Montgomery County Complete Streets Design Guidelines and Functional Classification Study

Development Community Round Table
May 21st, 2019
AGENDA

▪ Welcome
▪ Overview Presentation
  ▪ Why Develop a Complete Streets Design Guide?
  ▪ Process Overview
  ▪ Outline & Content
  ▪ Street Types
▪ Breakout Session
Why develop a CSDG?

- Consistent Vision
- One-Stop-Shop
- Emphasis: County Roads
- Priorities in Constrained Row
- Flexibility + Clarity
- Best Practices

Emphasis: County Roads
Design Standards

<table>
<thead>
<tr>
<th>Standard No.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>MC-100.01</td>
<td>Combination Concrete Curb and Gutter - Type A</td>
</tr>
<tr>
<td>MC-101.01</td>
<td>Combination Concrete Curb and Gutter - Type C</td>
</tr>
<tr>
<td>MC-102.01</td>
<td>Depressed Curb Entrance</td>
</tr>
<tr>
<td>MC-103.01</td>
<td>Bituminous Concrete Curb</td>
</tr>
</tbody>
</table>

Rain Gardens

Project Requirements (PDF)
Research on CS Design Guides
Agency / Stakeholder Engagement

- Work Sessions with MCDOT, DPS, M-NCPCC staff
- Focused effort related to Fire/EMS safety
- Development community open houses
- Additional stakeholder meetings
Develop Draft Content

Key elements:
- Safety
- Widths and priorities in constrained ROW
- Stormwater and green infrastructure
- Accessibility

Targeted schedule:
- Draft Guide for public / stakeholder review in Fall 2019
- Final Guide approval process in early 2020
Future Steps

• Adopt a revised street type map as a technical update to the Countywide Master Plan of Highways and Transitways

• As area plans are adopted, some decisions about street type designations will be refined/changed

• Update Design Standards
Outline & Content
Guide Outline

1. Introduction
2. Street Types

Overview

Downtown Commercial Streets define Boston’s dense commercial core. These Street Types are found primarily in the Financial District, Government Center, Chinatown, the Leather District, Back Bay, and the South Boston Waterfront. Containing a mix of mid- and high-rise office buildings, the streets serve as international cultural destinations and connect with highways and transit hubs that serve the Greater Boston region.

Example Streets

- Congress Street (Government Center/Financial District)
- State Street (Government Center/Financial District)
- Kneeland Street (Chinatown/Leather District)
- Summer Street (Financial District/South Boston Waterfront)
- Boylston Street (Back Bay)
Guide Outline

1. Introduction
2. Street Types

<table>
<thead>
<tr>
<th>Pedestrian Zone³</th>
<th>Mixed-Use Streets</th>
<th>Commercial Streets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frontage zone⁴</td>
<td>Min.</td>
<td>Pref.</td>
</tr>
<tr>
<td>Frontage zone⁴</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sidewalk clear zone⁶</td>
<td>6'</td>
<td>8' - 15'</td>
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<tr>
<td>Sidewalk clear zone</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Buffer/furnishing zone:</td>
<td>Buffer with street tree</td>
<td>6'</td>
</tr>
<tr>
<td>Buffer (adjacent to on-street parking)³</td>
<td>2'</td>
<td>6'</td>
</tr>
<tr>
<td>Buffer (adjacent to travel lane, on-street parking not permitted)³</td>
<td>5'</td>
<td>8'</td>
</tr>
<tr>
<td>Curb zone³</td>
<td>6'</td>
<td>1' - 2'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Street Zone</th>
<th>Mixed-Use Streets</th>
<th>Commercial Streets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking zone³</td>
<td>7'</td>
<td>8'</td>
</tr>
<tr>
<td>Parallel parking</td>
<td>15'</td>
<td>22'</td>
</tr>
<tr>
<td>Back-in angled parking³</td>
<td>12'</td>
<td>15'</td>
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<tr>
<td>Travelway zone—lanes on thoroughfares:</td>
<td>General purpose inside travel lane³</td>
<td>10'</td>
</tr>
<tr>
<td>Inside travel lane (adjacent to bicycle lane and parking lane)</td>
<td>10'</td>
<td>10'</td>
</tr>
<tr>
<td>Inside travel lane (adjacent to bicycle lane and curb, parking not permitted)</td>
<td>10'</td>
<td>10'</td>
</tr>
</tbody>
</table>
# Guide Outline

1. Introduction
2. Street Types

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## Trade-Offs in Limited Right-of-Way Priorities Chart

<table>
<thead>
<tr>
<th>Contextual Street Types and Functional Classifications</th>
<th>Pedestrian Zone</th>
<th>Street Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frontage Zone (private)</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Sidewalk Clear Zone</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Buffer/Furnishing/Curb Zone</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Parking Zone</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Travelway Zone</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Median Zone</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

### Mixed Use Streets

- **Principal Arterial**: 1, 2, 5, 4, 3
- **Minor Arterial**: 1, 2, 3, 4, 5
- **Collector**: 1, 2, 3, 4, 5
- **Minor/Local**: 1, 2, 3, 4, 5

### Commercial Streets

- **Principal Arterial**: 1, 3, 4, 5, 1
- **Minor Arterial**: 1, 4, 5, 2, 3
- **Collector**: 1, 3, 4, 2, 5
- **Minor/Local**: 1, 4, 3, 2, 5

### Residential Streets

- **Principal Arterial**: 1, 2, 5, 3, 4
- **Minor Arterial**: 1, 4, 2, 5, 3
- **Collector**: 1, 4, 2, 3, 5
- **Minor/Local**: 1, 4, 2, 3, 5

### Industrial Streets

- **Principal Arterial**: 2, 3, 4, 1, 5
- **Minor Arterial**: 2, 3, 4, 1, 5
- **Collector**: 2, 3, 4, 1, 5
- **Minor/Local**: 2, 3, 4, 1, 5

### Parkways

- **Principal Arterial**: 2, 4, 5, 3, 1
- **Minor Arterial**: 2, 4, 5, 3, 1
- **Collector**: 2, 4, 5, 3, 1
- **Minor/Local**: 5, 1, 4, 3, 2

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**Priority Levels**

- **High Priority**
- **Medium Priority**
- **Low Priority**
Guide Outline

1. Introduction
2. Street Types
3. Sidewalks

Preferred Widths for Sidewalk Zones

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Frontage Zone</th>
<th>Pedestrian Zone</th>
<th>Amenity Zone</th>
<th>Total Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Connector</td>
<td>2'-3'</td>
<td>6'-15'</td>
<td>6'-10'</td>
<td>14'-30'</td>
</tr>
<tr>
<td>Main Street</td>
<td>2'-6'</td>
<td>6'-10'</td>
<td>6'-10'</td>
<td>14'-22'</td>
</tr>
<tr>
<td>Mixed Use Boulevard</td>
<td>2'-6'</td>
<td>6'-18'</td>
<td>6'-10'</td>
<td>14'-30'</td>
</tr>
<tr>
<td>Neighborhood Connector</td>
<td>2'</td>
<td>6'-8'</td>
<td>6'-7'</td>
<td>14'-17'</td>
</tr>
<tr>
<td>Neighborhood Residential</td>
<td>2'</td>
<td>5'</td>
<td>6'-7'</td>
<td>11'-13'</td>
</tr>
<tr>
<td>Parkway</td>
<td>N/A</td>
<td>6'-10'</td>
<td>5'-10'</td>
<td>11'-20'</td>
</tr>
<tr>
<td>Industrial</td>
<td>2' or N/A</td>
<td>6'</td>
<td>5'-7'</td>
<td>11'-15'</td>
</tr>
<tr>
<td>Shared Streets</td>
<td>2'</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Guide Outline

1. Introduction
2. Street Types
3. Sidewalks

SIDEWALK OUTDOOR DINING

Min. 6’ Pedestrian Zone
Varies. Generally not narrower than 6’
Guide Outline

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2. Street Types
3. Sidewalks
Guide Outline

1. Introduction
2. Street Types
3. Sidewalks
4. Street Zone
Guide Outline

1. Introduction
2. Street Types
3. Sidewalks
4. Street Zone
5. Intersections

INTERSECTION CONTROLS
Uncontrolled and midblock crossings can be the most challenging places to provide safe pedestrian crossings.

Uncontrolled Intersections
Uncontrolled intersections are those where no traffic control devices facilitate the movement of traffic, and users yield the right-of-way to those who have already been established in the intersection, or those approaching from the right.

Midblock Crossings
A midblock crossing is a pedestrian crossing that is not located at a roadway intersection. If a midblock crossing is not designated by a marked crosswalk, then pedestrians must yield the right-of-way to motorists.

A discussion of when to mark crosswalk midblock crossings is provided in this create signalized midblock crossings.
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2. Street Types
3. Sidewalks
4. Street Zone
5. Intersections
Guide Outline

1. Introduction
2. Street Types
3. Sidewalks
4. Street Zone
5. Intersections
6. Speed Management

Speed Hump

Description: A raised section of pavement with parabolic or flat top that extends across the road, used traffic calming devices.

Placement & Design Guidance: Speed humps should be placed at right angles to traffic. The profile should be designed to be comfortably traversed at the desired design speed, but uncomfortable at higher speeds. Profiles can have the unintended consequence of encouraging drivers to slow at speed humps but typically do not. Gaps should be provided between the curbline and the end of the speed hump to allow stormwater to pass.

The spacing between speed humps should be a minimum of 250-feet apart and a maximum of 500 spacing is recommended:

<table>
<thead>
<tr>
<th>Speed (mph)</th>
<th>Spacing (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>250</td>
</tr>
<tr>
<td>15</td>
<td>300</td>
</tr>
<tr>
<td>20</td>
<td>350</td>
</tr>
<tr>
<td>25</td>
<td>400</td>
</tr>
</tbody>
</table>
Guide Outline

1. Introduction
2. Street Types
3. Sidewalks
4. Street Zone
5. Intersections
6. Speed Management
7. Implementation

Public Agency Fiduciary Responsibilities

This section outlines public agency responsibilities relative to the ownership and management of City of Boston owned assets in the public right-of-way. The Public Works Department (PWD) is the primary owner and manager of the reconstruction of city streets, sidewalks, and bridges. The Boston Transportation Department (BTD) is responsible for installing and operating traffic and parking management devices, and managing access for pedestrians, motor vehicles, and bicyclists. PWD owns the city's right-of-ways in coordination with BTD, the Parks Department, Boston Water and Sewer Commission (BWSC), and the Coordinated Street Furniture program. The Boston Fire Department and Emergency Medical Services (EMS) are also consulted.

For more information on project design approval responsibilities of city agencies and commissions, see the Project Development and Review section later in this chapter.
Street Types
Why create a new Street Typology?

Each street type prioritizes users and various design elements based on the context and character of the street.

- Based on roadway function and built environment
- Changes along segments of a roadway
- Focus is on new roads and reconstruction

What types of streets should we be building moving forward?
Draft Street Types

- Downtown Boulevard
- Downtown Street
- Suburban Boulevard
- Town Center Boulevard
- Town Center Street
- Main Street
- Neighborhood Connector
- Neighborhood Street
- Neighborhood Yield Street
- Industrial Street
- Country Connector
- Country Road
- Freeway
Special Streets

- Alleys
- Residential Shared Streets
- Commercial Shared Streets
- Rustic Roads / Exceptional Rustic Roads
Design Parameters
Draft Design Parameters

By street type, draft:

- Lane widths
- Target speeds
Breakout Session