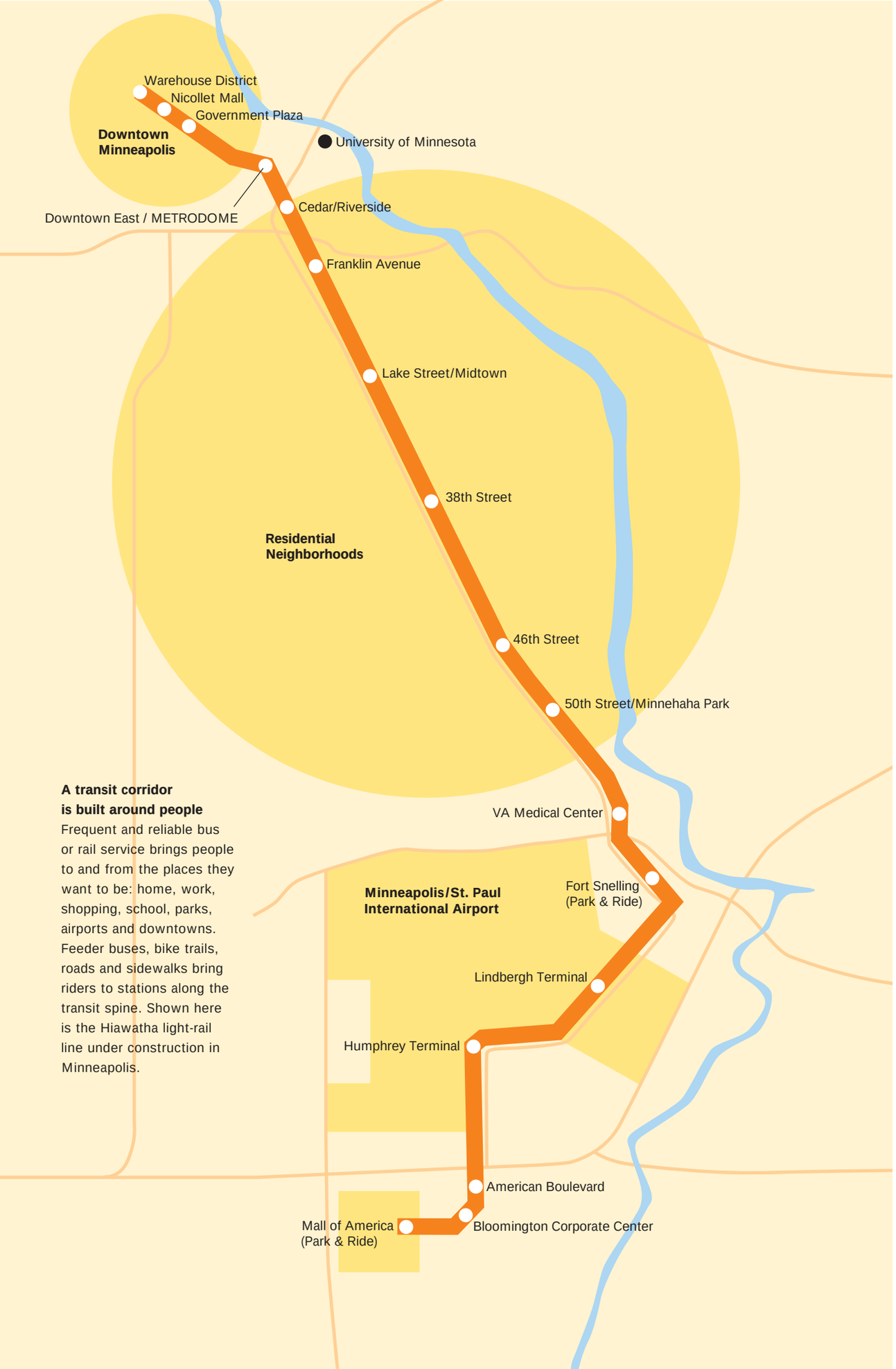
Cleveland has a bus rapid transit (BRT) system in the final engineering stage. The Euclid Corridor Transportation Project will link Public Square in downtown Cleveland to the Cleveland Clinic medical center and University Circle, home to Case Western Reserve University. The $230 million project involves reconstruction of historic Euclid Boulevard to create two exclusive bus lanes; pedestrian zone enhancements including shelters and landscaping; and traffic signal upgrades to give priority to the buses at intersections.

Bus ridership grows in some Midwestern cities while others have little success



Changes in transit ridership are uneven across the region, reflecting the relative intensity of local efforts to improve or expand service. Ridership change may also result from growth or decline in the region's economy and population.

SOURCE: American Public Transportation Association, "Transit Ridership Report," 1994 and 2001.



A transit corridor is built around people
Frequent and reliable bus or rail service brings people to and from the places they want to be: home, work, shopping, school, parks, airports and downtowns. Feeder buses, bike trails, roads and sidewalks bring riders to stations along the transit spine. Shown here is the Hiawatha light-rail line under construction in Minneapolis.

The Cleveland system will use extra-long, articulated buses with diesel-electric power to reduce emissions. Passengers will pay for their ticket before entering the platform area; this, along with multiple doors on the bus, reduces boarding time at each station. With multiple transfer points to other bus routes and to Red Line rail service, daily ridership by 2025 is projected at 29,500.

Similar rapid-bus service is recommended in several long-range plans:

- **Detroit's Metropolitan Affairs Coalition** has proposed a "Speedlink" network of 11 rapid-bus corridors with a $213 million starter line on Woodward Avenue from downtown to Pontiac. The corridor includes many destinations that could support transit, including 185,000 nearby jobs.
- **The Metropolitan Council in Minneapolis-St. Paul** has recommended six busways on dedicated rights-of-way on its 2025 Transitways map. They are a response to expected growth of 930,000 people and 555,000 jobs by 2030.
- **Chicago's PACE suburban bus agency** has proposed bus rapid transit to provide cross-suburb service. The City of Chicago uses dedicated bus lanes to provide "distributor" service downtown and is pursuing a more comprehensive busway system.

Rail-Served Corridors

Rail transit offers higher capacity and speed than bus systems. Because of their comfort and reliability, light-rail systems that have opened recently in the United States have consistently surpassed ridership estimates, and some have transformed nearby city and suburban environments. But with capital costs of $35 million per mile or more for light rail, these systems require high-density attractions (airports, retail centers, universities) around at least some of the stations.

Three types of urban and suburban rail are in use, each with a specific role:

- **Heavy rail** (subway and elevated trains powered by an electrified third rail) offers the highest capacity and frequency of service. **Chicago's** seven heavy-rail routes run trains at peak-hour intervals of three to six minutes and carry 500,000 riders per day. Chicago is leveraging $565 million in federal funds to rebuild part of its Blue Line and extend Brown Line stations. **Cleveland** is the only other Midwest city with heavy rail.
- **Commuter rail,** using diesel locomotives, typically serves the suburb-to-downtown market, though several cross-suburb systems are planned. **Chicago** has $318 million in federal commitments to

Fast and reliable, rail service can transform nearby communities.

improve and expand three of its 11 Metra commuter lines. Of other cities planning commuter rail, **Minneapolis** is farthest along with its Northstar plan to serve the I-94 corridor to St. Cloud. In places where commuter rail can use existing freight-rail tracks, it can be implemented more quickly and at lower cost.

- **Light rail** has grown rapidly around the world because of its combination of speed, maneuverability and cost. Using electric power from overhead wires, it typically runs in dedicated rights-of-way at street level to serve high-density areas, but can travel at high speeds between outlying stations. In 2001, the Bi-State Development Authority in **St. Louis** opened a 17-mile extension of St. Louis's light-rail network, bringing the rails across the Mississippi into **St. Clair County, IL.** It carries 12,400 riders per day, 25 percent above expectations. The $675 million Hiawatha Line in **Minneapolis** will serve the state's two largest employment concentrations by linking downtown to the airport and the world's largest shopping mall. It projects daily ridership of 19,300 when it opens in 2004. **Cincinnati** plans a 19-mile light rail route serving the I-71 corridor, but has been unable to raise local funding for the $900 million project.

Metropolitan **Chicago** has tapped Congestion Mitigation and Air Quality (CMAQ) and Transportation Enhancements (TE) programs for funds to rebuild commuter stations, provide better pedestrian access, add park-and-ride capacity and provide feeder services. A project singled out by the Transportation Research Board for praise is the Shuttle Bug along Lake Cook Rd. in the northern suburbs, where there are 30,000 jobs. Local employers help fund buses that provide 800 trips per day between workplaces and commuter rail stations. The study reported annual savings of 1.8 million vehicle miles and 2.7 tons of volatile organic compounds (VOCs), which are a major component of smog.

Shuttle and bus service feeds riders to rail and cleans the air.

Pedestrian and Biking Facilities

Probably the most widespread and visible impact in communities around the region comes from the Transportation Enhancements program, which funds pedestrian and bike uses, scenic byways, historic preservation and other amenities. Though grants are typically small, from $10,000 to $1 million, the funding has brought many long-sought trail and pedestrian concepts to fruition. CMAQ funding is also a major contributor to pedestrian amenities.

- **Indiana** has been a national leader in rebuilding historic bridges and reclaiming railroad rights-of-way for pedestrian and bike trails.

The Monon Rail Trail in **Indianapolis** was started in 1994 with a $1.3 million TE grant and has been extended five times. It is now 7.5 miles long, connects with three other trails totaling 15 miles and is being further extended to the south. A study in September 2000 found that 10,000 people use the trail each week. The Stone Arch Bridge over the Mississippi River in **Minneapolis** served 1,850 pedestrians, cyclists and roller-bladers on a single day in April 2001.

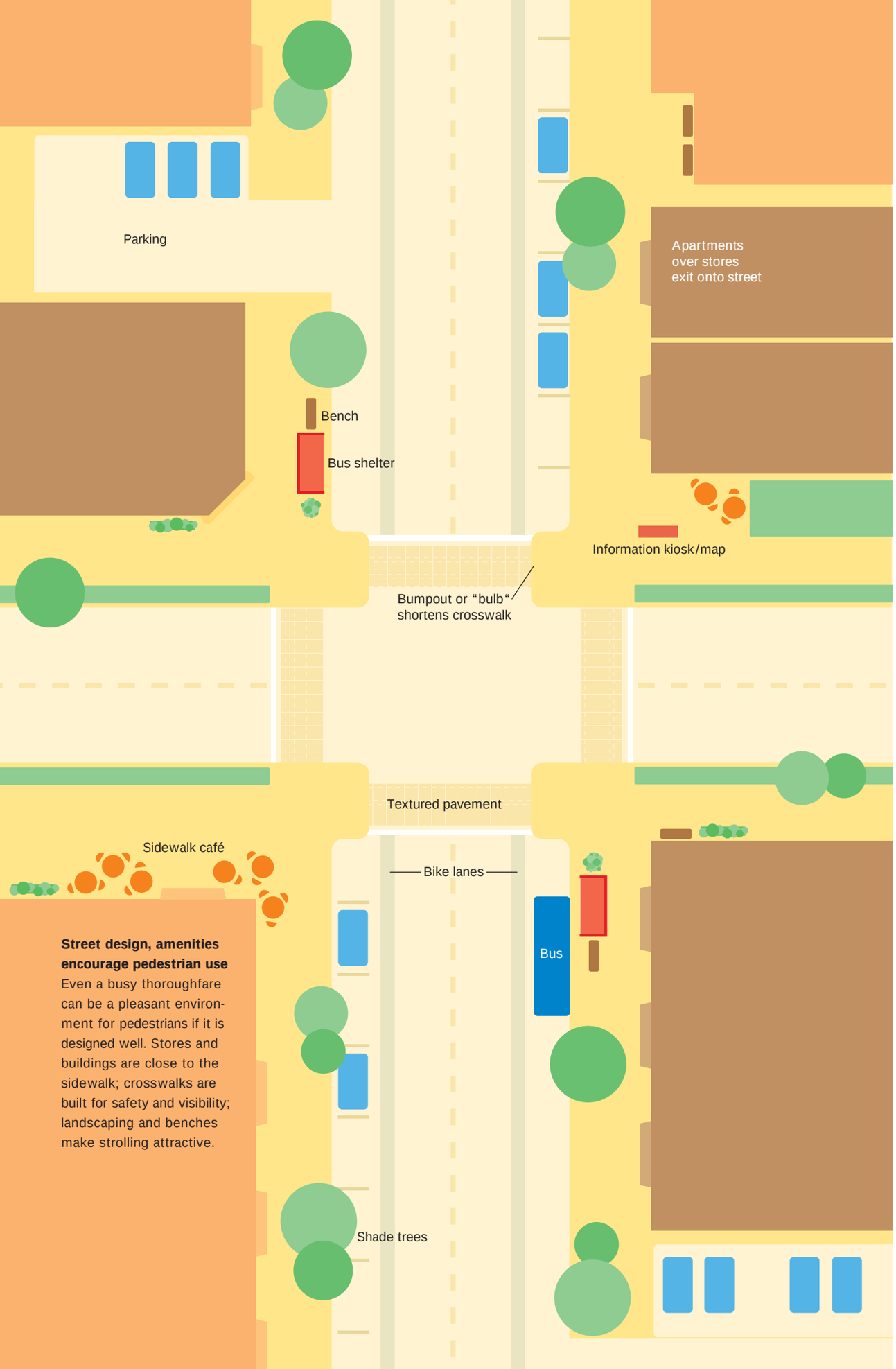
- **Cincinnati** used $630,000 in TE funds in 1993 to re-stripe bicycle lanes, add bicycle route signage around the University of Cincinnati, upgrade dangerous sewer grates and install bike lockers and new racks. In 1998, **Ohio** used the funds to provide $15 million to 50 projects for bicycle and pedestrian facilities, historic preservation and scenic beautification.
- **Chicago** used four rounds of CMAQ funding to incrementally expand its 100-mile network of on-street bike lanes and off-street paths, the most famous of which is its 16-mile continuous lakefront path. Chicago has added indoor bike parking at 20 rail stations, sponsors a month-long series of bike events and has a goal of continuous public paths along the Chicago River. Census figures show 6,000 bike-to-work commuters a day in Chicago, which *Bicycling Magazine* in 2001 called the best big city for cycling in the nation.

Highway and Road Investment

More than $35 billion of the $42 billion in total TEA funding in the Midwest has been directed into road and highway projects since 1992. But unlike earlier eras of mostly new construction, the majority of that funding is now spent to rehabilitate and repair existing resources. Major metropolitan areas are also expanding capacity on some existing roads, usually by adding lanes and improving overloaded intersections. Several new highways and extensions are on the planning table. But cost, local opposition and environmental factors have slowed or stopped projects in Indiana, Illinois, Michigan and other areas. In some instances, federal funds are being used to remove roads or narrow them to improve pedestrian access and safety.

Some cities are making roads narrower to improve the pedestrian environment.

- **Milwaukee** is using $24 million in federal funds to demolish an elevated segment of the Park East Freeway and open riverfront land for mixed-use redevelopment. **Cleveland** planners are considering turning part of Interstate 90 into a boulevard to improve access to the Lake Erie shore, and **Indianapolis** is planning to remove the Market Street ramp at I-65 as part of a 29-block redevelopment that



Street design, amenities encourage pedestrian use Even a busy thoroughfare can be a pleasant environment for pedestrians if it is designed well. Stores and buildings are close to the sidewalk; crosswalks are built for safety and visibility; landscaping and benches make strolling attractive.

will include pedestrian areas, high-density uses and new greenspace.

- **Cities, towns and suburbs** are experimenting with "traffic-calming" devices such as roundabouts and bump-outs to slow traffic and improve pedestrian crossings. **Indianapolis** used $4 million in TE funding on historic Washington Street to reduce the number of vehicle lanes, widen sidewalks and add brick gutters.
- **Seeking to squeeze** more capacity out of existing rights-of-way, **Minneapolis-St. Paul's** long-range transportation plan calls for construction of 125 miles of bus-only shoulders.

Efficient Land Use

How communities are laid out physically is extremely important for determining whether it is possible (or pleasant) to get around on foot and whether transit systems can work. Yet this issue shows up more in the rarified air of conferences than in the real world of cities. Every metropolitan area in the Midwest has experienced rapid growth of housing and commercial space on its outer edges, where land is inexpensive and traffic flows freely. But as new suburbs have learned, such development typically attracts traffic that chokes local roads. When new roads are built, they attract more traffic that can reduce mobility rather than improve it.

Back to Center Many regions are finally taking steps to refocus development into older parts of the region (this is called "infill" development) and into compact centers served by transit. In **Chicago,** sophisticated transportation modeling by the business group Chicago Metropolis 2020 predicts that switching from conventional land use to compact development and infill strategies through 2030 can save 300 square miles of open space—roughly the size of DuPage County, west of Chicago. In the **Twin Cities,** the Metropolitan Council's long-range plan calls for 30 percent of new household growth to be in existing urban areas and around transit nodes; the strategy would avoid conversion of 140 square miles of farmland and open space.

Concentrating development saves open space.

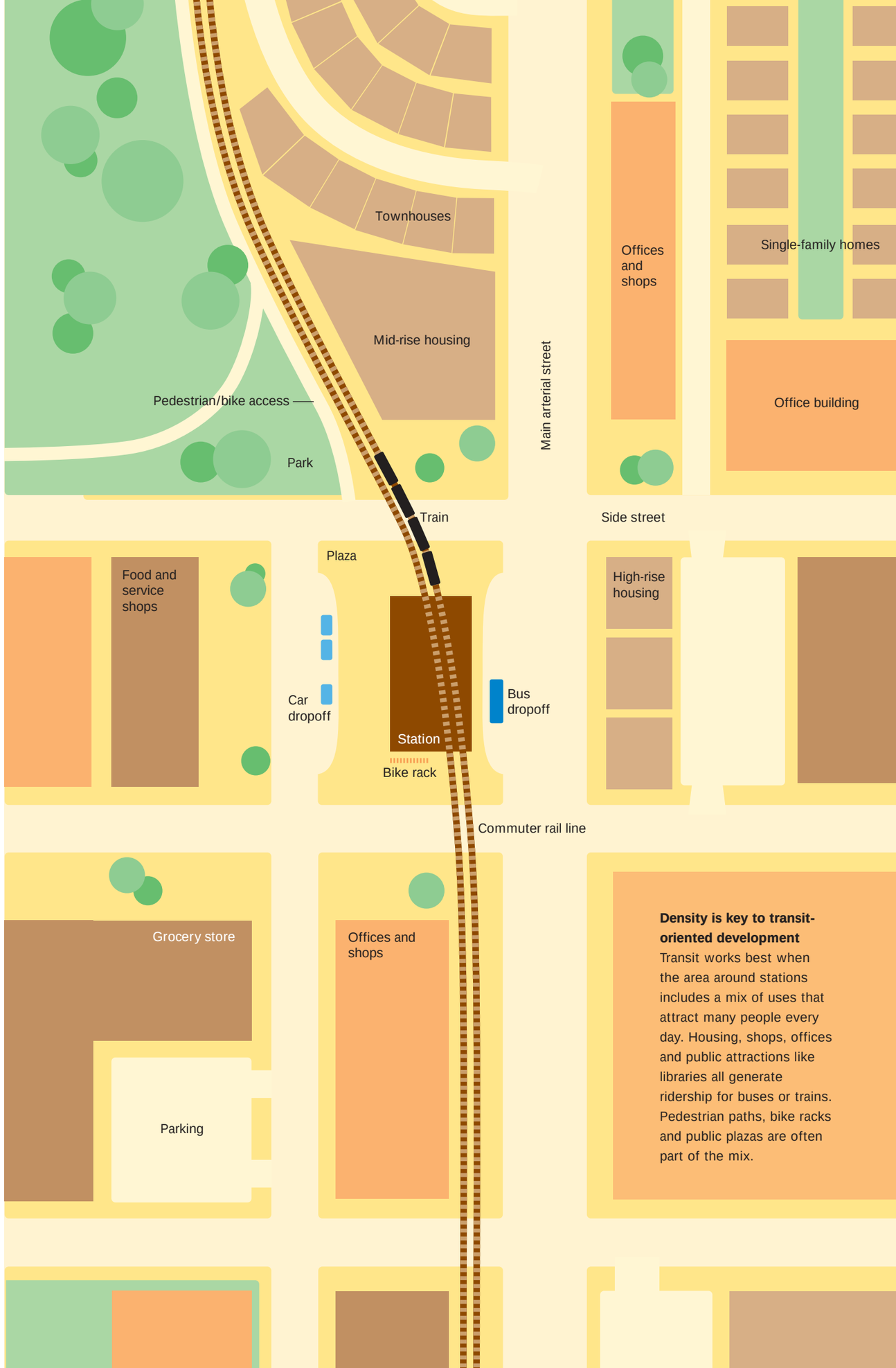
Mix of Activities Transit-oriented developments usually bring together tightly spaced residential buildings, employers, shops and recreational facilities. The mix of activities attracts people throughout the day and evening, which in turn provides for maximum use of transit (rather than rush-hour surges), better utilization of parking (shared among uses), higher pedestrian counts for retail businesses and more "eyes on the street" for safety.

New planning mantra: Easy to get to, easy to get around.

Old Approach Reborn Legislation in Wisconsin recently directed all municipalities with populations over 12,500 to allow, but not require, what is called "traditional neighborhood design." That includes sidewalks, a connected grid of streets and land-conserving practices such as clustering of housing or ground-floor retail stores with housing above. Though most older American neighborhoods were built on that model, many of today's building codes prohibit such practices without special-use permits, discouraging developers from building communities that are walkable and transit friendly.

- **Grand Rapids,** MI, involved 2,500 residents in a comprehensive process to create its Master Plan 2002, which emphasizes walking, biking and better transit. Its first principle is to "strengthen, and direct development towards, existing communities."
- **Dayton,** OH, has focused revitalization around its historic downtown and the Miami River. It leveraged $32 million in federal transportation funds for two transit centers, bike and pedestrian paths and other amenities near a new riverfront baseball stadium. A 2,300-seat performance center is being built adjacent to the Wintergarden Transit Center. Full-time employees will get free monthly bus passes, and patrons can ride the bus for free on the day of the performance.
- **Transit-oriented development** is being coordinated with construction of the Hiawatha light-rail line in **Minneapolis** and planned for the Northstar commuter rail corridor. Empty land around stations is targeted for dense residential and commercial uses, while existing buildings and streets will be reoriented to support pedestrians and transit. Municipalities in **Chicago's** northwest suburbs have agreed to revise zoning to better support transit stations planned for that corridor.
- **Park-and-ride** lots at rail or express bus facilities remain a staple of suburban transit planning because they are often the most efficient way to get riders to the train from dispersed subdivisions. But most areas now avoid surrounding a station with a sea of parking. Instead they site park-and-ride only at stations less suited to pedestrian-oriented mixed uses, and they build multi-level garages when feasible to free land for other uses.

The Midwest has given rise to several innovative mechanisms that support efficient land use and transit. These include employer-assisted housing, with businesses helping their employees purchase homes near the workplace; car sharing, which reduces the need for households to own automobiles; and location-efficient mortgages, which account for the savings from public transit use when figuring a household's mortgage limit.



Freight Rail

Rail can often outperform trucks, but investment is needed.

Most of the thousands of trailer-loads of freight that crowd I-94, I-80 and other Midwest highways can be carried at less expense by rail. Often one mile long, "intermodal" trains carry truck trailers and shipping containers between major destinations so that only short segments at each end of the trip take place on the road. Because it is cost-effective and has become more reliable, intermodal use has roughly doubled during the 1990s. This increase has jammed the transfer yards in the nation's rail hub at **Chicago,** the world's third largest intermodal port after Singapore and Hong Kong. The rail logjams can add two days to a coast-to-coast freight run, and they affect local roadways as well because cars at grade crossings must wait for the trains to pass.

Bottlenecks To handle an estimated 80 percent predicted growth in freight rail by 2020—and to keep that freight from being shifted to polluting, long-distance trucking—Chicago and other Midwest rail centers require substantial reinvestment in track, yards and grade crossings. A study of Chicago's bottlenecks counted 3,500 truck trips per day between rail yards. It recommended creation of a joint-use corridor for freight, passenger and commuter rail; upgrades of the 40 worst grade crossings, including flyovers that can cost $10 million; plus upgrade of 55 miles of highway between intermodal yards.

To help pay for such improvements in Chicago and other freight-handling cities such as Columbus, Indianapolis, Cleveland, Detroit and Des Moines, U.S. Rep. William Lipinski (D-Ill.) has proposed establishment of a dedicated rail infrastructure fund.

High-Speed Passenger Rail

Inter-city travel accounts for one-fourth of vehicle miles traveled nationally. Rail investment can lure inter-city auto drivers and air travelers onto a proposed high-speed passenger network. A cooperative effort called the Midwest Regional Rail Initiative, which includes the Federal Railroad Administration, Amtrak, the seven states plus Missouri and Nebraska, has outlined a 3,000-mile network that would provide 110-mile-per-hour service radiating from **Chicago.** Another effort called Reconnecting America proposes better rail and bus connections at airports to reduce the need for auto trips and short-haul flights. A study conducted in 2000 estimated that a Midwest network offering seven or more round trips per day on major routes could divert 7.9 million passengers per year from highways and airports. The estimated capital investment to upgrade track, signals and rolling stock was $4.1 billion. Michigan, Illinois and Wisconsin have been leaders in upgrading existing service. Ninety-mile-per-hour speeds are now routine on a stretch near Kalamazoo on the **Detroit-Chicago** run. An Amtrak test train in 2002 hit 109 mph on a 120-mile section of upgraded track between **Chicago** and **St. Louis.**

Shuttle Service High-frequency service between closely paired cities is also being pursued. Wisconsin has helped support the seven round trips per day on the 90-mile **Milwaukee-Chicago** route and plans similar service levels between **Madison** and **Milwaukee.** A long-standing need in Michigan is for service between the capital city of **Lansing** and **Detroit** via **Ann Arbor.** Efforts have been unsuccessful to raise funds for the full route, but the shorter segment between Detroit and Ann Arbor is being studied now for commuter-style service.

Work Ahead

Air pollution, growing cities and an aging population mean transportation systems must change. Doing it right can save money and increase safety.

Ambitious Plans to Tame Traffic

Billions necessary to meet future transportation needs.

The list of projects built or underway in the Midwest is impressive, but just as impressive is the shift in strategies in long-range transportation planning for many Midwestern metropolitan areas.

In cities where transit has long been marginal and more highway capacity has always been the proposed cure for congestion, new plans sketch out expanded bus networks, transit nodes, rail systems, pedestrian facilities and bike paths. **Indianapolis** seeks a 50 percent increase in transit ridership by 2020. **Columbus** has mapped a 10-segment rail network that would cost $3.3 billion.

Even smaller cities have changed their attitude. "No longer does the identification of an arterial street capacity deficiency carry with it the assumption that the street will automatically be widened," states **Iowa City's** 2002-2027 long-range plan. With 15 percent of its commuters already walking to work, Iowa City is expanding its wide-sidewalk and trail network and building a new transit hub complete with a child care center and inter-city bus station.

Adding Capacity In cities that already have substantial non-road infrastructure, the scale of planned improvements is stunning. **Chicago** has formal and informal plans for at least eight new or extended rail routes, from a mid-city transitway to a circumnavigational commuter route arcing 50 miles across the suburbs. The **Twin Cities,** not yet finished with their first light-rail construction, plan to double the capacity of the bus system, add a new commuter rail line every seven years and build two additional light-rail lines. Projected transit capital costs would be $3.26 billion, of which less than half is funded. The current system, says that region's long-range report, is "grossly undersized" to meet future needs.

While zeal is typical of long-range wish lists—many of whose items remain permanently on the drawing boards—planners are scrambling, for good reasons, to find cleaner, more-efficient ways to move people and goods.

Handling More People

Driven by immigration and job gains, Midwest metropolitan regions are expected to continue growing. Looking outward to 2025 or 2030, as required by TEA-21's planning provisions, **Minneapolis-St. Paul** expects 931,000 new residents; the **Chicago** region projects 1.6 million new residents; **Akron** is planning for an additional 43,000 housing units and 52,000 jobs; and Detroit expects 277,000 more residents along with their automobiles.

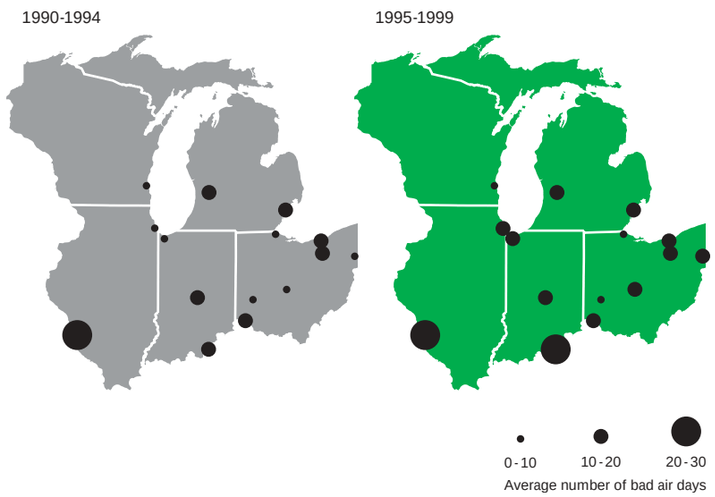
Farmland at Risk When planners map these populations assuming development similar to that of the past 30 years—with new growth pushing outward from the suburban fringe—the mathematics show a loss of thousands of acres of Midwestern farmland.

Building new roads and expanding existing ones is part of every large area's plan. But citizens and planners alike now understand that roads come with high capital and environmental costs as well as a never-ending propensity to draw new drivers until they exceed capacity. This induced-traffic phenomenon is one of the most powerful deterrents to business-as-usual.

The Air Quality Challenge

Air pollution is another constraint. Thirty-three million Midwest residents living in 15 different metropolitan areas, including seven in Ohio, are exposed to harmful air pollution as defined under the federal Clean Air Act. In these areas, the law constrains transportation investments that diminish air quality or requires that they be balanced by other pollution-reducing strategies. Federal funding can be denied to a region that violates this regulation.

Bad air days are more frequent... and Ohio has worst air in Midwest



The cities shown have repeatedly exceeded an Air Quality Index score of 100, which indicates that air quality is in the unhealthful range on that day. The index is based on measures of particulates, sulfur dioxide, carbon monoxide, ozone and nitrogen dioxide.

SOURCE: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, "National Air Quality and Emissions Trends Report," 1999.

"Bad Air" Days One of the most common pollutants, ozone, is created when sunlight strikes two byproducts of auto and truck use: nitrogen oxides and volatile organic compounds. Ozone and other air pollutants contribute to childhood asthma attacks and make outdoor activities unsafe for people with respiratory ailments. Ohio's coal-fired power plants, heavy traffic and dry sunny days made 2002 its worst air-quality year on record, with a combined 575 "bad air" days in 32 counties. Eight Midwest metro areas outside of Ohio also have "bad air" days each summer.

Reducing emissions becomes even more important because a new measuring system based on an eight-hour average is scheduled for implementation in 2004. It will classify many more Midwestern areas as "non-attainment" (i.e., polluted) areas and force more analysis of how transportation choices affect air quality.

Mobility for Older Residents and Non-Drivers

More than 8.7 million residents in the seven-state region are over 65. That number will jump to 12.6 million by 2025 as the postwar baby boom retires. The population is also living longer—Iowa has one of the oldest populations in the nation—which means more people with low vision or other age-related limitations will stop driving.

Regional leaders increasingly recognize that seniors and other residents can become isolated in communities accessible only by car. They also understand that a community that offers transportation options may help seniors relinquish driving earlier than if they have no alternatives. One solution is development or revitalization of compact, mixed-use and affordable communities—such as those in older cities and inner suburbs—that allow seniors to walk or roll in a wheelchair to nearby shops and activities. Another is reliable public transportation with wheelchair-accessible buses or trains and door-to-door service in vans and small buses.

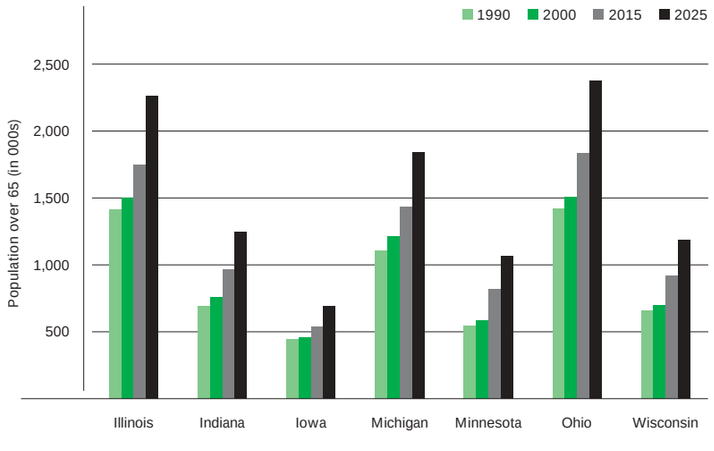
More Choices The same mixed-use and accessible communities that keep seniors mobile also make it easier for others who do not or cannot drive to get around. This includes people with disabilities, low-income workers and children and teenagers who can get to activities without condemning their parents to years of chauffeuring or fighting over car keys.

Transportation's High Costs

Transportation costs, especially for cars, amount to one of the largest expenses for households throughout the Midwest. They actually exceed the cost of housing in some areas. Milwaukee-area residents spend about $6,700 per year on transportation and Cleveland residents spend $7,900.

Ten Billion Dollars Traffic congestion adds additional cost for residents and businesses in the form of wasted fuel, labor and time. In the Midwest metropolitan areas where congestion costs were

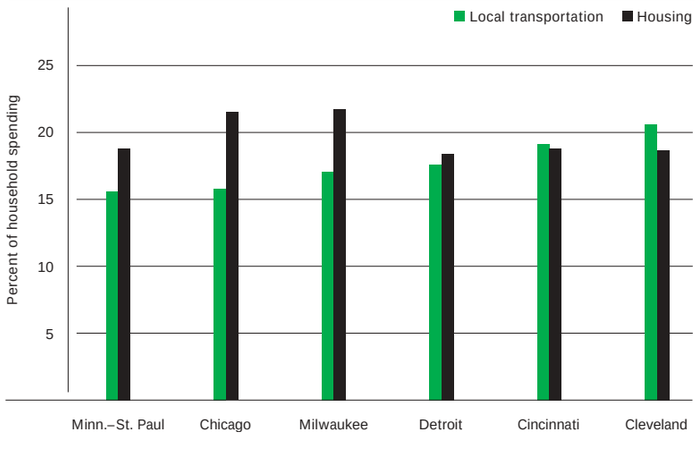
Senior population is growing fast



Every Midwestern state is expecting a steadily increasing population of residents over the age of 65.

SOURCE: U.S. Census 1990 and 2000 and "U.S. Census Projections of the Population, By Age and Sex, of States: 1995 to 2025."

Transportation rivals housing as top expense



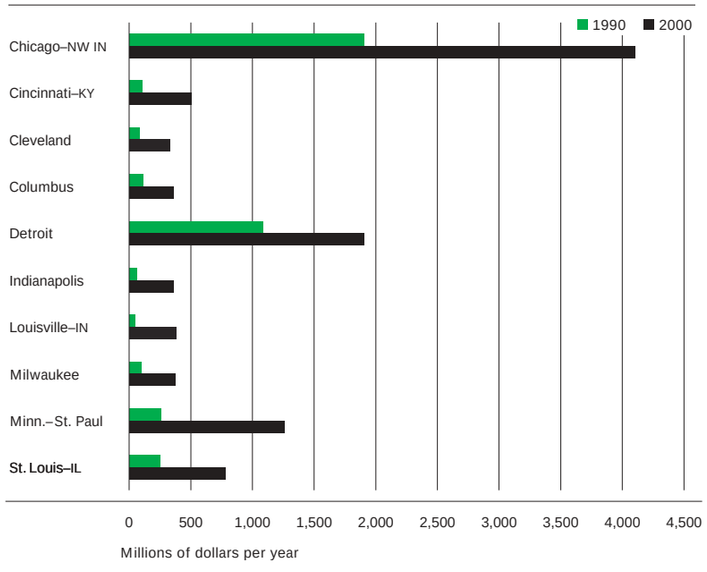
The percentage cost for ownership and maintenance of vehicles and public transportation is about equal to the cost of housing for households in Midwestern metropolitan areas. Household transportation expenditures range from $6,683 (Milwaukee) to $7,937 (Cleveland); housing costs range from $7,156 (Cleveland) to $9,396 (Chicago).

SOURCE: Surface Transportation Policy Project analysis of U.S. Department of Labor "1998 Consumer Expenditure Survey."

Billions in congestion costs—and growing

The cost of congestion is estimated by combining the value of lost time in passenger vehicles, increased operating costs of commercial vehicles and value of wasted fuel. Total congestion cost in 2000 for the metropolitan areas shown was $10.3 billion.

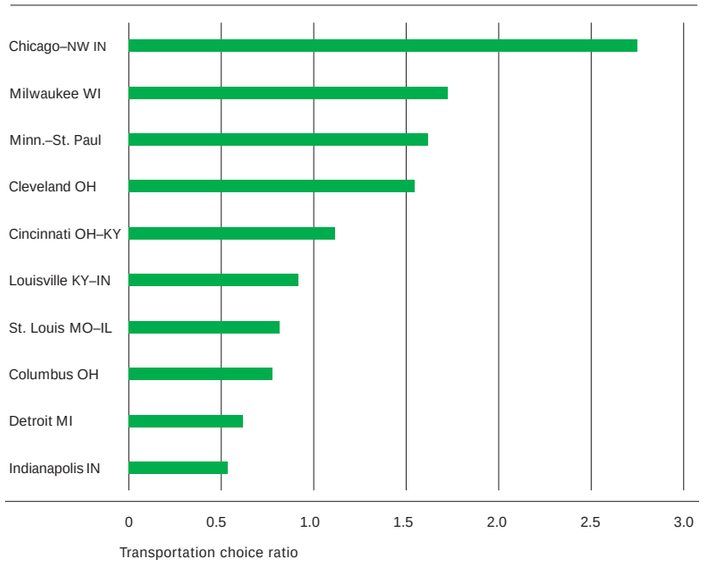
SOURCE: Texas Transportation Institute, "2002 Urban Mobility Report."



Some cities offer more transportation choices

The Transportation Choice Ratio measures the relative amounts of transportation services in metropolitan areas. It is calculated by dividing hourly vehicle revenue miles of transit service by the number of lane miles of major roads (Interstates, freeways, expressways and principal arterials).

SOURCE: Surface Transportation Policy Project analysis of Texas Transportation Institute, "2000 Urban Mobility Study" and Federal Transit Administration, "National Transit Database," 2000.



calculated by the Texas Transportation Institute, the total expense in 2000 was more than $10.3 billion.

These costs can be reduced in communities with more public transit and where more things can be reached on foot. Areas with a higher "transportation choice ratio" (i.e., more choices available for each mile traveled) often spend less on transportation because people can get by with fewer cars and less driving. Of the 1.7 million households in the Midwest without a car, almost one-third are in Illinois, which has the most extensive transit systems. Not surprisingly, households in metropolitan **Chicago** have among the lowest transportation costs on a percentage basis.

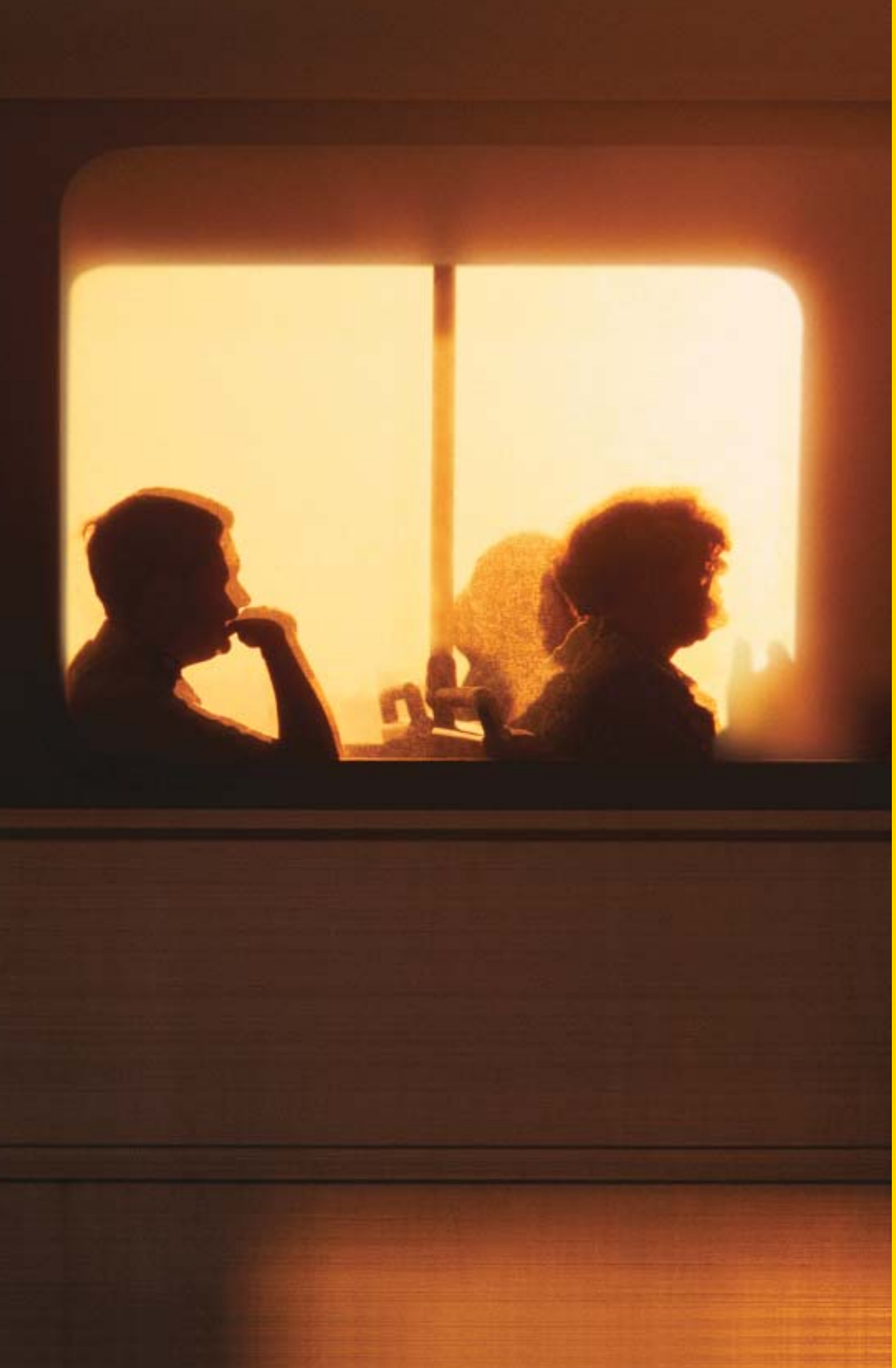
Link to Safety

Automobile accidents are the leading cause of injury-related deaths in America. In the Midwest, they cost 6,700 lives in 2001. Not surprisingly, the largest category after road spending in each of the seven states' transportation budgets is safety improvements. The majority of the safety spending goes to fix known hazards such as railroad grade crossings and crash-prone intersections.

More difficult to prevent by big-ticket improvements are traffic-related pedestrian deaths, which in the Midwest totaled 622 in 2001. The rate of pedestrian deaths in most Midwest states is well below the national average of 1.7 deaths per 100,000 people. But it is typically higher in metropolitan areas, where the accidents take place across a broad range of urban and suburban geographies.

Danger Zones The toll could be reduced by safety enhancements such as sidewalks along suburban arterials, bump-outs at intersections to shorten the pedestrian danger zone, and traffic-calming devices, such as roundabouts and chicanes, that reduce auto speed in pedestrian areas.

Safety concerns are also blamed for the declining proportion of children who walk to school. The Safe Routes to School program aims to turn this around by such measures as adding sidewalks and improving safety at crossings. Coordination of school siting decisions, community design and transportation policy would help make it easier and safer for children to walk or bike to school.



Rerouting Funds

Midwest states have spent $42 billion in federal money alone to fix roads, expand bus systems and plan rail projects. But they could take better advantage of the law's possibilities.

Heavy Spending Produces Mixed Results

Road and bridge repairs help keep traffic flowing.

The seven Midwest states spent more than $42 billion in federal transportation funds between 1992 and 2001. Figuring out exactly how that money has been deployed is almost impossible due to the complexity of the funding structures and the lack of accessible, detailed data on how each state has allocated funds. But the overall picture reveals structures within the law that could be improved. Among the findings:

- **Midwest states** have been rebuilding transportation infrastructure before adding new capacity.
- **States have utilized** the flexible funding structure to shift money to non-auto uses, but they could do much more.
- **States use the complex system** of obligation rates to consistently overspend in some road programs, while underspending on CMAQ and Transportation Enhancements.
- **Some states and metropolitan areas** have been more successful than others in raising local funds to leverage federal dollars.

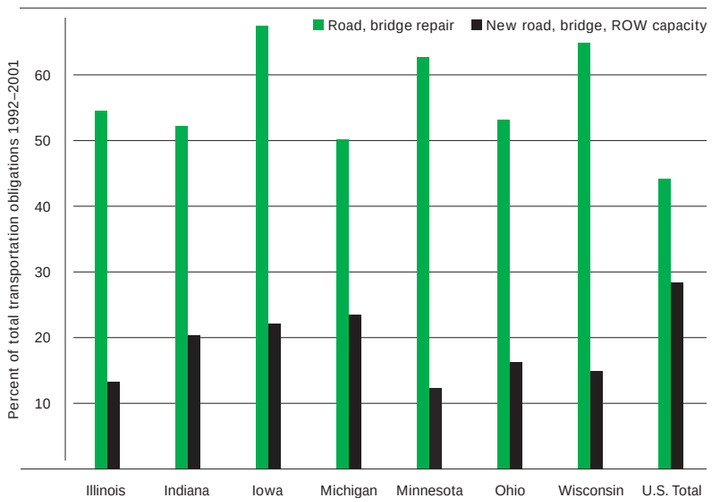
Fixing It First

With an installed highway system worth hundreds of billions of dollars and many roads and bridges more than 40 years old, most Midwest states have shifted federal highway money from new construction to "fixing it first."

Every Midwest state spends above the national average to maintain existing facilities and less than average on new capacity. Wisconsin, Minnesota and Iowa are showing the largest commitments to repairs (more than 60 percent). Michigan is spending the most on new capacity (23 percent) and the least on repairs (50 percent). These spending preferences are reflected in road conditions: the amount of roadway in less-than-good condition is falling, though this varies from state to state.

Backlog of Repairs But most states still face billions of dollars in unfunded repair work on bridges, Interstates and rural roads. Michigan's bridges are rated the worst in the nation, and only Minnesota has managed to bring more than half its roads up to good or better condition. In a tight fiscal environment, even more funds will probably have to be shifted toward maintenance and away from new construction.

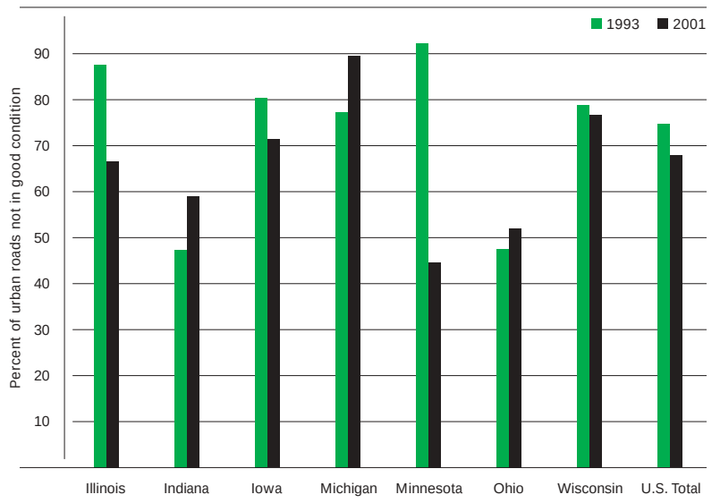
Midwest is fixing first before adding capacity



Expenditures for repairs of existing roads and bridges are significantly higher than spending on new bridges, roads and rights of way, reflecting the completion of the Interstate highway network and a shift in emphasis towards protecting existing resources.

SOURCE: Surface Transportation Policy Project analysis of data from Federal Highway Administration, "Fiscal Management Information System."

Road conditions improve, but there's a long way to go



The shift in funding towards repairs has helped improve the condition of roads, but in all Midwestern states except for Minnesota more than half of roads remain in less-than-good condition. Roads are rated very good, good, fair, mediocre and poor.

SOURCE: Federal Highway Administration, U.S. Department of Transportation, "Highway Statistics 1993" and "Highway Statistics 2001."

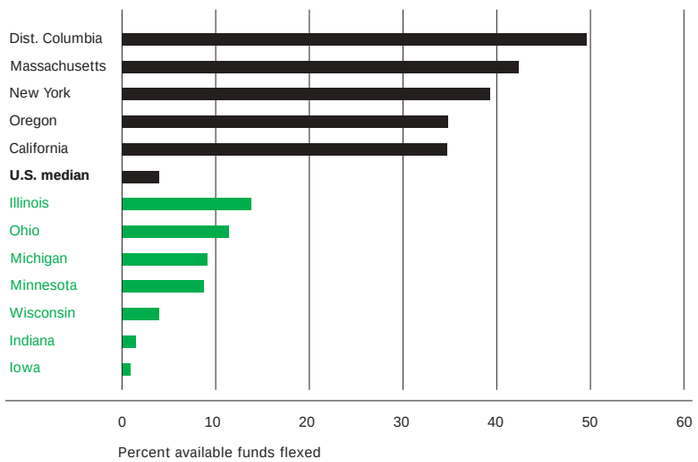
Flexing Funds

The TEA laws allow local governments to decide whether to use certain flexible funds for either roads or transit. The seven Midwest states shifted about $507 million from traditional road uses into transit projects, putting the region above the median in using this feature of the law. The Brookings Institution's Center on Urban & Metropolitan Policy found that Illinois and Ohio "flexed" the most, tapping $199 million and $134 million respectively, while Iowa, which has less intensive transit needs, flexed the least at $5.3 million.

Modest Shifts The region has taken less advantage of this opportunity than some other areas. The $507 million is less than 9 percent of the total that could have been shifted, more than $6 billion. Illinois shifted 13.5 percent of possible funds, which ranked it 12th nationally. Other states went much further: the District of Columbia shifted 49 percent of possible funds, or $83 million, to transit; California produced $1.25 billion in new transit funding by using 34 percent of its flexing capability.

The analysis does not trace the money to individual projects, but the places that most used flexible funds are also those making serious commitments to transit. New York City has invested $10 billion in its transit system and has seen dramatic passenger gains. Portland, OR, Boston, Washington, DC, and California cities are also using "flexed" funds to make major investments.

Other states exceed Midwest in use of flexible funds



The TEA laws permit states to shift some funds from traditional highway uses to transit or other transportation needs. Most Midwest states have exceeded the median in the use of these funds, but other areas of the country have more aggressively tapped this funding resource.

source: Brookings Institution Center on Urban & Metropolitan Policy, "Flexible Funding for Transit: Who Uses It?" May 2000.

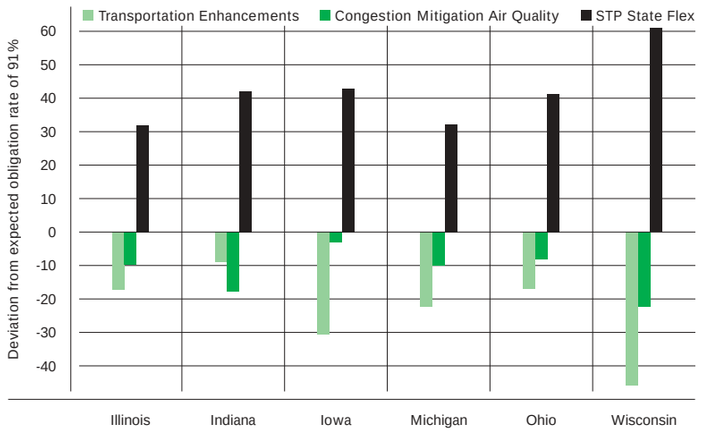
Underfunded Programs

TEA-21 allocates federal funds to the states through various formulas and programs, but gives states leeway in how that money is actually obligated. That loophole has resulted in underfunding of some programs while others with fewer restrictions are consistently overfunded.

Wisconsin, for instance, has obligated only 46 percent of the amount it received for the Transportation Enhancements program, which funds bicycle and pedestrian amenities, and only 67 percent of its CMAQ authorization. Unspent funds are reallocated to other programs, including the National Highway System and an all-purpose program called Surface Transportation State Flex, where the money generally goes to road projects. Wisconsin's obligation rate for STP State Flex is 152 percent, the highest in the Midwest.

Untapped Resources Like Wisconsin, other Midwest states (Minnesota is not included because of inconsistent data) consistently underfund their CMAQ and TE programs and consistently exceed the obligation rate for the STP State Flex program. In other words, like most other states nationally, they have not fully deployed available funds to clean the air, reduce congestion and build transportation enhancements.

States underfund air quality, enhancements



The TEA laws direct funding into categories including Congestion Mitigation and Air Quality (CMAQ) and Transportation Enhancements (TE). But states are allowed to underfund some programs while overfunding others. From 1992 to 2001, CMAQ and TE have been consistently underfunded while other programs such as STP Flex receive more than the amount obligated. Minnesota data were not available.

source: Federal Highway Administration, "Fiscal Management Information System," "Highway Statistics Series," Federal Notices from FHWA, and original analyses from the FHWA.

Raising the Local Match

Local and state governments have left federal dollars on the table.

Most federal transportation programs require that states and localities come up with at least 20 percent of total project cost. Because competition has been stiff for New Starts money for rail and rapid-bus investment, those projects often have to raise as much as 50 percent locally to land a full funding agreement from the federal government. Many municipal and state governments have failed to raise local matching funds or have not attempted to do so, thus losing out on federal funding.

Areas that have raised local funding use a variety of methods:

- The bus systems in **Kalamazoo** and **Grand Rapids, MI,** show growing ridership in part because voters approved property tax millages to support transit. These funds made possible better services, which in turn drew more riders.
- Twenty-eight percent of the capital costs of the Bi-State light rail line in **St. Clair County, IL,** were paid by a half-cent sales tax passed by the county's voters in 1993. A three-mile extension now being built tapped an Illinois state infrastructure fund for $50 million.
- Across the river in **St. Louis**, another extension of the Bi-State system is being built with $419 million raised through a local bond sale that included $1,000 bonds sold to individual investors.
- **Chicago** built a dedicated busway to serve its McCormick Place convention center using a special sales tax in the downtown area.
- Elsewhere, Portland, OR, is building a fourth extension to its rail system using private capital from the development firm that is building office and residential complexes around two of the stations. Portland uses a payroll tax to fund transit operations.

Projects on Hold A number of Midwestern projects, stalled for lack of local funding, require additional effort at the ballot box and more public education to build taxpayer support. A long-sought rail link between **Lansing** and **Detroit,** MI, has been delayed by lack of a local funding component, and the Northstar commuter rail project in **Minneapolis** is on hold for the same reason. In November 2002, voters in Hamilton County, OH, turned down a proposed half-cent sales tax to raise $60 million towards **Cincinnati's** light-rail project. In nearby Butler County, a one-fourth-cent sales tax to support bus service was defeated, and a third Ohio transit referendum, in Delaware County near **Columbus,** was also defeated. An impediment in some states is a constitutional requirement that gas tax money be used only for roads.

Not Enough Data

For a program worth $42 billion in the Midwest alone, there's surprisingly little detailed information collected and analyzed for evaluating its impact.

The federal government spends heavily on transportation research. It has created various performance measures, such as roadway pavement quality and revenue miles of transit service. But much of the system remains opaque to even the most dedicated analyst. A Transportation Research Board study of the CMAQ program found widespread support for the program but inadequate quantitative measures to measure its performance. That report called for more local and federal evaluation of projects, development of appropriate research designs and methods, and more synthesis and dissemination of results.

Better Measures Little federal effort goes into measuring transportation uses and preferences among low-income residents, immigrant populations, young people, cyclists, people with disabilities, older people—even though these offer critical potential markets for transportation services and may have very different needs than the typical auto driver. Measurements developed by outside observers, such as the Transportation Choice Ratio developed by the Surface Transportation Policy Project (see page 38), are relatively simple measures of complex phenomena. The choice ratio uses transit revenue miles and road miles to estimate the choices available, but does not take into account the area's walkability, land use and other factors that go into mobility. Similarly, modeling of the costs and benefits of road and transit projects does not adequately reflect how projects might affect land development, air quality, regional mobility and long-term costs.

In general, there is not enough high-quality information and analysis of how and why the federal transportation money is spent at the local level—a particular problem when both the state and federal governments are facing severe fiscal constraints.

Recommendations: Keep It Moving

Strengthened policies and new funding can keep the Midwest moving toward greater mobility, healthier communities and a more prosperous future.

New Transportation Law Can Keep America Moving

Spending should be tightly focused and responsive to local priorities.

We've come a long way since 1991, but there is still a long road ahead. Overall trends in the United States and the Midwest still show increased auto use, sprawling development and continued environmental challenges. But the TEA laws have been enormously successful in creating the possibility of a different future, where freight moves freely and people get around by walking, driving, riding, cycling—a "multimodal" future.

The transportation laws of the last decade laid the groundwork for mobility and economic prosperity in the 21st Century. The challenge now is to keep that moving by retaining the core elements of the two previous laws while addressing the financial and structural limitations that hold back progress. At the state and local levels, communities and government agencies must be better prepared to use the law's innovative programs and funding mechanisms.

At the Federal Level

1. **Preserve TEA's core concepts.** Retain the basic approach of TEA-21, which is driving fundamental changes that improve mobility and bring environmental and community benefits. Transportation improvements take many years to plan and build. Continuation of the basic TEA structure and funding will allow existing plans to move forward.
2. **Tighten and improve funding mechanisms.** Improve funding allocation mechanisms and eliminate loopholes so that resources intended for a specific purpose, such as the CMAQ and TE programs, are actually spent in those areas. Tighten evaluation standards so that mobility, environmental benefits, and urban revitalization are better measured and factored into federal and local decisions. Revise fund-allocation formulas that reward increases in vehicle miles traveled, as that is an incentive to increase driving rather than improve mobility.
3. **Address transit capital needs.** Address the backlog of capital needs for transit through substantially increased funding of the New Starts program; revision of the guidelines for New Starts so that major bus improvements can be funded; and continuation of flexible funding provisions that make it possible to tap traditional road funds for transit.
4. **Expand CMAQ funding for areas not meeting air-quality standards.** A revised air-quality measuring standard, scheduled for use in 2004, is expected to significantly expand the number of regions nationwide that fail to meet air-quality standards. Substantial new funding is needed to address these air-quality needs and to avoid diluting the intent of this program, which has successfully focused on reducing congestion and improving air quality.
5. **Support inter-city transportation by rail and bus.** Expand the focus from metropolitan areas to include inter-city transportation. Support high-speed and frequent passenger rail and bus services, improved freight-rail infrastructure and better intermodal connections at major airports and passenger rail terminals. By providing inter-city travelers and shippers with viable choices among auto, rail and air travel, this approach will relieve highway and airport traffic, reduce the need for costly new infrastructure, and—at a time when security is a concern—offer travelers more options if one mode is compromised.
6. **Expand resources for pedestrian improvements.** Develop new funding and programs to make walking easier, safer and more pleasant. Change modeling rules so that pedestrian amenities are extended the same preferences as other non-motorized transportation options. Support expansion and improvement of existing programs

such as Transportation Enhancements, which has funded thousands of pedestrian improvements nationwide, and Safe Routes to School, which benefits not only schoolchildren but all pedestrians who use streets, paths and sidewalks near schools.

7. **Improve analysis and accountability.** Develop accountability structures and improved measurement systems to support responsible allocation of limited transportation dollars. Create broader data collection, new analysis mechanisms, improved modeling and improved performance measures to provide more transparency within the system and to better track spending by type of project and benefits, including congestion reduction, transit ridership gains, air-quality improvement and efficient use of land.
8. **Provide incentives for coordination of land-use and transportation planning.** Create financial incentives that encourage local governments and planning agencies to better coordinate land-use and transportation planning. Reward projects that create more efficient land use, increase transit ridership, and make communities safer and more attractive for pedestrians; and allow transportation funding to be used for supportive local land use changes.

At the State and Local Level

1. **Continue to fix it first.** Most Midwest states still face billions of dollars in unfunded repair work on bridges, Interstates and rural roads. Improving safety and public convenience requires concentrating resources on existing infrastructure before launching expensive new construction projects.
2. **Improve public education about transportation and land use and public participation in the planning process.** Educate taxpayers about the benefits of investing in a range of transportation options to keep traffic flowing, provide environmental benefits and reduce infrastructure costs. Bring in the public as early as possible in the transportation planning process to improve the quality of decision-making. Public education and involvement are also critical to raising local and state funds necessary to match federal dollars.

Local initiative is required to reap full benefit of federal programs.

3. **Boost state and local planning capabilities.** Expand responsibilities and skills to improve MPO and local-government planning and coordination around land use and transportation. Develop stronger local data to measure costs and benefits of proposed projects so that transportation investments bring the largest possible benefits, including through promotion of transit-oriented development. Encourage creation of designs to harmonize, not conflict, with local settings. Teach planners to recognize and include economic benefits to households as well as communities.
4. **Increase collaboration.** Develop more effective regional collaborations (with local governments, transit agencies, businesses, civic groups, corridor planning councils and transportation management associations) to bring transportation improvements online faster and to develop stronger benefits from new investment. Within the Midwest, develop mechanisms for sharing expertise, best practices and financing methods among metropolitan areas, which face many common challenges.
5. **Secure local funding streams to match federal funds.** Use public education campaigns and regional coalitions to secure reliable funding streams to support capital costs for transportation projects as well as long-term operational support for transit. Local and state funding commitments are critical to attracting federal investment and to building out the much-expanded transit systems specified in virtually every major long-range plan in the Midwest.

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