MEMORANDUM

To: CMAP Committees

From: CMAP staff

Date: May 8, 2017

Re: Alternative Futures: Constrained resources

As part of ON TO 2050 development, CMAP is undertaking an “alternative futures” planning process focusing on exogenous factors that are largely beyond the control of any one entity, including CMAP and our regional partners. These factors include the environment, consumer preferences, technological advancements, and macroeconomic trends.

Based on research and feedback from stakeholders, CMAP envisions five different futures for the region, imagining life in 2050 where...

- Climate change impacts have intensified.
- More people have chosen walkable communities.
- The economy has transformed.
- Innovative technologies have enhanced transportation.
- Public resources are further constrained.

The Alternative Futures planning exercise, which draws upon ongoing CMAP work and ON TO 2050 products, will inform the agency’s phase of broad public engagement in spring and summer 2017. CMAP will identify the key macro-level drivers shaping each future and their potential impacts. With written and interactive materials, staff will depict the imagined futures’ effects on residents and businesses. With the assistance of committees, CMAP will also propose strategies to help mitigate potential negative outcomes and capitalize on opportunities that might arise. At the end of the futures phase, staff will emphasize crosscutting strategic actions and policies that will help the region thrive across a wide range of possible outcomes.

This memo, the third in a series, imagines a future in which fewer federal and state financial resources are available to the region for key CMAP focus areas like transportation, community development, and natural resources. For the purposes of this exercise, CMAP assumes that
fiscal policies would not have not sufficiently adjusted to changing needs and technology, such as the growth in online sales and consumption of consumer services, or decline in gas consumption. This memo further assumes that tax rates would not be increased to a level sufficient to maintain current services, in part due to a lack of political consensus. Finally, this future assumes that federal and state budgets would be increasingly devoted to entitlement programs and benefits such as Social Security, Medicare, and Medicaid, crowding out capital investments and direct services. As a result, there are fewer and fewer resources available from Washington, D.C., and Springfield to support public investments in the region.

In 2050, diminishing federal and state resources have required local governments and public agencies to rely more heavily on local sources of revenue. As a result, local taxes, fees, licenses, and fines have increased, as has the frequency of alternative financing mechanisms, such as public-private partnerships. For many communities, however, locally generated revenue streams are insufficient to offset the decline in federal and state revenue sources. While higher-capacity communities have sufficient resources to continue providing desired public services for their residents, lower-capacity communities struggle to make ends meet. Residents and businesses in these places will disproportionately see the effects of diminished resources in transportation, community development, and natural resources.

Primary driver: diminished federal and state resources

In 2050, federal and state sources of funding for critical infrastructure and services have reduced, and tax rates have not kept pace with needs.

The federal and state governments currently provide funding to support transportation, housing, environmental, and community development programs, among other services that are vital to supporting quality of life in the region. In this future, many programs have not adjusted to changing market forces. For example, transportation revenues are based on gas taxes and vehicle registration fees. If this revenue structure does not change, revenues will decline by 2050 as cars and trucks become even more fuel-efficient, more vehicles run on electricity or alternative fuels, and more people choose other modes of transportation. The following chart compares estimated state motor fuel tax revenues flowing to northeastern Illinois with ON TO 2050’s forecasted revenues, based on CMAP staff analysis of past revenue trends, anticipated changes in fuel economy across the vehicle fleet, and anticipated changes in vehicle travel.
Figure 1. Historic and projected state motor fuel tax revenues in Illinois

![Graph showing historic and projected state motor fuel tax revenues in Illinois from 2002 to 2050.]

Source: CMAP staff analysis of data from Illinois Department of Transportation, National Highway Traffic Safety Administration, and National Household Travel Survey.

**Major impacts of more constrained resources**

*In 2050, local governments rely more heavily on local sources of revenue due to the persistent inadequacy of federal and state resources. As a result, local taxes, fees, licenses, and fines have increased, as has the frequency of public-private partnerships.*

While federal and state revenues would continue to play a vital role in the provision of public services, by 2050 local governments would no longer be able rely on them to deliver the services that residents expect. Rather, various locally generated sources of revenue -- such as property, utility, and sales taxes; fees; and fines -- would account for an increasingly large share of resources available to the region’s municipalities and counties.

This broad trend has already started. At the national level, the growth of locally sourced revenues grew much faster than state revenue sharing with local governments. Between 2000-14, local governments’ own-source revenues grew by nearly 30 percent, while state revenue sharing with local governments grew by only 10 percent (figure 2). While both sources of revenue fell during the recession in the mid-2000s, the drop in state revenue sharing was steeper.
Since the adoption of GO TO 2040 in 2010, many local revenue sources have seen notable enhancements, including a broad toll increase on the Illinois Tollway (2011), City of Chicago water and sewer tax increases (2011 and 2016), local sales tax rate adoptions or increases in 63 municipalities in the region, and Cook County home rule sales tax increase (2016). In general, property tax revenues have grown faster and more steadily than some of the state sources of revenue municipalities receive. Moreover, the majority of local governments in the region are
already primarily reliant on local revenue sources like the property tax. Similar increases in local taxes, fines, and fees would continue in this future.

Communities could also increasingly rely on the private sector to provide infrastructure and services. Many governments may use public-private partnerships (PPPs) to move forward individual projects or provide key services. PPPs provide a greater role for the private sector in the design, construction, operations, management, and financing of public facilities and programs. Some communities in the region are already using PPPs: For example, in 2002, the City of Chicago entered into a PPP with the firm JCDecaux to install and maintain over 2,000 bus shelters and other street furniture across the city, in exchange for the right to install advertisements on the street furniture and annual payments made to the City. Transportation providers in the region have also considered PPP models to deliver transportation infrastructure, such as IDOT’s ongoing development of the I-55 managed lanes project.

*Transportation infrastructure is in a greater state of disrepair*

In 2050, locally generated revenue streams would often be insufficient to offset the decline in federal and state revenue sources. State of good repair for the transportation system is already a pressing issue. The 2012 state transportation plan anticipates the maintenance backlog to increase substantially, rising to some 5,000 backlog miles of roads and 800 bridges in need of repair by 2018 (figure 3). With even less funding, this backlog would be significantly worse in this future. Roads, streets, bridges, and transit would fall into an even greater state of disrepair, resulting in greater wear-and-tear on personal vehicles and increased congestion for travelers. Major facilities could break down more frequently, forcing emergency closures for extended periods of time. Important safety improvements would be postponed, increasing risk of accidents.

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Without funding for highway-rail grade separation projects or rail flyovers at busy junctions, the region’s rail congestion would worsen. Long, slow freight trains would block road traffic for excessive lengths of time, delaying each other at numerous chokepoints and limiting the growth of passenger rail services. Other modes could suffer as well: The region’s port facilities would be virtually unusable due to lack of investment, and airports would lack the resources needed to redevelop their facilities to handle high volumes of freight or accommodate the latest generations of aircraft and shipping technology. When the system functions properly, the extreme congestion would make freight deliveries inefficiently slow and expensive. Although modern technologies, such as traffic management centers, could improve the efficiency of the existing transportation network, few agencies would have resources to invest in them. In addition, few communities would have the funding to spare for bicycle and pedestrian projects.

Despite the chronic levels of congestion and a growing population in the region, very few new transportation facilities would be built to expand capacity. New passenger rail projects would continue to be prohibitively expensive, requiring agencies to rely on enhanced bus services in new corridors. Even so, many transit agencies would be forced to cut services due to budget shortfalls. Buses and trains would run less frequently, and some lines would be pared back as transit ridership falls and road congestion rises further. Some new highway facilities could be built, but any major new facility would have to cover its own costs through tolls, value capture, and other approaches.

*Regional economy becomes less competitive*
In 2050, the increasingly poor condition of the region’s infrastructure and services has negatively affected the regional economy. As discussed above, the deteriorating transportation network would result in higher congestion for trucks and cars alike. In turn, higher supply chain costs would not only contribute to higher prices for consumer goods, but also undermine key regional economic sectors -- such as manufacturing and logistics -- that rely heavily on the frequent shipment of goods. At the same time, reduced federal and state funding could reduce support for job-training programs, which would remain critical to ensuring an appropriately skilled workforce for the region’s manufacturing and logistics industries. As a result of both transportation and workforce trends, growth in key industries would slow, reducing employment as well as tax revenues available to the region. In addition, the region’s economy would become less competitive compared to peer metropolitan areas.

**Local planning and development becomes more challenging**

At the local level, communities would have greater difficulty implementing planning and economic development efforts. As with the state highway network, other forms of physical infrastructure, such as sewers, flood control, or utilities, are currently in disrepair. For example, the state of Illinois may need $19 billion and $17.5 billion of investment, respectively, to replace aging drinking water and wastewater facilities. The lack of adequate federal and state resources would exacerbate maintenance needs and hinder reinvestment, which could discourage reinvestment. Furthermore, fewer programs would be available to support local economic development initiatives, community revitalization, brownfield revitalization, and other importation public policy areas. Remaining federal and state programs would become increasingly competitive.

At the same time, local governments would have less ability to recruit and retain talented staff, or to train remaining staff to handle a broader and more complex workload. As a result, communities would have less ability to administer the remaining programs or compete for increasingly over-subscribed federal and state funds. As staff focus on immediate needs, communities would have fewer resources available to effectively plan for their futures, including updates to capital improvement plans, comprehensive plans, and zoning codes.

Taken together, the convergence of poorer infrastructure and more constrained local staff capacity would greatly weaken local governments’ ability to attract development or pursue long-term goals. Communities with assets – infrastructure, transportation networks, local amenities, etc. – would have a stronger ability to leverage their assets to attract and retain residents and businesses, while communities with less assets or lower capacity would become less competitive and face greater difficulty promoting reinvestment.

**Protection for natural resources and climate change resilience decline**

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In this future, federal and state agencies would provide fewer resources to develop, implement, and enforce environmental regulations, protect open space and natural areas, address natural disasters, and support ongoing research, monitoring, and outreach activities. Air and water quality could decline due to less federal and state regulatory enforcement and monitoring.

Today, local funding sources are responsible for the majority of land preservation activities. In a future where local governments face more difficult trade-offs, fewer natural areas, both large scale as well as local, could be protected. The federal government has also provided a significant amount of funding for disaster assistance; in this future, local governments would be increasingly responsible for relief and recovery efforts from events such as flooding. With fewer federal incentive programs, decreased publically funded research, and overburdened municipal staff, communities would have lower capacity to develop, identify, and implement new tools and best practices for adapting to or ameliorating the negative impacts of climate change.

**Quality of life comes at a higher price**

In 2050, reduced federal and state funding would also affect other public services -- such as libraries, community centers, social services, schools, police and fire services -- traditionally supported by local governments. With local governments covering more of the costs for transportation, housing, environmental, and other programs, fewer resources would be available for other services that make communities attractive places to live. As a result, some communities would be forced to reduce hours of service for these facilities, cut programs, and close some facilities entirely. Local governments may have to make even more difficult tradeoffs about which programs continue to receive funding while maintaining the best possible quality of life for their communities.

**Disproportionately impacted communities**

In 2050, not all communities can cope with a decline in federal and state revenues. While higher capacity communities have sufficient resources to continue providing desired public services for their residents, lower capacity communities struggle to make ends meet.

Many communities already struggle with a combination of low revenues, limited staff and capacity, and weak markets or disinvested parts of their community. If these communities continue to lack sufficient revenues to invest in infrastructure, staff, programs, and high-quality public services, they will struggle to retain existing residents and businesses, let alone attract new residents and businesses. By 2050, the local tax base would decline, providing even fewer resources for the local government and further exacerbating the disinvestment trend. While various federal and state resources are available today to help stop and reverse this downward cycle, those resources would not be widely available in 2050.

This trend would play out across multiple priority areas by 2050, including:
• **Infrastructure**: Without adequate funding, the maintenance backlog for road, transit, water, sewer, and utility facilities would grow. A continued lack of awareness for resources would prevent communities from maintaining their infrastructure, let alone from making improvements. It would also limit the ability to adopt best practices, such as asset management, which would lead to poorer choices for the limited capital resources available.

• **Community development**: Low capacity communities, and some disinvested communities with weak markets, struggle to provide core services (e.g., maintenance, enforcement of building and other codes). In addition, these communities would have a much more difficult time developing plans or implementing less urgent quality of life initiatives. Compounded with derelict infrastructure, a declining tax base, and other issues, these communities could have an even more difficult time attracting reinvestment without external support to overcome the myriad of complex challenges and help to provide a strong quality of life.

• **Affordable housing**: If funding for federal and state housing programs, such as rental subsidies and affordable housing development incentives, diminishes, residents, particularly lower income residents, would have fewer housing options that meet their needs at all stages of life. Moreover, even if the remaining federal and state funding incentivizes development in high-opportunity communities, decreases in funding would still result in fewer subsidized housing options in neighborhoods with better access to good schools, transit, and jobs.

• **Human services**: Many low capacity and disinvested communities would be forced to discontinue programs that support vulnerable resident populations (e.g., senior assistance, translation assistance, community centers, and job training). If social safety net programs are cut, more strain would be placed on other services (e.g., lack of housing assistance programs leads to more homelessness, lack of youth engagement programs creates more need for police services).

The Chicago region is already one of the most stratified regions in the U.S. by income, race, and ethnicity, and the disproportionate impacts of this future widens the gap. A greater reliance on fees and fines would have a greater impact on households with fixed or limited incomes. High-quality jobs, good schools, and other amenities could be increasingly concentrated in higher capacity communities, which would create greater difficulty for lower-income families to climb the economic ladder.

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Strategies to prepare for significantly more constrained resources

Today, CMAP and partners can undertake a number of strategies and actions, outlined below, to prepare for a future with diminished federal and state resources. Many of these strategies, such as maintaining and improving infrastructure and strengthening economically disconnected communities, would also encourage regional economic growth, which in turn would provide additional resources to ensure high quality of life for residents and businesses. These strategies are described in more detail in related CMAP strategy papers and research (see Attachment). Each broad strategy also includes questions for stakeholders that will help CMAP better understand preferences or communicate the issues or solutions. These questions may be included in future engagement with stakeholders.

1. **Increase efficiency of existing infrastructure**

In an era of constrained resources, reducing costs while maintaining or improving quality infrastructure would become even more critical. Efficiently using existing infrastructure can minimize the cost of maintenance and operations without sacrificing quality. Pricing strategies hold great promise to help manage demand for some types of infrastructure like highway and water facilities. For example, congestion pricing -- applying variable toll rates to major expressways -- would allow prices to rise during the morning and evening peak periods and encourage drivers during peak periods to switch to alternative modes, routes, or times of day. In addition to reducing congestion, this strategy would limit the need for costly highway expansion. Furthermore, new revenues could pay for maintenance costs, and be invested in additional transit services or local road improvements in priced corridors. Similarly, water rates could be adjusted to better reflect the true costs of delivering water to end users, particularly heavy users such as local industry. Higher prices for major users of water would encourage conservation while also raising new funds to invest back in the water-delivery infrastructure.

CMAP and partners should also promote information technologies that could more closely monitor the state of repair and optimize the timing of traffic signals or transit vehicles; these tools would lead to cost savings and improved performance in the transportation sector. Better collection and use of performance data would also allow agencies to implement best practices such as asset management programs.

Key questions about this strategy:

- What are the most promising strategies that would allow the region to make best use of existing assets?
- What are the best opportunities to implement variable pricing? How can pricing be implemented equitably?
- What are the best strategies to reduce costs and maintain a high quality of life using existing infrastructure?
2. Modernize transportation system funding for the future

To address diminishing funding resources, the region has several strategies that can increase or modernize federal, state, and local transportation revenue sources to encourage sustainable revenues. Federal, state, and some local transportation revenues are based on per-gallon fuel taxes and flat vehicle licensing fees, neither of which is capable of keeping pace with inflation or changes in travel behavior and vehicle technology. By 2050, the region will need an alternative to these approaches, especially in a future with less federal and state funding. A vehicle miles traveled (VMT) fee, which assesses a per-mile charge on travel, is a sustainable option to fund the transportation system over the long-term.

Other revenues, such as project-level revenue sources, can also provide additional funds for infrastructure. Congestion pricing, described previously, can contribute to operating costs. Value capture harnesses some portion of the benefits -- such as increased rents, sales, and land values -- created by a transportation project to pay for the cost of the facility. In Illinois, value capture mechanisms include tax increment finance (TIF) districts, special service areas, impact fees, and special local taxes, such as sales or hotel taxes. CMAP has commissioned detailed value capture studies, focusing on their potential application to transit facilities and other transportation infrastructure in the regions.

PPPs, which seek to provide a greater role for the private sector in the design, construction, and management of transportation facilities, have the potential to deliver benefits such as reduced project costs, accelerated project delivery, and innovative construction practices. However, they are complex and must be carefully considered on a transparent, case-by-case basis. It is important to clarify that PPPs are a source of financing, not funding, and that a discussion of a project’s merits is independent of the discussion on how a project should be delivered. Further, care must be taken to protect the public interest in a PPP agreement.

Key questions about this strategy:
- What additional revenue sources for transportation infrastructure would you most support?
- Would you support a VMT fee?

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• Even if a VMT fee were implemented, the region would still require new revenue sources in order to maintain, enhance, and expand the transportation system. Which strategies do you think are the most promising?

3. **Promote governance strategies that maximize use of limited resources**
In this future, communities would need to make the best use of the limited resources available. Performance-based funding and programming approaches can promote efficient governance. These approaches identify performance goals, and synthesize data and stakeholder feedback to prioritize potential projects toward those goals within a limited budget. Increasingly, these goals would emphasize the potential co-benefits of projects -- such as a transportation project that also addresses a local stormwater issue -- further maximizing limited public investments.

In addition, constrained resources region-wide would encourage local governments to share the cost of services or purchases where it makes sense. For example, joint procurement of bulk items could reduce costs for all participants, and vehicle fleets could be shared across jurisdictions. Local governments have other opportunities to coordinate capital projects and economic development strategies across jurisdictions. In some cases, consolidation of local governments could result in better governance, reducing overhead costs, promoting transparency, and delivering services more efficiently.

Key questions about this strategy:
• What represents the best opportunity for local cooperation?
• What level of cooperation would be most helpful in a future with more constrained resources, ranging from smaller-scale efforts like data sharing to larger efforts like consolidation of units of government?

4. **Increase capacity of all communities**
In a future where local planning and development becomes even more challenging, the region should explore strategies that strengthen the capacity of all communities. Capacity-building programs such as trainings and technical assistance could enhance the expertise of municipal staff, to elevate individual staff capacity as their numbers dwindle and responsibilities increase. Informed leadership from officials and municipal staff would continue to be essential and may require further advancement of skills to innovate and implement projects that leverage limited funds to meet critical needs and improve quality of life in the municipality. While all communities would need to find other ways to pay for municipal services and infrastructure, those with fewer funding resources today would have a particular need to do so. Shared services and consolidation approaches could also be developed in a way to enhance municipal capacity, and tax policy reforms could address structural fiscal challenges facing lower capacity communities.

Key questions about this strategy:
• What are the best ways to increase municipal capacity to cope with constrained resources?
• How can technical assistance from outside partners improve a municipality’s ability to ensure services are provided on a sustained basis in pursuit of local and regional objectives? Which partners could provide such assistance?

5. **Strengthen disinvested and economically disconnected areas**
Disinvested areas of the region require more comprehensive and targeted solutions because they face a complex mix of physical, market, and socioeconomic challenges that make reinvestment more difficult than other area types. With even less federal and state resources available, particularly for blight removal or brownfield remediation, innovative solutions to problems of vacancy, abandonment, and weak markets would be required. Strategies that reduce blight, land bank activities that make properties more financially feasible, and land use and zoning incentives to defer or reduce the cost of development could all encourage development in weak markets. Investments in infrastructure should be coordinated in order to optimize exceptionally scarce resources.

Economically disconnected communities are areas with a high concentration of poverty and high immigrant/persons of color population that can overlap with disinvested areas. CMAP recommends increasing housing choice for all residents. In a future with a more challenging environment for planning and development as well as a reduced social safety net, it would be particularly important to emphasize the development and preservation of affordable housing that provides safety, stability, and numerous other benefits for low-income households. Providing permanent housing to extremely low-income people and the chronically homeless has also been shown to reduce costs for local governments through the deterrence of emergency services. Land use and zoning incentives, elimination of regulatory barriers, and support for smaller, local developers willing to work on higher-risk projects in disinvested and/or excluded communities are strategies that CMAP and partners should support. Finally, increasing the ability of workers in economically disconnected areas to access jobs that offer pathways to upward mobility -- through infrastructure and workforce investments -- could also help offset some capacity challenges by raising individual and household prosperity.

Key questions about this strategy:
• What are the greatest challenges facing disinvested areas?
• What are the most effective solutions for strengthening disinvested areas?

6. **Prioritize development decisions that make the best use of public resources**
Infill development holds promise as a multifaceted strategy in a future with diminished federal and state funding. Land use strategies that encourage infill and reinvestment leverage existing infrastructure, focusing limited public resources in strategic areas. Within built-out communities, CMAP and partners should prioritize reinvestment in areas that target multiple regional goals, such as mixed-use and transit-served areas, job centers, transitioning existing neighborhoods, and disinvested areas.
For development within less dense or undeveloped areas, CMAP and partners should develop and implement strategies that reduce long-term maintenance costs. For example, compact and conservation-oriented development standards such as shorter blocks or clustering of buildings can preserve agricultural or natural areas while reducing the direct and indirect costs associated with development, including new infrastructure construction. In addition, municipalities should more fully consider the long-term fiscal impacts of development decisions when considering development proposals and in updating subdivision ordinances to ensure sustainable funding for infrastructure and services.

Key questions about this strategy:
- What are the greatest benefits to infill development?
- What are the most effective ways to promote infill development in the region?
- What are the most effective ways to preserve high quality agricultural or natural lands?

7. Reform tax policies
State and local tax structures affect the ability of municipalities to respond and adapt to a future with more constrained resources. Under the current tax structure, communities with land use mixes that emphasize retail may have a stronger fiscal position than other communities in the region. Communities without sales-tax-generating businesses have fewer options to raise municipal revenues. State tax reforms, such as expanding the sales tax base, should be implemented to ensure communities can provide municipal services and infrastructure regardless of their land use mix. CMAP and other partners should also explore fiscal strategies to more fully support all land uses, particularly industrial development. Balancing the fiscal outcomes between various land uses can support regionally beneficial ones, as well as allow communities to pursue land uses that best support their goals.

Moreover, as the region relies more on local revenues, it would be increasingly important to ensure the sustainability of local tax revenues. As one strategy, Cook County should phase out property tax assessment classification to help reduce commercial and industrial property tax rates in many areas of the county, which could encourage new or expanded investment in commercial and industrial development. Currently, high tax rates can discourage new businesses from locating in a community or lead to existing businesses relocating to areas with lower tax rates. As a result, the tax base grows slower than the cost of public services, which can lead to even higher tax rates for businesses and residents alike.

Key questions about this strategy:
- Which tax reforms would be most helpful to local governments in the future?

8. Implement additional revenues from all sectors
Even with increasing efficiency, reducing costs, and developing partnerships, the region would still need new revenues from the public, private, and non-profit sectors in order to truly thrive in 2050. Communities can and should take steps to develop locally appropriate revenue streams
and use existing resources more wisely; however, local and regional tax capacities are limited. Further, northeastern Illinois plays a critical role in the state and national economies, underscoring the need for corresponding levels of support from those units of government. As such, the region should advocate for the continuation and even expansion of federal and state resources such as transportation funding programs, Low Income Housing Tax Credit Program, and others.

Public entities, including CMAP, should also enhance partnerships with nonprofits, foundations, private sector, and lending institutions in order to align goals, efforts, and strategies. Increased coordination would spread the cost of implementing strategies and maximize scarce resources. For example, constrained resources can make public agencies less creditworthy, increasing their financing costs. Increased coordination could consolidate borrowing among agencies to reduce costs, or make greater use of lower-cost federal credit assistance programs such as the Transportation Infrastructure Finance and Innovation Act (TIFIA) program.

Key questions about this strategy:
- If northeastern Illinois were successful in securing new revenues, how would you allocate those additional resources?
- Which new or higher fees or taxes would you support?

**Next steps**

Following committee review and feedback, staff will finalize this memo and use it to inform the development of an online survey platform, MetroQuest, that will allow residents to learn about and select preferences for strategies to prepare for climate change impacts. In addition, CMAP will deploy interactive kiosks across the region, illustrating the key features of a future with intensified climate change impacts, along with the other four alternative futures. The kiosk content will also be accessible via the CMAP website. The MetroQuest survey and kiosks will be central to an intensive public engagement period from April through August 2017.

Four other potential futures for the region have also been selected for exploration. These futures will be oriented around what the region would be like if residents showed strong preferences for mixed-use, higher density environments; if the economy transformed; if significant technological advances improved mobility; and if climate change impacts intensified. Staff will also develop a final memo where the recommendations in ON TO 2050 strategy papers will be analyzed through the lenses of the five alternative futures; the strategies that apply across many of these futures will help to inform which strategies to prioritize in ON TO 2050, which will be completed in October 2018.
### Attachment: Related CMAP Strategy Papers

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