

October 5, 2017



VISION FOR THE

NORTHEASTERN ILLINOIS **EXPRESSWAY SYSTEM**



Chicago Metropolitan
Agency for Planning



ch2m:

Agenda



- Project purpose and overview
- Project goals
- Corridor improvements
- Policy framework


*Project purpose and overview:
Why CMAP is developing the Vision*

Project purpose and overview



Purpose: Create a bold, multimodal, multijurisdictional vision for the northeastern Illinois expressway system


Objectives:

- Chart a course for the system to guide future IDOT and Tollway capital programs and operating policies, to address the most intractable congestion, and to provide game-changing mass transit options.
 - Inform *ON TO 2050*, the region's long-term comprehensive plan development process.
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Project purpose and overview




Project highlights:

- Develop conceptual goals for the system
 - Conduct a planning-level examination of the investments and management strategies needed to improve system condition and performance
 - Make recommendations for specific corridors, supported by conceptual engineering and order-of-magnitude cost estimates
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Project purpose and overview



Project highlights (continued):

- Estimate revenue from tolling and value capture
 - Develop solutions for traffic diversion impacts
 - Identify multimodal strategies for each corridor to address transit needs and opportunities, as well as freight bottlenecks
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ON TO 2050 coordination



- The ON TO 2050 comprehensive regional plan must meet federal standards of “fiscal constraint.”
- Similarly constraining the Expressway Vision would defeat the purpose -- it must be expansive.
- CMAP's process to develop the Expressway Vision is distinct from but complements the agency's concurrent development of ON TO 2050.
- The draft Expressway Vision will be available for stakeholder and public engagement in April 2018.
- The draft ON TO 2050 plan will be issued for public comment in June 2018, followed by adoption in October.

*Project goals:
What the Vision will accomplish*

Support the region's economy



- Promote long-term regional economic growth
- Improve truck freight movement
- Make the system financially sustainable

Enhance operations



- Provide game-changing mass transit improvements
- Prepare for vehicle automation and leverage communications technologies
- Achieve a state of good repair
- Improve safety
- Address the most intractable congestion issues

Manage environmental impacts

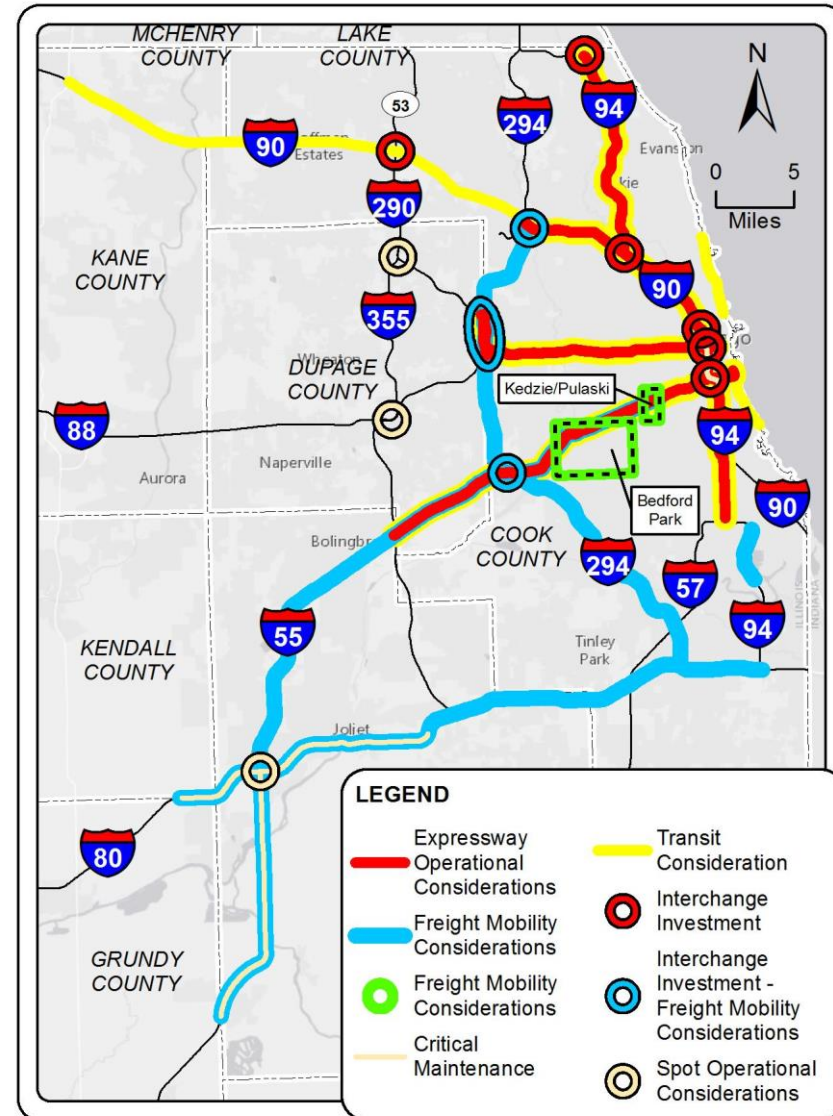


- Improve roadway environmental performance
- Reduce negative impacts on neighborhoods
- Adapt to a changing climate
- Leverage expressway right-of-way for broader needs (such as stormwater management, communications, utilities, and energy production)

Corridor improvements

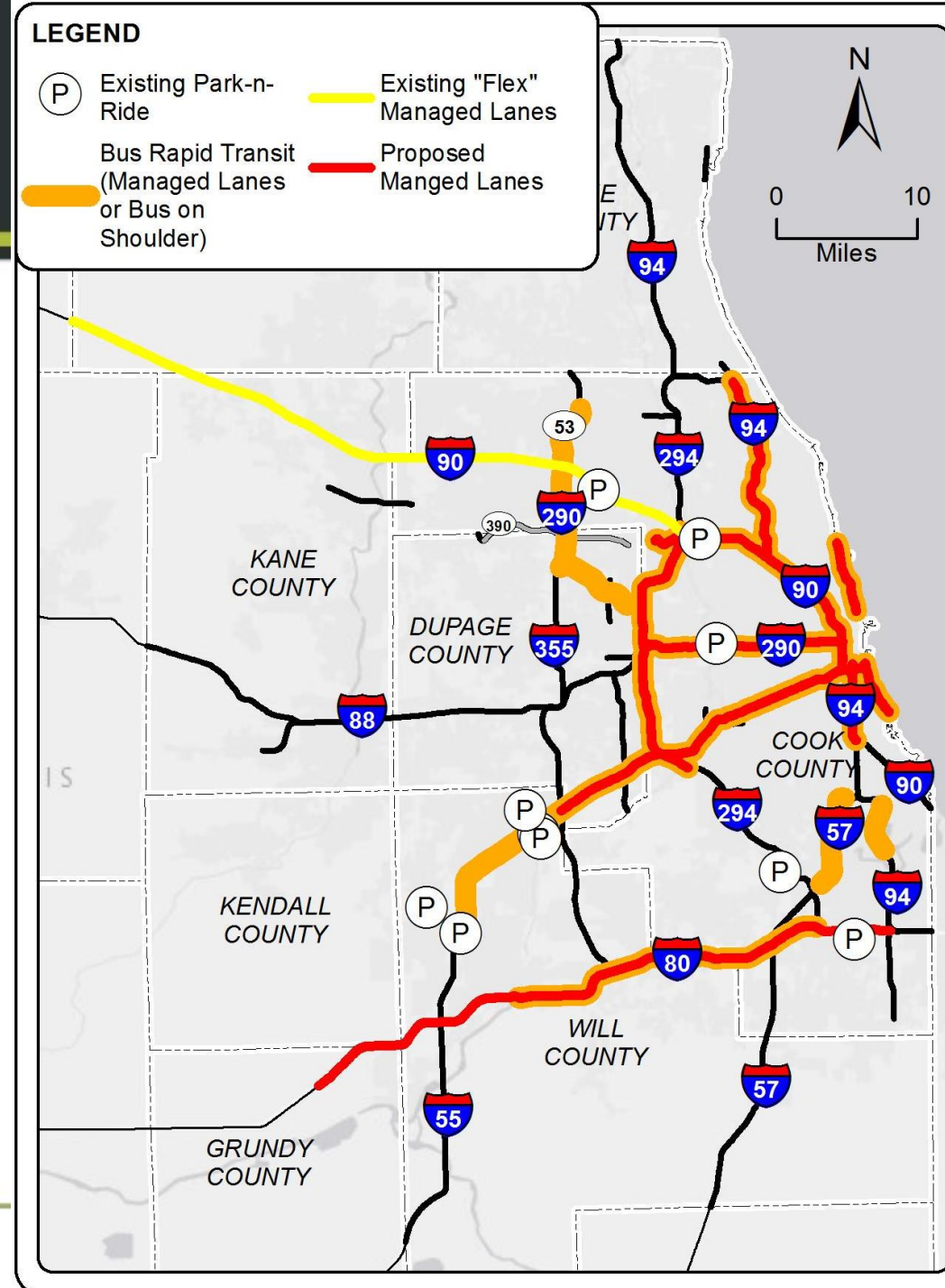
Corridor identification

- The first big lesson we've learned is that decades of insufficient funding have left the IDOT expressway system in need of improvements.
- Nearly everywhere.
- Now.



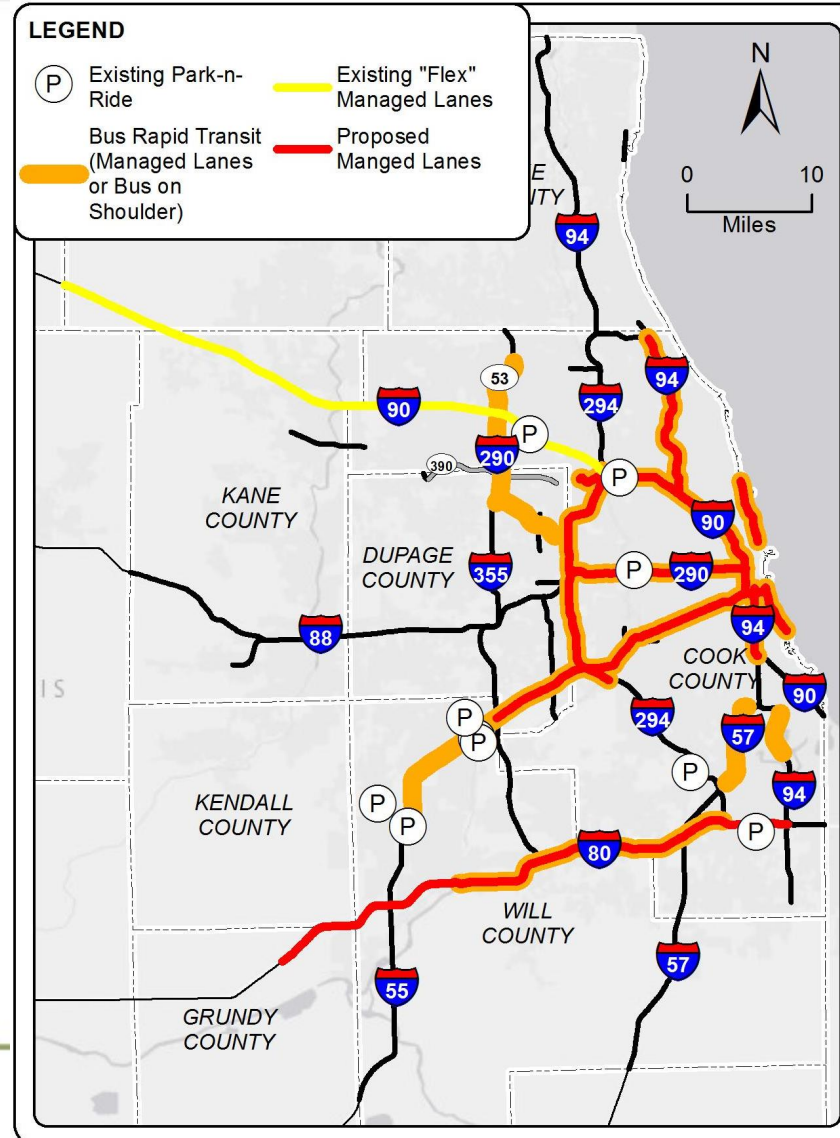
Managed lane network

- New capacity mixed with existing capacity
- Congestion pricing
- Identify lanes within corridors for automated and connected vehicles
- Address managed lane termini with Mobility-as-a-Service (MaaS) approaches



Transit improvements

- Express bus, bus rapid transit, and bus-on-shoulder services on expressways, with a focus on managed-lane corridors
- Enhanced infrastructure and service on existing rail lines
- Rideshare service enhancements and integrated travel demand management
- Transit infrastructure and transit service funding from expressway toll and managed lane revenues



Access to transit

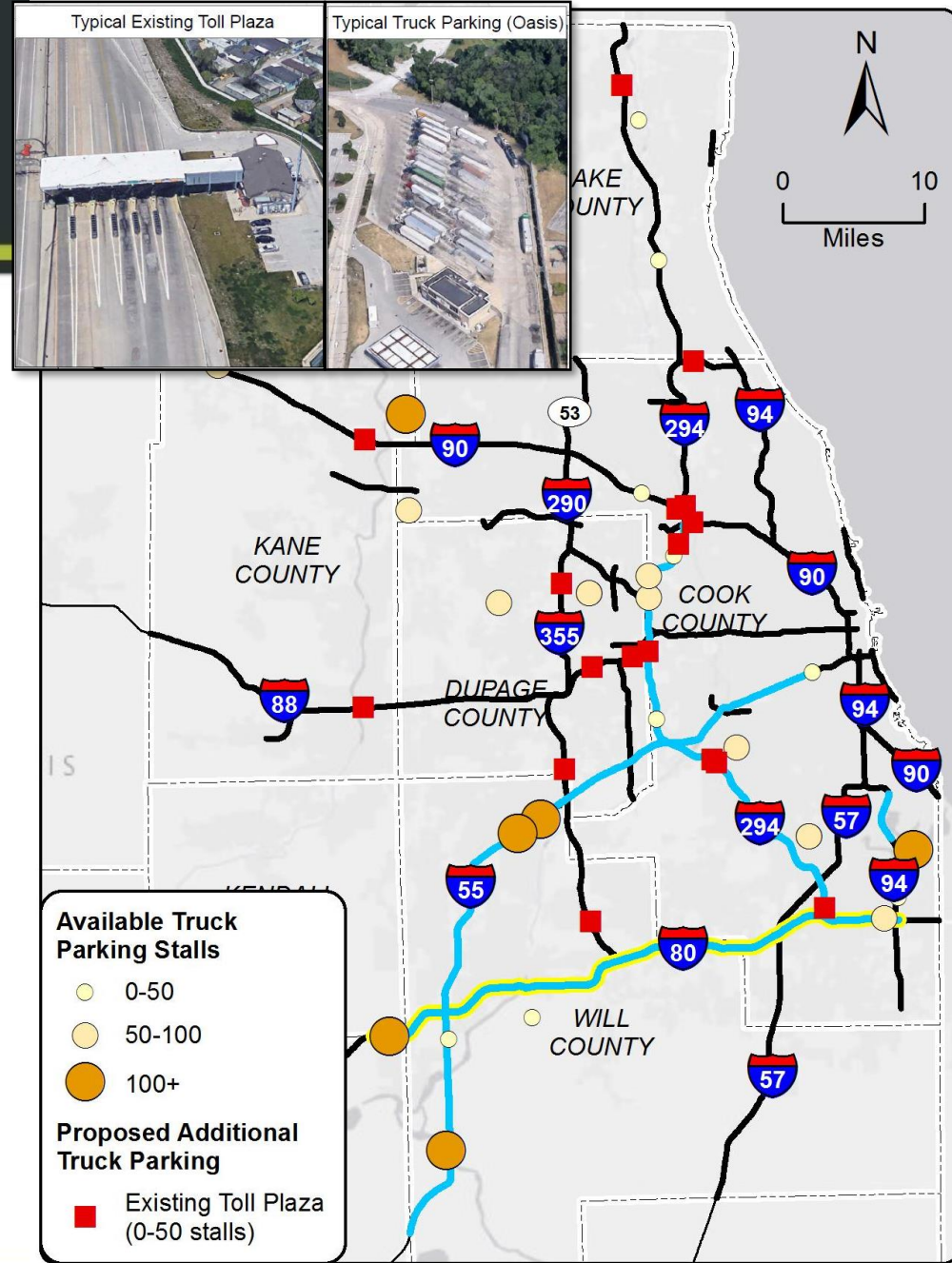
Corridor permeability for walkers and cyclists



- Community benefits will be a major part of the Vision.
- Transportation Centers will be a focus of this component.
- These parts of the Vision will be further refined as the other transit and mobility components become clearer.

Freight mobility

- Provide sustainable regional truck parking, smart truck stops
- Improve access to intermodal facilities
 - I-55 (Bedford Park, Kedzie/Pulaski)
 - I-294
- Truck platooning and truck lanes on the I-80 corridor



System interchange operations at major existing junctions



Existing

- I-88/I-355
- I-190/I-294/I-90/US 45 (near O'Hare)

Phase I/Master Plan

- I-290/I-294/I-88
- I-55/I-294
- I-55/I-80

Phase II/III

- I-90/I-94/I-290 (Jane Byrne Interchange)



Operations and technologies



- **Operations:**
 - Active traffic management
 - Automated/connected vehicles
 - Integrated corridor management
- **Safety**
 - Automated enforcement
 - Wrong-way driving controls
 - Automated pavement and incident detection
- **Freight**
 - Truck lanes
 - Truck platooning
 - Truck parking
 - Smart truck stops

Policy framework

Full-scale tolling

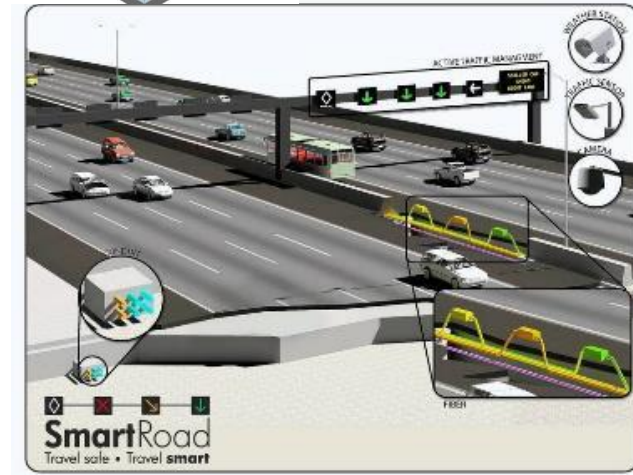
- Generate new revenues systemwide
- Variable pricing
- Toll gantries along mainline and on ramps
- All-electronic tolling
- Identify lanes within corridors for automated/connected vehicles



Typical cross section for full-scale tolling



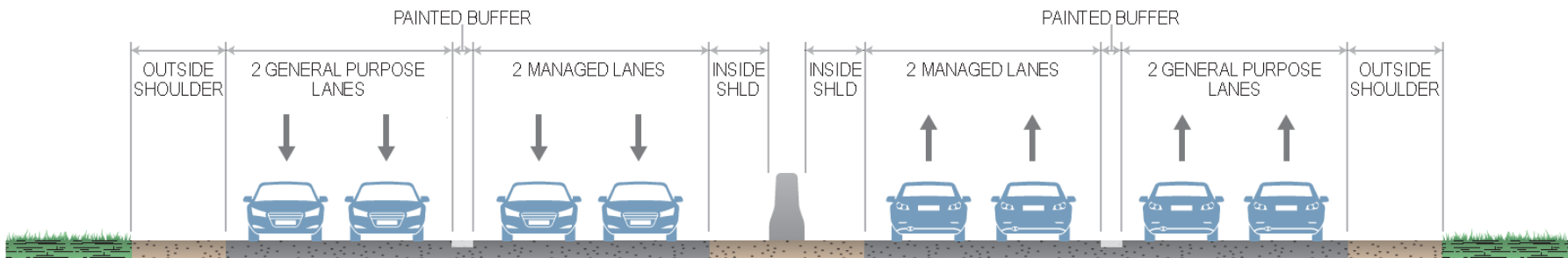
Source: Illinois Tollway



Typical cross section for managed lanes



- Toll lane dynamically priced to improve corridor mobility
- General design
 - Two managed lanes in each direction
 - Separated from general purpose lanes by 4' painted buffer
 - Continuous access
- Actual lane configurations and dimensions to be determined by corridor; based on capacity needs, geometric constraints



Proposed Typical Section
2+2 Ultimate Managed Lane Configuration

Policy framework: Focus on coordination



- Coordinated operations – e.g., tolling/pricing, transportation management centers, incident management, emergency services
- Best practices for multiparty integrated corridor management
- Shared revenue – use of revenues to support roads, bridges, transit facilities, transit services

Policy framework: equity



Focus will be on improving choices and mobility for all expressway users, regardless of income:

- Exploring a sliding-scale toll discount program for individuals based on need
- Identifying opportunities to enhance bus and rail transit services, including more frequent services and additional routes, particularly to serve communities with greatest need
- Researching enhanced rideshare services as part of travel demand management

Policy framework: environment



The following are being considered:

- Incentives for electric vehicles, particularly electric trucks
- Charging infrastructure for electric vehicles
- Sound barriers more palatable for sensitive environments (berms, transparent sound walls)
- Policy changes allowing more widespread deployment of sound barriers
- Noise ordinance enforcement
- Opportunities for additional stormwater detention in expressway corridors
- Opportunities for stormwater treatment and pollution abatement

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