Multimodal Implementation Plan

• OUTLINE

→ Overview

→ Planning Process Overview
  • Non-Motorized Latent Demand
  • Level of Traffic Stress
  • Pairwise Comparison
  • Facility Terminology

→ Lessons Learned & Implementation Successes
Multimodal Implementation Plan

Planning Efforts Relating to Multimodal Transportation in 4 Years


2014

2015

2016

2017
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• EMPHASIS ON CONNECTING:

  ➔ To Transit
  ➔ Existing Bike-Ped Facilities
  ➔ Parks & Schools
• **NON-MOTORIZED LATENT DEMAND**
  → Predicts latent (unrealized) demand for non-motorized infrastructure based on probability to walk/bike
  
  → Uses parcel-level population, employment, land use, & proximity data
  
  → Aggregated to 1/10 mile grid
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- NON-MOTORIZED LATENT DEMAND

0.75 mi = 0.32 trip
0.2 mi = 0.71 trip
1.6 mi = 0.17 trip

Total trips to school generated:
0.32 + 0.71 + 0.17 = 1.2 trips
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• NON-MOTORIZED LATENT DEMAND
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- **LEVEL OF TRAFFIC STRESS (LTS)**

  - Bicycle network planning methodology-2012

  - Basic scoring to:
    - understand stress levels of existing & proposed facilities
    - identify clusters of low-stress connectivity
    - identify improvements to overcome stressful barriers
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- **LEVEL OF TRAFFIC STRESS (LTS)**

  - **Bicycle Design User Profiles:**
    - Interested but Concerned: 51%-56%
    - Somewhat Confident: 5%-9%
    - Highly Confident: 4%-7%

  - **Low Stress Tolerance**
  - **High Stress Tolerance**
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- LEVEL OF TRAFFIC STRESS (LTS)

Low Stress: Neighborhood Street

High Stress: Neighborhood Boulevard, Major Collector, Arterial

LTS 1

LTS 2

LTS 3

LTS 4
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• **LEVEL OF TRAFFIC STRESS (LTS)**

<table>
<thead>
<tr>
<th>Street Width</th>
<th>Segments</th>
<th>2-3 LANES</th>
<th>4-5 LANES</th>
<th>6+ LANES</th>
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<tr>
<td>1</td>
<td>1</td>
<td>✴</td>
<td></td>
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<td>4</td>
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</tbody>
</table>

- **Speed Limit**
  - ≤ 25 mph
  - 30 mph
  - 35+ mph

- **Function Class**
  - 1
  - 2
  - 3
  - 4
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**LEVEL OF TRAFFIC STRESS (LTS)**

<table>
<thead>
<tr>
<th>Speed Limit (Crossing)</th>
<th>≤ 3 LANES</th>
<th>4-5 LANES</th>
<th>6+ LANES</th>
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<tbody>
<tr>
<td>≤ 25 mph</td>
<td>Green</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>30 mph</td>
<td>Green</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>35 mph</td>
<td>Green</td>
<td>Yellow</td>
<td>Red</td>
</tr>
<tr>
<td>40+ mph</td>
<td>Yellow</td>
<td>Red</td>
<td>Red</td>
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</table>

**CROSSING Street Width (Crossing)**
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- **LEVEL OF TRAFFIC STRESS (LTS)**

![Map with LTS 1’s & 2’s]
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- PUBLIC & STAKEHOLDER ENGAGEMENT
  - MPO Technical Advisory Committee (TAC)
  - Steering Committee
  - Public
    - Survey
    - Focus Groups
    - Public Meeting
    - Wikimap
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- **PAIRWISE COMPARISON**
  - One-on-One Comparisons
    - Overall Strategy
    - Destinations
    - Facilities
    - Factors that Impact Walking/Biking

| A. Address Maintenance Needs - **MAINTENANCE**
  Cracks, Faulting, Damaged Signs, warn striping, etc. | B. Expand System **EXPANSION**
  Build new sidewalks/bikeways to areas with no facilities | C. Complete Missing Gaps **GAPS**
  Construct missing sidewalks/bikeways to existing ones |
<table>
<thead>
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<tbody>
<tr>
<td>A or B</td>
<td>A or C</td>
<td>B or C</td>
</tr>
<tr>
<td>A % B</td>
<td>A % C</td>
<td>B % C</td>
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</table>

**OVERALL STRATEGY**
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• PAIRWISE COMPARISON - RESULTS

OVERALL STRATEGY

Address Gaps Connect Schools

FACILITIES

Neighborhood Streets Lack of Buffer

DESTINATIONS

FACtors

Lack of Buffer
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• FACILITY TERMINOLOGY

- GREENWAY
  Open Space

- URBAN GREENWAY
  Roadway ROW

- GREEN STREET
  Shared Roadway

- BIKEWAY FACILITIES
  Conventional Bike Lane
• **LESSONS LEARNED**
  - Competing interests
    - Similar mission, different strategies
  - Collaboration & Communication
  - Perceived safety vs. access
    (neighborhood to store)
  - Need for maintenance plan
  - Safety & Education Gap
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• IMPLEMENTATION SUCCESSES
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• IMPLEMENTATION SUCCESSES

→ Direction for future bicycle and pedestrian projects

→ Formation of BikeWalkBG
  → Promotes biking and walking
  → Safety Initiative

→ City’s Sidewalk Prioritization Process Revamped
  → Use of Latent Demand Generation

→ Momentum for bicycle and pedestrian focus
  → Road projects & priorities

→ Community Involvement
Bowling Green-Warren County MPO’s Multimodal Implementation Plan

Karissa Lemon
Bowling Green & Warren County MPO
Karissa.Lemon@bgky.org

Preston Elliott, AICP
KCI Technologies
Preston.Elliott@kci.com

Liesel Goether, AICP
KCI Technologies
Liesel.Goethert@kci.com