



BUILDING FOR SUCCESS

In-Road Electric Vehicle Charging

The Illinois Tollway's Vision

Presented by Illinois Tollway Engineering

June 06, 2025



Please remain
muted for the
duration of the
webinar



HOUSEKEEPING RULES

In-Road Electric Vehicle Charging

The Illinois Tollway's Vision

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June 6, 2025

BRIDGING >>> THE FUTURE

- ✓ Address **system needs** and **modernization**
- ✓ Implementing **stakeholder priorities**
- ✓ **Transition** to the next major capital plan
- ✓ Ensures **consistent funding** for infrastructure investments
- ✓ Begins **advance work** for potential projects and initiatives



IN-ROAD ELECTRIC VEHICLE CHARGING INITIATIVE

Advanced In-Road EV Charging Pilot in PSB 25-2

GOALS

Interoperability

- Vehicles, methods and technology

Energy as a Service

- Monitoring and reporting; Back Office integration

Public Outreach & Education

- Implementation and safety; System benefits

Safety, Maintenance and Operations

- 'No-Harm'; Pavement and maintenance impacts

Sustainability

- Environmental and economic

Workforce Development

- Diverse and inclusive development and training



GUIDING PRINCIPLES

► Innovation

► Sustainability

► Equitable Economic Development

► Diversity & Inclusion

NATIONAL IMPLEMENTATION

PEER SNAPSHOT



1/4-mile roadway at Utah Inland Port in Salt Lake City



Central Florida Expressway pilot 1/2-mile segment on Lake/Orange Expwy. in Clermont



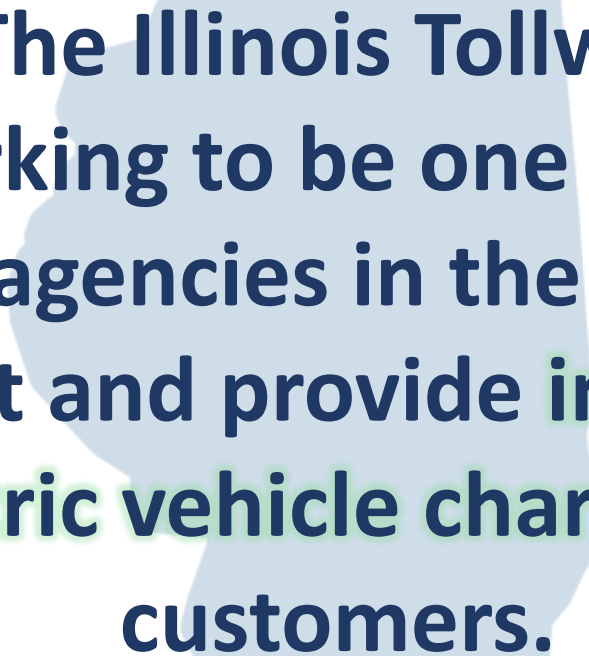
Partnership between MDOT and City of Detroit established 1/4-mile pilot project



1/4-mile pilot project on US231/52 in West Lafayette



PA Turnpike exploring on the Mon/Fayette Expressway near Pittsburgh



**The Illinois Tollway
working to be one of the
first agencies in the U.S. to
pilot and provide in-road
electric vehicle charging to
customers.**

ASPIRE TEAMING – ALIGNING SIMILAR GOALS

- ✓ Reduce harmful emissions
- ✓ Improve air quality and public health
- ✓ Protect the environment
- ✓ Support economic development through reduced cost and scale efficiencies
- ✓ Workforce skilling and job creation

*"The Illinois Tollway is **committed to leading the way in innovation** by integrating new technologies and expanding EV infrastructure across our 294-mile roadway system"*

– Cassandra Rouse, Illinois Tollway Executive Director



IN-ROAD **ELECTRIC** **VEHICLE** CHARGING



**Dynamic Wireless
Power Transfer**



**In-Roadway Magnetic Coils
Transmit Energy**



**Vehicle Mounted Magnetic
Coils Receive**



**Wireless Communication Facilitates
Maintenance Charge for Authorized EV**

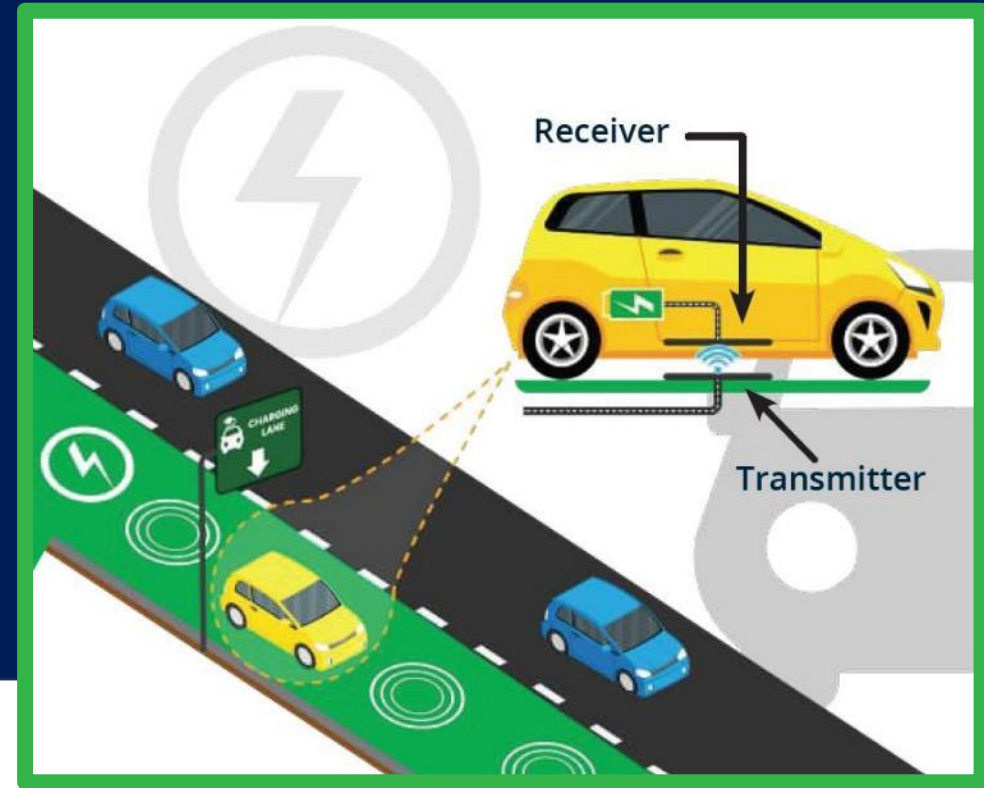


PILOT PROGRAM OVERVIEW

- Inductive charging feasibility study
- Preliminary identification of pilot locations
- 1/3-mile or more of electrified road
- Single lane testbed implementation

Potential Goals and Benefits

- ✓ Proof-of-concept for **new technology**
- ✓ Evaluate **durability and reliability**
- ✓ Design **national specs** for future use
- ✓ Examine **power delivery**
- ✓ Explore a **new revenue stream**
- ✓ Evaluate **environmental benefits**
- ✓ Provide **new customer amenities**
- ✓ Build on **existing infrastructure**



IN-ROAD ELECTRIC VEHICLE CHARGING

NEXT STEPS

PHASE I COMPLETION

- Verify location
- Stakeholder input
- Implementation Strategy

COORDINATION

- ComEd power delivery
- Coordination with external stakeholders
- Research and development partners

SCHEDULE

- Begin 2025



PSB 25-2 Item No. 1: Now Posted

Delivering a design-upon-request contract to encourage innovative implementation

IN-ROAD ELECTRIC VEHICLE CHARGING

NEXT STEPS

KEY PERSONNEL

- Project Manager
- Project Engineer (IL PE)
- Roadway Designer (IL PE)
- Electrical Designer (IL PE)
- QC/QA Reviewer (IL PE)

EXPERIENCE

- 3 years transportation electrification
- 1 year dynamic wireless power transfer

IDOT QUALIFICATIONS

- Highways (Freeways)
- Special Services (Electrical Engineering)
- Special Services (Feasibility)
- Special Services (Surveying)



PSB 25-2 Item No. 1: Now Posted

Delivering a design-upon-request contract to encourage innovative implementation

FOSTERING GROWTH

Providing small, diverse and veteran-owned firms with peer-to-peer training and mentoring and exposure to cutting-edge technology



Partnering for Growth Program

- ✓ Protégés work with **mentors** on agreed-upon scope of services
- ✓ Expands **technical capabilities** and **develops skills** for Tollway work



Emerging Technology Initiative

- ✓ Exposes small, diverse and veteran-owned firms to **latest technology, equipment** and **project delivery methods**



ASPIRE Partnership

- ✓ Unique opportunity to expose emerging firms to **research** and **peer-to-peer collaboration efforts**

UPCOMING OPPORTUNITIES

SCAN QR CODE FOR
CURRENT LOOK AHEAD

- Questions PSB_25-2.01_Questions_and_RFIs@docs.e-builder.net
- Questions are due June 16th at 4:30 pm Central Time



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