



21st Century Infrastructure Commission Report

Michigan Department of Transportation
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21st Century Infrastructure Commission

- Created by executive order in March, 2016
- Report formally released December 5, 2016
- 27 commissioners representing infrastructure assets including energy, communications, water, sewer, & transportation
 - Met monthly
 - Held 6 listening sessions statewide
 - Hosted a website seeking public input
 - Created asset-focused subcommittees & technical advisory committees that met twice a month or more

Prompted by Recent Events

- Water contamination in city of Flint threatens health & safety of residents
- Property damage from flooding is increasing
- 25 billion gallons of untreated sewage were released into lakes & rivers annually between 2013–2014
- Nearly 25% of beaches experienced closures in 2015
- 39% of roads in poor condition
- 27% of bridges are structurally deficient or functionally obsolete
- 12% of state's households lack access to advanced broadband service
- Planned power plant retirements in U.P. posed challenges to balancing reliability & affordability



Guiding Principles

- Create infrastructure systems that enhance quality of life, enable economic growth, & provide a strong foundations for vibrant communities
- Promote coordination, cooperation, & communication among agencies & across assets
- Build a culture of strategic investment through asset management
- Design infrastructure systems that are adaptable, flexible, & resilient
- Leverage a variety of public & private investment & financing resources
- Encourage meaningful public engagement
- Prioritize environmental quality & sustainability
- Embrace emerging technologies, visionary planning principles, & innovative approaches

Outcomes

- Economic prosperity
- A healthy environment
- Reliable, high-quality service
- Value for investment





Asset Management Recommendations

- Establish regional infrastructure pilot
 - To be accomplished by executive order
 - Ideally Michigan Prosperity Region
 - Leverage & expand efforts of TAMC
 - Develop comprehensive database for all assets in region
 - Identify data system, data gaps & data elements needed
 - Coordinate with private sector
 - To be used as prototype for statewide database



Asset Management Recommendations

- Establish Michigan Infrastructure Council (MIC)
 - Legislative action will be needed
 - Members appointed by Governor & Legislature, with staggered terms
 - Use information from pilot to develop statewide database
 - Develop long-term infrastructure investment strategy for State
 - Design, oversee & coordinate incentives, funding & financing opportunities, focusing on & rewarding improved coordination among assets

Communications Recommendations

- Make Michigan a Smarter State
- Improve Broadband Access & Adoption
- Establish the Michigan Consortium on Advanced Networks
- Secure Michigan's Digital Infrastructure



Energy Recommendations

- Resource Adequacy
- Cleaner Energy Sources
- Electric Reliability
- Natural Gas Safety
- Information Security
- Business Attraction & Economic Development



Water Recommendations

- **Ensuring Public & Environmental Health:** Invest in replacement of aging water, sewer, & stormwater infrastructure.
- **Water Asset Management:** Perform regular assessments & maintenance of drinking water, sewer, stormwater, & dam infrastructure systems.
- **21st Century Water Infrastructure**
- **Fiscally Sustainable Pricing Models**
- **Green Infrastructure**
- **Onsite Well & Septic Systems**





Transportation Recommendations

- Road & Bridge Condition – MIC to work with Legislature to identify sufficient & sustainable funding sources
- Bridges & Culverts
 - Design stream crossings for future watershed conditions
 - Use new bridge materials to reduce life-cycle costs
 - Encourage locals to inspect culverts greater than 5' in diameter
 - MDOT to undertake a culvert inspection pilot project in one county to assess costs of culvert inspection
- Seasonal Weight Restrictions
 - MDOT to work with local agencies to improve regional consistency
 - MDOT & locals work together to prioritize development of all-season roads



Transportation Recommendations

- Transit, Passenger & Freight Rail
 - Identify alternative sources of transit funding or increase CTF funding
 - Transit agencies should make greater use of technology
 - MDOT to work with private sector to continue to develop the DIFT
 - Update State Rail & Freight Plans
- Soo Locks – Urge the federal government to fund construction of a new large lock
- Port Authority Landside Improvements – need legislation that allows port authorities to form partnerships for the purpose of improving adjacent land infrastructure
- Port Maintenance
 - Encourage Congress to fully fund dredging needs
 - Work with Great Lakes Governors & Premiers Maritime Task Force to identify Great Lakes dredging needs
 - MDOT should work with local agencies to improve “last mile” land infrastructure connecting ports to highway networks



Transportation Recommendations

- Aviation – Update Michigan Aviation System Plan
- Intelligent Vehicle Technology
 - Pass legislation – done!
 - Continue working with private sector on implementation
 - Continue to promote Michigan as global leader
 - Sustain robust partnerships
 - MIC should create Emerging Technologies Group to coordinate with infrastructure improvements
- Signalized Intersection Technology – Encourage local agencies to improve signal timing to address congestion



Transportation Recommendations

- Nonmotorized Transportation – MDOT to work with local agencies & DNR to encourage nonmotorized on-road connectivity & trail development
- Right-sizing infrastructure across all modes to meet future needs
 - MDOT to work with stakeholders across all modes to identify where infrastructure needs right-sizing
 - Work with locals on context sensitive solutions
 - MIC to work with locals to encourage & incentivize collaboration & consolidation
 - MDOT to work with MPOs & planning agencies to help right-size infrastructure
- Review Act 51 – MIC to work with Legislature to make distribution of Act 51 revenues “simpler, equitable, more transparent, & more accountable while improving system outcomes.”



Transportation Recommendations

- Local Revenue Generation Options – Legislature to provide new options for local governments to raise revenue for transportation such as regional sales, gas tax, registration fee & impact fee
 - Existing RTA regional option registration fee could be extended statewide
- Road & Bridge User Fees – Pilot test a per-mile fee system & distribute user fees based on travel
- Tolling – Position Michigan to take advantage of openings that occur in federal tolling pilot program, & encourage Congress to allow tolling of existing Interstates

Investing in 21st Century Infrastructure

Infrastructure	Shortfall	Timeframe
Communications	\$618.6 M	Short term but major costs over 10 years
Energy	Private sector investment only	
Transportation	\$40.2 B	Over 15 years
Water	\$19 B	

**Seeking \$4 billion/year
for next 20 years.**

Funding Possibilities

(Total \$4.2 B/Year)

Potential Revenue Sources	Asset Type	Example Scenario	Estimated Annual Revenue Generation Potential
Dedicated sales tax for infrastructure	All infrastructure	1 percent increase	\$1.5 billion
Dedicated statewide property tax	All infrastructure	1 mill increase	\$325 million
Broadband service surcharge	Communications	\$1.54 per month surcharge on 2.7 million broadband service bills	\$50 million
METRO fee	Communications	11 cents per linear foot increase	\$50 million
Fuel tax	Transportation	10 cent per gallon increase	\$500 million
Local revenue generation options	Transportation	Up to \$40 county-wide registration fee or 10 cent county-wide gas tax	\$400-500 million
Mileage-based user fee	Transportation	1 cent per mile based on current average miles driven statewide	\$970 million
Nonmotorized transportation registration fee	Transportation	\$10 per year, for two million bikes, kayaks, canoes	\$20 million
Tolling	Transportation	5 cents per mile on 360 miles of US-23	\$138 million
Vehicle registration fee	Transportation	20 percent increase	\$200 million
Water infrastructure user fee	Water	\$1 per 10,000 gallons based on the state's annual water withdrawal	\$36 million

Conclusion

- Call to Action
 - Asks that Asset Management Pilot begin in 2017
 - Requests Legislature create MIC by 2018

“Our residents deserve reliable, safe, efficient and cost-effective infrastructure -- a 21st century infrastructure system that creates a foundation for the future.”

--21st Century Infrastructure Commission

Questions?

