A Diet that Works

AMATS Road Diet Analysis

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Overview

• What is a Road Diet?
• The Big Picture
  – Why does an MPO care about Road Diets?
• AMATS Road Diet Analysis/Examples
What is a Road Diet?

- Reduces the number lanes on a roadway
- Most common conversion is four lanes to three lanes
- One lane in each direction with a continuous turn lane
- Dropped lane width is allocated to other users
- Same pavement width, new lane configuration
- Very little additional infrastructure cost
Typical Configuration

Before

After
Benefits of a Road Diet

• Safety
  – Overall crash reduction of 19 to 47 percent
  – Less rear-end and left turn crashes through use of a dedicated left turn lane
  – Calming effect on speed

• Fewer lanes for pedestrians to cross

• Extra width can accommodate other transportation modes such as bikes
Benefits of a Road Diet

• Smoother traffic flow, less slow and go flow

• Best use of pavement when the capacity of a roadway is greater than the demand
  — Highways designed in 50’s and 60’s based on the current growth patterns
  — Population projections never materialized
Why We Care About Road Diets

• Transportation Funding Difficulties
• Regional Demographics
• Connecting Communities/Complete Streets
• Re-imagining Spaces
Transportation Funding Difficulties

• Funding has remained unchanged while project costs continue to rise

• Bike and pedestrian connections often foiled by right-of-way/acquisition costs

• We can create important connections with minimal cost
- Loss of population
- Lower traffic counts
Connecting Communities and the Importance of Complete Streets
Complete Streets
Re-imagining Our Community

N Main St Akron - Existing
Re-imagining Our Community

N Main St Akron – During Better Block
Re-imagining Our Community

N Main St Akron - Existing
N Main St Akron – During Better Block
The AMATS Road Diet Analysis

• Goal was to compile a list of streets where a road diet could be applied

• Start with an accurate inventory of roadways
  – GIS Database
  – ODOT Office of Technical Services
  – Highway Maintenance
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• Reduce the inventory by eliminating
  – Interstates and freeways
  – Divided roadways (freeway look-alikes)
  – Roadways with only two lanes

• In rare cases three lane roads and five lane roads can receive a road diet
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- Three lane roads must have unusually wide lanes
  - Reduce width of each lane
  - Allocate space for bike lane
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- Road diet applied to five lane roads has to have extra space well defined
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- Find average daily traffic (ADT)
  - Tier One: less than 10,000
  - Tier Two: 10,000 to 15,000
  - Tier Three: 15,000 to 20,000
  - Over 20,000 is probably not a good choice
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• Determine peak hour volume
  – If this is not provided it is usually 8-12% of the ADT

• Determine directional peak hour volume
  – If this is not provided use “engineering judgment”
  – Peak hour directional volume less than 800-900
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- **Additional Analysis Recommended**
  - Tier 2 roadways (ADT 10,000-15,000) key intersections should be analyzed, intersection spacing and length of queues considered.
  - Tier 3 roadways (ADT 15,000-20,000) key intersections should be analyzed and corridor analysis for overall level of service.
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• Additional Considerations
  – Roadway function and it’s environment
  – Continuity
  – Railroad tracks - queues twice as long with less lanes
  – Grades and slow moving vehicles
  – Frequently stopping vehicles, especially buses
  – Population and traffic volume trends
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• **Successful Implementation**
  
  – All stakeholders are part of the planning process
  
  – Coordinate with resurfacing projects/schedules
  
  – Community support
Road Diet Examples

Copley Rd (SR 162) in Akron, ADT = 13,300
Road Diet Examples

South St in Akron, ADT = 1,920
Road Diet Examples

South Main St in Summit Co., ADT ≈ 12,000
Road Diet Projects Planned

- E. Tallmadge Ave in Akron, ADT = 16,610
Road Diet Projects Planned

- Cedar St/Exchange St in Akron, four one-way lanes, ADT = 10,390
High Ranking Candidates

Maple St in Akron, ADT = 5,760
High Ranking Candidates

Wolf Ledges Pkwy in Akron, ADT = 8,400
High Ranking Candidates

E. Exchange St in Akron, ADT ≈ 10,000
High Ranking Candidates

N. Main St in Akron, ADT ≈ 10,000
Questions?

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