



McCity Grand Opening 参加報告

**University of Michigan Transportation Research Institute (UMTRI)
Mobility Transformation Center (MTC)**

2015年7月29日

国際連携WG 主査

天野 肇



施設概要



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Roadway Attributes

- 13 signalized intersections
- 1000' North/South straight
- Various road surfaces (concrete, asphalt, dirt)
- Variety of curve radii, ramps
- Two, three, four and five-lane roads
- Round-about and “tunnels”
- Sculpted dirt and grassy areas

Road-side Attributes

- Variety of signage and traffic control devices
- Fixed, variable street lighting
- Cross walks, lane delineators, curb cuts, bike lanes, grade crossings
- Hydrants, sidewalks, etc.
- “Buildings” (fixed and movable)

Mcity: A 32-Acre Outdoor Lab



Mcity is the world's first full-scale simulated urban environment designed expressly for testing the performance and safety of connected, automated, and autonomous vehicles under controlled and realistic road conditions. It is a 32-acre outdoor laboratory for advanced mobility systems that includes:

- Urban and suburban streets, including various lane configurations and sidewalks, pedestrian crossings, bike lanes, ADA ramps, street lights, parallel and diagonal parking, and a bus turnoff/stop.
- Instrumentation throughout, including a control network to collect data about traffic activity using wireless, fiber optics, Ethernet, and a highly accurate real-time kinematic positioning system.

Other features include:

Straight gravel roadway with a railroad crossing.

Traffic circle, a smaller version of a roundabout that is common in Europe and some older cities in the U.S.

Signalized intersections in different configurations, with mast arms, wood and metal poles, and pedestrian crossings.

Trunk line road, a rural roadway with a fully equipped railroad crossing, guard rail, and temporary and permanent pavement markings.

Brick paver road simulated with stamped concrete.

Underpass, simulated by a tunnel that blocks vehicles from wireless and satellite signals.

Roundabout, an increasingly common approach to intersection design intended to improve safety.

Open test area that can be configured for a wide range of scenarios, including parking lots and novel intersection geometries.

4-way stop intersection, with straight as well as tight and sweepingly curved approaching roadways.

Tree canopy, a simulated tree cover that reproduces the attenuation of signals that pass through trees.

Metal bridge deck, a bridge surface that poses special challenges for radar and image processing sensors.

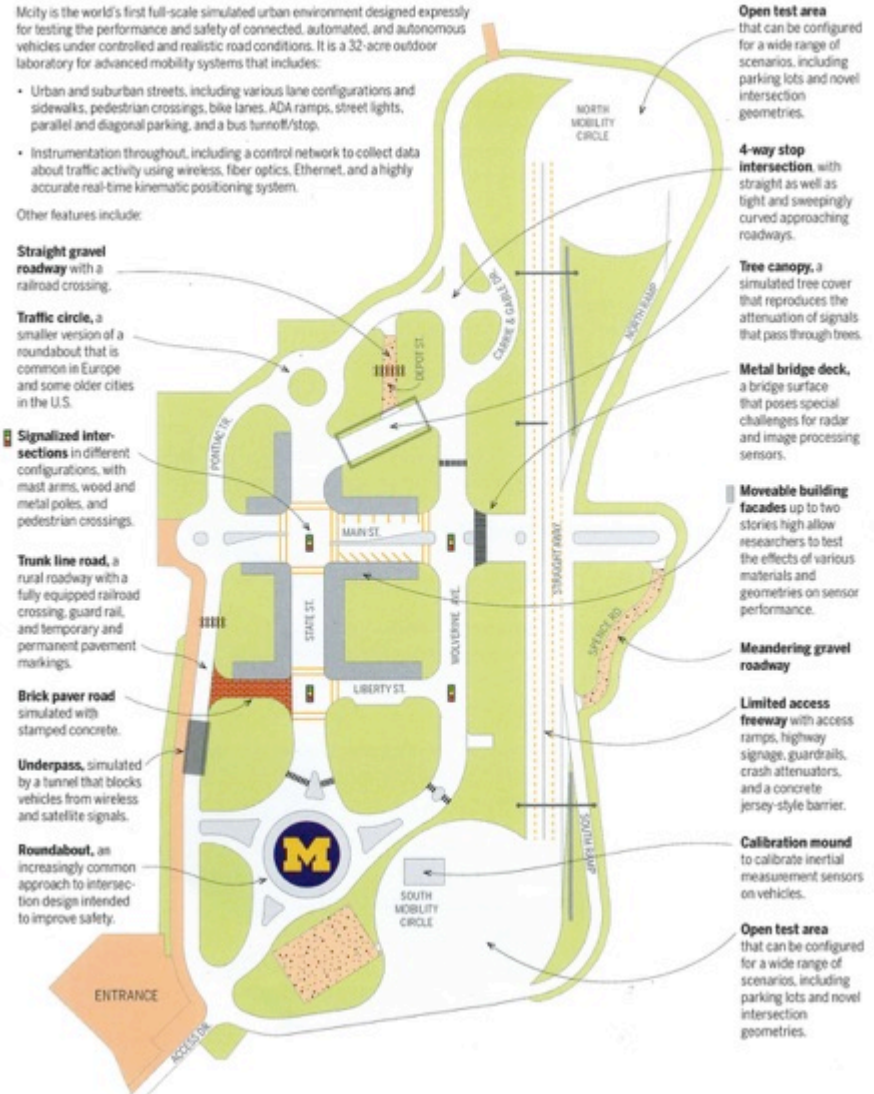
Moveable building facades up to two stories high allow researchers to test the effects of various materials and geometries on sensor performance.

Meandering gravel roadway

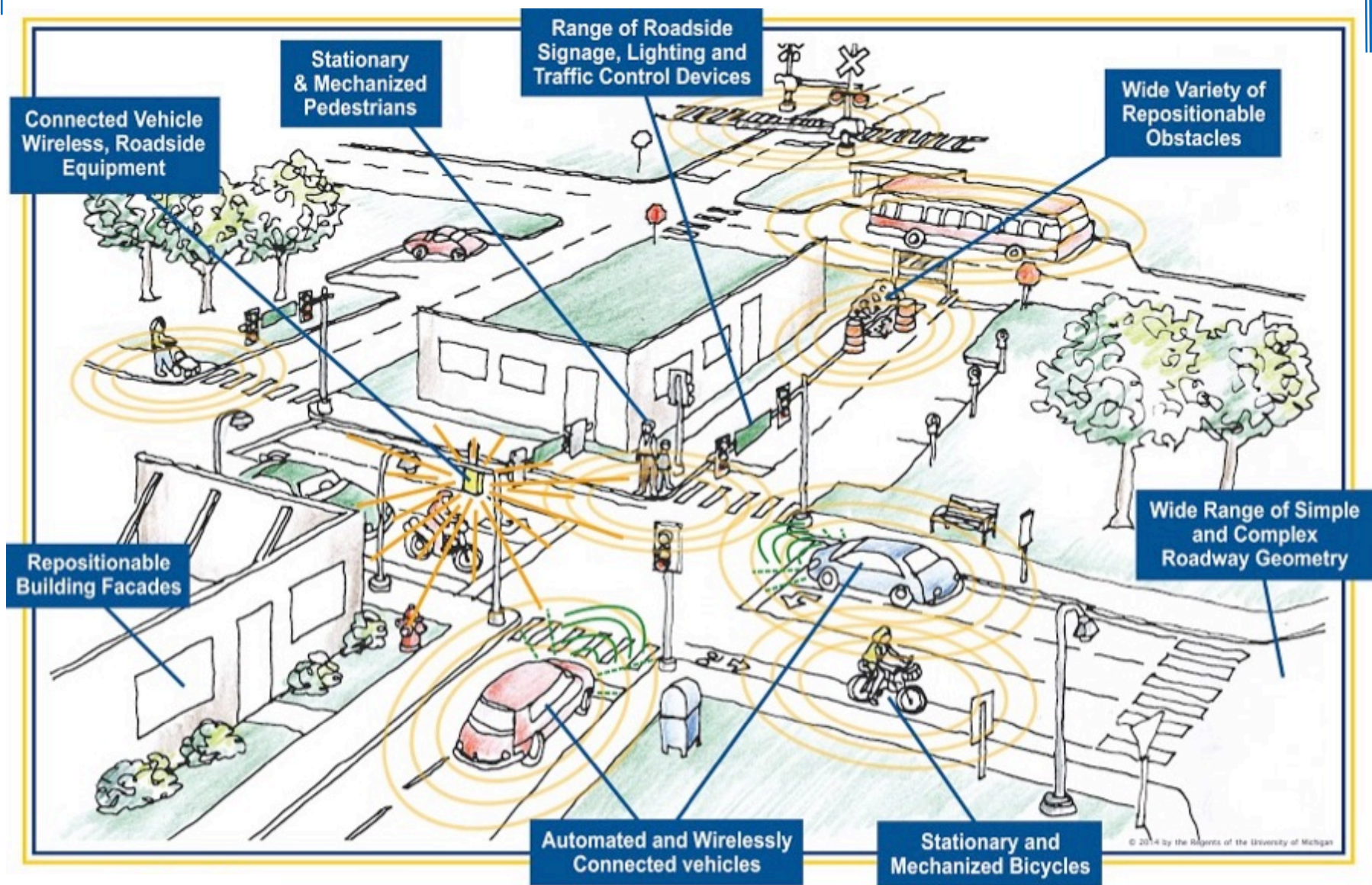
Limited access freeway with access ramps, highway signage, guardrails, crash attenuators, and a concrete jersey-style barrier.

Calibration mound to calibrate inertial measurement sensors on vehicles.

Open test area that can be configured for a wide range of scenarios, including parking lots and novel intersection geometries.



施設概要





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Grand Opening Ceremony



Peter Sweatman
Director, UMTRI
Director, Mobility Transformation Center



Shauna Ryder Diggs
Chair, U-M Board of Regents



Mark Schlissel
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Jim Sayer
'Mayor', Mcity



Kirk Steudle
Director, Michigan DOT



Debbie Dingell
House of Representative



Debbie Stabenow
Senator



Gary Peters
Senator



Christopher Taylor
Mayor, Ann Arbor



Ribbon Cutting



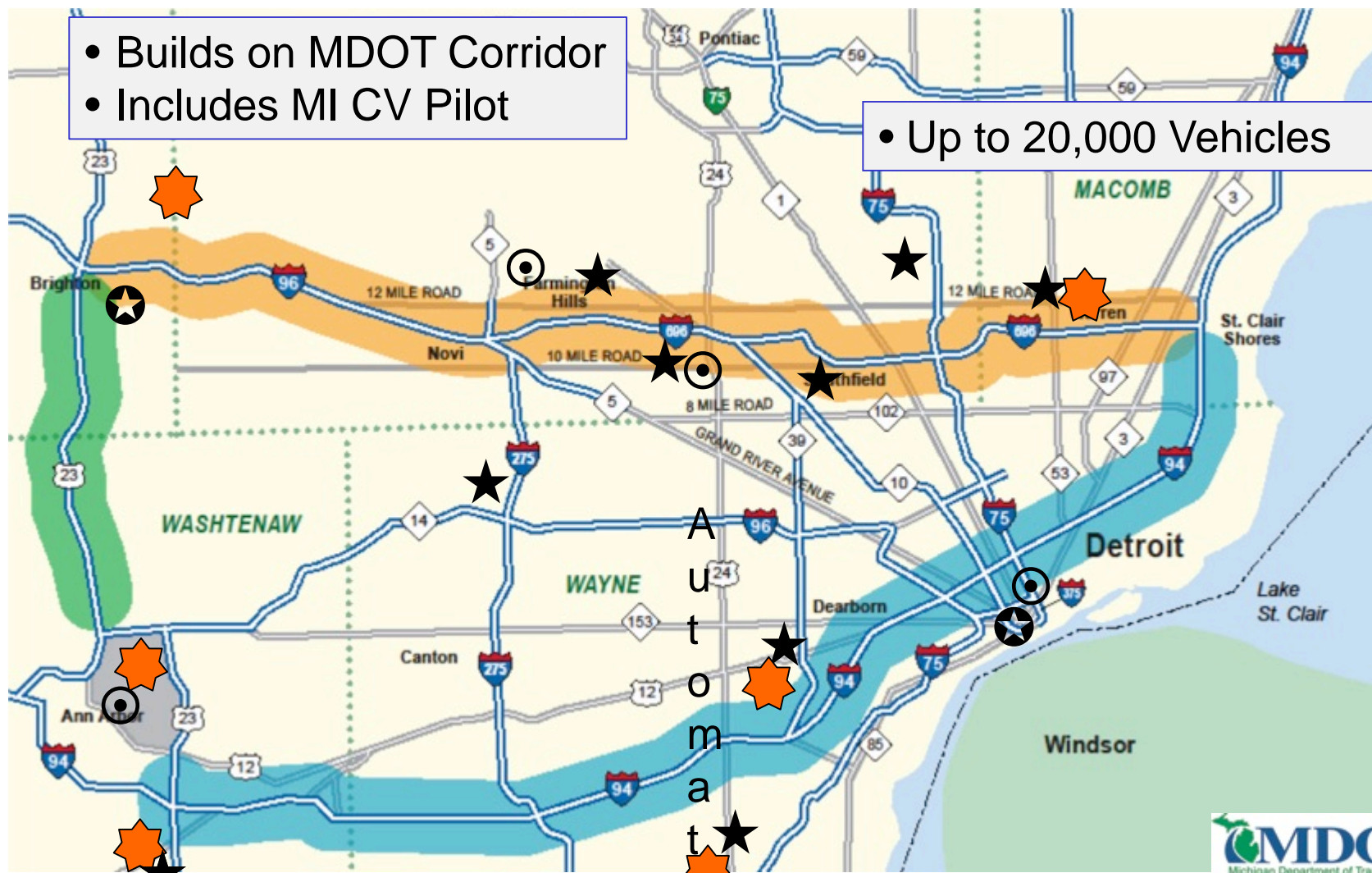


記念のたて贈呈





Michigan DOT Corridor



- ★ MDOT Facilities
- ⊙ Connected Vehicle Test Beds

Automated
Vehicle
Control

LC Member HQ or Key Facility

