Central New Mexico’s Application of ITE Recommended Practices: Designing Walkable Urban Thoroughfares and Planning Urban Roadway Systems

Julie Luna, Mid-Region Council of Governments

July 11, 2016

ITE Western District Annual Meeting
Today’s Presentation

1. Long Range Transportation System Guide & 2040 Metropolitan Transportation Plan

2. ITE Designing Walkable Urban Thoroughfares – Integrating Land Use and Transportation

3. Planning Urban Roadway Systems – Complete Streets & Complete Networks
Long Range Transportation System Guide & 2040 Metropolitan Transportation Plan
2040 Metropolitan Transportation Plan
2040 MTP & Scenario Planning
Principles of the Preferred Scenario
Today’s Presentation

1. Long Range Transportation System Guide & 2040 Metropolitan Transportation Plan

2. ITE Designing Walkable Urban Thoroughfares - Integrating Land Use and Transportation

3. Planning Urban Roadway Systems – Complete Streets & Complete Networks
Integrating Land Use & Transportation
General ITE Process

Step 1: Determine context surrounding the roadway

Step 2: Determine the roadway type

Step 3: Process & evaluation to determine the most appropriate cross section
Land Use Transect Model

Rural
Ex. Isleta Blvd

Suburban
Ex. Ladera Dr.

Urban
Ex. San Mateo & Lomas

Activity Center
Ex. Uptown
LRTS Guide Process:

Step 1:
Determine context surrounding the roadway

Step 2:
See the Long Range System Maps for future roadway regional role, transit, and bikeway requirements

Step 3:
Process & evaluation to determine the most appropriate cross section
Step 1: Determining Land Use Character

Based on future planned values

- Land use mix
- Net residential density
- Employment-population density (activity density)
LRTS Guide Process:

Step 1:
Determine context surrounding the roadway

Step 2:
See the Long Range System Maps for future roadway regional role, transit, and bikeway requirements

Step 3:
Process & evaluation to determine the most appropriate cross section
Roadway Regional Role
 stil taking into consideration functional class

Central Ave
Community
Principal Arterial

Coors Blvd
Regional
Principal Arterial
Long Range Roadway System

Long Range Bikeway System

Long Range Transit System
LRTS Guide Process:

Step 1: Determine context surrounding the roadway

Step 2: See the Long Range System Maps for future roadway regional role, transit, and bikeway requirements

Step 3: Process & evaluation to determine the most appropriate cross section
<table>
<thead>
<tr>
<th>Character Area</th>
<th>ACTIVITY CENTER</th>
<th>URBAN</th>
<th>SUBURBAN</th>
<th>RURAL</th>
<th>MAIN STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unser at Rio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rancho City Center</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coors &amp; Montaño</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Unser &amp; Montaño</td>
<td></td>
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</tr>
<tr>
<td>Sen. Dennis Chavez</td>
<td></td>
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<tr>
<td>N/A</td>
<td></td>
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</tbody>
</table>

**STREETSIDE MINIMUMS**

(ONE SIDE)

<table>
<thead>
<tr>
<th>Feature</th>
<th>CENTER</th>
<th>URBAN</th>
<th>SUBURBAN</th>
<th>RURAL</th>
<th>MAIN STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape buffer</td>
<td>6'</td>
<td>6'</td>
<td>6'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear Sidewalk width</td>
<td>10'</td>
<td>6'</td>
<td>6'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Shy Zone (ingress/egress)*</td>
<td>2'</td>
<td>2'</td>
<td>2'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Streetside Width (for one side only)</td>
<td>18'</td>
<td>14'</td>
<td>14'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BIKEWAYS (ONE SIDE)**

<table>
<thead>
<tr>
<th>Feature</th>
<th>CENTER</th>
<th>URBAN</th>
<th>SUBURBAN</th>
<th>RURAL</th>
<th>MAIN STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Use Path</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-Use Path Outside Buffer</td>
<td>5'</td>
<td>5'</td>
<td>5'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-Use Path Inside Buffer</td>
<td>3'</td>
<td>3'</td>
<td>3'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paved Multi-Use Path Width</td>
<td>10'-14'</td>
<td>10'-14'</td>
<td>10'-14'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See NACTO Urban Bikeway Design Guide for Cycle Tracks. Barrier protected cycle tracks may be considered in lieu of a multi-purpose trail as long as the roadway has sidewalks that meet the streetside minimums above.

**BICYCLE LANE**

(widths do not include gutter pan)

- Posted Speed 30 mph or lower: 5' bicycle lane
- Posted Speed 35 mph: 6' bicycle lane
- Posted Speed >40 mph: 7' bicycle lane with 3' striped buffer

See Community Principal Arterial Main Street

**TRANSIT**

<table>
<thead>
<tr>
<th>Feature</th>
<th>CENTER</th>
<th>URBAN</th>
<th>SUBURBAN</th>
<th>RURAL</th>
<th>MAIN STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated Bus Lane</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See Long Range Transit System: Include 24' for bus rapid transit routes. N/A

**ROADWAY**

<table>
<thead>
<tr>
<th>Feature</th>
<th>CENTER</th>
<th>URBAN</th>
<th>SUBURBAN</th>
<th>RURAL</th>
<th>MAIN STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Number of Through Lanes</td>
<td>2-6</td>
<td>4-6</td>
<td>4-6</td>
<td>4-6</td>
<td></td>
</tr>
<tr>
<td>Desired Operating Speed</td>
<td>30-35 MPH</td>
<td>30-35 MPH</td>
<td>40-55 MPH</td>
<td>35-55 MPH</td>
<td></td>
</tr>
<tr>
<td>Lane Width</td>
<td>10'-11'</td>
<td>10'-12'</td>
<td>10'-12'</td>
<td>11'-12'</td>
<td></td>
</tr>
<tr>
<td>Outside Lane Width (heavy vehicles)</td>
<td>12'</td>
<td>12'</td>
<td>12'</td>
<td>12'</td>
<td></td>
</tr>
</tbody>
</table>

See Community Principal Arterial Main Street
# Evaluating Alternatives

**BRIDGE BLVD (Isleta to Goff) - 26,000 AWDT - 35 MPH**

<table>
<thead>
<tr>
<th>ROW Width</th>
<th>AutoLOS</th>
<th>Transit LOS</th>
<th>Bicycle LOS</th>
<th>Pedestrian LOS</th>
<th>Walkability Index</th>
<th>Traffic Calming</th>
<th>Mode Choices</th>
<th>Parking</th>
<th>Land Use Integration</th>
<th>Green Streets</th>
<th>Cost</th>
<th>Strengths/Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>78&quot;</td>
<td>D</td>
<td>E</td>
<td>C (3.37)</td>
<td>C (3.47)</td>
<td>Minimal</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1/10</td>
</tr>
<tr>
<td>Mainstreet</td>
<td>100'</td>
<td>D</td>
<td>C</td>
<td>C (3.06)</td>
<td>C (2.80)</td>
<td>Basic</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>7/4</td>
</tr>
<tr>
<td>Bike Lanes</td>
<td>100'</td>
<td>D</td>
<td>C</td>
<td>B (1.93)</td>
<td>C (3.11)</td>
<td>Basic</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7/4</td>
</tr>
<tr>
<td>Cycle Track</td>
<td>104&quot;</td>
<td>D</td>
<td>C</td>
<td>A</td>
<td>C (2.53)</td>
<td>Basic</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>8/3</td>
</tr>
</tbody>
</table>

**EXISTING**

![Existing Diagram](image1)

**MAINSTREET CONCEPT**

![Mainstreet Concept Diagram](image2)

**BUFFERED BIKE LANES**

![Buffered Bike Lanes Diagram](image3)

**TWO WAY CYCLE TRACK CONCEPT**

![Two Way Cycle Track Concept Diagram](image4)
Albuquerque/Bernalillo County Comprehensive Plan Update & Zoning (ABC to Z)
ABC to Z Process

1. Does the transportation project take place within or outside an Activity Center?

2. What is the Corridor Type from the ABC to Z Vision Map?

3. Recommended roadway features and other considerations.
Land Use Transect Model is a new challenge!

Rural  Suburban  Urban  Activity Center
Recommendations

For MRCOG: Refine & provide measurements to help identify context

For Transportation Professionals: Use professional judgement to add land use context into discussions about roadway improvements
Today’s Presentation

1. Long Range Transportation System Guide & 2040 Metropolitan Transportation Plan

2. ITE Designing Walkable Urban Thoroughfares – Integrating Land Use and Transportation

3. Planning Urban Roadway Systems - Complete Streets & Complete Networks
“Layered Multi-Modal Network”

- Autos
- Transit
- Bicyclists
- Pedestrians
- Trucks
Long Range Roadway System

Long Range Bikeway System

Long Range Transit System

Activity Centers
Primary Freight Corridors

This map depicts corridors encouraged for truck freight deliveries and through travel. The routes provide regional connections, support commercial activity, and do not face restrictions related to weight or height.

Roadways that restrict truck traffic due to weight, height, or adverse community or municipal impacts are also highlighted.
<table>
<thead>
<tr>
<th>Primary Freight Corridors</th>
<th>Percent Multi-Unit Heavy Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-40</td>
<td>20-30%</td>
</tr>
<tr>
<td>Alameda Blvd</td>
<td>4-8%</td>
</tr>
<tr>
<td>I-25</td>
<td>4-6%</td>
</tr>
<tr>
<td>Coors Blvd</td>
<td>1-8%</td>
</tr>
<tr>
<td>Broadway (A. Cesar Chavez to Woodward)</td>
<td>3-4%</td>
</tr>
<tr>
<td>Central Ave</td>
<td>0.3-4%</td>
</tr>
<tr>
<td>Rio Bravo</td>
<td>3%</td>
</tr>
<tr>
<td>Bridge Blvd/A. Cesar Chavez</td>
<td>0.03-3%</td>
</tr>
<tr>
<td>2nd St (A. Cesar Chavez to Woodward)</td>
<td>0.5-1%</td>
</tr>
</tbody>
</table>
Connectivity by Character Area

**URBAN CORE**
Approx. 200 Four-leg intersections per square mile; closely spaced arterials & collectors.

**ACTIVITY CENTER**
Approx. 100 Four-leg intersections per square mile; arterials & collectors spaces less than 0.5 mile.

**URBAN**
Approx. 80 Four-leg intersections per square mile; arterials & collectors spaces at approx. 0.5 mile.

**SUBURBAN**
Approx. 40 Four-leg intersections per square mile; arterials & collector spaced at approx. 1 mile.

**RURAL**
Approx. 10 Four-leg intersections per square mile; arterials & collectors spaced more than 1 mile apart.
This map depicts congestion for year 2040 using a modeled network under the Trend Scenario. Volume-to-capacity ratios are based on the estimated number of vehicles traveling the roadway segment (i.e. volume) compared to the intended capacity. Greater levels of congestion generally ensue as V/C ratios approach or exceed 1.0. Following are numbers associated with each V/C designation contained in the map.

Acceptable $\leq 0.89$
Approaching 0.9 to 0.99
Over Capacity 1.0 to 1.09
Severely 1.1 to 1.49
Connectivity: Preserving Easements
Recommendations

For MRCOG & Member Agencies: Review the status of Central Ave & Bridge Blvd as primary freight corridors

For Transportation Professionals: Look for ways to support connectivity, layered networks, & please use the long range system maps
THANK YOU!

Julie Luna
Transportation Planner, Mid-Region Council of Governments

Mid-Region Council of Governments