

March 2019 | Report 406



CITIZENS
RESEARCH COUNCIL
OF MICHIGAN

103 YEARS OF UNCOMPROMISING POLICY RESEARCH

RETHINKING REGIONAL TRANSPORTATION IN MICHIGAN'S URBAN AREAS

BOARD OF DIRECTORS

Chair

Aleksandra A. Miziolek

Vice Chair

Michael P. McGee

Treasurer

Laura Appel

Todd Anderson

Blue Cross Blue Shield of Michigan

Laura Appel

Michigan Health & Hospital Association

Sandy K. Baruah

Detroit Regional Chamber

Beth A. Bialy

Plante Moran, PLLC

Lawrence N. Bluth

Penske Corporation

Chase Cantrell

Building Community Value

Stephan W. Currie

Michigan Association of Counties

Daniel Domenicucci

Ernst & Young LLP

Terence M. Donnelly

Dickinson Wright PLLC

Randall W. Eberts

W. E. Upjohn Institute

Tyler Ernst

Michigan Farm Bureau

Richard A. Favor, Jr.

Deloitte

Ann D. Fillingham

Dykema

Ron Fournier

Truscott Rossman

June Summers Haas

Honigman Miller Schwartz and Cohn LLP

Jason Headen

Quicken Loans

Renze L. Hoeksema

DTE

Marybeth S. Howe

Wells Fargo Bank

Earle "Win" Irwin

Irwin Seating Company

Wendy Lewis Jackson

The Kresge Foundation

Harry Kemp

Lear Corporation

Nick Khouri

Former State Treasurer

Thomas G. Kyros

Varnum

Michael P. McGee

Miller, Canfield, Paddock and Stone PLC

Anne Mervenne

Mervenne & Company

Aleksandra A. Miziolek

Cooper Standard

Paul R. Obermeyer

Comerica Bank

James M. Polehna

Kelly Services

Kirk Profit

Governmental Consultant Services, Inc.

Carolee K. Smith

Consumers Energy

Christine Mason Soneral

ITC Holdings Corp.

Kathleen Wilbur

Michigan State University

BOARD OF TRUSTEES

Chair

Eugene A. Gargaro, Jr.

Laura Appel

Michigan Health & Hospital Association

Donald Bachand

Saginaw Valley State University

Susan E. Borrego

University of Michigan-Flint

Beth Chappell

RediMinds, Inc.

Brian M. Connolly

Oakwood Healthcare, Inc., Retired

Matthew P. Cullen

Rock Ventures LLC

Stephen R. D'Arcy

Detroit Medical Center

Terence M. Donnelly

Dickinson Wright PLLC

David O. Egner

Ralph C. Wilson, Jr. Foundation

David L. Eisler

Ferris State University

Scott Ellis

Michigan Licensed Beverage Association

Eugene A. Gargaro, Jr.

Manoogian Foundation

Daniel P. Gilmartin

Michigan Municipal League

Allan D. Gilmour

Wayne State University, Emeritus

Richard C. Hampson

Citizens Bank

Paul C. Hillegonds

Michigan Health Endowment Fund

Marybeth S. Howe

Wells Fargo Bank

Daniel J. Kelly

Deloitte. Retired

Mary Kramer

Crain Communications, Inc.

William J. Lawrence, III

42 North Partners LLC

Edward C. Levy, Jr.

Edw. C. Levy Co.

Daniel T. Lis

Attorney-At-Law

Daniel Little

University of Michigan

Alphonse S. Lucarelli

Ernst & Young LLP. Retired

Kate Levin Markel

McGregor Fund

Michael P. McGee

Miller, Canfield, Paddock and Stone PLC

Larry Merrill

Michigan Townships Association

Anne Mervenne

Mervenne & Co.

Aleksandra A. Miziolek

Cooper Standard

Glenn D. Mroz

Michigan Technological University

Tim Nicholson

PVS Chemicals

Ora Hirsch Pescovitz

Oakland University

Philip H. Power

The Center for Michigan

James E. Proppe

Plante Moran

Milton W. Rohwer

TALENT 2025

Mark S. Schlissel

University of Michigan

John M. Schreuder

First National Bank of Michigan

Reginald Turner

Clark Hill PLC

Amanda Van Dusen

Miller, Canfield, Paddock and Stone PLC

Theodore J. Vogel

CMS Energy Corporation, Retired

RETHINKING REGIONAL TRANSPORTATION IN MICHIGAN'S URBAN AREAS

Contents

Summary	v
The Case for Improved Regional Transportation Systems.....	1
Barriers to Driving.....	2
Car Ownership is Expensive	2
Michigan's Elderly Population.....	4
Commuting Patterns and Congestion.....	5
Rethinking Mobility and Public Transportation.....	7
Need to Change Perception of Public Transportation	7
Improving Mobility.....	7
Mobility as a Service (MaaS).....	7
Ridesharing	8
Autonomous Vehicles	9
Transit-Oriented Development (TOD).....	10
Regional Governance is Critical	11
Current Governance System	11
Urban Transit Providers.....	11
State Authorizing Acts Related to Regional Transportation Services.....	13
Mass Transportation System Authorities Act	13
Metropolitan Transportation Authorities Act	13
Public Transportation Authority Act	13
Regional Transit Authority Act	14
Are These Statutes Adequate?.....	14
Shortcomings of the Current Systems.....	15
Lack of Regional Policies	15
Lack of Regional Coordination	19
Gaps in Regional Service	21
Recommended Policy Actions to Promote Regional Governance.....	23
State Level Policies	23
Local and Regional Level Policies.....	25

Regional Funding Mechanisms	26
Current Funding System.....	26
Shortcomings of Current Local Funding System: Property Tax.....	28
Inadequate Revenue Capacity	28
Unsuitable Regional Tax.....	30
Lessons from Other States.....	32
Heavy Reliance on Local Sales Taxes.....	32
Multiple Funding Sources	32
Sharing the Tax Base.....	33
Policy Options.....	34
New Local-Option Taxes.....	34
Tax Base Sharing	40
Feathering Tax Rates.....	41
Spread the Tax Burden	42
Multimodal Transportation Funding	42
Conclusion.....	44
Endnotes	51

Boxes

Key Takeaways.....	v
Public Health Benefits of Improved Public Transportation.....	3
Farebox Recovery Ratios	31
Public-Private Partnerships	40

Charts

Chart 1 Population of United States by Age Group: Projections 2016 to 2060	5
Chart 2 Percent of Commuters Using Public Transportation.....	6
Chart 3 Operating and Capital Funding Sources for Public Transportation, FY2016 U.S. Average	26
Chart 4 Transit Funding in Urban Areas across U.S. with Population over 200,000	28
Chart 5 CTA FY2017 Budgeted Operating Revenue	33

Maps

Map 1 Communities Served by Transit Providers in the Southeast Michigan Region	15
Map 2 IndyGo Current and Future Service Transit Maps	22
Map 3 Two Taxing Districts in Kalamazoo Metro Region	42

Tables

Table 1 Transportation Property Tax Millages Michigan's Urban Areas, 2018	27
Table 2 Estimated Revenue Gap in Michigan Transportation Programs Federal and State Funds	28
Table 3 Property Tax Rates and Taxable Value per Capita in Selected Counties, 2017.....	29
Table 4 Property Tax Rates and Taxable Value per Capita in Selected Cities, 2017	30
Table 5 Potential Local-Option Taxes to Support Transportation	35

Appendices

Appendix A Population by Age Group: Projections 2020 to 2060	45
Appendix B Local Public Transit Providers in Michigan.....	46
Appendix C 2017 Transit Agency Information	50

A Fact Tank Cannot Run on Empty or Fumes

Do you find this report useful and want to support analysis that will lead to better policy decisions and better government in Michigan? Your support of Citizens Research Council of Michigan will help us to continue providing policy makers and citizens the trusted, unbiased, high-quality public policy research Michigan needs.

You can learn more about the organization at www.crcmich.org/about. If you found the contents of this report useful and wish to help fill the fact tank so we can carry on our mission, please visit www.crcmich.org/donate or fill out the form below and send it to:



Citizens Research Council of Michigan
38777 Six Mile Road, Suite 208
Livonia, MI 48152-3974

YES! I want to help fill Michigan's Fact Tank and support sound public policy in Michigan!

NAME _____

ADDRESS _____

EMAIL / PHONE _____

- I wish to make a one-time, tax-deductible gift of: \$ _____
- I wish to pledge a total of \$ _____ with an initial payment of \$ _____ .
- I would like my contribution to support: _____ Annual Fund _____ Endowment
- Please mark my gift:
 - Anonymous
 - In Honor Of: _____
 - In Memory Of: _____
- Gift will be matched by: _____

Or donate online at www.crcmich.org/donate

RETHINKING REGIONAL TRANSPORTATION IN MICHIGAN'S URBAN AREAS

Key Takeaways

- Public transportation is often viewed by policymakers and citizens as a social welfare program aimed at providing limited mobility for those without any other options. To attract “choice” riders and expand service, it needs to be viewed as an important public utility and a vital part of the public and private transportation networks.
- Regional governance is about more than the cross-section of people appointed or elected to the governing board. It requires state and local policies that adopt a broader focus on transportation, planning and zoning, and related policies. Most importantly, it demands collaboration among units of government and transit providers.
- Regional funding is a prerequisite for regional systems. Expanded funding options, beyond the property tax, requires authorization of additional types of local taxes; tax base sharing; spreading the tax burden by levying multiple local tax rates; feathering tax rates by lowering rates as people get farther from the urban center; and/or linking public transit funding with road and other transportation funding.

Summary

Traditionally, the focus of public transportation (or transit) in Michigan has been limited to simply providing mobility to people without cars, and it has been provided by cities or small regions and constrained by political boundaries. Improved mobility will require a focus on regional public transportation services, as

well as integrating all different types of public and private transportation options, including ridesharing, car sharing (driven and autonomous), bike and scooter rentals, and microtransit services, among others. True regional transportation that is seamless and integrated across political boundaries is hard to find in Michigan.

The Case for Improved Regional Transportation

The case for expanded regional transportation services can be made by looking at both the benefits of public transportation and the barriers to driving, which are real and growing in some instances. Some of the benefits of public transportation include pollution and congestion reduction; enhanced mobility for residents that need (and want) it; public health benefits related to increased physical activity and access to health care and healthy food; less stress on road and parking infrastructure; and economic development benefits related to enhanced transit service.

Barriers to driving and mobility include the fact that owning and operating cars is expensive, especially in urban areas of Michigan where even middle income

people can be priced out of car insurance. At the same time that the costs of driving are high, the number of elderly people who either want or need to reduce their driving is increasing. And finally, driving, especially commuting, can be time-consuming as congestion and commuting times can be quite high in urban areas.

At the same time that residents face growing barriers to driving, mobility options are expanding and changing and public transportation needs to be part of the change. With the advent of transportation options including ridesharing, bicycle and scooter rentals, and autonomous vehicles, more people are focused on multimodal transportation and picking the best options for each trip they take. In this new world of mobility,

fixed-route buses and more traditional options are essential as part of a multimodal system that provides door-to-door transportation through integrated public

and private transportation providers with seamless journey planning and payment and real-time passenger information.

Improving Regional Transportation in Urban Areas

Improving regional transportation in Michigan's urban areas will require changing the way we view, govern, and fund public transportation and will involve policymakers at the state, regional, and local levels. Integrated regional transportation systems that truly connect people across large geographic regions often require years of work, strong political champions, and private sector support, as well as cooperation and buy-in from local officials. The key word here is regional: cities, even large urban centers, cannot go it alone and need the support of the region.

Changing Public Perceptions

Providing a system of public transportation that can attract all kinds of riders has been a problem across the country. Some have pointed to urban sprawl or our car-dominant history as the reason for this, but one reason may be in our mindset: European, Asian, and Canadian cities treat public transit as a vital public utility; in the U.S., most policymakers and citizens think of it as a social welfare program for those too poor or otherwise unable to drive.¹ This thinking has led to heavily subsidized services, but also to limiting the attractiveness of public transportation and making it a more highly scrutinized political issue.

To provide effective regional transportation, public transportation needs to be viewed as an important and viable transportation option that contributes to the revitalization of the urban area. Also, the focus of public transportation needs to move beyond bus or rail service to what can be done in a region to improve mobility and how the latest technology and benefits from the private sector can enhance public transportation.

Adopting Regional Governance

Currently public transportation is governed at the federal, state, and local levels and provided at the local and regional levels; this can lead to confusion and fragmentation when trying to implement a regional

transportation system, which often involves connecting multiple local transit providers.

Michigan has five urban regions with differing levels of public transportation services provided in those regions.^a Public transportation authorities are all governed under state authorizing legislation, namely a few key authorizing acts which allow communities to come together to provide public transportation services.^b Current service structures highlight shortcomings arising from a lack of regional policies and governance systems. When transit services are not coordinated and providers are not cooperating, it leads to gaps in service, overlapping services, and challenges for riders, including difficulty planning transit trips, long wait times due to infrequent service areas, and difficulty transferring between providers.²

Regional policies need to include transportation-related policies, but also extend to land use and planning, placemaking, transit-oriented development, economic development, and tax base sharing. An effective regional governance system puts the good of the region above the parochial desires of local units. This is why collaboration among transit providers and local units of government is important: transit providers often do not have influence over the local and regional policies that can either enhance or derail transit services.

With limited resources, choices have to be made over which policies to adopt and which direction to go in,

- a Urban public transit providers include the Regional Transit Authority of Southeast Michigan (RTA), Detroit Department of Transportation (DDOT), Suburban Mobility Authority for Regional Transportation (SMART), and the Ann Arbor Area Transportation Authority (TheRide) in Southeast Michigan; the Interurban Transit Partnership (The Rapid) in the Grand Rapids area; and the Flint Mass Transportation Authority (MTA); among others.
- b Mass Transportation Systems Authorities Act (PA 55 of 1963); Metropolitan Transportation Authorities Act (PA 204 of 1967); Public Transportation Authority Act (PA 196 of 1986); and Regional Transit Authority Act (PA 387 of 2012).

which requires strong regional governance and support from local communities. Essentially, before we can provide more effective transportation services, we need to decide upon our public transportation and mobility goals as a state and as regions, and then make sure that state, regional, and local policies are aligned towards those goals.

Recommended Policy Actions

At the state level, policymakers need to review policies relating to public transportation authorizing acts, local and regional planning and zoning, economic development, and incentives to promote cooperation. State policymakers may need to strengthen state authorizing legislation to make opting-out of regional transportation authorities more difficult. Most of the current state authorizing acts are completely voluntary, and those that are not include governance protections for the local units involved in the transportation authority. Allowing local units to decide to come together to join public transportation authorities promotes local control; however, it can limit the effectiveness of public transportation authorities if local units within a region opt out of public transit taxes and services.

One way to strengthen regional influence over transportation policies is to change the governance structure of transportation authorities from boards appointed by local officials to elected boards. If the constituents of transportation authorities are defined as residents of the transit district, then elected boards would be more accountable to constituents than to the local governments within their boundaries. Elected boards would likely be more partisan and may not possess the level of technical expertise found in appointed boards.

State level policies should incentivize regional collaboration through grants and funding opportunities for regional systems. The state could mandate that planning and zoning move to the county level, which would help provide a more regional focus to these functions. Shifting the focus of land use planning and zoning, as well as community and economic development and related policies, to the regional level would help to control sprawl and make land use decisions that are best for the region, in relation to public transportation and other policy goals. It may face local opposition as it would lessen local control, and these policies can directly impact local revenues and services.

Local policymakers need to consider transportation and related policies that promote collaboration and the region as a whole. Transit providers need to work together to determine local transportation boundaries and who is providing what type of service. This will help solve problems such as gaps in service and overlapping service and can lead to a clear division of labor between local and regional services. Boundaries can be managed by the regional agency working with the local providers to each focus on their part of the journey and coordinated to provide seamless transit for the riders.³ Local and regional transit providers may also need to examine current bus stops and transit routes to determine if they are serving their communities effectively. Many urban areas have recently undertaken redesigns of their bus systems to better reflect current travel patterns and needs.

Regional Funding Mechanisms Necessary

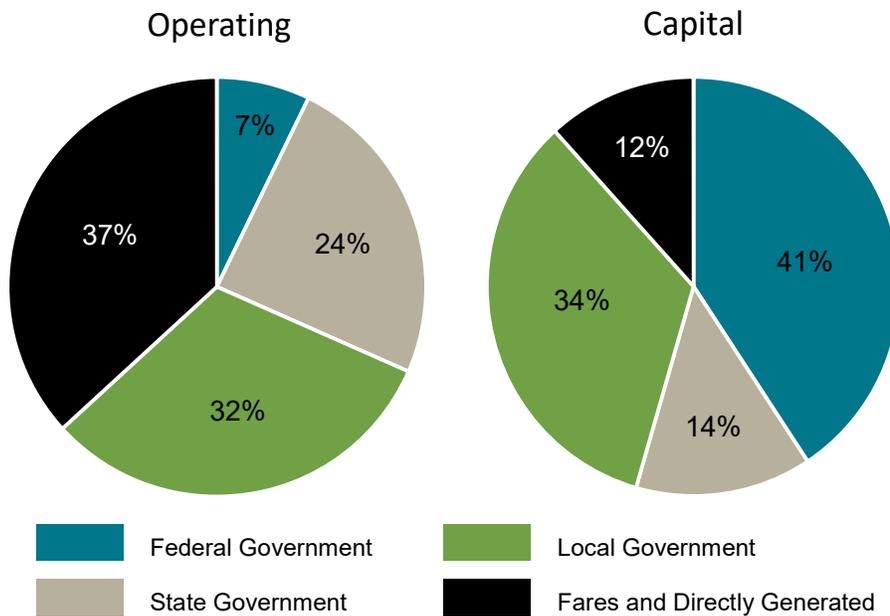
A regional funding model that includes tax base sharing can be difficult to provide in fractured communities, but it is necessary to connect transportation and mobility services across an entire region. However, funding for transit is complicated by the fact that public transportation competes with so many other policies and programs for funding, especially with other transportation programs such as road funding. Transit funding is also challenging because it comes from all different levels of government and includes both operating and capital funding (see **Chart 1** on page viii).

The main local funding source currently, the property tax, is inadequate because it is used to fund every other type of local government. In addition to its overuse, the property tax can be fairly regressive and require homeowners with less property value to pay the tax at higher rates for the same level of service as a neighboring community. This can create a cycle where those residents that can afford to leave the community with high property tax rates do, thereby lowering the taxable value even more and requiring even higher tax rates to raise the same amount of revenue as before.

Additionally, the property tax is not suitable as a regional funding source because it is too connected to a person's home and any benefits received (or not received) by paying the tax are associated with that home. Public services like transportation provide benefits on a broad scale and across an entire region,

Chart 1

Operating and Capital Funding Sources for Public Transportation
FY2016 U.S. Average



Source: National Transit Database, Federal Transit Administration, U.S. Department of Transportation. "2016 National Transit Summary and Trends: Office of Budget and Policy," October 2017.

even if services are not equally accessible throughout the region. Other types of taxes, sales or income taxes for instance, are not nearly as connected to place and therefore are a better fit to fund these regional public services.

Across the country, other transit agencies rely heavily on local sales taxes, as well as other taxes beyond the property tax. Sales taxes are popular for a number of reasons, including the fact that they are paid in part by commuters from outside the region and visitors; they are paid in small increments so the tax bite is less evident; and they are often passed to support specific lists of transportation projects. In addition, transit providers in other states levy multiple local taxes in support of public transportation and rely on tax base sharing across regions.

Policy Options in Michigan

Moving forward, the state and local governments have some options to provide more stable regional funding

for public transportation services.

New Local Taxes

In order to improve regional transportation services, local governments and transportation authorities need funding options other than just the local property tax. Property taxes may fit as part of a regional transit funding model, but they are not a good political (or practical) fit as the main source of funding. The level of funding needed to adequately provide transportation services will require the support of at least one of the big three taxes: property, income, or sales. Smaller taxes and fees may work as part of a funding system to support transit.

Table 5 in the full report explores the tax options state policymakers could make available to Michigan's regional transit providers and provides some criteria to evaluate those options.

The sales taxes would require a statewide vote to amend the constitution but relate to the expanded economic activity that could result from more robust transit systems. Income taxes are tied to the economic activity associated with matching transit users to employment. Given Michigan's requirement to levy income taxes at flat rates, the tax can be more burdensome on low-income earners and those most likely to use transit to access work. While motor fuel taxes are best left for road funding at this time, other transportation-related taxes may be viable.

Vehicle registration and licensing fees, car rental taxes, emissions fees, and transportation utility fees relate to many of the goals of a robust transit system, but because each would have to be levied at fairly high tax rates to yield the revenues sought, they are best employed in combination with other taxes. Finally, policymakers might consider utility, real estate transfer, tourism, amusement, or sin taxes to raise some of the funding sought to fund transit.

Before any new local taxes could be levied, they would need to be authorized in state law, approved by local legislative bodies and/or authority boards, and voted on by residents of any government or authority that wished to levy a new tax. The key point to remember is that any new taxes would be more effective if levied regionally, rather than locally. Allowing taxes to be levied at the most local level can reduce their administrative efficiency, decrease their equity and neutrality^c, increase local competition, and intensify socioeconomic disparities between neighboring communities.

Tax Base Sharing

A new funding model needs to include tax base sharing in addition to new local (or regional) taxes. Services such as public transportation extend beyond local political boundaries and are only feasible if funded with a regional model. Users of the system benefit most directly, but, others benefit indirectly through increased tourism, expanded regional and cross-county services, better connection to jobs and retail, and decreased road congestion and wear. Tax base sharing can be done with multiple different local taxes; the key is that the taxes are levied regionally and the tax revenues are spent across the region in support of projects that benefit and expand mobility and access to public transportation services.

Spreading the Tax Burden and Feathering Tax Rates

Local governments need to work together to support services and policies, like public transportation, and fund them as a region. One way to make this more palatable for the local units that are farther from the urban center of a region is to feather the tax rates and levy higher taxes near the central city and lower taxes farther from the city to reflect the fact that services decrease the farther you get from the urban center. This can be done by levying two different transit taxes – one throughout the entire county or urban region and another tax that is only levied in the urban center.

Another option that can be done in conjunction with different tax rates across an urban region is to levy multiple local taxes in support of public transportation. For example, recently in Southeast Michigan, the focus has been on trying to fund the Regional Transit Authority (RTA) through local property taxes alone; a better plan would employ property taxes in combination with a vehicle registration tax and support from constituent local governments. Or if local-option taxes were expanded in Michigan, regional transit providers could attempt to couple a local property tax with a local sales or income tax. Many public transportation providers in other states rely on multiple local taxes to support transit services.

Multimodal Transportation Funding

One big problem that often arises with expanding funding for public transportation is that there is an outcry that more road funding is needed and that increased funds to support public transportation take funds away from the roads.⁴ One option to combat this is to combine road and transit funding. The state must follow constitutional and statutory guidelines in how it separates road funding from transit funding, but that does not necessarily preclude transit and road projects from being considered together in a complete streets policy; however, it might face political resistance from those in support of road funding.

At the local level, governments could request funding for roads and transportation projects together. It does become complicated, though, because county road commissions and local governments have authority over roads and streets and transit operators have authority over transit projects. Combining road and transit projects and funding would require either 1) these groups to work together (a potentially difficult proposition when they are often seen as competitors for the same funding) or 2) authority to be given over both roads and transit to public authorities (e.g., RTAs) or regional governments (e.g., counties).

^c Neutrality is defined as the idea that taxes should be structured so as to minimize interference with economic decisions in otherwise efficient markets.

Conclusion

No one right way exists to provide regional transportation in urban areas; many policy options related to governance and funding can lead to effective regional transportation systems. However, it is clear from the research that it is mandatory to approach public trans-

portation in urban areas from a regional, rather than local, perspective. Urban transportation systems will not grow, and will not be able to contribute to the growth of their urban regions, without regional governance and funding mechanisms to support them.

Endnotes

1 Stromberg, Joseph. Vox. "The real reason American public transportation is such a disaster," August 10, 2015 (www.vox.com/2015/8/10/9118199/public-transportation-subway-buses, accessed 9/13/18).

2 Amin, Ratna and Sara Barz. SPUR Report. "Seamless Transit: How to make Bay Area public transit function like one rational, easy-to-use system," April 2015 (www.spur.org/sites/default/files/publications_pdfs/SPUR_Seamless_Transit.pdf, accessed 6/5/18).

3 Walker, Jarrett. Human Transit Blog, August 3, 2015 (humantransit.org/2015/08/on-transit-integration-or-seamlessness.html, accessed 6/5/18).

4 Citizens Research Council of Michigan. Report 405: "Evaluating Michigan's Options to Increase Road Funding," February 2019 (https://crcmich.org/PUBLICAT/2010s/2019/rpt405-Road_Funding_Options.pdf).

RETHINKING REGIONAL TRANSPORTATION IN MICHIGAN'S URBAN AREAS

Traditionally, the focus of public transportation (or transit) in Michigan has been limited to simply providing mobility to people without a car, and it has been provided by cities or small regions and constrained by political boundaries. It has not generally been provided in a manner that attracts users with other transportation options, truly reduces congestion, or improves mobility across an urban region.

Moving forward, the focus needs to be on how to provide seamless public transportation services that improve mobility for all residents of Michigan's large urban areas. With the goal of improved mobility, new public and private transportation options are emerg-

ing to complement traditional transportation services, including ridesharing, car sharing, bike and scooter rentals, and microtransit services.^a Improved mobility requires 1) a focus on regional transportation since mobility needs cross local boundaries and 2) an ability to do things differently and “think outside of the box” as transit services need to incorporate these emerging services and move beyond fixed-route bus lines to include multimodal options that complement traditional bus service.

True regional transportation that is seamless and integrated across political boundaries is hard to find in Michigan.

The Case for Improved Regional Transportation Systems

The primary goal of public transportation services is to increase mobility and access to transportation options for all people. Traditional public transportation options have included light rail, bus systems, bus rapid transit (BRT), demand response services (e.g., dial-a-ride), and intercity bus and rail systems. However, public transportation policy affects (and is affected by) various public policy concerns beyond mobility and access, including land use and planning, economic development, public health, public safety and security, social equity, urban growth, air quality and congestion, and environmental resource consumption.¹ No local unit of government or transportation provider has authority over all the public policy issues affecting public transportation, which is a big reason why effective regional transportation systems require collaboration across the public and private sectors and among local units of government and transportation providers.

At the outset, it is important to define what makes a regional transportation system effective. Regional transportation is provided in part by bus systems and rail lines, but it includes a broader focus on mobility management and multimodal transportation that inte-

grates all different kinds of transit options so that each user can pick the best option for their particular trip. This includes integrating private and public transportation options (e.g., using ridesharing services to get to and from bus stops) and coordinating different kinds of transportation options (e.g., walking, scooters, biking, and car options linked to traditional bus and rail systems).

An effective system provides seamless transportation services that are integrated across types of transportation, as well as political boundaries. This necessitates a commitment to regional governing and planning, requiring buy-in from the top-down (state level policies) and from the bottom-up (local policies). Furthermore, effective transportation systems are dynamic and responsive to changes in transportation and ridership, which includes adapting to ideas from the private sector and emerging modes of transportation while maintaining a commitment to basic, traditional bus services.

a Microtransit is small-scale transportation service with flexible routing and scheduling.

An effective system must be well funded. This requires a commitment to regional funding mechanisms, which necessitates state and local level policies in support of regional funding sources and usually includes some level of tax base sharing. Effective, well-funded transportation systems can be a contributor to economic development by promoting their region, encouraging development around transit, and attracting new residents and visitors.

Urban transportation systems will not be effective without regional governance and funding mechanisms, as well as state and local policies friendly to transit. Integrated regional transportation systems that truly connect people across large geographic regions often require years of work, strong political champions, and private sector support, as well as cooperation and buy-in from local officials. The key word here is regional: cities, even large urban centers, cannot go it alone and need the support of the region.

Barriers to Driving

The benefits of public transportation are numerous and include pollution and congestion reduction and enhanced mobility, among others. Beyond any perceived benefits, though, increased regional transportation is needed because of some very real barriers to driving and mobility across different regions in Michigan. While many people over the age of 16 do drive and have access to an automobile in Michigan, barriers to driving exist for large segments of the population, including the expense of owning, insuring, and operating cars and the inability to safely drive a car. These barriers primarily affect those living at or near the poverty level and those aging out of the ability to drive.

Car Ownership is Expensive

Car ownership is pretty common in the U.S., as well as in Michigan. Recent U.S. Census Bureau data show that in the four county region of Southeast Michigan, only 5.1 percent of workers in Wayne County, 1.8 percent in Oakland County, 1.9 percent in Macomb County, and 4.2 percent in Washtenaw County did not have access to a car.² A recent report by the Southeast Michigan Council of Governments (SEMCOG) found that automobiles provide the highest levels of accessibility to key destinations (e.g., jobs, schools, parks and libraries, health care facilities, and supermarkets).³

Effective, well-funded regional transportation systems can be a contributor to economic development within their region.

While fairly common, automobiles are not universally available with their big limitation being their high cost to own and operate. Cars are expensive due to 1) the cost of purchasing a car; 2) the cost of maintenance (e.g., oil

changes, repairs, new tires, etc.); and, 3) the operating costs (e.g., gasoline, registration, and insurance costs). With a poverty rate^b of 15.6 percent in Michigan, and much higher in some urban areas (e.g., 37.9 percent in Detroit, 22.5 percent in Grand Rapids, and 41.2 percent in Flint), the cost barrier is a big issue for much of the population.⁴ Even for people who can afford to own, operate, and insure a car, the necessity of car ownership creates opportunity costs by forcing individuals to spend their disposable income in this way.

The costs related to owning and operating cars place the largest burden on low-income people, but in many of Michigan's urban areas, the cost of car insurance is a burden even to middle-income residents. No-fault insurance means that an injured person in a car accident receives compensation from his or her own insurance company rather than having to show fault

b The 2017 federal poverty level is \$13,860 for a one-person household and \$28,290 for a four-person household.

Public Health Benefits of Improved Public Transportation

Poor public transportation services and a general lack of multimodal transportation options can lead to negative public health outcomes for the state and its urban regions. Multimodal transportation options enhance public health in a variety of ways, including

- reduce traffic accidents and fatalities,
- improve air quality and limit harmful emissions caused by automobiles,
- reduce negative effects of long car commutes,
- encourage physical activity (biking, scootering) and improve walkability of communities,
- enhance access to healthcare services and healthy foods, and
- reduce financial stress on low-income households by increasing transportation options^{i,ii}

A recent Research Council report on public health found that when it comes to factors contributing to length and quality of life, genetics accounted for about 30 percent, medical care accounted for about 10 percent, and the remaining 60 percent was attributable to social circumstances, environment, and related behaviors.ⁱⁱⁱ

These social determinants of health include things like economic conditions (i.e., whether or not a person lives in poverty), quality of education, availability of social support and community resources, and access to transportation (both public and private).

Therefore, it is hard to overstate the importance of public transportation on public health. Transportation affects numerous societal health determinants, including access to jobs, healthy foods, and healthcare services; reduction of pollution; and social connection to communities.

i Littman, Todd. Victoria Transport Policy Institute: "Evaluating Public Transportation Health Benefits," 14 June 2010 (https://www.apta.com/resources/reportsandpublications/Documents/APTA_Health_Benefits_Litman.pdf, accessed 2/14/19).

ii American Public Health Association. Public Health and Public Transportation.

iii Citizens Research Council of Michigan. Report 403: "An Ounce of Prevention: What Public Health Means for Michigan," August 2018 (https://crcmich.org/PUBLICAT/2010s/2018/rpt403_public_health.pdf).

of the other driver in order to recover compensation from that driver's insurance company. Michigan is one of 12 states with either mandatory or optional no-fault insurance.⁵

Michigan's insurance law was enacted in 1973 in order to reduce the number of disputes, fraudulent claims, and litigation associated with car accidents. It has been successful on some counts, but insurance premiums and associated medical costs have proven to be more expensive than those in all other types of insurance systems. In Michigan, medical claims cost automobile insurers 57 percent more than claims for similar crashes in other states and insurance premiums are 17 percent higher on average. These high costs are due to the fact that Michigan has unique and generous medical coverage for car accidents and that automobile insurers, rather than health insurers, are the primary payers for auto-related accidents.

Michigan is a high-cost car insurance state. A 2019 study by The Zebra^c found that while the average cost of car insurance premiums across the U.S. was \$1,470 per year, the cost in Michigan was \$2,693.⁶ This was the highest average annual premium in the nation and much higher than the Great Lakes region^d average of \$1,399. The report also found that Detroit was the most expensive city in the country for car insurance with an average annual premium of \$5,464. Detroit's 2017 median household income was \$27,838; the cost of car insurance represents almost 20 percent of the median household income in the city.⁷ The cost of car insurance in Detroit was almost \$2,000 higher than the city with the second highest annual premium (New Orleans at \$3,686). In New York City, the largest and

c The Zebra is an insurance search engine and independent source for pricing information.

d For this study, the Great Lakes region included Michigan, Wisconsin, Illinois, Indiana, and Ohio.

arguably most urban city in the country, annual insurance premiums averaged \$2,814, over \$2,500 lower than in Detroit.

Detroit is the most publicized, but certainly not the only city, where high insurance rates are a problem. Rates across much of metropolitan Detroit, as well as around Flint and other urban areas, are much higher than the state average.⁸ Whether one believes the high costs are worth it for the expanded medical care or that the no-fault insurance system needs to be changed to lower both car insurance and health care costs, the fact remains that Michigan is an outlier when it comes to car insurance costs. These high car insurance rates in Michigan, and especially in some of its urban areas, are a barrier to driving for many, causing some to rely on other methods of transportation and others to break the law and drive without insurance if other methods are undesirable or unavailable.

Michigan's Elderly Population

Michigan's growing elderly population is increasingly becoming dependent on public and private transportation options other than personal automobiles. According to SEMCOG's report on access to core services, a demographic shift to an older population is likely to lead to a number of people in the Southeast Michigan region having transportation difficulties, particularly those who live in suburban, rural, and other areas with limited transportation options.⁹ The report found that 35 percent of households with seniors have access to some type of health care center (hospital, doctor's office, or urgent care) via a 30-minute transit trip. This could be a serious limitation of public transit as seniors that cannot drive have a great need for access to health care centers; however, the SEMCOG study only took

into account fixed-route transit (e.g., fixed bus service) and did not include door-to-door paratransit, which is available in many areas for seniors and people with disabilities.

For many older adults, door-to-door paratransit, which can be provided publicly or privately, may be preferable to riding the bus as this service picks a senior up at their door and takes them straight to the health care center rather than to a bus stop close to the center. While door-to-door paratransit services are available across the state in many urban areas, the services are

not universally available to all areas and can be limited by times of day and days of week as well as by the need to book the service in advance. The services are

also not always coordinated across political boundaries; seniors could face the need to coordinate themselves among different types of public transportation systems if they need to see a doctor in a different city or county. Furthermore, if older adults have been driving their whole lives, and not using public transportation, they may be limited in their knowledge of the services available and how to access them.

As the baby boomers age, the nation, as well as Michigan, faces a demographic turning point where older Americans will outnumber younger Americans. According to the U.S. Census Bureau, by the year 2030, all baby boomers will be 65 or older and one in every five Americans is projected to be retirement age.¹⁰ At this point, immigration is projected to overtake natural causes (i.e., births over deaths) as the primary driver of population growth for the country. By 2035, older adults are projected to outnumber children for the first time in U.S. history. By 2060, older adults are projected to make up nearly one-quarter of the population.

Rates across metropolitan Detroit, as well as other urban areas, are much higher than the state average.

Chart 1 shows that adults 65 and older are by far the fastest growing population group in the U.S. (see **Appendix A** for more detail). Some sources indicate that Michigan's population is aging even faster than the nation's as a whole.¹¹ An aging population has greater need for public transportation services as old age requires some people to give up driving or, at a minimum, reduce driving. If an elderly person has to give up driving (or is simply no longer comfortable driving), they become dependent on family and friends or public and private transportation services.

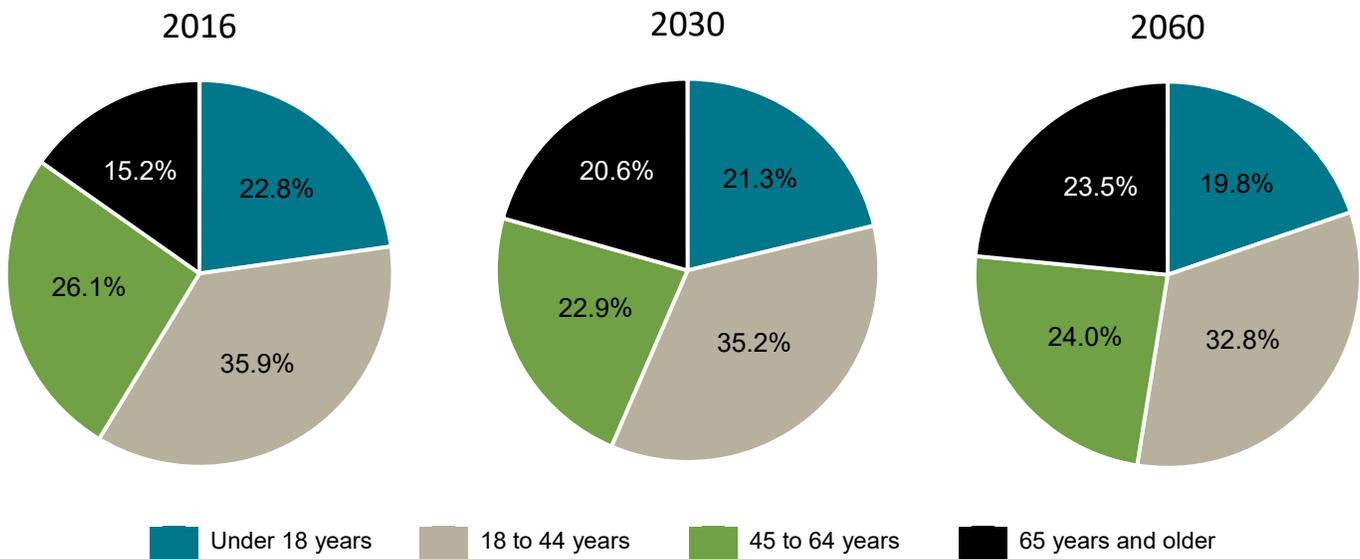
Commuting Patterns and Congestion

Census data show that county-to-county commuting flows between Wayne, Oakland, and Macomb counties have been, and continue to be, high. They have been ranked among the highest in the nation due, in

part, to the fact that jobs in Southeast Michigan are not concentrated in one central city, but can be found throughout the region.¹² Of note, though, is the fact that commuters into Wayne County have increased in recent years (both in numbers and percentages), even though the general population of Wayne County has decreased, which suggests that jobs, at least some of them, are moving back to the central Detroit area. A recent *Detroit News* article discusses the fact that a decades-long capital flow is reversing directions as more jobs and tax revenue leave the suburbs for a rejuvenated downtown.¹³ While recent changes have seen a shift in jobs back to the central city to some extent, Southeast Michigan is at a disadvantage when it comes to providing transportation since jobs and amenities are so dispersed across the region.

Chart 1

Population of United States by Age Group: Projections 2016 to 2060



Source: Vespa, Jonathan, David M. Armstrong, and Lauren Medina. U.S. Census Bureau. Current Population Reports, Population Estimates and Projections, P25-1144: "Demographic Turning Points for the United States: Population Projections for 2020 to 2060," March 2018.

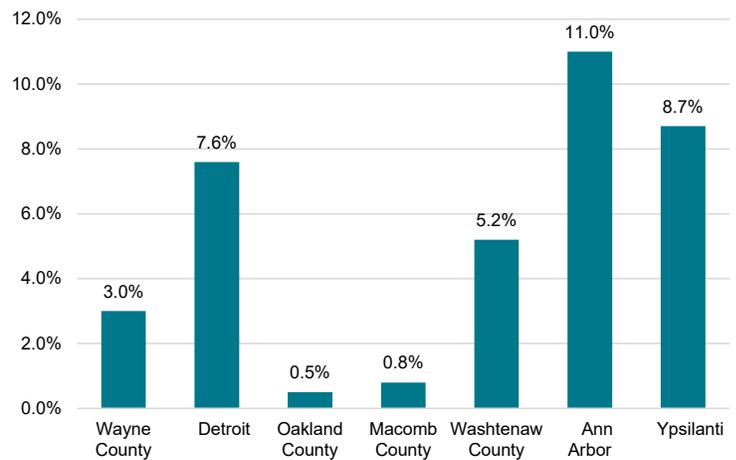
Commuting patterns suggest that expanded transportation options in the Southeast Michigan region, coupled with better integration of existing transit would provide more people with access to jobs via transit. Census data finds pretty minimal use of public transportation as a means to get to work in Southeast Michigan (see **Chart 2**). Furthermore, the share of working age residents with access to jobs via a 90-minute one-way transit commute is quite low. It is important to discuss how reasonable a 90-minute commute is. While, it is true that riding public transportation provides a way to “work on the way to work,” it is questionable how many people would find it reasonable to commute three hours a day (to and from work) via transit.

That being said, a Brookings Institute analysis of transit options and jobs in metropolitan America found that while, on average, 70 percent of residents of large metropolitan areas in the U.S. live in neighborhoods with access to transit service of some kind, those services only connected them to approximately 30 percent of the jobs in their metropolitan area within a 90-minute one-way transit commute. In Detroit, 60 percent of working age residents live in neighborhoods with access to high-frequency transit,^e but those residents had access to less than 22 percent of the jobs in the area via a 90-minute or less transit commute.¹⁴ A recent SEMCOG report found that only seven percent of the region’s jobs are accessible via a 60-minute transit commute.¹⁵ Another recent report on workforce development in Michigan found that inadequate transportation options

e High frequency in this case is defined as transportation that comes less than 15 minutes apart during rush hour times.

Chart 2

Percent of Commuters Using Public Transportation



Source: U.S. Census Bureau. 2013-2017 American Community Survey 5-Year Estimates.

present a very real challenge to workforce development and connecting workers with jobs.¹⁶

Congestion is bad and getting worse in Southeast Michigan. A report by Inrix^f ranks Detroit in the top 10 percent for traffic congestion out of 240 U.S. cities. The study found that the average commuter in metropolitan Detroit spends about 33 hours per year in congested traffic.¹⁷ Ann Arbor ranks not too far behind Detroit with drivers spending approximately 25 hours in traffic. Grand Rapids ranked lower, but is still congested, with drivers spending about 13 hours in congested traffic in 2016.

f A transportation research group (inrix.com).

Rethinking Mobility and Public Transportation

Improving regional transportation in Michigan's urban areas will require changing the way we view, govern, and fund public transportation and will involve policy-makers at the state, regional, and local levels.

Many reports on mobility and public transportation discuss the fact that adults in their 20s and 30s prefer public transportation to car ownership, or, at a minimum, prefer multimodal transportation. The data on millennials and transportation is limited and whether millennials truly prefer public transit in greater percentages than young adults in previous generations did is difficult to assess. It is clear, however, that moving forward all people are more focused on multimodal transportation and choosing the best transportation option available for each trip they take. In this new world of mobility, buses and rail transit are seen as one part of a transportation system that includes multimodal transportation options from both the public and private sectors working together.

Need to Change Perception of Public Transportation

Providing a system that can attract all kinds of riders has been a problem in Michigan and throughout the U.S. Even though some U.S. cities do a good job providing public transit and attracting riders, in general, public transportation in the U.S. is much less prevalent and less used than in other countries. Some have pointed to urban sprawl in the U.S. or our car-dominant history as the reason for this, but one reason may be in our mindset: European, Asian, and Canadian cities treat public transit as a vital public utility; in the U.S., most policymakers and citizens think of it as a social welfare program.¹⁸ This mentality has led cities to heavily subsidize public transit, but it prevents transit agencies from charging sufficient fares to provide efficient services. This limits the attractiveness of public transit and leaves it as a public welfare program for those too poor to drive. Viewing transit as a social welfare program rather than an important public utility makes it a more highly scrutinized political issue.

This idea that public transportation is a social service for the poor, elderly, and non-mobile "captive" riders is particularly strong in Michigan. Public transportation systems in other major U.S. urban areas are better able to attract "choice" riders along with the captive riders. "Choice" riders are those that have other transportation options, but choose transit due to personal preference

or other factors (e.g., wish to avoid traffic or parking). In Chicago, for example, all different types of people at all different income levels ride transit for all kinds of reasons. Furthermore, in some cities public transit contributes to economic development and businesses

strategically choose to locate near transit stops. Here in Michigan, urban residents do not have access to robust regional transit systems.

Improving Mobility

To provide effective regional transportation in Michigan's urban areas, public transportation needs to be viewed as an important and viable transportation option that contributes to the revitalization of the urban area. Also, the focus of public transportation needs to be on improving mobility rather than on expanding bus service. When the focus is on mobility, then the issue moves beyond bus or rail service to what can be done in a region to improve mobility and how the latest technology and benefits from the private sector can enhance public transportation.

Mobility as a Service (MaaS)

In this new world of mobility, the idea of mobility as a service (MaaS) is a combination of public and private transportation services within a given regional environment that provides holistic, optimal, and people-centered travel options that enable end-to-end journeys paid for by the user as a single charge.¹⁹ MaaS leads to door-to-door transportation through integrated public and private transportation providers with seamless journey planning and payment and real-time passenger information.

Public transportation needs to be viewed as an important and viable transportation option that contributes to the revitalization of the urban area.

This idea of MaaS is in contrast to how things have generally been done: in a traditional model a city may run a transportation department, a mass transit authority, a dial-a-ride service, and a bike-share separately (or some of these services may be provided by a city or county while others are provided by a public authority or nonprofit provider) leaving individuals responsible for stitching together the various modes of transportation that they need.²⁰ Effective regional transportation requires a broad view of regions and their transit needs, a willingness to cooperate, and an ability to think outside of the box at times.

MaaS includes the increased use of mobility managers at the local level. This is a fairly new, customer-driven, market-based approach to providing transportation services. It focuses on individual travel needs rather than large-scale transit operations and offers a full-range of travel alternatives to the single-occupant automobile, providing a single point of customer access to multiple travel modes. Mobility managers help people locate and use available services to complete a trip. They also work to facilitate coordination of services and track unmet needs.^{21,22}

Microtransit, another example of collaboration with the private sector (or at least with private sector transportation ideas), is flexible, inexpensive, on-demand, door-to-door transit service. It can be provided publicly, privately, or collaboratively. The idea is to mirror the benefits of ridesharing services and link those benefits to the public transportation system. It can be a way to connect people to existing public transportation options and address the issue of helping transit riders find transportation for the first and last mile of their trip. The flexibility of microtransit lets it locate where demand exists (i.e., go to the riders) rather than counting on riders to come to it (e.g., fixed-route bus or rail stops).²³ It can also include new kinds of transportation, such as motorized scooters and bike share services.

Ridesharing

One of the arguments keeping transit off of the public agenda is the idea that the increased use of ridesharing services, as well as the future use of autonomous vehicles, will eliminate the need for public transportation services. However, a growing body of research shows that ridesharing and transit tend to be used in different ways by most travelers, making them complementary rather than competitive.^{24,25}

Effective regional transportation requires a broad view of regions and their transit needs, a willingness to cooperate, and an ability to think outside of the box at times.

A study by the Transit Cooperative Research Program (TCRP)^g found that use of transportation network companies (TNCs)^h tend to increase on weekends and late at night – times when transit services tend to be scaled back. TNC trips tended to be short and infre-

quent (i.e., not daily trips to work). The research found that the biggest loser in the new ridesharing world is not likely to be public transit, but taxi cab service.^{26,27}

Researchers at DePaul University found over two dozen partnerships between TNCs and public transit providers across the U.S. They found that most partnerships fit into one of five categories:

1. Incentives to encourage connections between ridesharing and transit services or to fill in the gaps in transit service through ridesharing discounts and financial incentives.
2. Development of smartphone trip planning applications that encourage combining ridesharing and transit services.

g The TCRP is managed by the Transportation Research Board, a program of the National Academies of Sciences, Engineering, and Medicine.

h TNCs are defined as organizations that pair passengers with drivers via a mobile app or website.

3. Efforts to mitigate parking shortages through subsidized rides during certain times.
4. Programs to promote mobility for travelers with impairments that serve as alternatives to conventional paratransit services (e.g., ridesharing to non-emergency medical appointments).
5. Specialty programs that indirectly promote transit use or the improvement of transit services (e.g., initiatives to promote exchanging data or “guaranteed ride home” programs for commuters).²⁸

One of the partnerships reviewed included a program in Detroit that provides \$5 fare reductions on weekday Lyft rides to and from DDOT’s 53 Woodward corridor between midnight and five in the morning. This pilot program is grant funded and limited to 2,000 rides total.

The next step in these partnerships is likely to be a rise in multimodal trip-planning apps that brings together public transit, ridesharing, taxis, motorized scooters, and bike-sharing, and merges trip-planning and payment in one easy to use application. Columbus, Ohio, in partnership with the Central Ohio Transit Authority, has released a request for proposals to create such an app. A second request for proposals will be released in the future for the development of a payment portal that can handle payments for multiple modes of transportation under one system.²⁹

Other sources, though, have found evidence linking the rise in ridesharing to negative consequences, including increased congestion, higher traffic fatalities, and declines in transit ridership.³⁰ The key point from research into TNCs and mobility is that partnerships are on the rise between TNCs and transit operators and signify the changing nature of transportation and mobility, but the evidence is not all positive. TNCs and ridesharing are fairly new, so it is not yet clear how ridesharing and transit will co-exist.

Autonomous Vehicles

The advent of autonomous, or self-driving, cars sits like the elephant in the room when talking about local transportation services. The future is unknown with autonomous cars: how soon will they be on the roads;

will they be a service of the wealthy that can afford them or a service that will benefit everyone; will they replace truck drivers and significantly reduce congestion; will they allow for expansion of local transit services and lessen the need for car ownership, parking, and other car-related services in cities; will they increase (or decrease) safety on the road; how will they affect land use planning? The questions seem endless. The only thing that can be said for sure is that they are likely to change transportation services, both public and private, in the not-too-distant future.

In many ways we can consider ridesharing the precursor to autonomous vehicles. Passengers can tell the driver or computer where they want to go and get there in a hands free ride. The question is: to what extent will people see autonomous vehicles as tools to serve their personal transportation needs or as shared assets

to serve the needs of many. The sub-optimal response is that this technology will be employed only to serve the needs of individuals, leading to increased congestion on

the roads; changing, but not eliminating, the need for parking facilities; and resulting in an inefficient use of resources.

A more ideal scenario would employ autonomous vehicles to serve the needs of many. Instead of parking the vehicles in garages at night and business parking lots during business hours, they could be a shared means of transportation in use for most of the time throughout the day. In such a scenario, these vehicles would be put to their best use serving the first and last miles of daily commutes. Instead of every commuter traveling in their own autonomous vehicle, those vehicles would help commuters get to and from public transportation on their daily commutes and other travels. Those envisioning a future with autonomous vehicles see them playing a vital role in moving people in coordination with public transportation.

Moving forward, transportation options, both public and private, will continue to change and expand with advances in technology. At one time in the 1800s, people thought that the biggest transportation problem of the future would be figuring out how to deal with all the horse manure in the streets.³¹

Transportation options will continue to change and expand with advances in technology.

Transit-Oriented Development (TOD)

In some areas of the country, transit is viewed as a vital service that contributes to the economic development of the urban area. In some other countries, transit is seen as a vital public utility that is necessary for economic development and urban growth. In Michigan's urban areas, transit is often viewed as a social service and its role in economic development and urban revitalization is often overlooked.

Where appropriate, planning should focus on transit-oriented development (TOD). TOD is defined as a type of community development that includes a mixture of housing, retail, office, and/or other amenities integrated into walkable neighborhoods located close to quality public transportation services.³²

Local and regional civic and government leaders in Michigan's urban areas should implement TOD and work together to adopt policies that enhance transit. This would leverage improved mobility and transportation options to promote economic development throughout the regions. It can only be successful when regional planning services and transit services are considered together. TOD is not something that any public authority, local government, or nonprofit institution can accomplish on its own.

The Cleveland and Indianapolis regions have been focusing regional policies on TOD, among other policies, in recent years in an effort to revitalize their regions, and specifically their central cities. Transportation services in Cleveland are provided by the Greater Cleveland Regional Transit Authority, which works with the Northeast Ohio Areawide Coordinating Agency (NOACA), the City of Cleveland and other local governments, other transit providers in the region,

and the development community to promote TOD throughout the region. One goal of TOD in this region is to increase density and bring population back to Cleveland. NOACA has created a TOD readiness framework that includes:

- **Connectivity:** how well connected a transit station is to its community and other parts of the transportation network.
- **Market strength:** how the real estate market is performing in the transit station area.
- **Land availability:** the extent to which the transit station area has vacant and underutilized land to be developed.
- **Institutional support:** the degree of support from public jurisdictions and private institutions.^{33,34}

In order to promote and enhance transportation in the Indianapolis region, the city has worked closely with its metropolitan planning organization to support and encourage TOD and to adjust local regulations and land use policies to support transit (e.g., parking requirements).³⁵ While the region is working to address sprawl and revitalize Indianapolis by encouraging TOD and changing land use policies, it still has to address past sprawl that has led to jobs increasing in the suburbs. One option being pursued is working with the business community to subsidize suburban bus service. This method is only successful if it can take advantage of economies of scale and charge a large number of businesses a small fee.

These industrial, Midwestern regions provide examples of how TOD and past sprawl can be addressed in urban areas in Michigan.

Transit is often viewed as a social service and its role in economic development and urban revitalization is often overlooked.

Regional Governance is Critical

In conjunction with changing the perception of public transportation and mobility, Michigan should implement a system of regional governance of public transportation and other policies affecting transportation. This can be done through voluntary collaboration among local governments and transit providers or state mandated regional governance systems. Public transportation is currently governed at the state, regional, and local levels and provided at the local and regional levels. This can lead to confusion and fragmentation when trying to implement a regional transportation system, which often involves connecting multiple local transit providers.

Current Governance System

A brief explanation of the current governance system will help to illustrate the complexity of it. The fact that every level of government has a role in public transportation can create confusion, lead to differing goals, and slow the process when it comes to implementing policy and providing services. The federal role, which is provided by the U.S Department of Transportation (DOT) and its Federal Transit Administration (FTA), is largely one of oversight, providing funds (mainly capital), guidance, and standards for the provision of public transportation services.

The federal government requires regional planning through Metropolitan Planning Organizations (MPOs). MPOs are organizations that carry out transportation planning at the regional level with boards made up of local elected officials, state government officials, and officials of public transit agencies. Federal policy requires a MPO be designated for each urbanized area with a population of more than 50,000 people and that a Transportation Management Area (TMA) be designated for each urbanized area with a population over 200,000 in order to carry out the metropolitan transportation planning process, which is a condition of federal aid.^{36,37}

The fact that every level of government has a role in public transportation can create confusion, lead to differing goals, and slow the process.

Michigan law provides the authority for local governments to provide transportation services and for the creation of regional or metropolitan transportation systems. The state oversees local transit services and operations and distributes federal and state transportation funds through the State Transportation Commission and the Michigan Department of Transportation (MDOT) Office of Passenger Transportation (OPT).

Public transportation services are provided locally through a city, village, or township government, or regionally through a county government or regional authority. A total of 78 local governments (either cities or counties) and regional authorities provide public transportation services across Michigan (see **Appendix B**). The services provided by these local governments range from dial-a-ride and door-to-door paratransit in rural areas to fixed-route bus and bus rapid transit (BRT) systems in urban areas.

Urban Transit Providers

Michigan has five regions that are large enough to be designated as TMAs for the metropolitan transportation planning process:

Southeast Michigan, which includes both the Detroit and Ann Arbor regions; Grand Rapids; Kalamazoo; Lansing; and Flint. Each of these regions currently has

one or more public transportation provider; however, the level of services provided, as well as the degree of regional cooperation to provide public transportation, varies.

The biggest urban area, Southeast Michiganⁱ, has dealt with severe population loss in the City of Detroit and slight population loss across the region. The out-

ⁱ For the purposes of this report, Southeast Michigan comprises the four counties that make up the RTA's governance region: Wayne, Oakland, Macomb, and Washtenaw.

migration from Detroit has impacted the relationships among local units of government and their ability to provide services, like public transportation, that require regional cooperation and buy-in. Public transportation in Southeast Michigan is currently provided by three regional transit providers – the Detroit Department of Transportation (DDOT), the Suburban Mobility Authority for Regional Transportation (SMART), and the Ann Arbor Area Transportation Authority (TheRide) – each providing services in their own geographic area and trying to meet the needs of their riders. The difficulty comes in coordinating these regional providers and connecting areas that are currently without transit service.

Southeast Michigan does have an umbrella organization to provide regional governance and funding and facilitate cooperation, the Regional Transit Authority (RTA) of Southeast Michigan. However, the RTA has not been successful in passing a regional tax levy and this has limited its ability to integrate providers and promote regional transportation.

West Michigan differs from Southeast Michigan in many ways; while not a completely homogeneous population, it is not as diverse as Southeast Michigan and it has not experienced the degree of out-migration from its central cities. Furthermore, while it is a less densely populated urban area, its population has grown 12.8 percent since 2000. Public transportation in Grand Rapids and its surrounding suburbs is provided by the Interurban Transit Partnership (The Rapid). The Rapid provides regional transportation throughout the Grand Rapids urban area, and is the only public transit provider in the state providing bus rapid transit (BRT). BRT provides bus service with dedicated transit lanes and traffic light preemption, platform-level boarding, and off-site ticketing, giving buses some of the benefits associated with rail transit without the costs of creating the infrastructure necessary for rail.

While The Rapid is providing services in the Grand Rapids urban area and out to Grand Valley State University (GVSU) in Allendale with its new BRT line,

West Michigan is currently lacking a regional transit authority or any real way to connect the region's urban transit providers.^j Commuting patterns suggest that connecting areas across the region through transit would increase access to jobs in the area; however, the rural township areas between these small urban areas are currently transit deserts. Getting the buy-in and desire to pay for transit service in the more rural parts of the county in order to connect the urban areas is a big hurdle to funding and providing a true regional transportation system in West Michigan.

A 2012 study on transit in West Michigan found that while there is interest in connecting communities across county lines (e.g., Holland and Grand Rapids),

demand is limited due to low density residential development and low density of employment locations, relatively short travel times using a car, generally low levels of congestion compared with other urban areas, and the

prevalence of free or low-cost parking.³⁸ This study found that current demand did not warrant instituting commuter service connecting more of West Michigan, but that demand might increase in the future with any of the following: increased fuel prices, the creation of a large centralized employment destination, demographic changes, or the ability of local units to provide funding for expanded regional transportation.

Michigan's other urban areas – Flint, Lansing, and Kalamazoo regions – could also benefit from increased regional transportation options. Each of these small urban regions has a public transportation provider that is coordinating and providing transit services across the central urban area and throughout the county to some extent, but not necessarily connecting all areas of the larger region. That being said, each area needs to examine their public transportation needs and willingness to fund services; some of these small urban regions are surrounded by rural areas where there is very limited need for transit beyond demand response systems.

Southeast Michigan does have an umbrella organization to provide regional governance and funding and facilitate cooperation, the RTA.

^j MAXTransit in Holland/Zeeland, Harbor Transit in Grand Haven area, and the Muskegon Area Transit System (MATS).

The Flint Mass Transportation Authority (MTA) has done a good job of providing regional transportation across the county and connecting riders with transportation options outside of the county. This has risen out of necessity and innovation as the region has experienced significant population and job losses in recent years. The MTA responded to Flint's population decline and a fixed bus service ridership decline by expanding its out-county bus service in order to connect workers in Genesee County with jobs in other counties. The service also connects workers outside of the county to jobs in Genesee County, and provides pass-through service transporting workers outside of Genesee County to another neighboring county. In order to effectively provide these regional transportation services, the MTA has partnered and coordinated with many other transit providers, including SMART, Greater Lapeer Transportation Authority (GLTA), Shiawassee Area Transit Agency (SATA), and Livingston Essential Transportation Service (LETS); in addition, the MTA has partnered with private businesses to provide these services.³⁹

See **Appendix C** for data on Michigan's urban transit providers, as well as urban transit systems in other states, from the National Transit Database.

State Authorizing Acts Related to Regional Transportation Services

Over the years, the state has enacted a number of statutes relating to public transportation and the creation of transportation authorities.

Mass Transportation System Authorities Act

Public Act (PA) 55 of 1963 provides for the incorporation of public authorities to acquire, own, and operate mass transportation systems by the legislative body of any city having a population of not more than 300,000 (every city except Detroit); other political subdivisions may request to join an authority, but a majority of

authority members must approve the request.⁴⁰ The Capital Area Transportation Authority (CATA) in Lansing, Flint Mass Transportation Authority (MTA), and Ann Arbor Area Transportation Authority (TheRide) are all organized under this state law.

Authorities created under this law may issue self-liquidating revenue bonds and may levy a tax of no more than five mills for a period of five years or less with voter approval.

Metropolitan Transportation Authorities Act

PA 204 of 1967 created the Southeastern Michigan Transportation Authority (SEMTA), which included the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne and was the precursor to

the Suburban Mobility Authority for Regional Transportation (SMART) in metropolitan Detroit.⁴¹

In 1989, SEMTA was reorganized without Detroit and was renamed SMART.⁴² The act allows SMART to do many things, including provide public

transportation facilities and services; fix rates, fares, and charges; and accept federal, state, and private funds. However, SMART (and any other authority created under this act) may not levy taxes in support of public transportation services, and, instead, relies on the taxes levied by local units of government (i.e., counties) in support of SMART services.

Public Transportation Authority Act

PA 196 of 1986 allows public authorities created under the Mass Transportation Systems Authority Act, the Metropolitan Transportation Authorities Act of 1967 (except SMART), or the Urban Cooperation of 1967 to form a public authority for the purpose of providing public transportation services.⁴³ Any political subdivisions (i.e., local governments) which were members of the old authorities will be members of the newly created public authority. Additionally, local units of government can create a new authority under this act.

Over the years, the state has enacted a number of statutes relating to public transportation and the creation of transportation authorities.

Kalamazoo Metro Transit and the Interurban Transit Partnership (The Rapid) in Grand Rapids are organized under this act. Any public authority created under this act may acquire, finance, and provide public transportation services, both within and without the boundaries of the authority. Public authorities organized under this act can levy, with voter approval, a tax of no more than five mills for a period of five years or less (with some exceptions).

Regional Transit Authority Act

PA 387 of 2012 created the Regional Transit Authority (RTA) of Southeast Michigan.⁴⁴ The qualified region for the transit authority was defined to consist of the county in this state with the largest population according to the most recent decennial census (i.e., Wayne) and the three counties with the largest populations that are contiguous to that county (i.e., Macomb, Oakland, and Washtenaw). A county may petition to be included in the public transit authority region if it is adjacent to a member county; a county's petition must be approved by the RTA's board.

The RTA board is made up of 10 members: one non-voting chair chosen by the governor; one member appointed by the mayor of Detroit; and two members each appointed by the county executive or board in Wayne, Oakland, Macomb, and Washtenaw counties.⁴⁵ The RTA may levy a property tax or motor vehicle registration tax with voter approval. However, in order to put a tax levy on the ballot, seven of the nine voting board members must approve it, including at least one member from each jurisdiction. This gives the counties and Detroit the ability to over-rule the majority of the board when it comes to tax, as well as some governance, measures. One unit of local government within the authority can halt the progress of the authority if its members will not approve putting a tax measure on the ballot for voters to decide.

The state authorizing legislation also requires that the RTA spend at least 85 percent of the money raised in each county on transportation services within that county.

This is another way that the local units within the RTA have the ability to dictate how the RTA board must act.

The act specifies that the RTA is the designated recipient of federal transit funds for the region, which it then distributes. This gives the RTA some ability to require coordination and collaboration among providers; however, the RTA is still limited by its lack of funding and governance requirements giving participant counties the ability to block board measures.

Are These Statutes Adequate?

Adequacy is a subjective concept: one's opinion depends how adequacy is defined. However, one issue with the current statutes authorizing public transportation authorities is that they tend to favor local, rather than regional, governance.

Current statutes authorizing public transportation authorities tend to favor local, rather than regional, governance.

In general, these authorizing statutes provide transportation authorities with governance over public transportation within their boundaries, but participation in the transportation authority is

voluntary, not mandatory. Boundaries are determined by which local governments within a region voluntarily choose to come together to provide public transportation services. A transportation authority cannot force a local unit of government to allow transit services within its boundaries (or to provide tax revenues in support of transportation services) regardless of whether the local unit falls within the greater urban region. While it is important that local units of government and voters decide which public services they want to provide and fund, this limits the effectiveness of public transportation authorities.

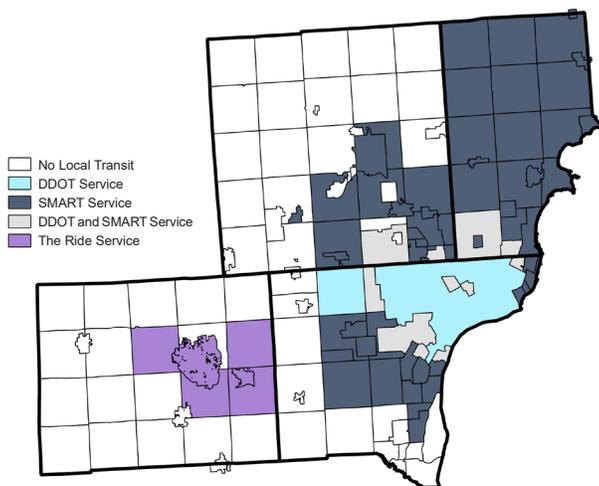
This is evidenced by the fact that many of these urban transit providers consist of authorities whose members include the central city and some of its inner suburbs, but not all the local units within the greater urban region. The SMART system in metropolitan Detroit has many members throughout the Southeast Michigan region, but communities have opted out, which creates gaps in service and transit deserts and limits the overall effectiveness of the regional transportation system.

Map 1 shows where fixed-route transit service is available throughout Southeast Michigan and where transit deserts exist. The Ann Arbor area provides an example of transit being provided in a central city and its suburbs, but not out to the rest of the county; metropolitan Detroit provides an example of areas that have opted themselves out of transit service. Keep in mind that not all of these areas with transit service have service throughout the entire municipality; e.g., DDOT provides service connecting Detroit to Livonia, but does not provide services throughout all of Livonia.

The RTA authorizing legislation is different and requires the entire four-county region to be part of the transit authority without the option of opting out; however, it includes other board governance requirements that gives the constituent local governments some real control over what the RTA board can do. Again, valid reasons exist to give local units of government within an authority the ability to decide on what levels of transit they want to support, but the way these authorities are set up through their governance and funding mechanisms

Map 1

Communities Served by Transit Providers in the Southeast Michigan Region



Source: Map created by the Citizens Research Council based on service maps of SMART (www.govbids.com/storedoc2/mitn/documents/Amend/133561_1_3.PDF), DDOT (detroitmi.gov/document/ddot-system-map and detroitmi.gov/news/new-ddot-connectten-service-add-500-trips-week-15-minute-peak-hour-frequency-wi-fi), and TheRide (www.theride.org/Portals/0/Documents/1SchedulesMapsAndTools/SysMaps/Current/Sys_map_main.pdf?ver=2017-08-26-185543-323).

limits their effectiveness and ability to garner support without the backing of the local governments that make up the authority. This means that support for public transportation services within a region, especially the Southeast Michigan region with the RTA, can change with a change in political leadership at the local level.

Another limitation of the authorizing statutes is that they give the public authorities control over public transportation within their boundaries, but no role in other public policy issues that can greatly affect public transit services. Expanding the role of public transportation authorities to give them influence over other public policy issues would affect the level of local control over these issues and would likely be resisted by local units of government, but current legislation does not require (or even encourage) collaboration on these other public policy issues. Land use planning and zoning and roads/streets policies can have a huge impact on the effectiveness of public transportation services. Collaboration between transit authorities and local governments, as well as regional-level policies, is critical and is not addressed in the state authorizing statutes.

Shortcomings of the Current Systems

The current public transportation systems in Michigan's urban areas provide bus service for those with no other transportation options in the central urban areas and dial-a-ride type service throughout the larger region, but collaboration and coordination is limited across the regions and services are not generally provided at levels that attract choice riders.

Lack of Regional Policies

The biggest shortfall of the current system is a lack of regional policies that promote public transportation services across Michigan's urban regions. Beyond explicit transportation policies, the importance of policies that take a regional approach to land use and planning, placemaking, transit oriented development (TOD), economic development, and tax base sharing cannot be overstated. An effective governance system puts the good of the region above the parochial desires of local units. This is why collaboration among transit providers and local units of government is important: transit providers often do not have any authority over the local and regional policies that can either enhance or derail transit services.

True regional service often requires significant collaboration and buy-in from local transit providers and governments in the region, as well as strong partnerships between local transit providers and the state. Collaboration among the different levels of government helps to ensure that the transit needs and concerns of all citizens are being addressed adequately. This is enhanced in areas that have regional authorities to coordinate and provide transportation services. Even with a regional authority to coordinate and bring transit services together, successful regional transportation in urban areas requires private sector support from the business community that may need transit services to connect workers to jobs; support from local officials who have control over streets and roads; and a strong political champion, as well as political support of the local units of government in the region. As we have seen in Southeast Michigan, lack of political support from local units of government can derail the effectiveness of regional transportation.

Local policies related to planning and zoning can enhance transit services by promoting TOD and requiring developers to include affordable housing and development near transit stops. Cities and regions can also use public transportation and TOD to attract people to their cities and make them a more vibrant place to live, work, and visit. TOD allows communities to focus on placemaking, which uses planning and the management of public spaces to capitalize on a community's assets and what it has to offer residents and visitors. With more transit, less urban space is needed for cars and parking, which makes cities more walkable, bike-able, and less congested. Integrating land use policies with transit investments would shift a greater percentage of people to walking, cycling, and transit use for trips throughout the day than any transportation strategy.⁴⁶

On the other hand, if local planning and zoning encourages development away from transit stops, it makes it more difficult for transit to be effective and for ridership to grow. Also, planning and zoning policies can often be built around and encourage sprawl by requiring a cer-

tain amount of parking to accompany developments. The same can be said for street and road development and policies. If streets are built to accommodate cars alone, then they will not be as conducive to public transit and other forms of transportation.

Regional policies also can be related to public safety and security. People will not willingly use public transportation unless they feel that it is a safe option. Safety relates to both the safety of the transportation method (e.g., feeling safe from crashes) as well as feeling safe and secure from personal harm or injury while on public transportation and at transit stops. Public transit remains one of the safest mobility options available, especially in comparison to individual cars: there were nearly 70 times more highway passenger car and motorcycle fatalities than transit fatalities in 2015.⁴⁷ To

be fair, many more users utilize the highway via car or motorcycle than public transit which contributes to the higher fatality numbers, but transit injuries and fatalities are low.

Safety from personal harm is enhanced by transit ame-

nergies including safe and lighted shelter at transit stops, safe walkways and pathways to buses and transit stops, on-board cameras, security coordination with providers, driver safety training, passenger codes of conduct, and coordination with municipalities to keep transit stops, crosswalks, and curb ramps well-lit and in good condition. These types of policies are enhanced when transit providers work together as well as with local communities and police to keep the public safe while using transit. Some transit providers, like DDOT, have their own transit police to monitor safety on public transportation systems as well.

Public transit providers are providing safe and accessible transportation services to the best of their ability. This section is not meant as an indictment against current transportation providers, but as a call for local governments and transportation providers to come together and develop regional policies that promote public transportation and the priorities of each region. Any public policy will include trade-offs and cities and

As we have seen in Southeast Michigan, lack of political support from local units of government can derail the effectiveness of regional transportation.

regions need to decide their priorities together. The priorities do not have to be black and white: policies that either support cars and road infrastructure OR public transportation. However, a complete streets policy that encourages transit and other non-car forms of transportation can only be enacted at the expense of a policy that focuses solely on improving the driving and parking experiences of people in cars. Encouraging transit-oriented development may counteract policies that encourage sprawl and development out into green spaces.

Most policy choices to improve or change transportation services will invariably include increased costs and compromise. We live in a world of limited resources and transit service can have many goals, not all of which can be funded equally. Goals can include:

- maximize ridership,
- cover all parts of a service area,
- serve particular populations of concern,
- support economic development,
- remove rush hour cars from the road, and
- improve regional air quality.

These goals can conflict with each other or simply compete for funding and often require trade-offs, such as increased ridership versus increased coverage or route spacing versus frequency or peak service versus all day service.⁴⁸ Furthermore, expanding regional transportation often requires many difficult, potentially contentious, decisions.

With limited resources, choices have to be made over which policies to adopt requiring strong regional governance and support from local communities. Essentially, before we can provide more effective regional transportation services, we need to decide as a state, and as regions, what our public transportation and mobility goals are and then make sure that local and regional policies work together towards those goals. This will not be an easy political endeavor as getting universal buy-in on policies and projects is impossible.⁴⁹ How-

ever, it is important for regions to come together and compromise to determine priorities that can improve regional policymaking moving forward.

Lessons from Other Urban Areas Related to Regional Governance. A review of urban areas across the U.S. provides unique examples of regions that have worked together to promote regional policy development and have found a way to incorporate regional governance over public transportation policies.

Unigov in Indianapolis. Under a consolidated government in the Indianapolis region, many functions of the city and county are consolidated and the elected mayor serves as the chief executive of Indianapolis and Marion County. The City-County Council of Indianapolis and Marion County is the legislative branch of government. Under

Before we can provide more effective regional transportation services, we need to decide as a state, and as regions, what our public transportation and mobility goals are and then make sure that local and regional policies work together towards those goals.

this “unigov” structure, 11 other municipalities are legally part of the consolidated city and subject to the laws and administration of Indianapolis city government; and four municipalities are not part of the Indianapolis government system, but do receive county services from Marion County. This type of government structure helps to encourage regional planning and policy development. Under this consolidated form of government, Indianapolis was able to fund and expand its public transportation system amid competing policy goals.

The Met Council in the Twin Cities. The Twin Cities metropolitan region consists of Minneapolis and St. Paul and the seven-county area around those two cities with a population of approximately 3.6 million people. Public transportation services are provided by Metro Transit, which is governed by the Metropolitan Council (commonly referred to as the Met Council). Unlike most metropolitan planning agencies, the Met Council is not a council of local governments, but is composed of 17 members appointed by the governor from 16 districts within the seven-county region (one member is appointed at-large). It provides services beyond regional planning, including transit, wastewater treatment, administration of federal low-income hous-

ing vouchers, and the purchase of park land and open space for a regional park system.⁵⁰

This unique regional government system “was conceived with the idea that we will be faced with more and more problems that will pay no heed to the boundary lines which mark the end of one community and the beginning of another.”⁵¹ The Met Council is based in St. Paul and has a staff of 4,200 and a \$1.1 billion budget. The Met Council is seen as a national model of regional cooperation and a key element in the success of the Twin Cities region. Critics of the council say that it is too powerful with its independent funding, veto power over local development plans, and lack of accountability.

The Twin Cities region has leveraged its unique regional governance system to provide public transportation that is governed and funded regionally and that collaborates with city governments and other public institutions in the region to coordinate transit services with other local services, including land use and planning services. Metro Transit through the Met Council works with local governments in the region to promote TOD and a complete streets policy, which calls for streets to be designed to safely accommodate all users, including pedestrians, bicyclists, motorists, and transit riders. Metro Transit also coordinates with city planning departments to promote development near transit and parking requirements for residential buildings that reflect their access to transit (e.g., developers are required to provide only half a parking space per unit in larger residential buildings that are located within a quarter mile of a high-frequency bus stop or a half mile from a rail transit stop).

The ATL in Atlanta. Georgia State lawmakers enacted legislation in 2018 to set in place a funding framework and a regional transit governing system for all of metropolitan Atlanta beyond just the boundaries of the Metropolitan Atlanta Rapid Transit Authority (MARTA).

By March 2023, the region’s transit systems will be folded into a single brand name – the Atlanta-Region Transit Link Authority (The ATL).

The ATL legislation creates 10 districts within the 13-county region and is an attempt to promote transit planning from a regional rather than local level. It will be charged with planning and coordinating transit across the region with the goal of improving mobility across county lines through regional planning and projects, thereby boosting the region’s economic vitality. The

ATL, however, will still rely on voluntary compliance; no transit expansions can be mandated from the regional level as counties must “opt-in” to any specific project or funding mechanism and residents must approve any local sales tax increase.^{52,53}

Preemption of local zoning authority allows zoning decisions to be made at the regional level with a regional perspective and prevents local opposition to new density from stalling transit in an area.

Regional Preemption of Local Zoning Authority. An example of specific regional policies around planning and zoning can be found in California and Florida. Both have addressed local zoning issues by allowing for regional preemption of permitting and zoning authority in certain high density transit areas.

The creation of a rapid transit zone in Miami-Dade County in Florida preempts zoning and permitting jurisdiction to the county for all property under and around the heavy rail system. In the San Francisco Bay Area, its transit system (Bay Area Rapid Transit) has been allowed to preempt zoning authority for certain development around the BART system. The reason for these preemptions of local zoning authority is to facilitate expeditious permitting and planning and higher density development around transit stations. This allows zoning decisions to be made at the regional level with a regional perspective and prevents local opposition to new density from stalling transit in an area. Regional preemption of permitting and zoning also facilitates private investment in projects because it speeds up the permitting process and makes it more predictable.⁵⁴

Lack of Regional Coordination

A result of not having regional policies is a lack of coordination among transit providers and local governments. In Southeast Michigan, transit providers have designed services and set policies largely independently of each other for years. The current system with its lack of coordination is recognized as a problem and was the impetus for the creation of the RTA, but absence of funding for the RTA has limited its ability to coordinate providers. The current system, which is slowly changing, lacks coordination in bus and paratransit services, a centralized point for mobility management, and access to real-time information about vehicle arrivals and transfers.

When transit providers are not cooperating, riders can face many challenges, including lack of information about how to make a multi-operator trip and difficult transfers between operators. Coordinating wayfinding, transit maps and graphics, as well as designing large transit hubs can require collaboration among multiple providers and local units (and even among private companies). If transit passes are not universal, riders can face financial penalties for using more than one operator. In addition to universal fare policy, transit operators need to provide mobile ticketing and the ability to add value and check transit service in real time. It is also important for providers to coordinate connections; transit trips will not run smoothly for riders if the connections between buses that they need to take are uncoordinated and haphazard.⁵⁵

Some providers in Michigan are already doing these things; others need to update their services to provide better connections and reflect technological innovations. Both DDOT and SMART have been working to increase their provision of transportation services and options and coordinate with each other. Recently they have proposed changes to fares and transfers that include eliminating all transfer fares, reducing the number of pass options from 25 to six, and eventually adding a mobile fare payment app and additional

retail sites for ticket purchases. A new pass option will include unlimited rides in both systems during specified time periods.⁵⁶

Lessons from Other Urban Areas Related to Regional Coordination. A review of other regions identified problems and challenges riders face due to public transit fragmentation and how transit providers can and do work together across urban regions to improve services.

San Francisco Bay Area. A report by the San Francisco Bay Area Planning and Urban Research Association (SPUR) on the fragmented public transportation system in the San Francisco Bay Area identified problems related to a lack of regional coordination and policies to better provide transit more seamlessly.⁵⁷ The Bay Area is a much larger region than any urban region in

Michigan with over seven million residents throughout a nine-county region. It does provide a good case study on collaboration as it has a large number of transit agencies: seven large providers with annual ridership over nine million each and 16 smaller providers.

When transit providers are not cooperating, riders can face many challenges, including lack of information about how to make a multi-operator trip and difficult transfers between operators.

Coordination and cooperation can be difficult without an umbrella organization to bring all providers together because agencies compete with each other for state and federal capital and operating funding. Depending on transit providers' boundaries, local funding sources can overlap as well. Operators also can face institutional constraints to cooperation, including constraints on where services can be provided, labor agreements, funding limitations, social and geographic equity policy goals, and control over streets. Again, this is where an umbrella organization like a regional transit agency can work well if it has control over disbursing funding and coordinating services. The power of the purse gives a regional transit agency the authority to require cooperation and hold organizations accountable for how well they coordinate and cooperate. Of course, an umbrella organization also inserts another layer of cooperation and funding needed to provide public transportation services.

The SPUR study reviewed problems related to lack of regional coordination in the transportation network in the Bay Area in detail and offered five general strategies for integrating transit providers into a seamless, regional transportation system:

1. Help travelers understand the value of the region's transit system and how to use it through marketing it as one system. The first step towards doing this is to provide clear, consistent, and ample transit information across the entire region, including regional transit maps. It is also important to support third-party providers of transit information and tools as a way to cultivate more transit data and ensure that data standards from the private sector are also useable by the public sector.
2. Standardize fares and develop passes that encourage the use of the region's entire transit system. This is a critical step to making the transit system with multiple operators seamless for riders. The first step is to develop regional, integrated fare products, which requires uniform goals, policies relating to fare discounts (i.e., youth, senior, disabled, low-income), and rules dealing with rate changes and transfers. Second step is to institute a consistent fare-setting schedule that favors regional coordination; this allows operators to maintain control over their fare rates, but forces them to cede some control over the schedule and parameters within which they can change fares. Finally, it is crucial to ensure that the regional transit fare payment system is convenient and reliable for users.
3. Develop transit hubs that make transferring easy. This includes designing great transit hubs and integrating them into neighborhoods. The focus should be on improving the riders' experience and offering transit the opportunity to perform well.
4. Take an integrated approach to transit network design: coordinate service planning for more rational routes, better use of vehicles, and higher ridership. When considering funding and/or expanding transit, adopt policies to consider each project as part of a network of projects rather than looking at them individually.

5. Use institutional practices to promote integration: incentivizing system consolidations when they benefit customers, evaluating long-term governance choices, facilitating dialogue among transit providers, and growing new capacity to address the regional transit experience.

These strategies and steps are taken from the case study on public transit in the San Francisco Bay area, but they lend themselves to application in Michigan's urban areas as well. The idea underlying all of the recommendations is to look at public transportation needs from a regional perspective and see how those needs can be met through the integration of current providers into a regional system, collaboration efforts among both public and private transportation providers, and a focus on seamless transportation throughout a region (i.e., focus on making transportation easy for riders).

For regional transportation to be successful and effective, cooperation and collaboration among providers is critical.

Seattle Urban Region. The Seattle region provides a good example of how to work together to provide an integrated fare system that makes transit easier for the rider. Seattle and its metropolitan area are similar in size to the Southeast Michigan region. Public transportation in the Seattle region is provided by the Central Puget Sound Regional Transit Authority (Sound Transit). Sound Transit was created in 1996 when voters approved a \$3.9 billion ballot measure to fund a mix of buses, commuter rail, and light rail. Since then, voters have passed two more transit ballot measures expanding Sound Transit and its services.

The Seattle region, like most metropolitan regions, has multiple public transit providers, of which Sound Transit is the largest and serves as the regional transit authority. In order for regional transportation to be successful and effective in Seattle or any other region, cooperation and collaboration among providers is critical. Seattle's One Regional Card for All (ORCA) is a fare payment system that is the result of years of collaboration and negotiations among the region's transit providers. It provides a unified system of consistent fares and policies that makes transit more convenient for riders.⁵⁸

When Sound Transit was created in the 1990s and tasked with providing regional transit services, it led all the transit providers in the region in negotiations over revenue sharing agreements that would facilitate a regional fare product. They did this by creating a governance system that granted one vote to each transit provider, regardless of size, to vote on changes to revenue sharing, technology procurement, and pricing. Over the years, the providers reconciled business rules, resolved disputes regarding revenue shortfalls, and established a regional fund to share fare revenues. The larger providers even established a temporary subsidy for smaller providers to make the transition to the regional pass financially feasible.

The ORCA card has been in operation since 2009 and has shown that even complex transit environments with multiple providers can cooperate and achieve fare integration. It has also illustrated that fare integration does not require providers to give up control over fare setting as long as they can stick to agreed-upon guidelines.⁵⁹ ORCA cards work like cash or a transit pass. They can track different fares and transfers automatically and be managed online. Value can be added to the cards online, at ticket vending machines, or at participating retailers.⁶⁰ The regional pass allows riders to travel seamlessly among transit providers in the Seattle region.

Gaps in Regional Service

Related to the lack of regional coordination is the problem of gaps in service. This is a problem in Southeast Michigan, which lacks regional connections between major destinations, including job centers, retail centers, the Detroit Metropolitan Airport, and the Ann Arbor area. Regional transit options are limited due to gaps in services caused by communities opting out of SMART bus service, as well as simply having limited options when crossing municipal and county boundaries. Furthermore, when transfers are available, they can be time-consuming and inconvenient due to low bus frequencies. Gaps in regional service exist in other urban areas (e.g., West Michigan), which are

made up of small high density urban areas surrounded by rural areas so they lack connections between the urban areas.

Anecdotally, the *Detroit Free Press* published an article in 2015 on the Detroit man that had to walk 21 miles every day to get from his home in Detroit to his job in Troy due to gaps in bus service in Detroit (which had bus service along his route in Detroit, but not 24-hour service) and suburban communities that opt out of SMART bus service.^{61,62} Since this story was published, both DDOT and SMART have expanded service to provide more options for regional commuters, but they are still limited by their funding and boundaries.

For regional services to be effective, they need to be provided over a large geographic area without certain communities opting out of the service.

Many transit providers have historically done their work in silos: developing their own plans for transit in response to the problems they have identified. A focus on a transit provider's immediate problems and a lack of a holistic

approach that includes all transportation providers in the region can result in inefficiencies and an inability to solve transit problems. Some areas have multiple providers providing service without proper coordination leading to duplicative service; other areas fall into gaps between providers and no one provides adequate service; other areas may have communities that have opted out of paying for transit services making them transit deserts where buses cannot pick-up or drop-off riders.⁶³ For regional services to be effective, they need to be provided over a large geographic area without certain communities opting out of the service.

Lessons from Other Regions: Indianapolis. The Indianapolis region, which is governed under a consolidated city-county government, is one region of the country that has addressed gaps in public transportation service and generally low service levels. The consolidated city-county government makes regional policymaking and cooperation a little easier to accomplish and the region has addressed gaps in service and generally poor levels of service by completely redesigning its bus system, which is provided by the Indianapolis Public Transportation Corporation (IndyGo). In 2014, the Indiana General Assembly passed a law allowing six central Indiana counties to levy an

income tax of up to 0.25 percent dedicated to mass transit. In November 2016, Marion County voters approved this tax to support increased transit services in the Indianapolis region. IndyGo took this opportunity to rethink how public transportation is provided in the region and to improve service rather than build upon poor service.

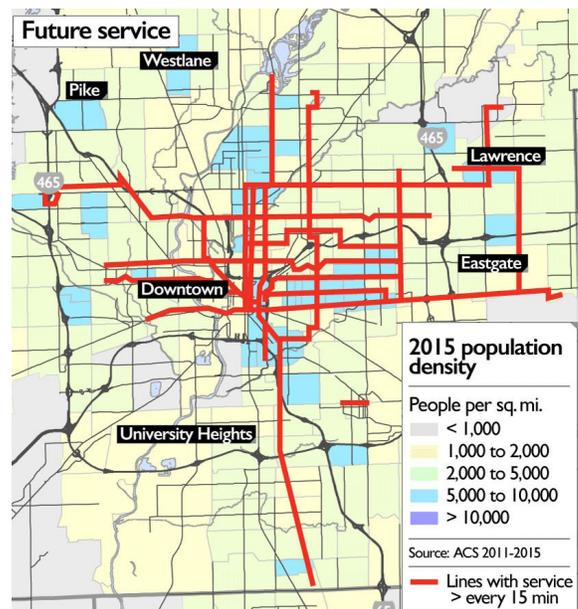
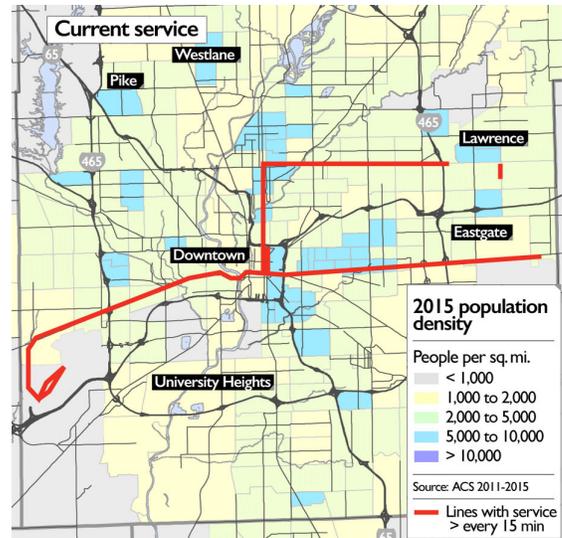
IndyGo originally provided local bus services with lines extending from downtown in a hub and spoke model. One problem with this is that you could not traverse easily across the city – you had to take the bus downtown and then find a bus going to the part of the city that you wished to travel to, and, with limited services, transfer times could be very long. The new transit plan of IndyGo includes a 70 percent increase in service with less waiting, better night and weekend frequency, easier transfers, advanced payment technology, and real-time arrival information. IndyGo faced competing trade-offs between using limited resources (even at the increased level) to serve the most people and get the most ridership or to provide services to those most in need even if they live in remote places. The decided upon goal was to devote 80 percent of funds to efficient ridership-based service and 20 percent to reach those that do not live in transit-friendly environments. New services include the addition of three rapid transit lines and improvements to the local bus network.⁶⁴

The new transit map will provide north-south and east-west service across the city/county and will not require people to travel into downtown to catch the necessary transfer (see **Map 2**). It is a complete re-shaping of its bus system to provide much more frequent service along more corridors.⁶⁵

Beyond IndyGo, the Central Indiana Regional Transportation Authority (CIRTA) focuses on bringing more transportation options to central Indiana and to better connect Indianapolis with suburban and rural communities in surrounding counties.⁶⁶ The ten-county CIRTA region is governed by a 17-member board of directors. CIRTA is partnering with IndyGo on its improved transit services and rapid transit corridors and working on an Indy Connect plan that ties together walking and biking trails, bus routes and rail options with roadway planning in a 25-year vision for the region's economy.

Map 2

IndyGo Current and Future Service Transit Maps



Source: www.indygo.net and www.indyconnect.org

Recommended Policy Actions to Promote Regional Governance

The shortcomings of the current regional transportation systems in Michigan can be addressed by some policy changes at the state and local level. The following section is an attempt to identify alternative policies that can be enacted that would better promote regional transportation systems.

State Level Policies

At the state level, policymakers need to review policies relating to public transportation authorizing acts, the governance structure of transportation authorities, local and regional planning and zoning and related policies,^k and incentives to promote cooperation.

Ban Opt-Outs in Authorizing Legislation. The state authorizing acts that most of the urban transportation providers are organized under are voluntary and do not require any region (or any local units within a region) to join together to provide public transportation, with the exception of the Regional Transit Authority Act, which created the RTA of Southeast Michigan. Allowing local units to decide to come together to join public transportation authorities promotes local control; however, it can limit the effectiveness of public transportation authorities if local units within a region opt out of public transit taxes and services (see **Map 1** on page 15).

Stronger state authorizing legislation would require urban regions of the state to provide public transportation throughout the region with no opt-out ability. Legislation could require participation in regional transportation

Stronger state authorizing legislation would require urban regions of the state to provide public transportation throughout the region with no opt-out ability.

based on factors including population density; location of major employment centers, health care facilities, entertainment facilities, and/or convention centers; major road corridors; or income levels (e.g., lower income levels would suggest the need for more services).

Another option is to allow other areas of the state to create RTAs, with no opt-out option, to fund and coordinate public transportation in regions other than Southeast Michigan. If RTAs are created in other regions of the state (e.g., West Michigan), voter approval would still be required for the RTA to levy taxes and provide additional transportation services. If every urban region had an RTA (or if the largest transit provider was able to act as the region's RTA) it would help promote the regional development of transportation plans.

The state authorizing legislation for the RTA of Southeast Michigan contains important taxing and governance measures that keeps some control over transportation policies with the counties that make up the RTA. These governance measures could be main-

tained throughout the state, requiring RTAs to work more closely with their constituent local governments, or they could be eliminated, giving more authority to the RTA board and voters to decide on taxing and governance measures. As

stated above, RTA membership by county is not the only option for determining membership and it could be based more on population or other factors contributing to transit needs.

Review Governance Structure of Regional Authorities. A 2017 Research Council report raised some questions about the governance of regional authorities in Michigan, including the RTA and other transportation authorities.⁶⁷

Multiple court cases (decided predominantly in the 1960s) have established that general purpose local governments (i.e., counties, cities, villages, and townships) must adhere to the "one person, one vote" principle established in the Fourteenth Amendment to the U.S. Constitution. This principle holds that people must

^k Urban Cooperation Act of 1967 (PA 7 of 1967); Housing Cooperation Law (PA 293 of 1937); Land Bank Fast Track Act (PA 258 of 2003); Michigan Planning Enabling Act (PA 33 of 2008); Regional Planning (PA 281 of 1945); Joint Municipal Planning Act (PA 226 of 2003); County or Regional Economic Development Commission (PA 46 of 1966); Economic Development Corporations Act (PA 338 of 1974); Joint Municipal Planning Act (PA 226 of 2003); Michigan Zoning Enabling Act (PA 110 of 2006).

be represented equally by elected government officials making broad policy decisions (i.e., representative districts must be proportioned equally so that everyone's vote counts the same). The governance of regional authorities has not been required to adopt the "one person, one vote" principle. The governance structure of special authorities can vary, but they are generally governed by appointed boards representing the participating local governments (this is the case with boards of the transportation authorities discussed above).

Regional authorities are created to provide a single (or sometimes multiple) government service(s), such as transportation; however, the level of legislative authority given to a board can vary. When regional authorities possess policymaking, borrowing, and taxing authority, the question of how they are governed becomes more relevant. The question to be asked is: would regional authority boards be more accountable to constituents if they represented people instead of governments. If constituents are defined as residents of the transit district, boards would be more accountable to constituents if they were directly elected; however, they would also likely be more partisan and may not possess the greater technical expertise of appointed boards.

Ultimately, policymakers should consider whether the governance of regional authorities is best served through appointments to the boards by participating local governments or if governance would be better served by direct election of representatives based on the "one person, one vote" principle.

Incentivize Regional Collaboration. Rather than changing state authorizing legislation to require regional participation and provision of public transportation services in all of Michigan's urban regions, the state could offer incentives to promote regional collaboration. These incentives could include state grants for expanded transportation services and collaboration in providing them, or state policies that provide new funding options in support of regional transportation. New funding options will be discussed in more detail in the following section, but these could include new local-

option taxes that would be available to support regions that are expanding public transportation services.

Regional Planning, Zoning, and Development Regulations. The state could mandate that planning and zoning move to the county level, which would help to provide more of a regional focus to these functions. Any negative consequences for local governments that would lose control over some aspects of planning and zoning might be mitigated if it is accompanied by tax base sharing, which would allow the region to make land use decisions based on the best available land use and share the taxes that result from those land use decisions. In other words, it might keep local units from developing land that is better used for other purposes (e.g., parks) in order to raise tax revenues from the land use. Of course, making planning a regional function would lessen local control over land use decisions.⁶⁸

The state could mandate that planning and zoning move to the county level, which would help to provide more of a regional focus to these functions.

While current state law allows for regional planning and zoning, local units of government have authority over planning and zoning in their jurisdiction and only cede that authority to a regional planning commission voluntarily. The planning and zoning enabling acts

allow county boards of commissioners to designate county planning or zoning commissions as metropolitan commissions, but municipalities are not required to give planning or zoning authority over to the county.⁶⁹ Shifting the focus of land use planning and zoning, as well as community and economic development, to the regional level would help to control sprawl and make land use decisions that are best for the region, in relation to public transportation as well as other policy goals. This could be done by allowing for regional preemption of zoning and permitting around transit hubs.

It is important to remember that state and local incentives and development policies can either encourage or discourage urban, high-density housing and development, which contributes to effective transportation systems. Also, enacting impact fees at the local level, which would require state authorization, helps to charge some of the infrastructure costs associated with suburban development and sprawl to developers

and can effectively limit sprawl and encourage high-density urban development.⁷⁰

Local and Regional Level Policies

Local policymakers should consider adopting policies that promote collaboration and the region as a whole when it comes to transportation and related policies.

Promote Local Collaboration. At the local level, governments could voluntarily cooperate with public transportation authorities in order to integrate land use policies with transportation policies and investments. In other words, before deciding on a development based solely on land use policies and potential tax revenue, local governments could work with the public transportation provider to develop where transit will be available.

Furthermore, local and regional transit providers can make a greater commitment to collaboration and coordination throughout the region by coordinating transit projects and services, and providing regional transit passes and payment cards/applications. Any type of collaboration will require local agencies to give up some of their autonomy to promote and expand transportation options and usage across the region.

Adopt Transit-Oriented Development (TOD) and Complete Streets Policies. Local units of government can adopt TOD and complete streets policies that would require any local development or project to take into account all road users rather than just drivers of cars. This could include parking requirements that lessen the number of parking spaces required if developments are located near public transportation and other policies that would discourage sprawl and reflect a commitment to public transportation. This may also include updating local zoning codes and master plans to reflect these new policies.⁷¹

These type of policies require local governments to coordinate with other local and regional agencies and promote collaboration as well as transportation services.

Good Fences: Determine Transportation Boundaries. The idea that good fences make good neighbors originally comes from a poem by Robert Frost, but is taken here from the professional blog of public transit consultant Jarrett Walker.⁷² The idea is that neighbors, including transit neighbors, have an easier time being friendly if they have very clear agreement about where their boundaries are. Transit providers need to work together to determine the boundaries and how services are going to be shared and provided.

Boundaries between adjacent local transit providers that occur at natural chokepoints (e.g., a body of water or hilly area) are usually easy to manage. Boundaries that run across a flat expanse of urban area are more problematic to manage and require cooperation and agreement among agencies. A “good fences” solution to boundaries attempts to put them in places that work well for both transit agencies and, especially, transit riders.

Any type of collaboration will require local agencies to give up some of their autonomy to promote and expand transportation options and usage across the region.

Another aspect of “good fences” is a clear division of labor between local and regional services. Regional services can be designed as more rapid transit with widely spaced stations for fast operation between them, and local

services can provide the more local transit connections getting people closer to their desired destinations. These fences can be managed by the regional agency working with the local providers to each focus on their part of the journey and coordinated to provide seamless transit for the riders.

Reexamine Bus Routes and Transportation Options. If Michigan wants to promote regional governance and expansion of transportation services, it may be necessary to review current bus stops and transit routes to determine if they are serving the region effectively. Many urban regions have redesigned their bus systems (e.g., Indianapolis, Houston, Columbus Ohio) after drops in ridership and a review of their systems revealed bus routes that had not changed in decades and that did not reflect current travel patterns and needs.⁷³

In urban areas of Michigan, regional transportation systems require regional governance and cooperation, but may also require a review of bus routes and transportation options to see how routes and systems can be redesigned to provide a more efficient transportation system that better serves residents' needs. This is not an easy task as improving a system for greater frequency and service to more residents in-

variably involves removing some stops and service in low-frequency areas, which upsets riders who use those services.⁷⁴ The trade-offs between frequency and ridership coverage are real and it can be difficult for transit officials to determine the best policy. This is why regional policies around public transportation are so important: the decisions of policymakers need to reflect the actual goals and desires of the region.

Regional Funding Mechanisms

While governance is critical to an effective regional transportation system, a system cannot be successful without a regional funding model. A regional funding model that includes tax base sharing can be difficult to provide in fractured communities, but it is necessary to connect transportation and mobility services across an entire region. However, funding for transit is complicated by the fact that public transportation competes with so many other policies and programs for funding, especially with other transportation programs such as road funding.

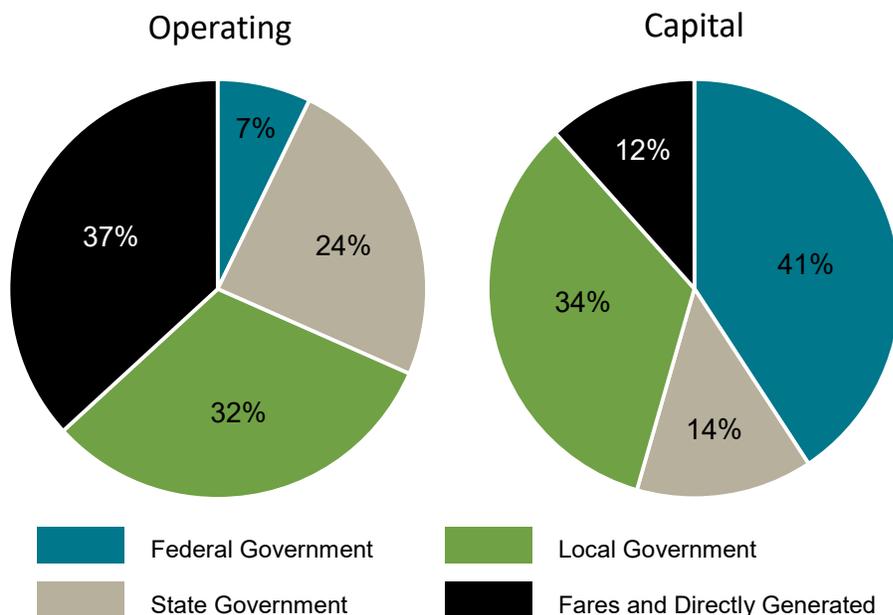
Federal funding comes from the federal fuel tax, heavy vehicle use tax, and motor carrier excise taxes; all of which are allocated to the federal Highway Trust Fund and the Mass Transit Account within it. Federal grant programs, congressional earmarks, and one-time expenditures (e.g., the American Recovery and Reinvestment Act of 2009) can each provide additional funds for transportation projects across the country. In Michigan, federal funding is distributed to the Michigan

Current Funding System

Funding for public transit comes in two different pots: capital projects and operating expenses. **Chart 3** shows that the majority of operating funding (69 percent), on average, across the U.S. comes from local governments and fares and revenue generated by transit agencies (e.g., revenues from advertising). For capital funding, 75 percent comes from the federal government and local governments with the remainder from state governments and fares and revenue directly generated by transit agencies. Local governments provide a large source of funding for both operating and capital funds.

Chart 3

Operating and Capital Funding Sources for Public Transportation FY2016 U.S. Average



Source: National Transit Database, Federal Transit Administration, U.S. Department of Transportation. "2016 National Transit Summary and Trends: Office of Budget and Policy," October 2017.

Department of Transportation (MDOT) and a portion goes directly to some local transit providers. While the federal government provides funding for transit, the state and local governments maintain control over project selection and implementation.

The use of state transportation funds are determined by the Michigan Constitution and state law. The Michigan Constitution dictates that all specific taxes, except general sales and use taxes, on motor fuels and vehicle registration must be used exclusively for transportation purposes after the payment of necessary collection expenses.⁷⁵ Not less than 90 percent of those taxes must be dedicated to roads, streets, and bridges. The balance, if any, as well as not more than 25 percent of the general sales tax imposed on the sale of motor fuels and vehicles, may be used for public transportation purposes distributed through the state's Comprehensive Transportation Fund (CTF). The General Sales Tax Act further specifies the percentage of the sales tax collected on motor fuels that must be used to support public transportation.⁷⁶

In 2015, a \$1.2 billion transportation funding package was enacted to provide more state revenue for transportation, though most of that revenue will go towards roads and bridges rather than public transit. Of the \$600 million from increases in gas taxes and registration fees, almost 10 percent will go into the CTF for public transportation and/or rail purposes. That equates to less than five percent of the total \$1.2 billion increase in funding going toward public transportation. Even more recently, income tax earmarking changes have led to more money being deposited into the state's transportation fund, though all of those extra dollars are to be used to increase road funding.⁷⁷ The state legislature has used general fund money to support public transportation programs in the past.^{78,79}

Local funding for public transportation comes largely from property taxes. Counties, cities, villages, and townships may fund public transportation services out of their general fund, which is supported with property taxes and state revenue sharing (along with fees and other taxes in some instances), or through dedicated transit property tax millages. Public transportation authorities also can be funded through property taxes, general support from constituent general purpose governments within the transportation authority's service

area, user fees, and other sources (e.g., advertising fees). All of the urban systems in Michigan levy at least one property tax millage dedicated to public transportation services, with the exception of DDOT which is funded through Detroit's general fund that is supported in part by Detroit property and income taxes (see **Table 1**).

Decisions related to state and federal funding levels are driven by policies in Lansing and Washington, D.C., and generally provide incremental funding to all transportation types (roads, bridges, transit) and are not usually specific to urban transportation systems. While federal and state dollars are an important part of transit funding, especially when it comes to capital expenses, the focus of this report is on providing and funding public transportation locally or, more accurately, regionally.

The importance of local and regional funding becomes even more apparent when looking at the state's long-term transportation plan and the public transportation state and federal revenue gap forecasted by MDOT.

Table 1
Transportation Property Tax Millages
Michigan's Urban Areas, 2018

Transit Provider	Property Tax Millage
DDOT	Detroit General Fund
SMART*	1.0 mills
TheRide (Ann Arbor)	0.7 mills
Ann Arbor	2.0373 mills
Ypsilanti	0.9789 mills
Scio Twp	0.36 mills
The Rapid (Grand Rapids)	1.47 mills
Kalamazoo Metro	
Urban area	0.75 mills
Entire county	0.45 mills
CATA (Lansing)	3.007 mills
Flint MTA	
Urban area	0.6 mills
Entire county	1.225 mills

* Counties levy this tax in the participating communities that make up SMART.

As shown in **Table 2**, there is a projected statewide revenue gap of \$10.1 billion over a 25-year period, approximately \$404 million per year. The report only estimates that the state and federal governments will be able to provide \$324 million into the public transportation program per year, making the gap larger than the estimated revenue.

Table 2

Estimated Revenue Gap in Michigan Transportation Programs
Federal and State Funds, FY2016 to FY2040

	Revenue Availability	Revenue Needs	Revenue Gap
Total Transportation Revenue	\$41.6 billion	\$86.5 billion	\$44.9 billion
Public Transportation Program	\$8.1 billion	\$18.2 billion	\$10.1 billion

Source: Michigan Department of Transportation. "Moving Michigan Forward, 2040 State Long-Range Transportation Plan: Revenue Gap White Paper," Final Draft July 2016

Chart 4 highlights transit funding sources (capital and operating) across the U.S. in urbanized areas with a population over 200,000 (all the urban areas discussed in Michigan). This pie chart illustrates the importance of local and regional funding sources that, when combined with fares and income earned by local or regional transit providers, totals almost 60 percent of all transit funding.

Shortcomings of Current Local Funding System: Property Tax

The local property tax is the only option for most local governments and transportation authorities when raising funds to support public transit. **Table 1** (page 27) shows that every major transportation provider discussed in this paper levies a local property tax in support of transit services. The fact that the local property tax is the primary local and regional tax available (with the exception of registration fees for the RTA and city income taxes) is fairly unique to Michigan. While regional requests for property tax levies in support of transit generally have been successful (e.g., SMART millage, millages to support TheRide in Ann Arbor and

The Rapid in Grand Rapids), increased property taxes in support of public transportation programs can be a tough sell to voters (e.g., RTA's failed property tax request).

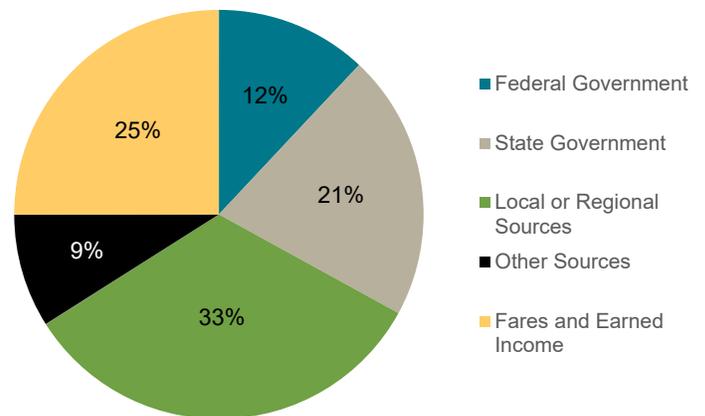
Inadequate Revenue Capacity

When analyzing the revenue capacity of a tax, it is important to review the government's capacity to use the property tax as a funding source as well as taxpayers' capacity to take on higher property taxes.

The property tax is already supporting multiple local government functions, thus limiting the ability of the government to levy additional property tax millages in support of regional transportation systems. All types of local governments – counties, cities, villages, townships, school districts, intermediate school districts, community college districts, and special authorities – levy property taxes, as well as the state. Therefore, local property taxes fund many different kinds of services, including school, public safety, and local government administration. Furthermore, the revenues from these multiple property tax millages have been constrained over the years due to property tax limitations placed on local governments (e.g., Headlee Amendment of 1978 and

Chart 4

Transit Funding in Urban Areas across U.S. with Population over 200,000



Source: Transit Cooperative Research Program (TCRP), Transportation Research Board. *The National Academies of Sciences, Engineering, and Medicine*. TCRP Report 129: "Local and Regional Funding Mechanisms for Public Transportation," 2009.

Proposal A of 1994) and declining property values in recent years (caused by the Great Recession in 2007).⁸⁰

While property tax rates have been limited over the years and some local units are still taking in less property tax revenue than they did in the early 2000s (at least when adjusted for inflation), many residents, particularly in Michigan's urban areas, are already paying prohibitively high property tax rates. This is because residents pay property taxes to so many different local and regional governments, but also because the property tax can be fairly regressive and require homeowners with less property value to pay the tax at higher rates.

Tables 3 (below) and **4** (on page 30) show how much the number of mills levied, taxable values, and taxable value per capita can vary across different local governments in the state's urban regions. The average mills levied for each county include the average of all

property taxes county residents pay to all the different types of overlapping local governments that levy a property tax and the state (i.e., the state education property tax).

Local units of government with more high-income residents, and corresponding higher property values, can levy property taxes at low rates because they have a high taxable value per capita. Local units with a lower-income population, and therefore lower property values, must levy property taxes at higher rates to meet funding needs. This can create a cycle where those residents that can afford to leave the community with high property tax rates do, thereby lowering the taxable value even more and requiring even higher tax rates to raise the same amount of revenue as before.

The range of property values and taxes levied is evidenced in **Table 3** at the county level. In Southeast Michigan, Wayne County has a taxable value per

Table 3
Property Tax Rates and Taxable Value per Capita in Selected Counties, 2017

	2017 Population	Mills Levied by All Govt's (avg rate)	Total Collected (millions)	Taxable Value (millions)	Taxable Value per Capita
State of Michigan	9,962,311	41.68	\$13,983.33	\$335,481.14	\$33,675
Wayne	1,753,616	55.83	\$2,203.04	\$ 39,461.39	\$22,503
Oakland	1,250,836	42.67	\$2,335.11	\$ 54,723.74	\$43,750
Macomb	871,375	42.19	\$1,099.37	\$ 26,056.43	\$29,903
Washtenaw	367,627	47.75	\$ 754.86	\$ 15,807.73	\$42,999
Kent	648,594	40.40	\$ 882.23	\$ 21,838.35	\$33,670
Ottawa	286,383	36.18	\$ 391.80	\$ 10,827.87	\$37,809
Muskegon	173,693	44.17	\$ 191.62	\$ 4,338.13	\$24,976
Kalamazoo	262,985	43.78	\$ 360.94	\$ 8,243.74	\$31,347
Ingham	290,186	55.86	\$ 423.45	\$ 7,580.91	\$26,124
Eaton	109,027	42.02	\$ 144.90	\$ 3,448.12	\$31,626
Clinton	78,443	37.48	\$ 99.80	\$ 2,662.80	\$33,946
Genesee	407,385	42.79	\$ 383.46	\$ 8,962.07	\$21,999

Sources: U.S. Census Bureau, 2017 Population Estimates.
Michigan Department of Treasury. "2017 Ad Valorem Property Tax Report," Rev 02-18, (http://www.michigan.gov/documents/taxes/2017_625_Ad_Val_Tax_Levy_Report_613125_7.pdf, accessed 4/19/18).

capita of \$22,500, almost half that of Oakland County at just under \$44,000. Tax rates levied reflect these differences with residents of Wayne County paying, on average, almost 56 mills in property taxes and residents of Oakland County paying less than 43 mills on average.

The differences are even more stark at the municipal level. In Southeast Michigan, mills levied range from 10.36 in Troy to 31.46 in Detroit (these are only mills levied by the city – they do not include mills levied on city residents by overlapping units of government). Per capita taxable values range from a low of just under \$9,000 in Detroit to almost \$56,000 in Troy (see **Table 4**). The differences are greatest in Southeast Michigan, but vary throughout the state. Taxable values per capita in Muskegon are less than half what they are in Holland; taxable values in Lansing are less than half what

they are in Delta Charter Township; and Flint has the lowest taxable value per capita on the table at just over \$7,000 (comparatively, Flint Township has a taxable value per capita of almost \$26,000).

The data indicate that the ability to pay an additional property tax transit millage varies dramatically in the urban areas included in this analysis. Furthermore, even wealthier communities that may have the ability to pay may lack the desire to increase their property taxes to pay for public transit as many are already taxed at fairly high rates. The average mills levied in Southeast Michigan is 47.11 mills, above the average of 41.68 mills levied across the state as a whole.

Unsuitable Regional Tax

Beyond the government lacking the capacity to use the property tax to fund additional public transporta-

Table 4

Property Tax Rates and Taxable Value per Capita in Selected Cities, 2017

	2017 Population	Mills Levied	Total Collect- ed (millions)	Taxable Value (millions)	Taxable Value per Capita
Detroit	673,104	31.46	\$189.94	\$6,038.05	\$ 8,970
Troy	83,813	10.36	\$ 48.47	\$4,679.80	\$55,836
Warren	135,022	27.68	\$ 89.42	\$3,230.38	\$23,925
Ann Arbor	121,477	16.14	\$ 88.69	\$5,495.59	\$45,240
Grand Rapids	198,829	8.99	\$ 41.60	\$4,629.45	\$23,284
Holland*	33,366	12.96	\$ 14.59	\$1,103.22	\$33,064
Muskegon	38,131	13.03	\$ 7.28	\$ 558.21	\$14,639
Kalamazoo	75,807	13.80	\$ 20.62	\$1,494.77	\$19,718
Lansing**	116,986	19.57	\$ 39.12	\$2,022.92	\$17,292
Delta Charter Twp	32,881	5.92	\$ 8.13	\$1,373.70	\$41,778
DeWitt Charter Twp	14,665	5.97	\$ 2.80	\$ 465.74	\$31,758
Flint	98,918	18.66	\$ 13.33	\$ 714.58	\$ 7,224

* Holland is located in both Ottawa and Allegan counties, so the city tax rate is the average of the city rate in each county

** Lansing is located in Ingham, Eaton and Clinton counties, so the tax rate is average of the three.

Sources: U.S. Census Bureau, 2017 Population Estimates

Michigan Department of Treasury. "2017 Ad Valorem Property Tax Report," Rev 02-18 (http://www.michigan.gov/documents/taxes/2017_625_Ad_Val_Tax_Levy_Report_613125_7.pdf), accessed 4/19/18).

tion services, the property tax may not be suitable as a regional funding source because it is too connected to a person's home and any benefits received (or not received) by paying the tax are associated with where a person lives. In other words, people connect paying property taxes to the benefits they receive for living at their house in their particular community.

Property taxes make sense to fund schools – people will move to a community with higher taxes if they have better schools. When it comes to local services, people will pay more to live in a community that provides more services (e.g., increased public safety or parks and recreation services, etc.). When it comes to regional services, some have been successfully funded by property taxes, including regional property tax millages in support of the Detroit Institute of Arts (DIA) and the Detroit Zoo. These regional property tax millages have been successful because they are generally low

(0.2 and 0.1 mills, respectively), they provide benefits across the region (e.g., residents of all three counties receive free admission to the DIA), and the institutions are considered regional, rather than Detroit-specific, attractions (the zoo is located in Oakland County).

When it comes to services that benefit an entire region, but that will not be spread equally across a region, property taxes are not a good fit because it is more difficult to see the connection between living in a particular community and getting the benefit of the tax. For example, if someone living in community A is paying the same property tax rate to support regional transportation as someone that lives in community B, but community A has greater access to high-frequency transit services because their community is closer to the central hub of business and retail in the region, people living in community B sometimes perceive this tax as unfair.

Farebox Recovery Ratios

Farebox recovery ratios refer to the amount of money raised to support public transportation services through user fees (i.e., fares). In many countries, fares cover a much greater percentage of the costs of providing public transit (e.g., recovery ratios of 50 percent are common in Canada and European countries and up to 100 percent in parts of Asia and Australia). In the U.S., most transit systems have recovery ratios between 25 and 35 percent and they can range from below 10 percent to over 60 percent.ⁱ Farebox recovery ratios generally vary depending on the type of service (i.e., paratransit has a lower farebox recovery average than rail or bus service). On average, according to the National Transit Database, for each \$1 spent in operating costs per trip across the U.S. on all modes and all transit systems, 36 cents are recovered through fares. Some states require public transit providers to recover a certain percentage of costs from transit-generated revenue (including fares and advertising revenues or other revenues raised directly).

One impediment to charging fares that will raise funds substantial enough to cover more of a percentage of transit costs in the U.S. is that public transportation is seen as a social service and providing low fares is seen as a public good. In other countries, public transit is seen as an important public utility and charging fees to provide it makes sense under that mindset. Some of these transit systems in other countries may provide subsidized fares for low-income riders, but their general fares are not so heavily subsidized.

It is an important debate whether public transit should remain inexpensive for all or if charging a higher price to those who could afford it might allow transportation services to improve so much as to attract more riders than a subsidized service can attract. For choice riders that can afford a car or other modes of transportation, the most prized benefit transit could provide may be convenience (more, frequent, high-quality service) rather than cheap transportation.ⁱⁱ

i MacKechnie, Christopher. ThoughtCo. "The Basics of Transit Funding," updated June 19, 2017 (www.thoughtco.com/basics-of-transit-funding-2798674?utm_source=emailshare&utm_medium=social&utm_campaign=shareurlbuttons, accessed 9/13/18).

ii Descant, Skip. FutureStructure. "What Do Transit Riders Prize Even More than Cheap Tickets? Convenience," May 23, 2018 (www.govtech.com/fs/transportation/What-Do-Transit-Riders-Prize-Even-More-than-Cheap-Tickets-Convenience-.html, accessed 9/13/18).

Public services like public transportation do provide benefits to the entire region, even if services are not equally accessible throughout the region, however. Other types of local taxes, sales or income taxes for instance, are not nearly as connected to place for people and therefore might be a better fit to fund these regional public services.

Lessons from Other States

A review of local transportation funding in urban areas in other states illustrates how unusual the property tax is as the primary funding source for public transportation services, as well as other potential sources of funding.

Heavy Reliance on Local Sales Taxes

Sales taxes are the most widely used source of dedicated local and regional funding for public transportation across the U.S.⁸¹ According to the National Transit Database, sales tax revenue comprise the second largest source of capital funds for transit after federal funds as well as the second largest source of operating funds after fares. A 2003 Government Accountability Office (GAO) study of the nation's 25 largest transit systems found 15 systems received dedicated sales tax revenue.⁸²

Some examples of urban regions across the U.S. that levy a local or regional sales tax in support of public transportation include Metro Transit in the Twin Cities region, the Regional Transit Authority in the Chicago area, the Metropolitan Atlanta Rapid Transit Authority, the Greater Cleveland Regional Transit Authority, Sound Transit in Seattle, and Los Angeles Metro. Some of these regional transportation providers rely solely on the local sales tax; others levy a local sales tax in combination with other local revenues. They are popular for a number of reasons, including the fact that they are paid in part by commuters from outside the region and visitors; they are paid in small increments so the tax bite is less evident; and they are often passed to support specific lists of transportation projects.

Multiple Funding Sources

A number of local or regional transportation providers rely on more than one kind of local funding source. Some examples include Metro Transit in the Twin Cities, which relies on a state motor vehicle sales tax and state general fund support as well as a regional property tax levy, county sales taxes, and county vehicle taxes.

Public transportation in the Chicago area benefits from a regional funding model that includes funding from the state, the city, a regional transit authority serving the six-county region around Chicago, and the Chicago Transit Authority (CTA). The regional transit authority was established to provide financial oversight, funding, and regional transit planning for the local transportation operators in the six-county region, which includes the CTA, Metra and Pace Suburban Bus, and Pace Americans with Disabilities Act Paratransit.⁸³

Public services like public transportation provide benefits to the entire region.

Operating funds for the regional transit authority comes from system generated revenue (40 percent), the regional sales tax (40 percent), and state funding (20 percent). System

generated revenues include passenger fares, advertising, and concession sales. State law authorizes the regional transit authority to levy a sales tax throughout the six-county region. Sales tax rates in the counties differ to recognize the differing levels of transit service provided throughout the region. The traditional regional sales tax is 1.0 percent in Cook County and 0.25 percent in the five suburban counties.¹ The regional transit authority retains 15 percent of the proceeds from the traditional sales tax and passes along the remaining 85 percent as follows: CTA receives 100 percent of the Chicago sales tax and 30 percent of the suburban Cook County sales tax; Metra receives 55 percent of the suburban Cook County tax and 70 percent of the tax collected in the five suburban counties; and Pace receives 15 percent of the suburban Cook County tax and 30 percent of the five suburban counties' tax.

In January 2008, Illinois state law increased the regional sales tax rate by 0.25 percentage points in

¹ DuPage, Kane, Lake, McHenry, and Will counties.

Cook County and by 0.5 percentage points in the five suburban counties. The proceeds of the tax increase in Chicago go to the CTA; in the suburban counties, the proceeds are split between the regional transit authority and the county where the tax is collected (counties must use the proceeds for transportation or public safety purposes). In addition, Chicago levies a real estate transfer tax of \$4.25 per \$500 of the transfer price for the privilege of transferring real property in the city; \$1.50 of the tax is transferred to the CTA in support of public transit.

Illinois law provides for a public transportation fund in support of the regional transit authority, which is funded out of the state's general fund revenue in an amount equal to 30 percent of the revenue realized from the regional sales tax and 30 percent of the revenue realized from CTA's portion of the Chicago real estate transfer tax. This regional funding model benefits from more than one source of funding (e.g., state funding, regional sales tax, and local real estate transfer tax) and includes a measure of tax base sharing through a regional, rather than local, sales tax that allows for all transit operators in the region to benefit from the tax and provides funds for the regional transit authority to coordinate and fund transportation in the region.

Chart 5 highlights the CTA's 2017 budgeted operating revenue to give an idea of how this regional funding model comes together to provide funds for the largest transit provider in the region. CTA's FY2017 budgeted operating revenues total \$1.52 billion. Sales Tax I revenue includes the revenue from the 1.0 percent sales tax in Cook County. Sales Tax II and PTF revenue includes the revenue from the 0.25 percent sales tax increase in Cook County and the state's public transportation fund (PTF), which matches 30 percent of the revenue raised by the regional sales tax with state funds. RETT and PTF revenues refer to funds raised by the real estate transfer tax levied by Chicago to support the CTA and the matching state funds that were put into the PTF.

Public transportation in the Seattle region is provided by the Central Puget Sound Regional Transit Authority

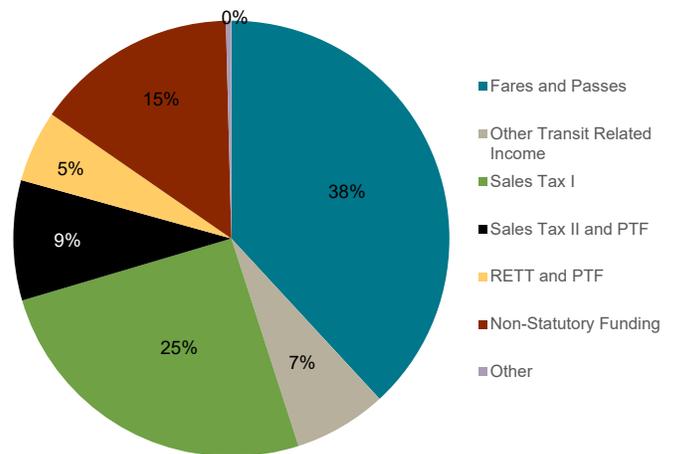
(Sound Transit), as well as by some smaller transportation agencies. Local taxes make up just over half of Sound Transit's total funding; remaining funding comes from federal grants, fares, interest earnings, and miscellaneous revenues. Local taxes include a 1.1 percent car tab tax (\$110 annually for each \$10,000 of vehicle valuation); 1.4 percent sales and use tax; a property tax levied at \$0.25 per \$1,000 of assessed valuation property tax (\$100 annually for a \$400,000 house); and 0.8 percent rental car sales tax. Many of these taxes were increased or instituted (i.e., property tax) with passage of a 2016 ballot measure.

Sharing the Tax Base

Tax base sharing is used to support public transportation in many urban areas across the country. This is because any regional (e.g., county-level) tax to support transit is levied across the entire region to provide services throughout the region leading to some level of tax base sharing. For example, a sales tax is levied throughout the six-county region in the Chicago area to support public transportation. The tax is levied at a lower rate in the out-county areas than in the central county to reflect the diminished service levels provided in those communities.

Chart 5

CTA FY2017 Budgeted Operating Revenue



Source: President's 2017 Budget Recommendations. Chicago Transit Authority: Building on 70 Years of Service.

The Twin Cities region in Minnesota has a state law requiring tax base sharing, the 1971 Charles R. Weaver Metropolitan Revenue Distribution Act, now referred to as Fiscal Disparities.⁸⁴ This program requires nearly 200 local governments to share a portion of the property tax dollars generated by industrial and commercial growth in the metropolitan area; 40 percent of the tax base increase since the base year of 1971 goes into an area-wide pool and an area-wide tax rate is levied on the pool's base. The tax base from the pool is distributed to communities through an index that compares each community's market value per capita to the average market value per capita for all communities in the seven county region. Cities that have less market value per capita than the region's average receive a relatively larger distribution from the pool than cities with greater market value per capita than the average.

The program redistributes hundreds of millions of dollars a year among communities, schools, and special taxing districts in an effort to even out the tax burden across the metropolitan area, reduce competition among communities for commercial and industrial development, and ease pressure to develop land better suited for recreation and open space. In 2016, taxing units shared \$561 million in taxes generated from the pool. This program has not eliminated the gap between communities with the highest and lowest commercial and industrial tax bases, but it has lowered it from an estimated gap of 12 to one to a gap of about five to one.

This program is seen as a national model of regional cooperation, though it does have its critics, especially among the wealthier suburbs in the region who are forced to share part of their tax base with less prosperous communities. It has enhanced regional planning

and cooperation because it reduces the need for local governments to compete in economic development and promotes regional land-use planning.

Policy Options

Moving forward, state and local governments have some options to provide more stable regional funding for public transportation services. These include the authorization of new local-option taxes in support of public transportation, preferably levied at the regional level; the institution of new funding models that require tax base sharing, spreading the tax burden across multiple local taxes, and feathering tax rates so that those closer to the urban center pay higher taxes in support of public transportation and those further out pay lower tax rates to reflect the lower services they receive;

and the consideration of multimodal transportation funding, which would group together road and transit funding.

New Local-Option Taxes

In order to improve regional transportation services in Michigan's urban areas, local governments and transportation authorities need more funding options than just the local property tax. However, the level of funding needed to adequately provide regional transportation services will require the support of at least one of the big three taxes: property, income, or sales. As discussed above, property taxes may fit as part of a regional transit funding model, but they are not a good political (or practical) fit as the main source of funding in Michigan. In most other states, public transportation services are supported by local taxes other than just a property tax. Smaller taxes and fees (e.g., motor fuel and vehicle related taxes or fees, etc.) may work as part of a funding system to support transit.

To improve regional transportation services in Michigan's urban areas, local governments and transportation authorities need more funding options than just the local property tax

Table 5 summarizes potential local-option taxes that could be levied in support of public transportation or in support of local governments generally.⁸⁵ With the exception of sales or income taxes, all of the taxes on **Table 5** represent minor taxes that could be levied as part of a funding package for public transportation, but that would not provide adequate funding on their own to support regional transportation services.

Before any new local taxes could be levied in Michigan, the following steps would need to be taken:

1. The state would need to pass a law authorizing local units to levy any new tax (a local sales tax may require a constitutional amendment).
2. Once the Constitution and state law allow for a local tax, then the legislative body of the local government or authority would need to pass a resolution or ordinance to levy the tax at whatever rate is desired and allowed for in state law.
3. Finally, any new local tax would need voter approval.

Any new local taxes would be more effective if levied at the regional, rather than local, level. This could be at a county level or by a regional authority. Authorizing taxes at the most local level (i.e., city or township) reduces their administrative efficiency, decreases their equity and neutrality^m, increases local competition, and intensifies socioeconomic disparities. Authorizing the levy of new local-option taxes at the regional level addresses some of these concerns over economic distortions, socioeconomic disparities, and local competition.

^m Neutrality is defined as the idea that taxes should be structured so as to minimize interference with economic decisions in otherwise efficient markets.

Table 5
Potential Local-Option Taxes to Support Transportation

Type of Tax	Who Can Levy in MI Currently	Constitutional or Statutory Restrictions	Related to Transportation	Adequate	Transparent	Reliable	Equitable	Neutral	Administratively Efficient	Implementation Potential
Sales Taxes:										
General Sales	State	On rate and disposition	No	Yes	Yes	Responsive to economic downturns	Somewhat regressive	No	Yes, depending on tax structure	Difficult; may require constitutional amendment
Selective Tax on Services	None	n/a	No	Yes	Yes	Responsive to economic downturns	Progressive	Somewhat	Can increase administrative burden of tax	Requires legislative and voter approval
Income Taxes:										
Personal Income	State and cities	Yes	No	Yes	Somewhat	Responsive to economic downturns	Progressive	Yes	Yes, depending on structure	Requires legislative and voter approval
Corporate Income	State	Yes	No	Yes	Somewhat	Responsive to economic downturns	Progressive	May affect business location decisions	Yes, depending on structure	Requires legislative and voter approval
Business-Related Fees	State	Yes	No	No	Yes	Responsive to economic downturns	Progressive	May affect business location decisions	Yes	Requires legislative and voter approval
Transportation-Related Taxes:										
Motor Fuel	State	Most dedicated to roads	Yes, but often used to fund roads	No	Yes	No	Progressive	No	No	Difficult - collected at wholesale level, making local collections difficult
Vehicle and License Fees	State; RTA	Most dedicated to roads	Yes	No	Yes	Yes	Regressive if flat fee	Yes	Yes	RTA can implement with voter approval; others need legislative authorization

Table 5 (continued)

Type of Tax	Who Can Levy in MI Currently	Constitutional or Statutory Restrictions	Related to Transportation	Adequate	Transparent	Reliable	Equitable	Neutral	Administratively Efficient	Implementation Potential
Car Rental	None	n/a	Yes	No	Yes	No	Progressive	Yes	No	Requires legislative and voter approval
Parking	State and select municipalities	Yes	Yes	No	Yes	Yes	Regressive	Yes	No	Requires legislative and voter approval
Tolls	Not generally used	n/a	Yes	No	Yes	Yes	Progressive	Yes	Yes	Difficult; federal law limits state tolling ability
Congestion Pricing	None	n/a	Yes	No	No	Yes	Progressive	Yes	No	Difficult – largely untried and requires authorization
Vehicles Miles Traveled Fees	None	n/a	Yes	No	No	Yes	Progressive	Yes	No	Difficult – requires vehicle tracking
Emissions Fees	None	n/a	Yes	No	No	Yes	Progressive	Yes	No	Difficult – requires broad scale to implementation
Transportation Utility Fees	None	n/a	Yes	No	Yes	Yes	Progressive	Yes	Yes	Requires legislative and voter approval
Other Taxes:										
Utility	State and Detroit	Some	No	No	Yes	No	Regressive	Somewhat	Yes	Requires legislative and voter approval
Real Estate Transfer Fees	State	Yes	No	No	Yes	No	Somewhat progressive	Somewhat	Yes	Requires legislative and voter approval
Tourism-related (hotels, restaurant meals)	Select counties and cities	Dedicated to tourism and convention centers	Yes	No	No	Yes	Progressive	No	No	Requires legislative and voter approval
Alcohol	State	Some	No	No	No	Yes	Regressive	No	No	Requires legislative and voter approval
Tobacco	State	Yes	No	No	No	No	Regressive	No	No	Requires legislative and voter approval
Marijuana	State	Yes	No	No	No	No	Regressive	No	No	Requires legislative and voter approval
Casino Gambling	State and Detroit	Yes and number of casinos restricted	No	No	No	No	Regressive	No	No	Difficult due to casino restrictions
Sugar	None	n/a	No	No	No	No	Regressive	No	No	Difficult; local tax prohibited by legislature
Sharing Economy	None	n/a	Ridesharing has limited relation	No	Depends on tax	No	Progressive	Somewhat	No	Requires legislative and voter approval
Impact Fees (on new development)	None	n/a	Yes (requires infrastructure expansion)	No	No	No	Progressive	Somewhat	Yes	Requires legislative and voter approval

Sources: Bureau of Governmental Research. "Paying for Streets: Options for Funding Road Maintenance in New Orleans," May 2017 (www.bgr.wp-content/uploads/2017/07/BGR-PayingForStreets.pdf, accessed 9/20/18).
 Transit Cooperative Research Program (TCRP), Transportation Research Board. The National Academies of Sciences, Engineering, and Medicine. TCRP Report 129: "Local and Regional Funding Mechanisms for Public Transportation," 2009.
 Arizona PIRG Education Fund. Why and How to Fund Public Transportation, March 2009.

Regions would still compete with each other for tax revenues, but it is more difficult for businesses and individuals to alter their behavior by leaving a region than it is if they simply have to go to the next closest unit of local government. Plus, regions are made up of bigger groups of people so socioeconomic and income inequalities tend to be less severe.

Local Sales Taxes. Sales taxes are the most common “big” tax levied in support of public transportation. Local sales taxes can include general sales taxes and selective sales (or excise) taxes on specific things (e.g., “sin” taxes or hotel taxes). Sales taxes, either general or selective, can be levied on goods and/or services.

Some advantages of sales taxes to support transit include the fact that they have a broad base and provide adequate and reliable revenue at fairly low rates. It is important to pay attention to how they are applied; tax experts generally recommend that sales taxes apply to the final retail sales of goods or services, but not to intermediate business-to-business transactions in the production chain. Sales taxes can keep pace with inflation and they are politically popular because they spread costs to all transit users, including visitors and commuters, rather than being borne solely by residents. They are also popular because people have more control over whether they pay the tax than they do with property or income taxes (i.e., it is easier to choose not to make a particular purchase to avoid the tax than to choose not to pay property or income taxes). Sales tax revenue can fluctuate with the economy, but generally have strong growth potential. They capture economic activity not captured by the property tax (e.g., purchasing power). They are also easy to administer if structured and piggybacked on a state sales tax.

The sales tax can be regressive as it is levied on more goods than services and falls more heavily on lower-income people. However, some argue that the net effect can be progressive because the benefits of transit tend to be more concentrated in lower-income groups than the incidence of the sales tax.⁸⁶ A disadvantage

of sales taxes is that they can lead to tax avoidance if people cross local borders to purchase items in municipalities that do not levy a local sales tax; this problem is not as severe if a local sales tax is levied regionally, making it harder to avoid the tax.

Local general sales taxes are not currently allowed in Michigan. The state Constitution limits the sales tax rate to six percent and the state is levying it at the maximum rate.⁸⁷ The language in the Constitution is not clear as to whether the rate limit applies only to the state or to the state and its political subdivisions, which makes it unclear if the state could authorize local units of government (including transportation authorities) to levy a local sales tax or if allowing local units to levy a sales tax would require a constitutional amendment. Furthermore, the Constitution dedicates a large portion

of sales tax revenue to the School Aid Fund and state revenue sharing to local units of government, which requires sales tax revenues to go to purposes other than public transit.

Michigan is an outlier among the states when it comes to

local-option sales taxes. Thirty-seven statesⁿ allow at least some types of local governments to levy a local-option sales tax. How local sales taxes are structured differ across the states: variation exists in which local units are allowed to levy taxes, how many local units actually do levy taxes, and how broad a local tax's base is. Not all of these states will allow transit authorities to levy local-option sales taxes, but that does not preclude local governments within the states from levying local-option sales taxes in support of public transit. At the local and regional level, sales taxes enacted to support transit typically range from 0.25 to 1 percent; some are perpetual, others require reenactment or extension through periodic popular votes.⁸⁸

Some advantages of sales taxes to support transit include the fact that they have a broad base and provide adequate and reliable revenue at fairly low rates.

n Alabama, Alaska, Arizona, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Iowa, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Michigan's general sales tax is levied largely on goods and not on many services. One option to consider would be expanding the sales tax to apply to more services and dedicating some of the increased revenue to public transportation. The sales tax base can be expanded by state law, but changing the distribution so that the revenues can be used to support public transportation services rather than the School Aid Fund and state revenue sharing would likely require a constitutional amendment.

A similar option would be to allow local units of government to levy an excise tax on specific services, which are not included under the general sales tax, to fund public transportation. For example, one category of services that is not currently taxed in Michigan, but is in other states, is amusement or entertainment services (e.g., tickets to concerts, sporting events, cultural events; merchandise sold at events; ski hills; bowling alleys; Netflix and streaming services; etc.). Other types of selective sales, or excise, taxes might include taxes on utilities or tourism-type services.

An excise tax on specific types of services would not require a constitutional amendment, as it would not be a general sale tax, but it would require legislative authorization before a local government or authority could levy it. This type of tax could be levied at a fairly low rate if it was specific to public transportation services and would tax currently untaxed services.

Local Income Taxes. Local income taxes in support of public transportation can include personal income taxes, corporate income taxes, employer or payroll taxes, or business license fees. According to the National Transit Database, these taxes are not as common in support of public transportation as sales or property taxes.

The advantages to local income-type taxes include that they are broad-based, indexed for inflation, fairly progressive (depending on how they are structured—flat versus graduated taxes, number of exemptions, etc.), and easy to administer if piggybacked on a state income tax. It would be a fairly transparent and neutral

tax, as it is unlikely that people would change their employment status due to a regional income tax. Income taxes at the local level will capture economic activity that is not captured by the property tax, including the value of earned income and investments.

Local income or business taxes ensure that commuters and businesses contribute to public transportation. However, some disadvantages include that commuters who pay the tax have no vote or say in the tax and they may provide incentives for businesses to locate outside of a jurisdiction. This would be less likely with a regional income or business tax than with one

levied at the municipal level.⁸⁹ Income taxes are also tied more closely to the ebbs and flows of the economy than property tax revenues, making them more cyclical.

While local-option income or business taxes in support of transit are not very common, neither are local-option income taxes in general. Eighteen states^o allow local units to levy local-option income taxes, most at the city or county level. Oregon and Ohio specifically allow transit districts to levy local-option income taxes, but municipalities or counties in other states may levy income taxes in support of transit. Indiana, for example, passed a law allowing six central counties to levy an income tax of up to 0.25 percent dedicated to mass transit and Marion County (home of Indianapolis) voters approved this tax to support increased transit services provided by IndyGo. Furthermore, only seven states allow local units to levy a corporate income tax.⁹⁰

Local-option income taxes are available to cities in Michigan, and 24 cities currently levy a local income tax, including nine cities that are in the four urban transit regions.^p To the extent that those cities support

Local income taxes are broad-based, indexed for inflation, fairly progressive, and easy to administer.

- o Alabama, California, Colorado, Delaware, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Missouri, New Jersey, New York, Ohio, Oregon, Pennsylvania, Washington, and West Virginia.
- p Detroit, Hamtramck, Highland Park, and Pontiac in Southeast Michigan; Grand Rapids and Walker in West Michigan; Lansing and East Lansing in the capital region; and Flint in Genesee County.

the local transportation providers in their community, they may use income tax revenue to support those services. This is most likely in Detroit, where DDOT is part of city government. Transportation systems in Ann Arbor, Grand Rapids, Kalamazoo, Lansing, and Flint are managed and operated outside of city government.

The state Constitution prevents the state and its political subdivisions (i.e., local governments) from levying a graduated income tax, and state law sets the rate limits for cities that levy a local income tax.⁹¹ The biggest disadvantage to local-option income taxes in Michigan is that they are levied at the most local level, which can lead to competition and economic distortions. This may be why so few cities levy the tax. Authorizing the tax at the county or regional level may eliminate some of the negative externalities associated with levying the tax and be a way to provide more funding in support of regional transportation.

New Transportation Taxes and Fees. Many of the transportation taxes and fees listed in **Table 5** (on pages 35 and 36) have been used in Michigan and other states for years (e.g., motor fuel taxes, vehicle registration taxes and fees, etc.). Of note are some new types of charges or fees that are being applied to transportation, including congestion pricing, vehicle miles traveled fees, emissions fees, and transportation utility fees. These are being pursued in some areas of the U.S. and internationally to try to curb pollution and emissions from automobiles, as well as to raise money for public transportation and expanded mobility options in urban areas.

Congestion pricing, which has been used more internationally, is a system of surcharging users of a transport network during periods of peak demand to reduce traffic congestion. A vehicle miles traveled fee is assessed on each vehicle based on the number of miles traveled. This is fairly new with some pilot programs being tested across the U.S.; major implementation obstacles exist to using this on a wide scale at this time,

including the fact that determining the number of miles driven within a particular jurisdiction would require some sort of tracking device in vehicles.⁹² Emissions fees are based on the amount of pollutants released by specific vehicles. These have not been attempted in U.S. and would require federal and state authorization as well as an application on a broader level than local or regional to be effective.⁹³

A transportation utility fee is an alternative property-based funding mechanism that charges property owners a fee based on the type of property and estimated street usage. It treats the street network like a public utility and charges for it like it would charge for water usage. This type of funding is used locally in Oregon and is sometimes referred to as road user fees or street maintenance charges. The fees can be placed on monthly utility bills.⁹⁴

One of the big benefits to using transportation type taxes and fees in support of public transportation is that they constitute road user fees and, therefore,

New types of charges or fees are being applied to transportation, including congestion pricing, vehicle miles traveled fees, emissions fees, and transportation utility fees.

have a direct connection to public transportation, which can help alleviate road use and congestion. They can be considered as user fees that make apparent some of the social costs of driving.⁹⁵ However, relatively little direct use is made of

these various motor vehicle related taxes and fees in support of transit due mainly to the still dominant view that revenues from personal vehicle use should be directed to roadway improvements for those who drive, especially given the growing gaps between roadway needs and available revenues.⁹⁶ Furthermore, transportation related taxes and fees are not viable as primary funding sources for public transportation as they would not raise large sums of money unless rates were set prohibitively high.

These new types of charges and fees are not used in Michigan, but they represent the changing nature of funding transportation (both roads and public transit). As far as more traditional transportation taxes and fees, the state

Constitution requires all taxes imposed on motor fuels and on registered motor vehicles to be used exclusively for transportation purposes as follows: not less than 90 percent, after the payment of necessary collection expenses, must be used to fund roads and bridges and the balance may be used for public transportation purposes.⁹⁷ If local transportation taxes were expanded to support public transportation, it is not clear how this constitutional provision would affect their disposition. Allowing more than 10 percent of their proceeds to be used to support public transportation may require a constitutional amendment.

Tax Base Sharing

A new funding model to support urban public transportation services will likely need to include new local (or regional) taxes, but will also need to be connected to regional policies related to governance and funding that promote public transportation and the region when making land use, planning, and public transportation decisions. One important part of a regional funding model is tax base sharing.

Public-Private Partnerships

Public-Private Partnerships (PPP or P3s) have been touted as an option for funding public projects, including public transportation projects. The PPP Knowledge Lab defines P3s as “a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance.”ⁱ

P3s are expanding in some areas of the country in various public transportation projects (highways, airports, public transit, etc.). They are viewed by some as an innovative way to fund projects without needing to raise taxes and/or issue bonds to pay for the project (at least in the short-term). However, it is a misconception to view P3s as a funding source; rather they provide additional financing opportunities and can create efficiencies that lead to cost savings. They do not replace the need for public funding to support transportation projects.ⁱⁱ Furthermore, they are not without risks (e.g., long-term deals can constrain policymaking for decades, such as the fact that Chicago leased its parking meters for 75 years will affect any city parking decisions for that entire time period) and do not provide a cure-all for public transportation needs.ⁱⁱⁱ

Some P3s related to public transportation in Michigan include:

- QLine in Detroit: a 6.6 mile circulating streetcar line serving 12 locations on Woodward Avenue from downtown Detroit through Midtown, New Center, and the North End since May 2017.
- Michigan Transit Connection (MTC): a nonprofit, non-emergency medical transportation brokerage organization.
- Planet M: a partnership between MDOT, universities, local agencies, automobile manufacturers and suppliers, and others in the public and private sector to create and maintain a connected vehicle environment encompassing a large segment of Southeast Michigan.

The QLine and MTC are unique P3 models because they are not operating from a profit motive, but to promote regional cooperation and improved transportation options. Planet M represents a more traditional P3 model where the state partners with the private sector with the hopes that the state will achieve a public good and benefit from the private sector profit motive.

- i World Bank Group. Public-Private-Partnership in Infrastructure Resource Center: “What are Public Private Partnerships?” (ppp.worldbank.org/public-private-partnership/overview/what-are-public-private-partnerships, accessed 5/31/17).
- ii Pula, Kevin. National Conference of State Legislatures. “Public-Private Partnerships for Transportation Categorization and Analysis of State Statutes,” January 2016 (www.ncsl.org/research/transportation/public-private-partnerships-for-transportation-categorization-and-analysis-of-state-statutes-january-2016.aspx, accessed 5/9/18).
- iii Holeywell, Ryan. *Governing Magazine*. “Public-Private Partnerships Are Popular, But Are They Practical?,” November 2013, www.governing.com/topics/transportation-infrastructure/gov-public-private-popular.html (accessed 5/31/17).

Some services, like public transportation, go beyond local political boundaries and are only possible through regional funding models. **Tables 3 and 4** (on pages 29 and 30) illustrate the differences in taxable values per capita among the communities in Southeast Michigan, which is directly related to the ability of communities to pay for services and the need for tax base sharing to fund regional transportation services. Detroit has far higher property tax rates than Troy because Detroit has less than one-fifth the taxable value of Troy. Socioeconomic differences are not as stark at the county level, but Wayne County still has about half of the taxable value per capita as Oakland County. Differences in taxable value per capita are not as pronounced in West Michigan and other urban regions, but they vary.

When discussing a new RTA tax in Southeast Michigan, some political leaders and residents of Oakland and Macomb counties, especially those in communities far from the urban center, argued that they would not get the benefits of the regional transportation system, and asked why they should fund it through higher property taxes, especially when many of these communities already pay a property tax millage to fund SMART services. The answer is that improved regional transportation services benefit the entire region. While it is true that the direct beneficiaries of enhanced transportation services will be the actual users, others benefit indirectly through increased tourism, expanded regional and cross-county services, better connection to jobs and retail, decreased road congestion and wear, and improved public health. However, it is also true that not all will get the same level of benefit from expanding public transportation, even though all property owners in the region would pay the same tax for it.

Tax base sharing can be done with multiple different local taxes, including property, sales, or income taxes, as well as smaller taxes levied in support of public transportation. The key is that the taxes are levied regionally and the tax revenues are spent across the

region in support of projects that benefit and expand mobility and access to public transportation services.

While tax base sharing is necessary to fund some regional services, it can be politically challenging, especially in a region as diverse as Southeast Michigan. The state can take a role by either requiring tax base sharing in support of public transportation or by providing incentives for more regional support of public transportation services. The state already allows regions to support public transportation services through state authorizing legislation allowing local units of government to create and support public transit authorities.

The state could beef up authorizing legislation by creating more RTAs across the state, which require all the counties in a region to be part of the transit authority and its funding mechanism. The state could also

provide financial incentives (e.g., grants) to regions that are funding transportation services with methods that include tax base sharing.

Feathering Tax Rates

Local units need to work together to support regional services and policies, like public transportation, and fund them as a region. One way to make this more palatable for the local units that are farther from the urban center of a region is to feather the tax rates. Under such a scheme, higher taxes are levied near the central city and lower taxes farther from the city to reflect the fact that services decrease the farther you get from the urban center. This is more feasible if counties are not the units levying the tax.

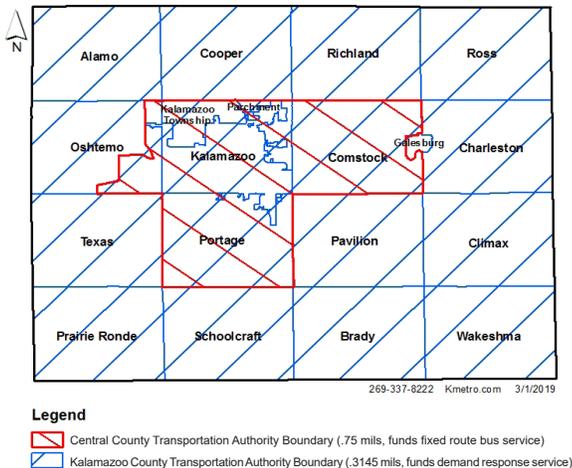
The property taxes levied to support public transportation services in Kalamazoo and Flint areas are levied at different levels depending on proximity to public transportation. These taxes are levied by the transportation authorities rather than by the counties. Both areas have one property tax millage across the entire county to support transportation services that benefit the entire county, and then the central urban areas

Some services, like public transportation, go beyond local political boundaries and are only possible through regional funding models.

around the cities of Kalamazoo and Flint levy an additional property tax millage to support the fixed-route bus and expanded services available near the central cities (see **Map 3**). This allows the entire county to receive and pay for some level of service, but does not make the out-county regions pay a higher tax for urban services that do not benefit them directly.

Map 3

Two Taxing Districts in Kalamazoo Metro Region



Source: Kalamazoo Metro Transit.

This is also done in the Chicago region where Cook County pays a higher sales tax rate to support transit than the other counties in the region, and residents of Chicago pay a real estate transfer tax to support transit that is not levied in other cities in the region. It is also done in the Atlanta region where residents of Atlanta pay an additional sales tax rate that is not levied in the rest of the region.

If a local-option sales tax, for example, was allowed in Michigan, the tax could be levied across the Southeast Michigan region with a higher rate in the urban centers of the region. Anyone across the region, or from outside of the region, who works, shops, or visits the urban centers would be subject to the higher rate (and anyone who purchases goods outside of the urban centers would be subject to the tax at a lower rate) and the proceeds would be spent to improve public transportation services across the region.

Spread the Tax Burden

Another option is to levy multiple local taxes in support of public transportation. Regional transportation

systems in urban areas will not survive without the support of one of the big three taxes: property, income, or sales. That being said, one of these taxes alone does not need to be the only support for public transportation services in a region. For example, recently in Southeast Michigan, the focus has been on trying to fund the RTA through local property taxes alone; maybe a plan that relies on local property taxes in combination with a vehicle registration tax and support from constituent local governments would work. Or if local-option taxes were expanded in Michigan, regional transit providers could attempt to couple a local property tax in support of transit with a local sales or income tax. Many public transportation providers in other states rely on multiple local taxes to support transit services, including the CTA and regional transit authority in Chicago and Sound Transit in Seattle.

Again, the state's role in this is to provide local governments and/or regional authorities with more local funding options and the ability to levy taxes at different rates throughout a region. State authorizing legislation needs to explicitly allow local governments and/or public authorities to do these things. The role of local governments and public authorities is to get creative and use all their options, including feathering tax rates and levying multiple taxes (with voter support), in support of public transportation.

Multimodal Transportation Funding

One big problem that often arises with expanding funding for public transportation is that there is an outcry that more road funding is needed and that increased funds to support public transportation take funds away from the roads.⁹⁸ A recent Senate Fiscal Agency report highlighted the growing costs of road maintenance and stated that Michigan's roadways will require at least \$2.2 billion per year on top of the increase from the 2015 road funding package.⁹⁹ While everyone can agree that more funding is needed for road infrastructure, some might point out that our past choices of focusing most transportation projects on concrete and roads and moving vehicles has led to more road lanes and miles to maintain; changing the focus to multimodal transportation and moving people rather than cars might help to lessen the future burden of road infrastructure needs. One option might be to combine road and transit funding.

In San Diego County, the local funding mechanism for transportation and roads is combined in a multimodal revenue raising process. In 1987, under the leadership of the former Metropolitan Transit Development Board, county voters enacted TransNet: a 20-year, one-half cent sales tax which would provide \$3.3 billion to support specific amounts and projects for transit expansion, highway expansion, and local street and roadway improvements. Faced with the expiration of TransNet in 2008, county voters approved a 40-year extension of the tax in 2004, which is expected to generate \$14 billion over the period. Enactment occurred with over 67 percent of the vote meeting the statutorily-required two-thirds minimum for enactment of new tax measures in California. TransNet revenues will be split into thirds: one-third for transit, one-third for highways, and one-third for local streets and roadways, with specific amounts dedicated to bicycle and pedestrian improvements.¹⁰⁰

In San Diego County, local and regional officials have taken the viewpoint that roads and transit projects and funding should be complementary, not competitive. Conversely, in Michigan, transportation funding and projects at the state and local level are separated between roads and transit and the need for road funding is prioritized. Increases in transportation funding in recent years have gone almost exclusively to road projects. Furthermore, the way the system operates makes road commissions and transit officials into competitors for

funding rather than encouraging them to work together to address all road and transportation needs.

It is possible for the state and local units to link road and transit projects and funding together. The state must follow constitutional and statutory guidelines in how it separates road funding from transit funding, but that does not necessarily preclude transit and road projects from being considered together in a complete streets policy.

At the local level, local units could request funding for roads and transportation projects together. However, it does become complicated because county road commissions and local governments have authority over roads and streets and transit authorities (and local governments in some instances) have authority over transit projects. Combining road and transit projects and funding would require either 1) these groups to work together (a potentially difficult proposition when they are often seen as competitors for the same funding) or 2) authority to be given over both roads and transit to public authorities (e.g., RTAs) or regional governments (e.g., counties).

The important point to remember is that roads and transit both need to be adequately funded and projects that combine the two could benefit both. When discussing a potential RTA transit tax proposal for 2018, one columnist proposed increasing the RTA transit levy and using it to fund both transit and roads.¹⁰¹

Conclusion

To continue the revitalization of the Detroit region, as well as in other urban regions across the state, effective regional transportation systems are critical. Effective systems provide integrated, seamless transportation services across an urban region to all types of riders, including riders that have the ability to take a car, but choose public transportation, as well as other transportation options, as their preferred travel method. The regional transportation systems of the future will include public and private transportation options that are marketed and paid for by the user in a single fee. They will provide door-to-door transportation options that integrate walking, biking, and scootering with ridesharing and public transportation options.

The first key to providing effective regional transportation systems is to change the perception of public transportation from a social welfare program to a vital public utility that is necessary to urban revitalization. Providing the regional transportation systems of the future in Michigan's urban areas will require regional governance of public transportation and policies that affect the success of transit, including planning and

zoning policies and streets or road policies. Effective regional governance systems might be mandated by the state or voluntary organizations of local and regional units, but they will include regional policy development, implementation, and coordination of transportation and related policies. Providing effective transportation systems will also require regional funding mechanisms that could include new local (or regional) taxes, tax base sharing, feathering tax rates and spreading the tax burden, and multimodal transportation funding options.

No one right way exists to provide regional transportation in urban areas; many policy options related to governance and funding can lead to effective regional transportation systems. However, it is clear from the research that it is mandatory to approach public transportation in urban areas from a regional, rather than local, perspective. Urban transportation systems will not grow, and will not be able to contribute to the growth of their urban regions, without regional governance and funding mechanisms to support them.

Appendix A

Population by Age Group: Projections 2020 to 2060

(in millions)

	Population						Change from 2016 to 2060	
	2016	2020	2030	2040	2050	2060	Number	Percent
Under 18 years	73.6	73.9	75.4	76.8	77.9	79.8	6.2	8.4%
18 to 44 years	116.0	119.2	125.0	126.3	129.3	132.3	16.3	14.1%
45 to 64 years	84.3	83.4	81.3	89.1	95.4	97.0	12.7	15.1%
65 to 84 years	42.8	49.4	64.0	66.4	67.1	75.7	32.9	76.9%
85 to 99 years	6.3	6.6	9.0	14.2	18.2	18.4	12.1	192.1%
100 years and older	<u>0.1</u>	<u>0.1</u>	<u>0.1</u>	<u>0.2</u>	<u>0.4</u>	<u>0.6</u>	0.5	500.0%
Total population	323.1	332.6	354.8	373.0	388.3	403.8	80.7	25.0%

Source: data and table from U.S. Census Bureau.

Vespa, Jonathan; Armstrong, David M.; Medina, Lauren. U.S. Census Bureau. Current Population Reports, Population Estimates and Projections, P. 25-1144: "Demographic Turning Points for the United States: Population Projections for 2020 to 2060," March 2018.

Appendix B Local Public Transit Providers in Michigan

Transit Authority or Dept.	Type of Government	Services Provided										
		Light-Rail System	Fixed Route Buses	Flexed Route Buses	Bus Rapid Transit	Express Buses	Door-to-Door Paratransit	Dial-A-Ride	Carpool/Vanpool	Special/Seasonal Service	Charter Service	Regional (out-county) Service
Adrian Dial-A-Ride (DART)	City department						x	x				
Alger County Transit (ALTRAN)	Regional authority						x	x				
Allegan County Transportation	County department						x	x				
Alma Dial-A-Ride (DART)	City department						x	x				
Ann Arbor Area Transit Authority (TheRide)	Regional authority		x			x	x		x	x		
Antrim County Transportation	County department						x	x				
Barry County Transit	County department						x	x				
Battle Creek Transit	City department		x				x					
Bay Area Transportation Authority (BATA-Leelanau and Grand Traverse counties)	Regional authority		x				x	x		x		
Bay Metropolitan Transportation Authority (BMTA-Bay County)	Regional authority		x	x			x					
Belding Dial-A-Ride (DART)	City department						x	x				
Benzie Transportation Authority (Benzie Bus)	Regional authority		x	x			x	x*				x
Berrien County Public Transportation (Berrien Bus)	County department			x			x	x*				
Big Rapids Dial-A-Ride (DART)	City department						x	x				
Blue Water Area Transit (City of Port Huron area)	Regional authority		x				x	x		x		
Branch Area Transit Authority (BATA)	Regional authority						x	x				
Buchanan Dial-A-Ride (DART)	City department						x	x				
Cadillac Wexford Transit Authority (CWTA)	Regional authority						x	x				x
Capital Area Transit Authority (CATA-City of Lansing area)	Regional authority		x				x	x*				x
Caro Transit Authority (CTA)	Regional authority						x	x				
Cass County Transportation Authority (CCTA)	Regional authority			x			x	x				
Charlevoix County Public Transit	County department						x	x				
City of Sault Ste. Marie	City department						x	x		x		
Clare County Transit Corporation (CCTC)	Regional authority						x	x				

Appendix B (continued)

Transit Authority or Dept.	Type of Government	Services Provided										
		Light-Rail System	Fixed Route Buses	Flexed Route Buses	Bus Rapid Transit	Express Buses	Door-to-Door Paratransit	Dial-A-Ride	Carpool/Vanpool	Special/Seasonal Service	Charter Service	Regional (out-county) Service
Clinton Transit (The Blue Bus-Clinton County)	Regional authority						x	x				
Crawford County Transportation Authority (CCTA)	Regional authority						x	x				
Delta Area Transit Authority (DATA)	Regional authority						x	x			x	x
Detroit Department of Transportation (DDOT)	City department		x				x					
Detroit Transportation Corporation (Detroit People Mover)	City department	x										
Dowagiac Dial-A-Ride (DART)	City department						x	x				
Eastern Upper Peninsula Transportation Authority (EUPTA)	Regional authority						x	x		x		x
Eaton County Transportation Authority (EATRAN)	Regional authority						x	x				x
Flint Mass Transportation Authority (MTA)	Regional authority		x				x	x*				x
Gladwin City County Transit	Regional authority						x	x				
Gogebic County Transit Authority (Little Blue Bus)	Regional authority			x			x	x				
Greater Lapeer Transportation Authority (GLTA)	Regional authority			x			x	x				
Greenville Transit	City department						x	x				
Hancock Public Transit	City department						x	x				
Harbor Transit (Grand Haven area)	Regional authority		x				x	x		x		
Hillsdale Dial-A-Ride (DART)	City department						x	x				
Houghton Public Transit	City department			x			x	x		x		
Huron Transit Corporation (Thumb Area Transit)	Regional authority						x	x				
Interurban Transit Authority (Saugatuck/Douglas area)	Regional authority						x	x				
Ionia Dial-A-Ride (DART)	City department						x	x				
Iosco Transit Corporation (ITC)				x			x	x				
Isabella County Transportation Commission (ICTC)	County department			x			x	x				
Jackson Area Transportation Authority (JATA)	Regional authority		x				x	x				
Kalamazoo Metro Transit (KMetro)	Regional authority		x				x	x	x		x	x
Kalkaska Public Transit Authority (KPTA)	Regional authority			x			x	x				x
Lake Erie Transit (LET-Monroe County)	Regional authority		x				x	x				

RETHINKING REGIONAL TRANSPORTATION IN MICHIGAN'S URBAN AREAS

Appendix B (continued)

Transit Authority or Dept.	Type of Government	Services Provided											
		Light-Rail System	Fixed Route Buses	Flexed Route Buses	Bus Rapid Transit	Express Buses	Door-to-Door Paratransit	Dial-A-Ride	Carpool/Vanpool	Special/Seasonal Service	Charter Service	Regional (out-county) Service	
Lenawee Transportation	County department		x					x	x*				
Livinston Essential Transportation Service (LETS)	County department							x	x				x
Ludington Mass Transportation Authority	Regional authority							x	x				
Macatawa Area Express (MAX-Holland area)	Regional authority		x					x	x*				
Manistee County Transportation	Regional authority							x	x				
Marquette County Transit Authority (MARQ-TRAN)	Regional authority		x	x				x	x				
Marshall Dial-A-Ride (DART)	City department							x	x				
Mecosta Osceola Transit Authority (MOTA)	Regional authority							x	x				
Midland County Connection	County department							x	x				
Midland Dial-A-Ride (DART)	City department							x	x				
Muskegon Area Transit System (MATS)	County department		x					x					
Niles Dial-A-Ride (DART)	City department		x					x	x				
Ogemaw County Public Transportation (OCPT)	County department							x	x				
Ontonagon County Public (On-Tran)	County department							x	x				
Otsego County Bus System	County department							x	x				
Roscommon County Transit Authority (RCTA)	Regional authority							x	x				
Saginaw Transit Authority Regional Services (STARS)	Regional authority		x					x					
Sanilac Transportation Corporation (STC)	County department							x	x				x
Schoolcraft County Public Transit (SCPT)	County department							x	x				
Shiawassee Area Transportation Agency (SATA)	Regional authority							x	x				x
St. Joseph County Transportation Authority (SJCTA)	Regional authority							x	x				
Straits Regional Ride (SRR-Cheboygan, Emmet, and Presque Isle counties)	County department			x				x	x				x
Suburban Mobility Authority for Regional Transportation (SMART-SE Michigan communities)	Regional authority		x					x	x*				x
TheRapid (Interurban Transit Partnership-Grand Rapids area)	Regional authority		x			x		x		x			

Appendix B (continued)

Transit Authority or Dept.	Type of Government	Services Provided										
		Light-Rail System	Fixed Route Buses	Flexed Route Buses	Bus Rapid Transit	Express Buses	Door-to-Door Paratransit	Dial-A-Ride	Carpool/Vanpool	Special/Seasonal Service	Charter Service	Regional (out-county) Service
Thunderbay Transportation Authority (TBTA-Alpena area)	Regional authority						x	x				
Twin Cities Area Transportation Authority (TCATA-Benton Harbor area)	Regional authority		x	x			x	x*			x	
Van Buren Public Transit	Regional authority						x	x				
Yates Township Transportation System (Lake County)	City department						x	x				

All regional authorities have appointed boards.

* Provide limited dial-a-ride services with priority going to seniors and individuals with disabilities.

Source: Michigan Department of Transportation, Public Transit Providers (www.michigan.gov/mdot/0,4616,7-151-9625_21607-31837--,00.html) and various public transit and city/county websites.

Appendix C 2017 Transit Agency Information

	Service Area			Annual Passenger Miles	Annual Unlinked Trips	Trips Per Capita	Average Weekday Trips	Operating Funds Expended		Capital Funds Expended		
	2010 Urbanized Area Population	Square Miles	Population					2017	Per Capita	2017	Per Capita	
Urban Regions in Other States												
Metro Transit (Twin Cities)	2,650,890	653	1,837,223	359,406,114	81,927,425	44.6	264,347	\$378,081,603	\$206	\$219,182,550	\$119	
Chicago Transit Authority (CTA)	8,608,208	309	3,217,332	1,972,073,598	479,435,218	149.0	1,540,770	\$1,446,038,532	\$449	\$389,660,322	\$121	
Metropolitan Atlanta Rapid Transit Authority (MARTA)	4,515,419	936	1,967,468	729,390,104	126,428,706	64.3	404,330	\$557,732,552	\$283	\$141,480,048	\$72	
Greater Cleveland RTA	1,780,673	458	1,412,140	178,748,128	39,562,839	28.0	130,031	\$261,153,795	\$185	\$59,867,823	\$42	
IndyGo (Indianapolis)	1,487,483	396	928,281	43,859,005	9,064,009	9.8	30,678	\$70,473,033	\$76	\$8,821,675	\$10	
Sound Transit (Seattle)	3,059,393	1,087	3,054,000	520,035,532	46,795,663	15.3	155,990	\$310,777,005	\$102	\$1,450,229,887	\$475	
Los Angeles Metro	12,150,996	1,419	8,360,358	2,088,280,036	407,153,682	48.7	1,287,264	\$1,908,479,770	\$228	\$1,399,970,581	\$167	
Detroit/Ann Arbor Region												
DDOT	3,734,090	144	713,777	124,836,711	24,894,081	34.9	80,787	\$128,759,021	\$180	\$2,584,204	\$4	
SMART	3,734,090	1,074	3,424,477	70,271,187	8,614,722	2.5	29,046	\$131,999,141	\$39	\$28,439,164	\$8	
TheRide	306,022	110	228,574	27,595,845	6,948,990	30.4	24,244	\$41,001,909	\$179	\$7,071,034	\$31	
Grand Rapids Region												
The Rapid	569,935	155	417,978	41,184,267	10,972,970	26.3	39,071	\$43,945,490	\$105	\$20,635,670	\$49	
Out-State Urban Regions												
CATA	313,532	136	298,629	33,256,374	10,241,340	34.3	35,516	\$45,683,404	\$153	\$9,483,590	\$32	
Flint MTA	356,218	640	418,408	34,421,651	5,071,813	12.1	17,263	\$32,747,615	\$78	\$11,076,748	\$26	
Kalamazoo Metro	209,703	69	209,555	11,810,716	2,899,511	13.8	9,789	\$15,711,937	\$75	\$503,508	\$2	

Note: Per capita data is measured based on service area population and not the greater urban population.

Source: Federal Transit Agency. National Transit Database. "2016 Annual Agency Profiles."

NTD data comes from urbanized area statistics from 2010 U.S. Census and agency filed reports.

Endnotes

- 1 Transportation Planning Capacity Building Program, Federal Highway Administration, Federal Transit Administration. *The Transportation Planning Process Briefing Book: Key Issues for Transportation Decisionmakers, Officials, and Staff*, 2007 (www.fhwa.dot.gov/planning/publications/briefing_book/, accessed 5/9/18).
- 2 U.S. Census Bureau. 2012-2016 American Community Survey 5-Year Estimates (factfinder.census.gov/faces/nav/jsf/pages/index.xhtml), accessed 4/25/18).
- 3 Southeast Michigan Council of Governments (SEM-COG). "Access to Core Services in Southeast Michigan," January 2016 (semcog.org/reports/accesstocoreservices/files/assets/common/downloads/Access%20to%20Core%20Services%20in%20Southeast%20Michigan.pdf, accessed 4/10/18).
- 4 U.S. Census Bureau. 2013-2017 American Community Survey 5-Year Estimates.
- 5 Citizens Research Council of Michigan. Report 385: "Medical Costs of No-fault Automobile Insurance," October 2013 (crcmich.org/PUBLICAT/2010s/2013/medical_cost_no-fault_automobile_insurance-2013.pdf).
- 6 The Zebra. "The State of Auto Insurance," 2019 (<https://www.thezebra.com/state-of-insurance/auto/2019/#full-report>, accessed 2/20/19).
- 7 U.S. Census Bureau, American FactFinder. 2012-2016 American Community Survey 5-Year Estimates.
- 8 Wilkinson, Mike and Chad Livengood. *Bridge Magazine*. "Detroit isn't the only city with outsized auto insurance rates," October 24, 2017 (www.bridgemi.com/public-sector/detroit-isnt-only-city-outsized-auto-insurance-rates, accessed 4/26/18).
- 9 Southeast Michigan Council of Governments (SEM-COG). "Access to Core Services in Southeast Michigan," January 2016.
- 10 Vespa, Jonathan, David M. Armstrong, and Lauren Medina. U.S. Census Bureau. Current Population Reports, Population Estimates and Projections, P25-1144: "Demographic Turning Points for the United States: Population Projections for 2020 to 2060," March 2018 (www.census.gov/content/dam/Census/library/publications/2018/demo/P25_1144.pdf, accessed 4/11/18).
- 11 Laitner, Bill. *Detroit Free Press*. "Michigan is aging faster than the rest of the U.S. – here's why," June 8, 2018 (www.freep.com/story/news/local/michigan/wayne/2018/06/08/michiganders-100-years-old-senior-tide-coming-first-michigan-2025/675828002/, accessed 6/26/18).
- 12 Southeast Michigan Council of Governments. SEM-COG Quick Facts: "Commuting in Southeast Michigan, 2006-2010," May 2013.
- 13 Howes, Daniel and Nolan Finley. *The Detroit News*. "Howes & Finley: Regional transit battle reveals rising anxiety over jobs, growth," May 31, 2018 (www.detroitnews.com/story/business/columnists/daniel-howes/2018/05/31/regional-transit-battle-jobs-anxiety/656813002/, accessed 6/7/18).
- 14 Tomer, Adie, Elizabeth Kneebone, Robert Puentes, and Alan Berube. Metropolitan Policy Program at Brookings. "Missed Opportunity: Transit and Jobs in Metropolitan America," May 2011 (www.brookings.edu/wp-content/uploads/2016/06/0512_jobs_transit.pdf, accessed 5/9/18).
- 15 Southeast Michigan Council of Governments (SEM-COG). "Access to Core Services in Southeast Michigan," January 2016.
- 16 Washtenaw County Office of Community and Economic Development, Emma White Research LLC, and Michigan Environmental Council. "Connecting to Opportunity: Region 9 Report on Transportation, Jobseeking, and Economic Development," June 2015 (<https://www.washtenaw.org/DocumentCenter/View/1764/2015-Transportation-Report-PDF>, accessed 2/7/19).
- 17 Raven, Benjamin. *MLive*. "Detroit's traffic ranked among worst in US," February 21, 2017 (https://www.mlive.com/news/detroit/index.ssf/2017/02/detroits_traffic_rated_24th_wo.html, accessed 10/23/18).
- 18 Stromberg, Joseph. *Vox*. "The real reason American public transportation is such a disaster," August 10, 2015 (www.vox.com/2015/8/10/9118199/public-transportation-subway-buses, accessed 9/13/18).

- 19 Dekozan, David and Robin O'Hara. Meeting of the Minds webinar. "Towards a Regional Mobility-as-a-Service Solution: Leveraging a Transit Smart Card Program Across Multiple Transit Agencies," August 1, 2018 (meetingoftheminds.org/cal/towards-a-regional-mobility-as-a-service-solution-leveraging-a-transit-smart-card-program-across-multiple-transit-agencies?utm_campaign=MaaS%20White%20Paper&utm_source=hs_email&utm_medium=email&utm_content=65031518&hsenc=p2ANqtz-91XE8a9XZ-PUUgdeDZmTRdBZpGeEa92lsYmZBuWLZJa8K-ScPzMU-ZnkonGz2RZnPD9uFxz4wVwz1Z1AWziwenvFVFG3EQ&hsmi=65031518), accessed 9/5/18).
- 20 Goldsmith, Steven. *Governing Magazine: The States and Localities*. "A Better Way to Manage How We Get Around," June 20, 2017 (www.governing.com/blogs/bfc/col-urban-transportation-mobility-management.html), accessed 5/9/18).
- 21 Michigan Department of Transportation. "Moving Michigan Forward: 2040 State Long-Range Plan," July 2016 (www.michigan.gov/documents/mdot/2016_SLRP_PRINT_530128_7.pdf), accessed 5/9/18).
- 22 Michigan Department of Transportation. "Moving Michigan Forward: 2040 State Long-Range Transportation Plan – Transit White Paper," Final Draft July 2016 (www.michigan.gov/documents/mdot/Transit_WhitePaper_finalreview_readyforweb_40816_520984_7.pdf), accessed 5/9/18).
- 23 Beyer, Scott. *Governing: The States and Localities*. "How Microtransit Could Transform Cities," May 2018 (www.governing.com/columns/urban-notebook/gov-microtransit.html), accessed 9/4/18).
- 24 Schwieterman, Joseph P., Mallory Livingston, and Stijn Van Der Slot. Chaddick Institute for Metropolitan Development at DePaul University. Policy Series: "Partners in Transit: A Review of Partnerships between Transportation Network Companies.
- 25 Public Agencies in the United States," August 1, 2018 (las.depaul.edu/centers-and-institutes/chaddick-institute-for-metropolitan-development/research-and-publications/Documents/Partners%20in%20Transit_Live1.pdf), accessed 9/4/18).
- 26 Descant, Skip. *FutureStructure*. "Think Uber and Lyft are Killing Transit? Think Again," May 18, 2018 (www.govtech.com/fs/transportation/Think-Uber-and-Lyft-Are-Killing-Transit-Think-Again.html), accessed 9/4/18).
- 27 Feigon, Sharon and Colin Murphy. Webinar from the Transit Cooperative Research Program's (TCRP) Research Report 195: Broadening the Understanding of the Interplay Between Public Transit, Shared Mobility, and Personal Automobiles. "Who's Riding TNCs and What Does it Mean for Public Agencies?," May 15, 2018 (onlinepubs.trb.org/onlinepubs/webinars/180515.pdf), accessed 9/4/18).
- 28 Schwieterman, Joseph P., Mallory Livingston, and Stijn Van Der Slot. Chaddick Institute for Metropolitan Development at DePaul University. Policy Series: "Partners in Transit: A Review of Partnerships between Transportation Network Companies and Public Agencies in the United States," August 1, 2018.
- 29 Descant, Skip. *FutureStructure*. "Columbus, Ohio, to Build Multimodal Trip-Planning and Payment System," August 30, 2018 (www.govtech.com/fs/transportation/Columbus-Ohio-to-Build-Multimodal-Trip-Planning-and-Payment-System.html?utm_term=READ%20MORE&utm_campaign=Transit%20Data%20Sharing%3A%20What%27s%20the%20Worst%20that%20Could%20Happen&utm_content=email&utm_source=Act-On+Software&utm_medium=email), accessed 9/5/18).
- 30 Schmitt, Angie. *Streetsblog USA*. "All the Bad Things About Uber and Lyft In One Simple List," Feb. 4, 2019 (<https://usa.streetsblog.org/2019/02/04/all-the-bad-things-about-uber-and-lyft-in-one-simple-list/>), accessed 2/7/19).
- 31 Johnson, Ben. Historic UK. "The Great Horse Manure Crisis of 1894" (www.historic-uk.com/HistoryUK/Historyof-Britain/Great-Horse-Manure-Crisis-of-1894/), accessed 8/29/18).
- 32 Reconnecting America website. "What is TOD?" (www.reconnectingamerica.org/what-we-do/what-is-tod/), accessed 6/5/18).
- 33 Britt, Kelley C. and Ken Sislak. Northeast Ohio Areawide Coordinating Agency (NOACA).
- 34 AECOM. "TOD in the NOACA Region," May 3, 2018. Presentation, Grand Rapids Mobility Management Summit.
- 35 Freemark, Yonah. *StreetsblogUSA*. "Can Transit Work Well in a Sprawling City Like Indianapolis?," June 22, 2017 (usa.streetsblog.org/2017/06/22/can-transit-work-well-in-a-sprawling-city-like-indianapolis/), accessed 6/26/18).

- 36 U.S. Department of Transportation, Federal Highway Administration, Federal Transit Agency. "A Guide to Transportation Decisionmaking," Revised April 2015 (www.planning.dot.gov/documents/GuidetoTransportationDecisionmaking.pdf, accessed 5/9/18).
- 37 Transportation Planning Capacity Building Program, Federal Highway Administration, Federal Transit Administration. *The Transportation Planning Process Briefing Book: Key Issues for Transportation Decisionmakers, Officials, and Staff*, 2015 Update.
- 38 MP2Planning LLC. "West Michigan Transit Linkages Study: Executive Summary Report and Study Recommendations," September 2012 (www.michigan.gov/documents/mdot/Ottawa_County_-_West_Michigan_Transit_Linkage_Structures_Study_402997_7.pdf, accessed 6/21/18).
- 39 Information on Flint MTA comes from a phone/email interview with Ed Benning, General Manager/CEO of Flint MTA on April 17/18, 2018.
- 40 Public Act (PA) 55 of 1963 (MCL 124.351-124.359).
- 41 PA 204 of 1967 (MCL 124.401-124.426).
- 42 PA 481 of 1988.
- 43 PA 196 of 1986 (MCL 124.451-124.479).
- 44 PA 387 of 2012 (MCL 124.541-124.558).
- 45 For more information on the RTA, see Citizens Research Council of Michigan. Memo 1143: "Southeast Michigan Ballot Issues: The Regional Transit Authority Millage Request," October 2016 (https://crcmich.org/rta_millage_question-2016/).
- 46 Salsberg, Lisa. Meeting of the Minds. "A Future Ready Transportation Plan for the Greater Toronto Region," May 17, 2018 (meetingoftheminds.org/a-future-ready-transportation-plan-for-the-greater-toronto-region-27066?omhide=true&utm_source=Meeting+of+the+Minds+Newsletter+List&utm_campaign=9244d31060-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_cdb70a5ce7-9244d31060-57996821&mc_cid=9244d31060&mc_eid=7f27680c88, accessed 5/17/18).
- 47 American Public Transportation Association (APTA). *2017 Public Transportation Fact Book*, March 2018 (<https://www.apta.com/resources/statistics/Documents/FactBook/2017-APTA-Fact-Book.pdf>, accessed 12/6/18).
- 48 Houston Metro. "Reimagining Houston's Transit System," May 3, 2018. Presentation, Grand Rapids Mobility Management Summit.
- 49 Singer, Eric and Andrej Micovic. *Meeting of the Minds*. "Zoning for Mass Transit: The Case of Miami-Dade County's Rapid Transit Zone," January 24, 2019 (https://meetingoftheminds.org/zoning-for-mass-transit-the-case-of-miami-dade-countys-rapid-transit-zone-29665?omhide=true&utm_source=Meeting+of+the+Minds+Newsletter+List&utm_campaign=fa61ef25db-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_cdb70a5ce7-fa61ef25db-57996825&mc_cid=fa61ef25db&mc_eid=d2f0c4c7cf, accessed 1/30/19).
- 50 Michigan Future, Inc. "Regional Collaboration Matters: How Metro Minneapolis has forged one of the wealthiest and most livable metropolitan areas in the United States," May 2018 (www.michiganfuture.org/assets/uploads/2018/05/Minneapolis-Report-Regional-Collaboration-Matters.pdf, accessed 5/24/18).
- 51 Ibid.
- 52 Green, Josh. *Curbed Atlanta*. "Georgia passes landmark legislation for regional transit; prepare for 'The ATL'," March 30, 2018 (atlanta.curbed.com/2018/3/30/17180118/georgia-marta-transit-atl-legislation-regional-network, accessed 6/14/18).
- 53 *Atlanta Regional Commission website*. News Center: "What 'The ATL' Means for Regional Transit and Metro Atlanta," April 9, 2018 (atlantaregional.org/news/transportation-mobility/what-the-atl-means-for-regional-transit-and-metro-atlanta/, accessed 6/20/18).
- 54 Singer, Eric and Andrej Micovic. *Meeting of the Minds*. "Zoning for Mass Transit: The Case of Miami-Dade County's Rapid Transit Zone," January 24, 2019.
- 55 Amin, Ratna and Sara Barz. SPUR Report. "Seamless Transit: How to make Bay Area public transit function like one rational, easy-to-use system," April 2015 (www.spur.org/sites/default/files/publications_pdfs/SPUR_Seamless_Transit.pdf, accessed 6/5/18).
- 56 Lewis, Shawn D. *The Detroit News*. "DDOT, SMART propose fare, transfer changes," August 23, 2018 (www.detroitnews.com/story/news/local/michigan/2018/08/23/ddot-smart-propose-fare-transfer-changes/1073996002/, accessed 9/4/18).

- 57 Amin, Ratna and Sara Barz. SPUR Report. "Seamless Transit: How to make Bay Area public transit function like one rational, easy-to-use system," April 2015.
- 58 Ibid.
- 59 Ibid.
- 60 For more information, see www.orcocard.com.
- 61 Laitner, Bill. *Detroit Free Press*. "Heart and sole: Detroiter walks 21 miles in work commute," January 31, 2015 (www.freep.com/story/news/local/michigan/oakland/2015/01/31/detroit-commuting-troy-rochester-hills-smart-ddot-ubs-banker-woodward-buses-transit/22660785/, accessed 5/1/18).
- 62 Laitner, Bill. *Detroit Free Press*. "'Walking man' settles into new life, friends, waist size," February 6, 2016 (www.freep.com/story/news/local/michigan/detroit/2016/02/06/walking-man-james-robertson--detroit-troy-buses-oakland-county-smart-ddot-ford-taurus/79505152/, accessed 5/1/18).
- 63 Amin, Ratna and Sara Barz. SPUR Report. "Seamless Transit: How to make Bay Area public transit function like one rational, easy-to-use system," April 2015.
- 64 Indy Connect: Central Indiana's Transit Initiative. The Central Indiana Transit Plan: Your Input, Your Transit, 6-16-2016 (indygobus.wpengine.com/wp-content/uploads/2014/12/Central-Indiana-Transit-Plan_2016-06-16.pdf, accessed 6/21/18).
- 65 Freemark, Yonah. *StreetsblogUSA*. "The Bus Network Redesign in Indianapolis Will Be Like Launching a Brand New Transit System," July 11, 2017 (usa.streetsblog.org/2017/07/11/the-bus-network-redesign-in-indianapolis-will-be-like-launching-a-brand-new-transit-system/, accessed 6/26/18).
- 66 For more information see www.cirta.us.
- 67 Citizens Research Council of Michigan. Memo 1146: "Questions About the Governance of Regional Authorities in Michigan," September 2017 (https://crcmich.org/PUBLICAT/2010s/2017/memo1146-questions_governance_regional_authorities.pdf).
- 68 For more information on local services and providing more services at the county level, see Citizens Research Council of Michigan. Report 395: "Counties in Michigan: An Exercise in Regional Government," March 2017 (https://crcmich.org/PUBLICAT/2010s/2017/rpt395_counties_exercise_regional_government-2017.pdf).
- 69 PA 33 of 2008 and PA 110 of 2006.
- 70 Michigan Future, Inc. "A Path to Good-paying Careers for all Michiganders: Creating places across Michigan where people want to live and work," December 2018 (<http://www.michiganfuture.org/report-creating-places-across-michigan-where-people-want-to-live-and-work/>, accessed 1/30/19).
- 71 Commission on the Future of Transportation in the Commonwealth. "Choices for Stewardship: Recommendations to Meet the Transportation Future, Volume I" (<https://www.mass.gov/lists/choices-for-stewardship-recommendations-to-meet-the-transportation-future>, accessed 2/7/19).
- 72 Walker, Jarrett. *Human Transit Blog*, August 3, 2015 (humantransit.org/2015/08/on-transit-integration-or-seamlessness.html, accessed 6/5/18).
- 73 Vock, Daniel C. *Governing: The States and Localities*. "Buses, Yes Buses, Are 'the Hottest Trend in Transit'," September 2017 (<http://www.governing.com/topics/transportation-infrastructure/gov-big-city-bus-systems.html>, accessed 1/30/19).
- 74 Goldsmith, Stephen and Wyatt Cmar. *Governing: The States and Localities*. "The Bus System of the Future," January 23, 2019 (<http://www.governing.com/blogs/bfc/col-indianapolis-bus-system-of-future.html>, accessed 1/30/19).
- 75 1963 Michigan Constitution (Article IX, Section 9).
- 76 General Sales Tax Act, PA 167 of 1933 (MCL 205.75).
- 77 Citizens Research Council of Michigan. Report 405: "Evaluating Michigan's Options to Increase Road Funding," February 2019 (https://crcmich.org/PUBLICAT/2010s/2019/rpt405-Road_Funding_Options.pdf).
- 78 Michigan Department of Transportation. "Moving Michigan Forward, 2040 State Long-Range Transportation Plan: Finance White Paper," Final Draft July 2016.
- 79 Michigan Department of Transportation. "Moving Michigan Forward, 2040 State Long-Range Transportation Plan: Transit White Paper," Final Draft July 2016.
- 80 For more information on property taxes in Michigan, see Citizens Research Council of Michigan. Report 394: "The Prolonged Recovery of Michigan's Taxable Values," December 2016.
- 81 Transit Cooperative Research Program (TCRP), Transportation Research Board. *The National Academies of Sciences, Engineering, and Medicine*. TCRP Report 129: "Local and Regional Funding Mechanisms for Public Transportation," 2009 (nap.edu/14187, accessed 9/19/18).

- 82 Arizona PIRG Education Fund. "Why and How to Fund Public Transportation," March 2009.
- 83 For more information, see www.rtachicago.org.
- 84 Michigan Future, Inc. "Regional Collaboration Matters: How Metro Minneapolis has forged one of the wealthiest and most livable metropolitan areas in the United States," May 2018 (www.michiganfuture.org/assets/uploads/2018/05/Minneapolis-Report-Regional-Collaboration-Matters.pdf, accessed 5/24/18).
- 85 Citizens Research Council of Michigan. Report 399: "Diversifying Local-Source Revenue Options in Michigan," February 2018 (www.crcmich.org/PUBLICAT/2010s/2018/rpt399_Local_Option_Taxes.pdf).
- 86 Wachs, Martin. *Access*, No 22 Spring 2003. "Local Option Transportation Taxes: Devolution as Revolution."
- 87 1963 Michigan Constitution (Article IX, Sections 8-11).
- 88 Transit Cooperative Research Program (TCRP), Transportation Research Board. *The National Academies of Sciences, Engineering, and Medicine*. TCRP Report 129: "Local and Regional Funding Mechanisms for Public Transportation," 2009.
- 89 Ibid.
- 90 Citizens Research Council of Michigan. Report 399: "Diversifying Local-Source Revenue Options in Michigan," February 2018 (www.crcmich.org/PUBLICAT/2010s/2018/rpt399_Local_Option_Taxes.pdf).
- 91 1963 Michigan Constitution (Article IX, Section 7) and PA 284 of 1964 (MCL 141.501-141.787).
- 92 Bureau of Governmental Research. "Paying for Streets: Options for Funding Road Maintenance in New Orleans," May 2017 (www.bgr.org/wp-content/uploads/2017/07/BGR-PayingForStreets.pdf, accessed 9/20/18).
- 93 Transit Cooperative Research Program (TCRP), Transportation Research Board. *The National Academies of Sciences, Engineering, and Medicine*. TCRP Report 129: "Local and Regional Funding Mechanisms for Public Transportation," 2009.
- 94 Bureau of Governmental Research. "Paying for Streets: Options for Funding Road Maintenance in New Orleans," May 2017.
- 95 Arizona PIRG Education Fund. "Why and How to Fund Public Transportation," March 2009.
- 96 Transit Cooperative Research Program (TCRP), Transportation Research Board. *The National Academies of Sciences, Engineering, and Medicine*. TCRP Report 129: "Local and Regional Funding Mechanisms for Public Transportation," 2009.
- 97 1963 Michigan Constitution (Article IX, Section 9).
- 98 For more information on road funding, see Citizens Research Council of Michigan. Citizens Research Council of Michigan. Report 405: "Evaluating Michigan's Options to Increase Road Funding," February 2019 (https://crcmich.org/PUBLICAT/2010s/2019/rpt405-Road_Funding_Options.pdf).
- 99 Siracuse, Michael and David Zin. Michigan Senate Fiscal Agency. State Notes: "The Rising Costs of Road Repair," Winter 2019 (<http://www.senate.michigan.gov/sfa/Publications/Notes/2019Notes/NotesWin19dzms.pdf>, accessed 2/7/19).
- 100 Transit Cooperative Research Program (TCRP), Transportation Research Board. *The National Academies of Sciences, Engineering, and Medicine*. TCRP Report 129: "Local and Regional Funding Mechanisms for Public Transportation," 2009.
- 101 Kaffer, Nancy. *Detroit Free Press*. "Kaffer: To break transit gridlock, raise RTA millage to fund buses and roads," May 3, 2018 (www.freep.com/story/opinion/columnists/nancy-kaffer/2018/05/03/transit-gridlock-buses-roads/578586002/, accessed 5/9/18).