

Transportation Commission Training

March 15, 2017



MKSK

Training Topics

- Commission Roles
- Meeting Tips
- Transportation 101 Training
- Polling: Topics for Future Training

Roles and Responsibilities

Transportation Commission

- Established by City Council ordinance
- Advises City Administrator and City Council on transportation policy
- Provide comments to Planning Commission, City Council, Downtown Development Authority and the Ann Arbor Area Transportation Authority
- May be asked to provide input toward codes, design standards, and transportation related capital improvements
- May overlap with transportation issues that fall under the purview of Planning Commission, Park Advisory Commission, City Council and others

Meeting Tips and Making Decisions

Know Ground Rules



Information



Meeting Preparation



Deliberation



Decision

Meeting Procedures-Fundamental Documents

- City Ordinances
- Open Meetings Act
- Transportation Commission Bylaws

Making Effective Decisions

Information

- City Plans and Documents
- Staff Reports
- Publications
- Public Correspondence

Making Effective Decisions

Preparation

- Make sure you have...
 - All agenda materials
 - Read those materials
 - Do a site visit (if applicable)
- May have field trips but...

Custodians of the Public Trust

Communication and Discussion

- Deliberation in public (Open Meetings Act)
- Do not have communication outside the meeting (no emails, meetings etc..)
- Be cautious in meetings with advocacy and other groups
- Include staff liaison on all commission related communications

Making Effective Decisions

Deliberation

- Rules for Speakers
 - Maintain reasonable degree of formality
 - Comments through the Chair
 - Follow rules for speaking time
 - Allow extra time for spokesperson
- Rules for Decision Makers
 - Communicate procedures
 - Comments through the Chair
 - Describe any potential conflicts of interest
 - Deliberate in the open
 - Express opinions



Making Recommendations

Motion Protocol

- Chair or staff state the question
- Refer to staff reports, plans, ordinances, etc.
- Motion
 - “Request that staff provide us...”
 - “Schedule a meeting to/with...”
 - “Recommend that (staff, city council, etc.)...”
- Second
- Discussion, may modify the motion
- Call for vote

Transportation 101

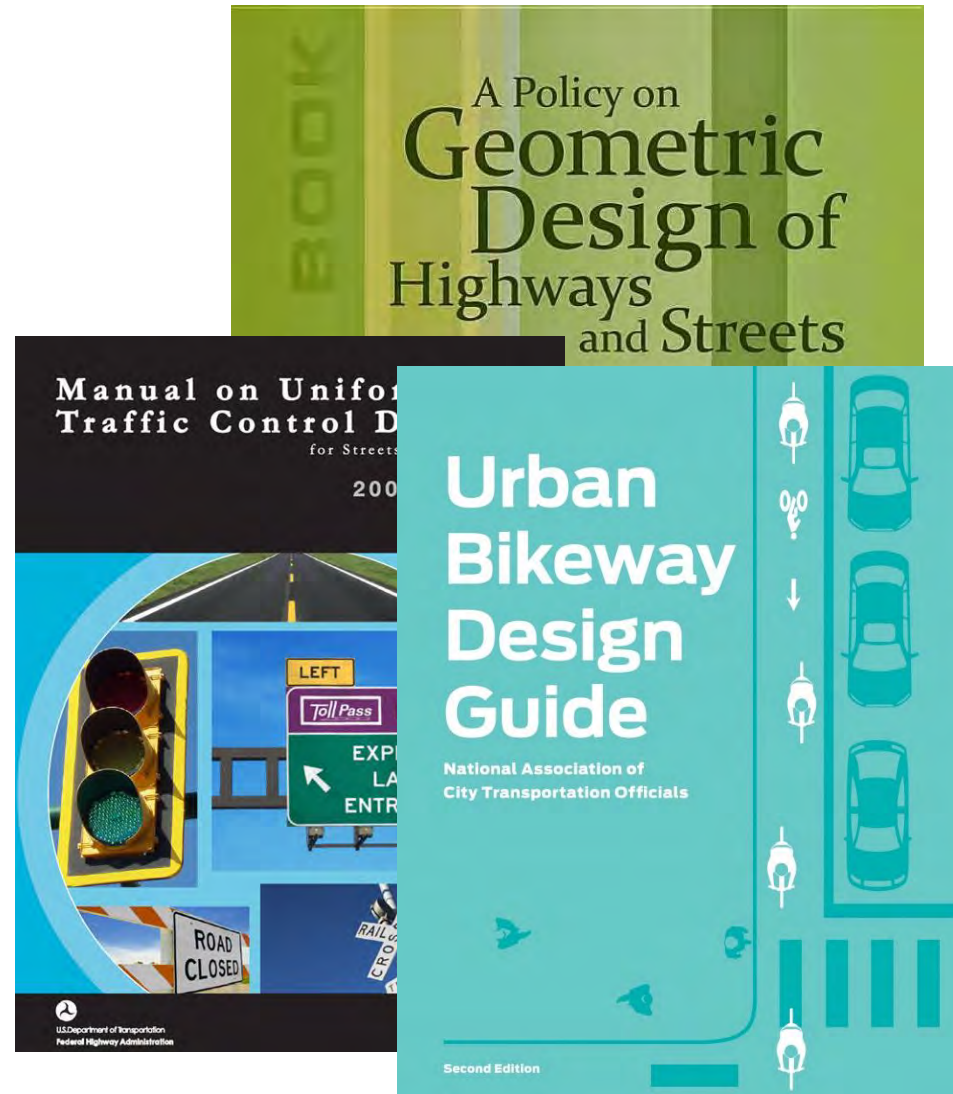
Manuals and Standards

National

- American Association of State Highway and transportation Officials (AASHTO)
- Highway Capacity Manual (HCM)
- National Association of City Transportation Officials (NACTO)
- Manual of Uniform Traffic Control Devices (MUTCD)

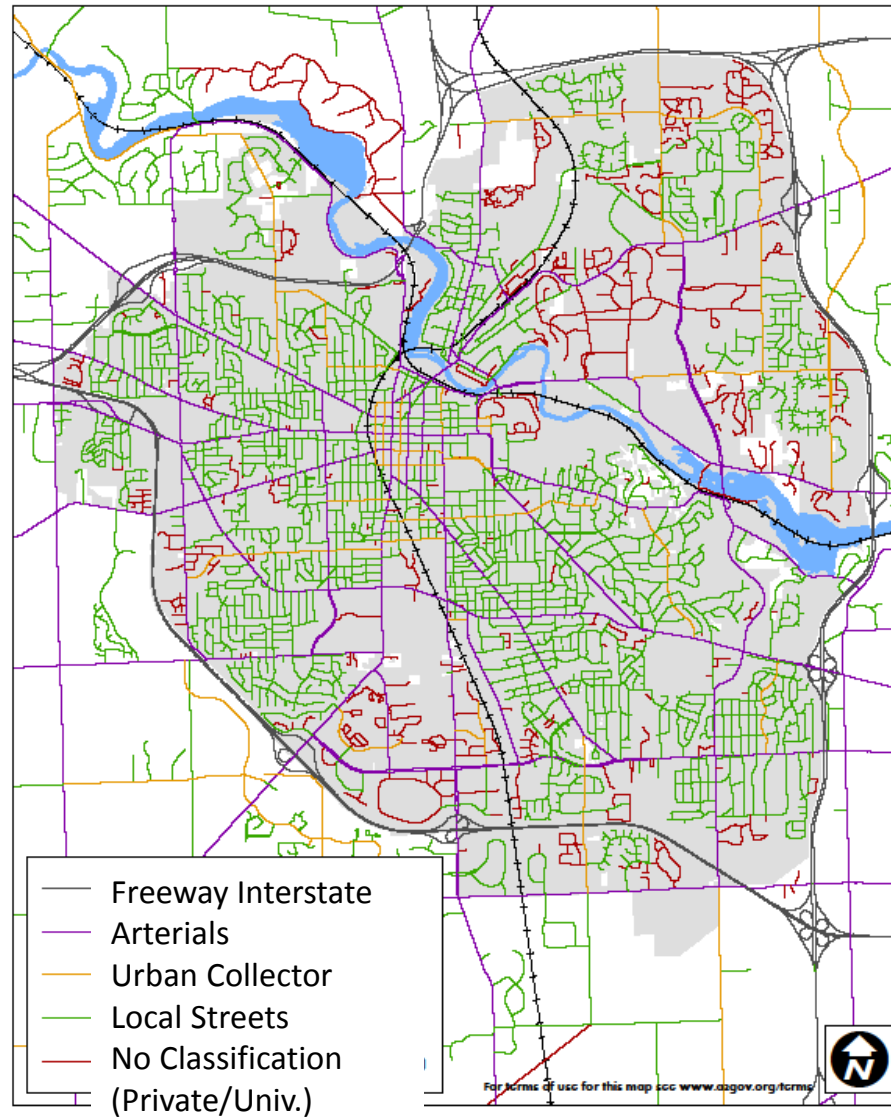
City

- Street Design
- Complete Street Policy
- Green Street
- Vulnerable Road User Ordinance



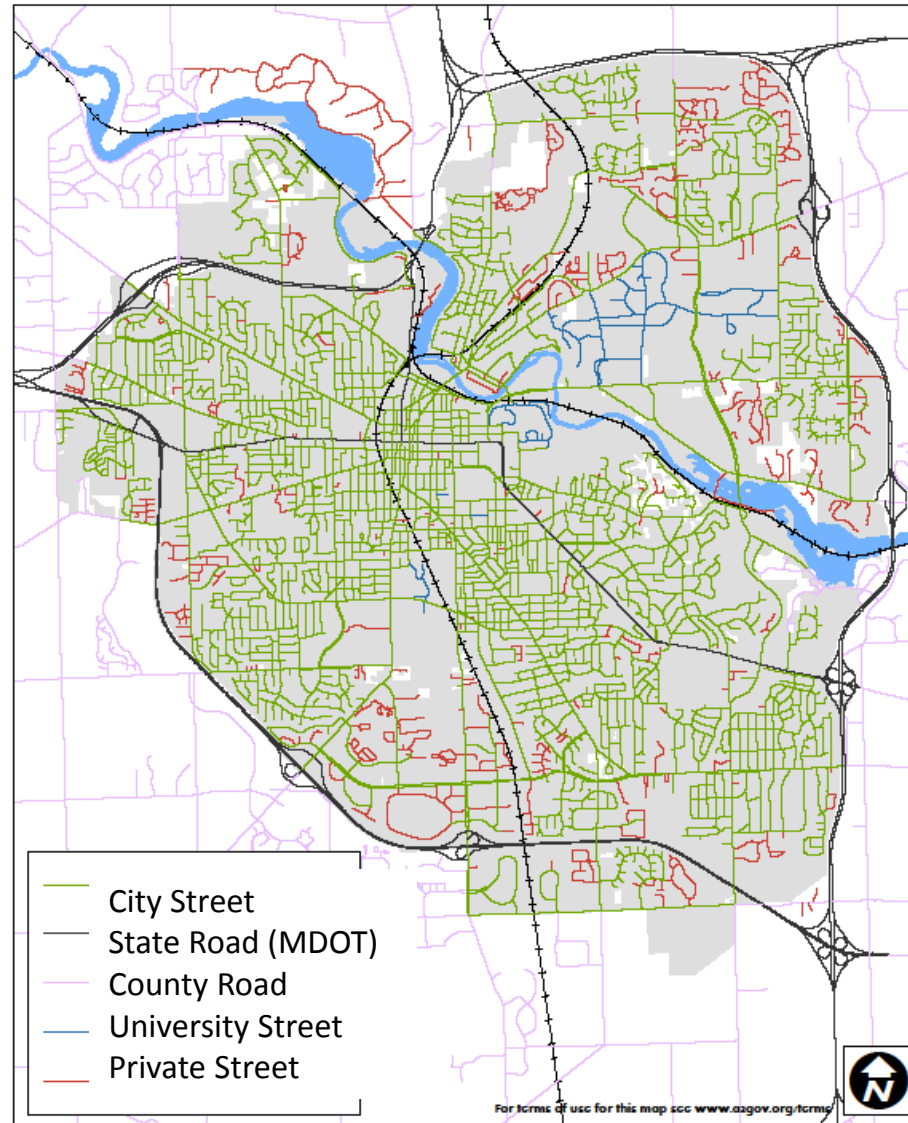
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Act 51 - Road Classification



Transportation 101

Act 51 - Road Jurisdiction



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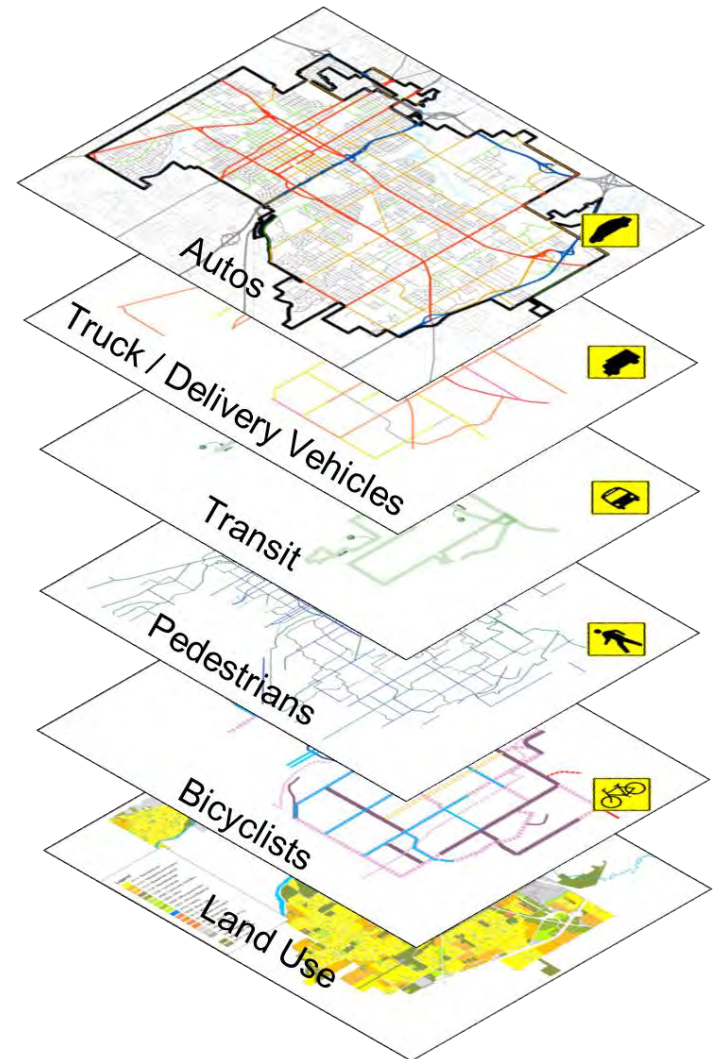
Roadway Users

Complete Streets

- Accommodate the variety of uses in the street ROW
- The ROW width is limited

Complete networks

- Multi-modal connected network
- Primary network for each user
- Not every street may be able to accommodate each user equally



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Active Transportation: Pedestrian Facilities



A – Facility with Vertical Buffer



B – Facility with Buffer



C – Facility along Curb



D – No Facility, but Passable



E – No Facility, Not Passable

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Active Transportation: Pedestrian Facilities



Marked
Crosswalk



Pedestrian
Bridge



Crosswalk
with
refuge
island



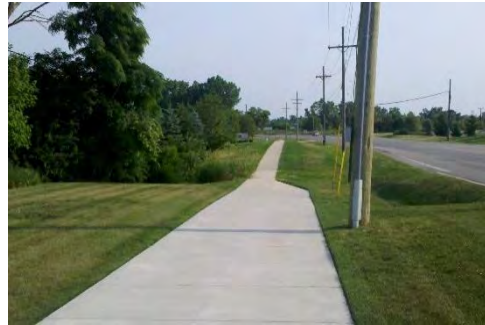
Rapid
Rectangular
Flashing
Beacon
(RRFB)
Crosswalk

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Active Transportation: Bike Facilities



Bike Lanes &
Sidewalks
(buffered bike
lane)



Roadside
Pathways



Cycle
Tracks



Shared
Roadways
(Sharrows)



Paved
Shoulders

**Matching
context with
facility is key**

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Flexible Streets



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Transit

COMMUTER RAIL



Metra, Chicago Region

LIGHT RAIL



*Hiawatha Line,
Minneapolis*

STREETCAR



Portland, OR

**BUS RAPID
TRANSIT (BRT)**



*Healthline BRT,
Cleveland*



MBTA, Boston Region



*TriMet Max, Portland,
OR*



Seattle, WA



EmX, Eugene, OR



*UTA, Salt Lake City
Region*



Tide LRT, Norfolk, VA



Tacoma, WA



Primo, San Antonio, TX

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Traditional Level of Service (LOS)

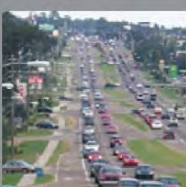
Measurement of delay for vehicles at intersections:

- A (little delay) to F(congestion)
- Typical standard is C or D, some use E
- Usually modeled for peak hours

LOS	Average delay in seconds per vehicle	Description of motorist perception
A	< 10	Free-flow traffic: “Good” LOS
B	10.1 – 20	Reasonable free-flow
C	20.1 – 35	Stable but unreasonable delay begins to occur
D	35.1 – 55	Borderline “bad” LOS
E	55.1 – 80	“Bad” LOS: long queues
F	> 80	Unacceptable: very high delay, congestion

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Multimodal Level of Service (MLOS)

	AUTOMOBILE	BICYCLE	PEDESTRIAN	BUS
A/B				
C/D				
E/F				
				

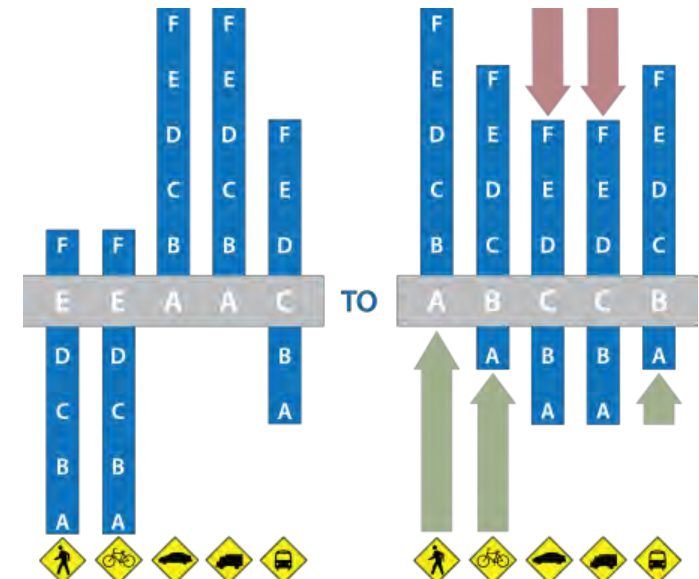
MLOS Targets

Auto = C

Bicycle = B

Pedestrian = A/B

Bus = B/C

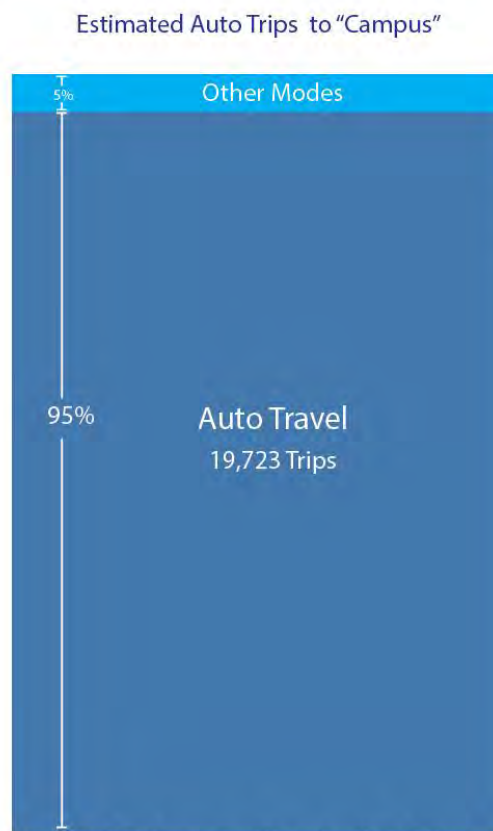


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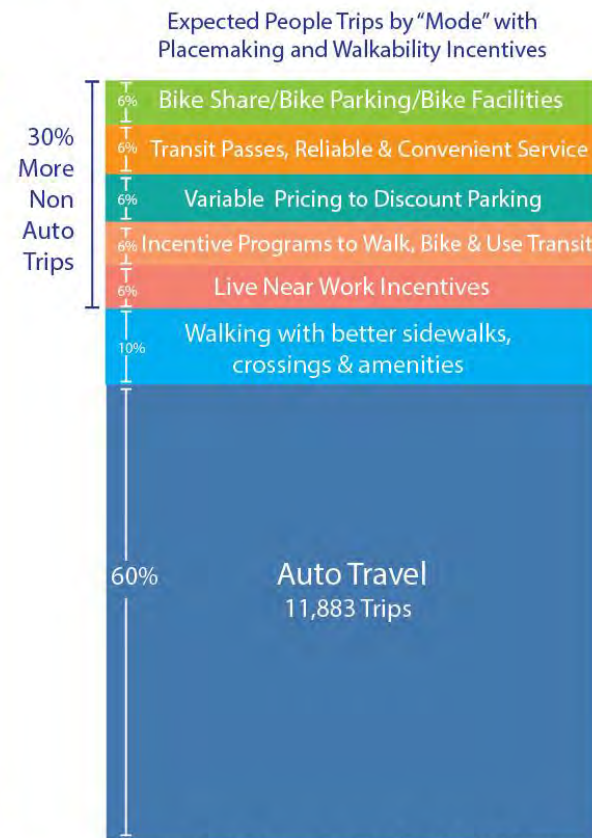
Transportation Modeling

How might Employees, Students and Visitors Travel to the Kalamazoo Healthy Living Campus?

- Some models overestimate traffic for urban environments
- Look for trip reduction factors (mixed use, non-vehicle trips)
- Transportation demand management programs



Source: ITE Trip Generation Manual and LSL Estimates

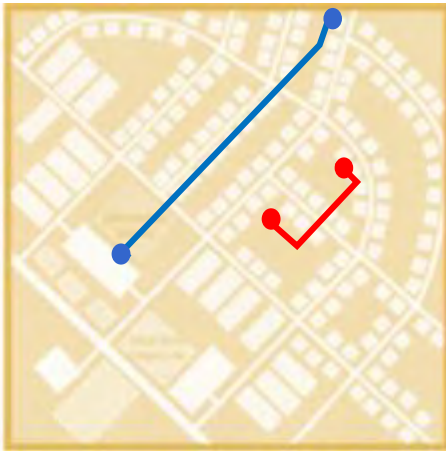


Source: ITE Trip Generation Handbook 3rd Edition and LSL Estimates based on other campus studies

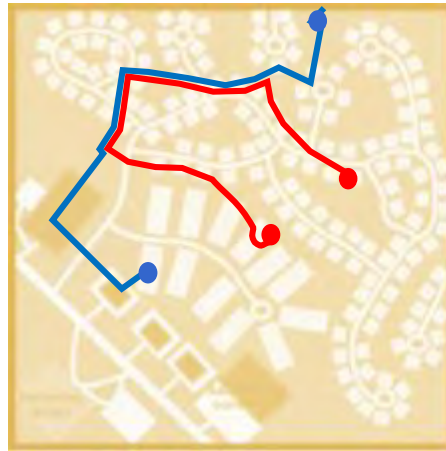
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Connectivity

Provides multiple routing options for users (including emergency services)



Traditional



Conventional

Challenges of a Connected Network:

- Streets have been there for a long time
- Right-of-way is constrained
- Street connections difficult to add
 - Natural barriers
 - Residents & developers oppose connections
- Outdated codes

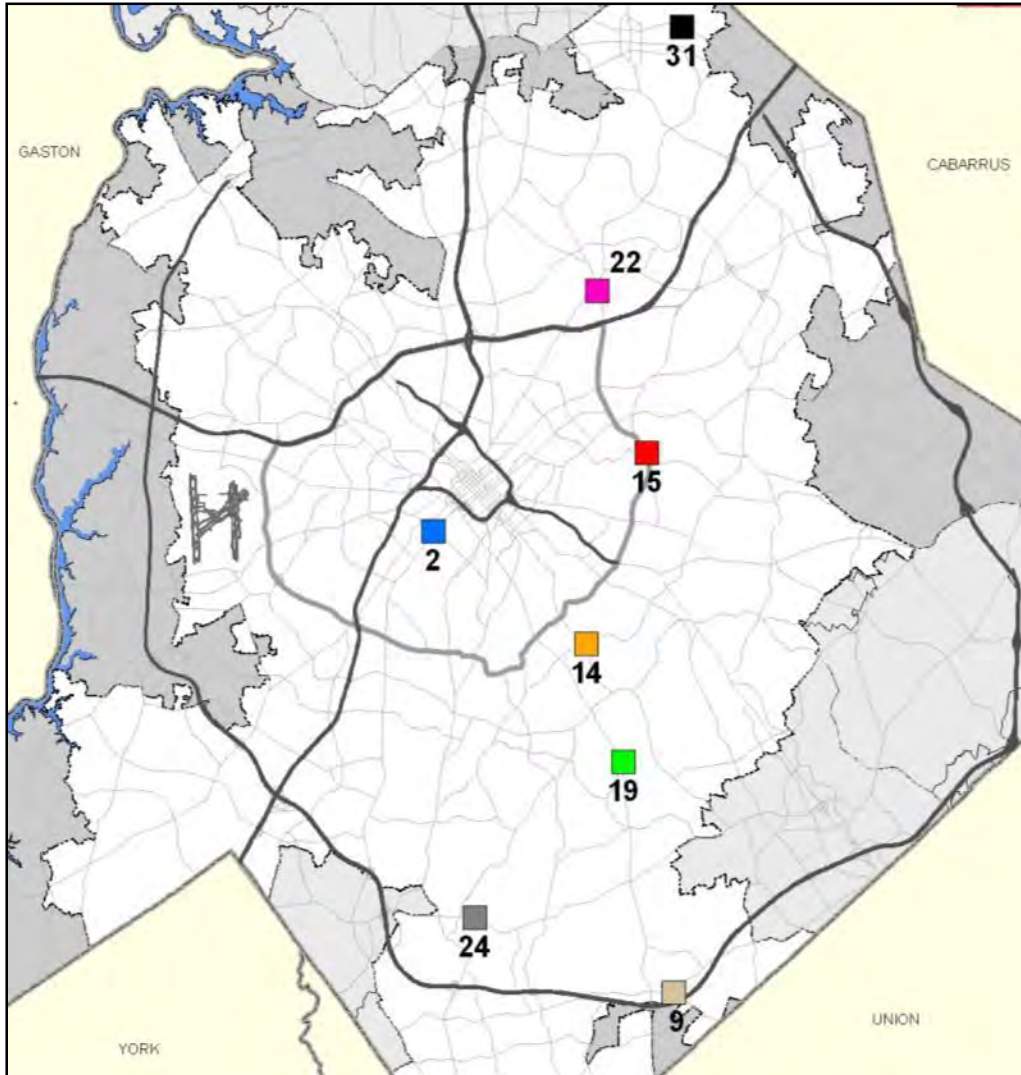
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Connectivity Case Study: Charlotte, NC



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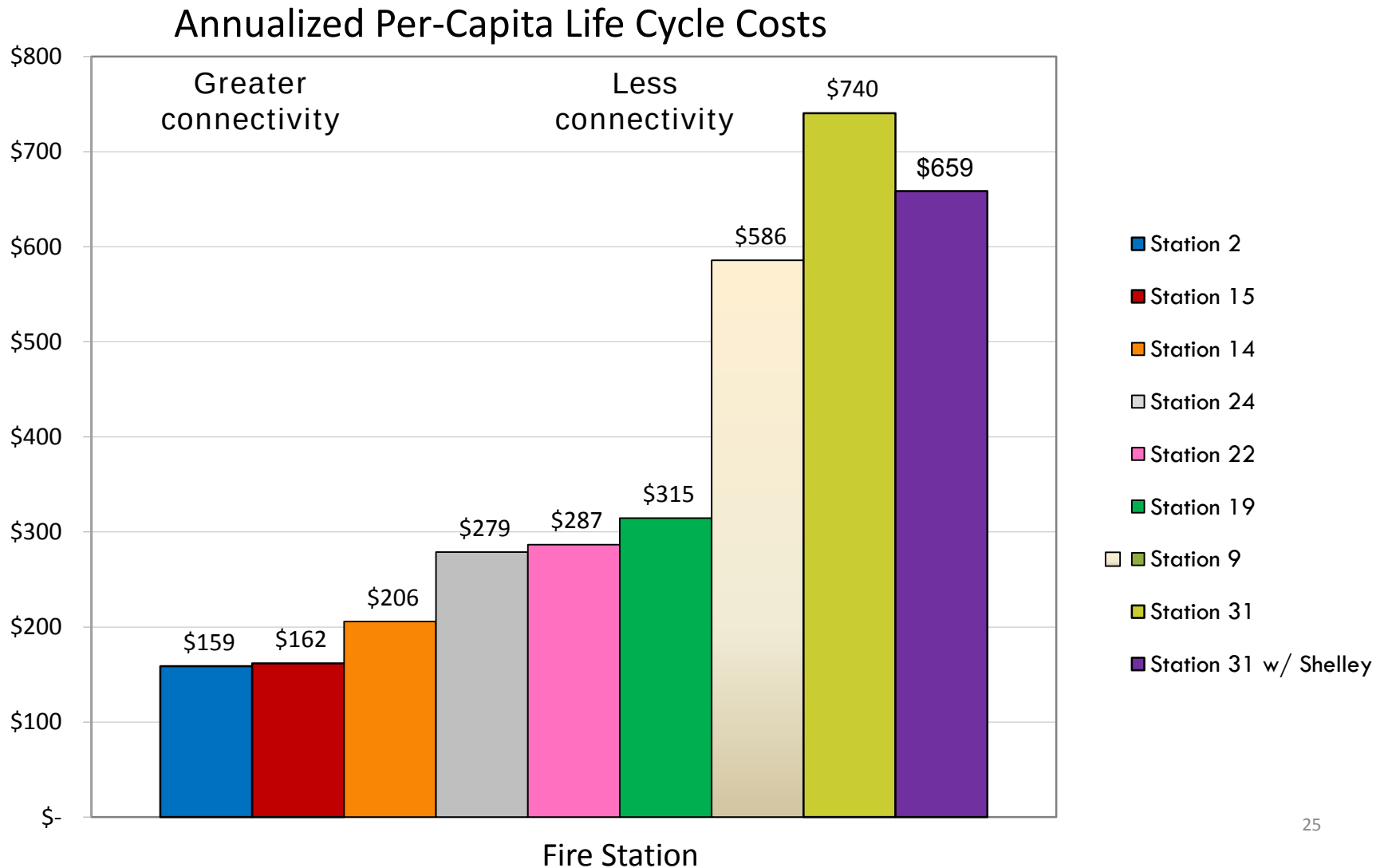
Connectivity Case Study: Charlotte, NC



- 8 fire stations
- Areas all generally built-out
 - Land generally developed
 - Street network generally complete
- Distance from Center City generally correlates negatively with connectivity

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Connectivity Case Study: Charlotte, NC



Transportation 101

Roundabouts

Benefits

- Alternative to traffic signal
- Reduces crashes (up to 60%)
- Reduces crash severity
- Smoother traffic flow

Disadvantages

- Requires more right-of-way
- May be less accommodating to pedestrians and bikes
- Universal accessibility concerns



Roundabout at Huron Parkway & Nixon Road

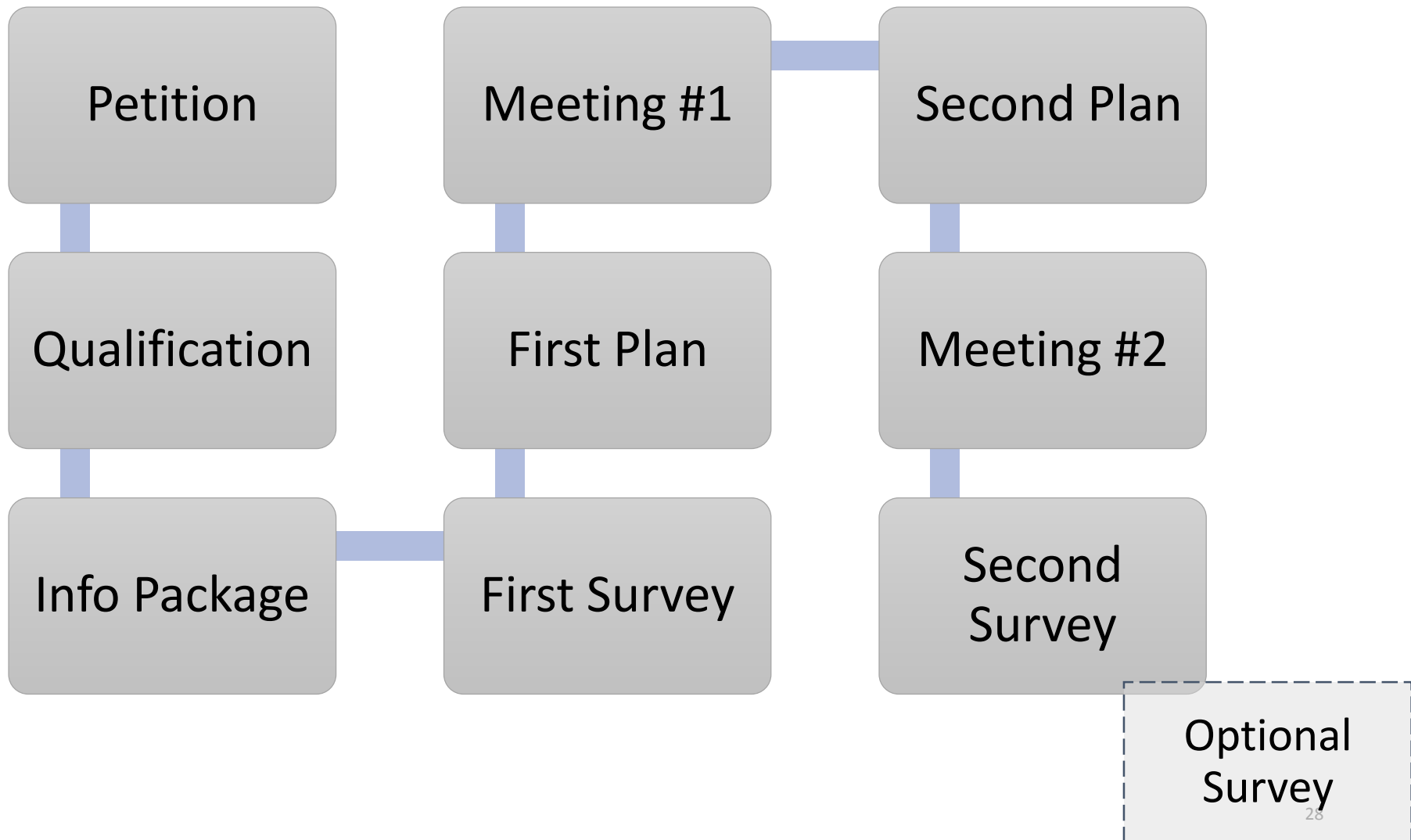
Traffic Calming

“Traffic Calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users.”

Lockwood, Ian. *ITE Traffic Calming Definition*. ITE Journal, July 1997, pg. 22.

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City of Ann Arbor Traffic Calming 10 Step Process





Raised Crosswalk at S. Forest Ave.



Speed Hump at Wells St.

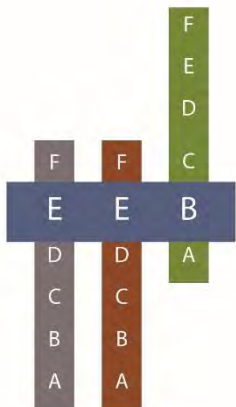


Curb Bump Out at Brooks St.

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Road Diets

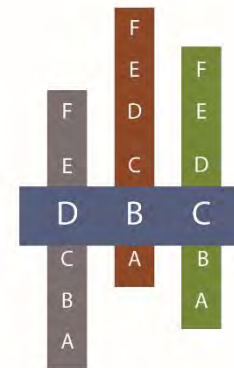
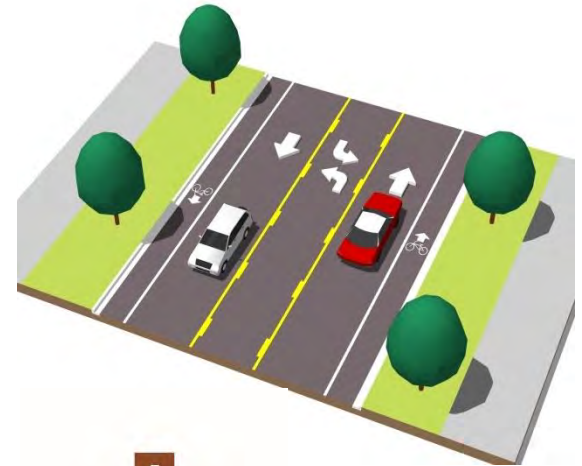
Existing: 5 Lanes



4 Lanes + median



3 Lanes + bike lanes



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Road Diets



BEFORE



CONCEPTUAL



AFTER

Green Road Modifications



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Road Diets



BEFORE



CONCEPTUAL



AFTER

Platt Road Modifications



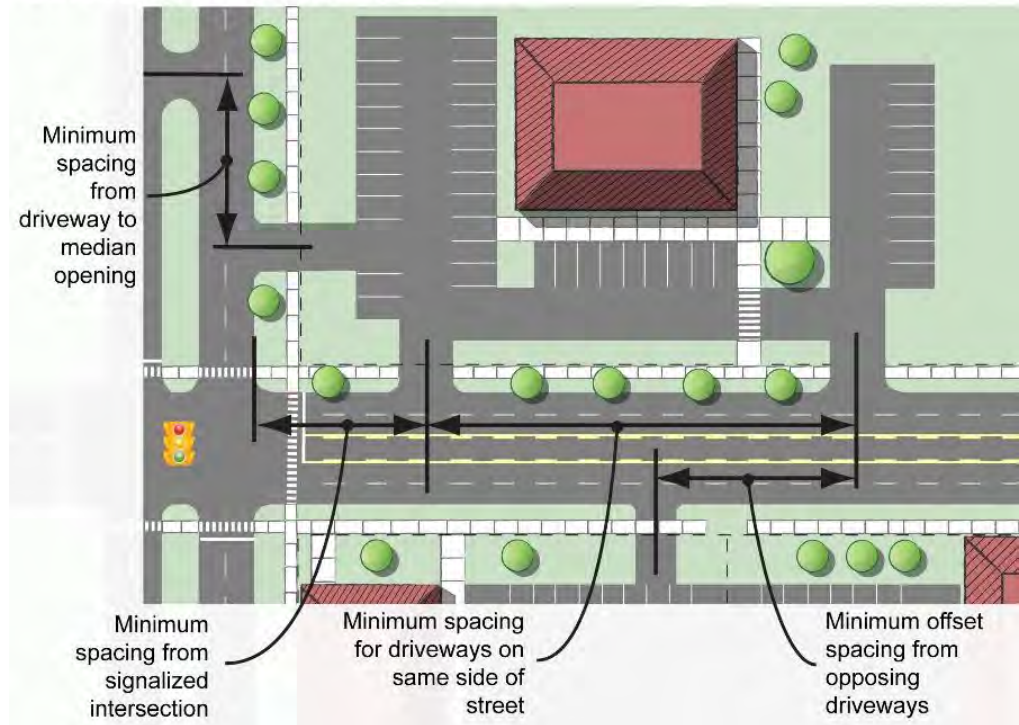
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Access Management

A series of techniques limiting the number, location, spacing and design of access points and traffic signals to:

- Maximize existing street capacity
- Reduce potential for crashes
- Improve overall corridor conditions

Driveway Spacing Requirements



Proper driveway design, spacing and offsets maximize benefits of access management.

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Transportation Demand Management (TDM)

Strategies that increase overall system efficiency by encouraging a shift from single-occupant vehicle (SOV) trips to non-SOV modes, or shifting auto trips out of peak



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Smart Cities

USDOT identified 12 vision elements that comprise a Smart City

- Technology Elements:
 - Urban Automation
 - Connected vehicles
 - Intelligent, Sensor-Based Infrastructure
- Innovative Approaches to Urban Transportation Elements
 - User-Focused Mobility Services and Choices
 - Urban Delivery and Logistics
 - Partnering opportunities
 - Smart Grid, Roadway Electrification, and Electric Vehicles
 - Connected, Involved Citizens and stakeholders
- Underlying Smart City Elements
 - Low-Cost, Efficient, Secure, and Resilient Information and Communications Technology
 - Smart land Use

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Capital Improvement Program

- Capital Improvement Plan is a six year plan of projects considering priorities, cost, funding
- Capital Improvement Project is a significant physical project or study
- CIP Transportation Asset Category Groups:
 - Airport
 - Alternative Transportation
 - Bridges
 - New Street Development
 - Other Transportation Projects
 - Parking Facilities
 - Street Construction

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Capital Improvement Program – Typical Timeline

- **September** -- CIP Kickoff
- **September to October** -- Projects suggested, prioritized, and tentatively scheduled
- **October to November** -- Funding Analysis and Draft Plan Developed
- **November** -- Draft Plan to Planning Commission Working Committee
- **December** -- Plan. Comm. Public Hearing/Action
- **February to April** -- City Council uses as basis for Capital Budget Consideration

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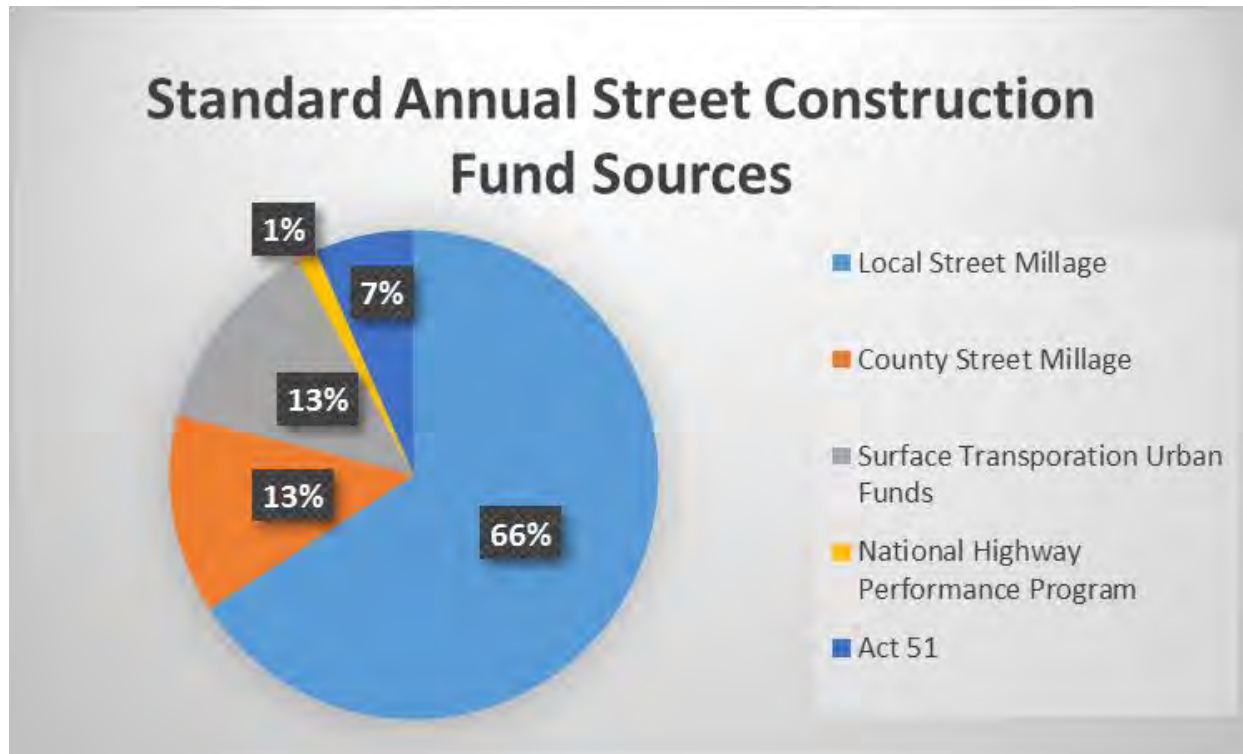
Funding

- Gasoline Taxes
- Vehicle Registration
- Federal and State project funds (some allocated through Washtenaw County Area Transportation Study (WATS))
- City and County Millage
- Developer
- Special Assessment
- Tax Increment Financing



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Funding



Other Funds From Competitive Sources:

- *CMAQ* (Congestion Mitigation and Air Quality) Funds
- *TAP* (Transportation Alternative Program) Funds
- *TIGER* (Transportation Investment Generating Economic Recovery)

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Act 51 (“Gas Tax”) Funding

Fiscal Year 2016 Funds		
	Funds Received	\$ Per Mile
Major Roads	\$ 6,320,567.45	\$ 63,174.09
Local Roads	\$ 1,770,987.64	\$ 8,999.84
Total:	\$ 8,091,555.09	

Limited Act 51 funds are spent on street capital maintenance. The majority is spent in the public works unit on snow plowing, street sweeping, pothole repairs, patching, signs and signals, pedestrian island & curb and gutter maintenance, etc.

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Transportation System Quality – how do we measure performance and results?

- Traffic volumes (actual counts) vs. capacity (intersection delay)
- Bike and pedestrian counts and facility quality
- Crashes (number, rate, type, severity)
- Condition and changes from prior years; before and after studies
- Mode choice (walk, bike, transit, shared ride)

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Pavement Asset Management

Current Conditions

- Current Street Conditions and 10 year Goal

Rating	Description	Miles	Percent
9,10	Excellent	44.91	16%
6,7,8	Good	103.93	36%
4,5	Fair	59.44	21%
1,2,3	Poor	79.05	27%
	Totals:	287.32	100%

Goal: 80% of streets are rated 7 or better

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Evaluation Statistics

Mode Share

Non-motorized Commuting Rates

Year	City of Ann Arbor	Washtenaw County	SEMCOG region	Michigan
2000	24.7%	11.6%	4.0%	3.7%
2010	27.9%	11.9%	4.0%	4.0%
2014	29.7%	13.2%	4.1%	4.2%

Source: US Census Bureau, 2000 Decennial Census and American Community Survey 5-year estimates



Annual non-motorized inventory

Name	Extents	Length	Pavement Condition	2009	Stripe Integrity	2009	Marking	Marking Integrity	2009	Signs	Change From 2009	Comments
Ann Street	Main - Division	600	9	9	3.5	5	Yes	4	5	Yes	Pavement.  Stripe  Marking  Signs 	Good end signs, no beginning signs.

Information available at a2gov.org/walkbikedrive

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Safety

Pedestrian Crashes

