Montgomery County
Complete Streets Design Guidelines
and Functional Classification Study

Development Community Round Table

May 21st, 2019

TOOLE DESIGN

AGENDA

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

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MCDOT
Montgomery Planning
M-NCPPC


CONSISTENT VISION
ONE-STOP-SHOP
EMPHASIS: COUNTY ROADS
Why develop a CSDG ?
PRIORITIES IN CONSTRAINED ROW
FLEXIBILITY + CLARITY
BEST PRACTICES

Division of Transportation Engineering

Design Standards

Standard No.	Description
MC-100.01	Combination Concrete Curb and Gutter - Type A
MC-101.01	Combination Concrete Curb and Gutter - Type C
MC-102.01	Depressed Curb Entrance
MC-103.01	Bituminous Concrete Curb

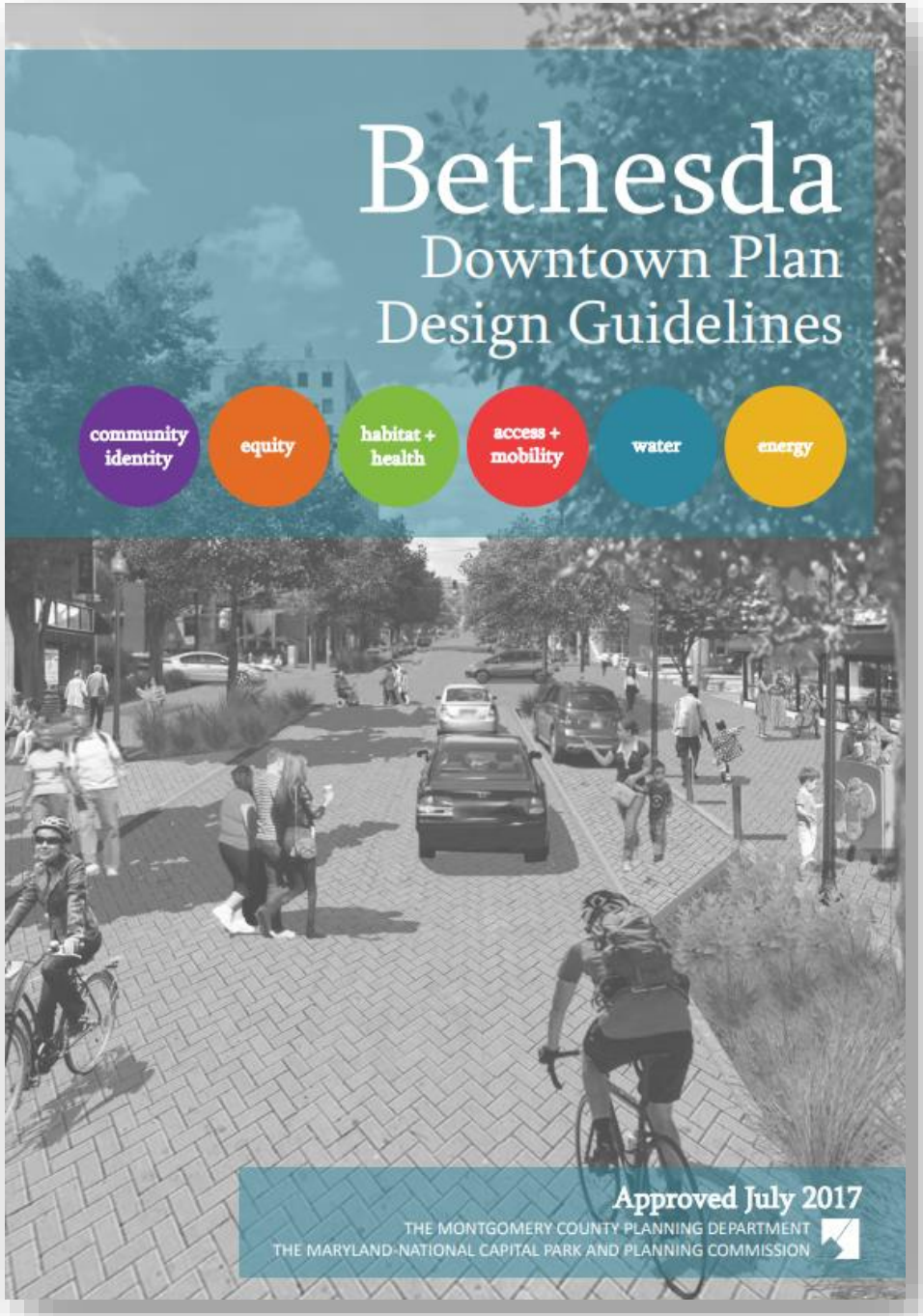
Montgomery County Government

Drainage Design Criteria

Department of Transportation

Rain Gardens

Project Requirements (PDF)




20
MPH
18%
likelihood
of fatality
or severe
injury
30
MPH
50%
likelihood
of fatality
or severe
injury
40
MPH
77%
likelihood
of fatality
or severe
injury

Process

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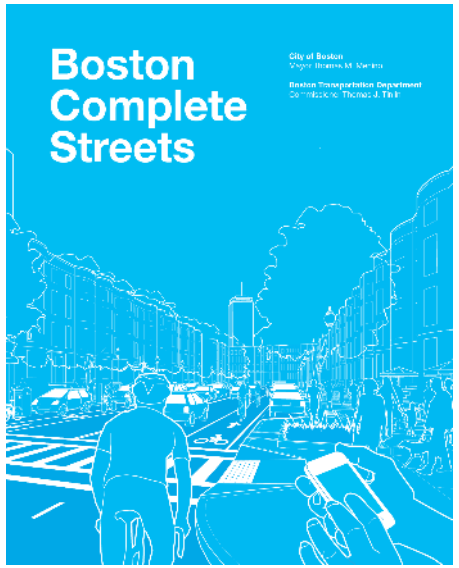
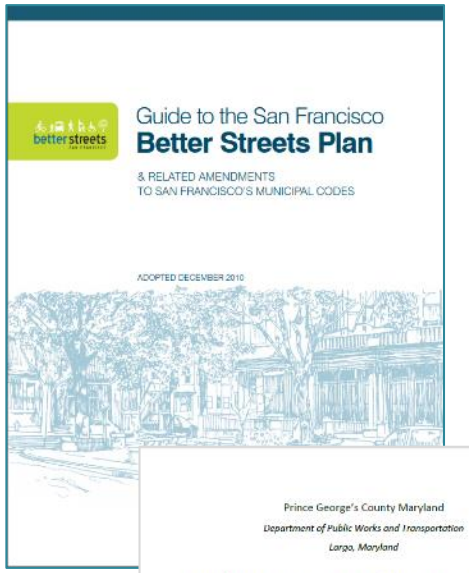
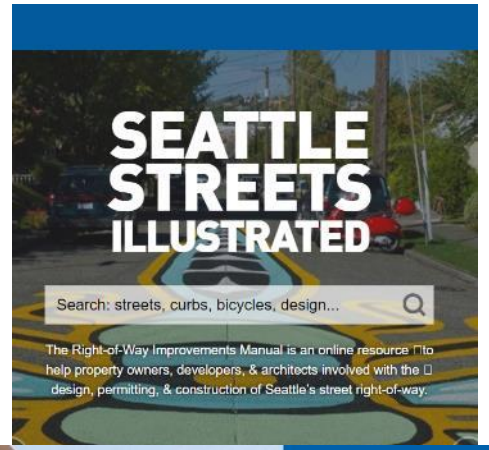
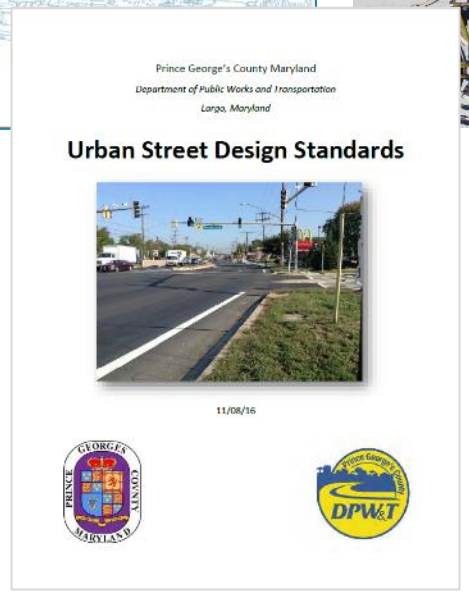
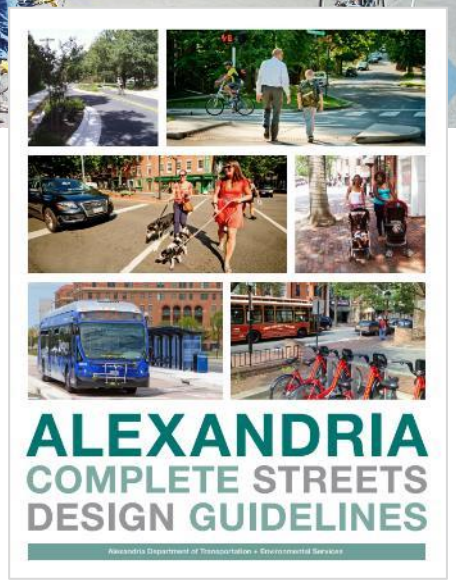
Research on CS Design Guides

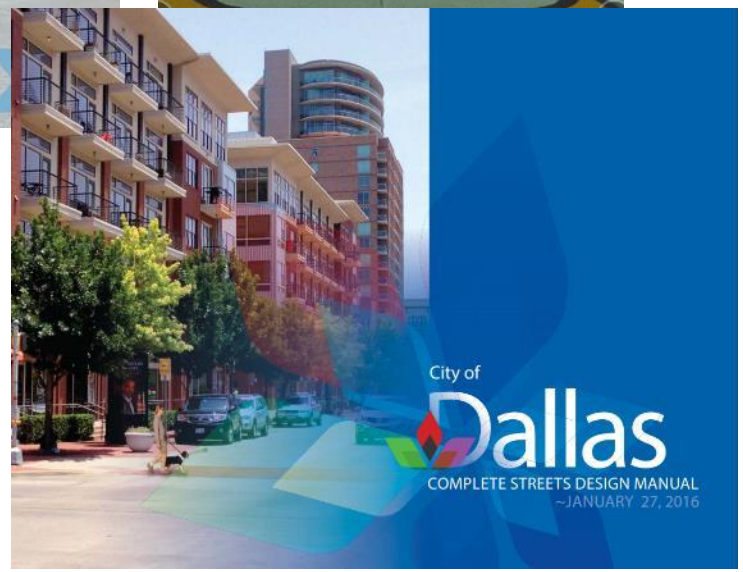












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Agency / Stakeholder Engagement

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

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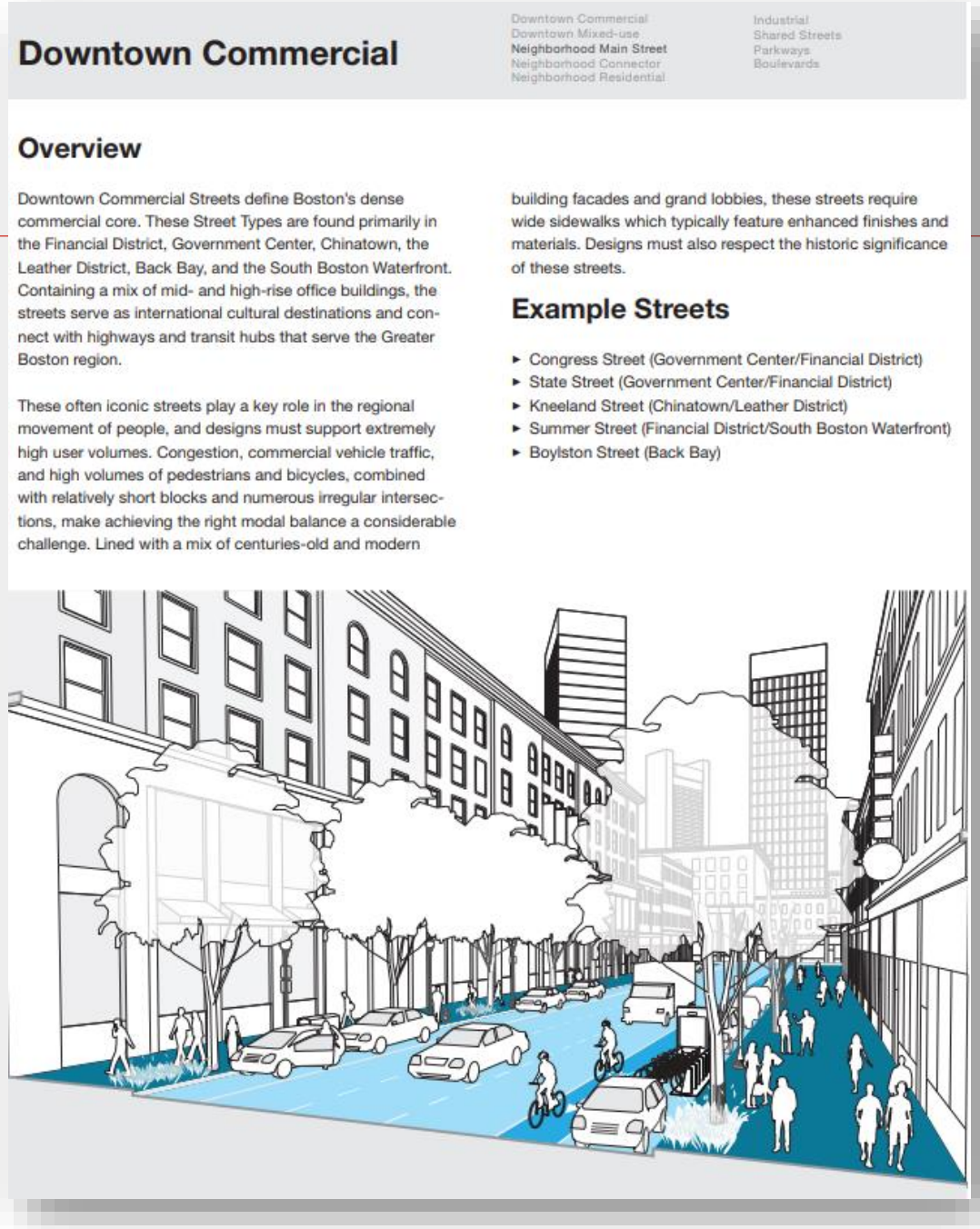
Develop Draft Content

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



Downtown Commercial

Downtown Commercial
Downtown Mixed-use
Neighborhood Main Street
Neighborhood Connector
Neighborhood Residential

Industrial
Shared Streets
Parkways
Boulevards

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.

These often iconic streets play a key role in the regional movement of people, and designs must support extremely high user volumes. Congestion, commercial vehicle traffic, and high volumes of pedestrians and bicycles, combined with relatively short blocks and numerous irregular intersections, make achieving the right modal balance a considerable challenge. Lined with a mix of centuries-old and modern building facades and grand lobbies, these streets require wide sidewalks which typically feature enhanced finishes and materials. Designs must also respect the historic significance of these streets.

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)

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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

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Outline & Content

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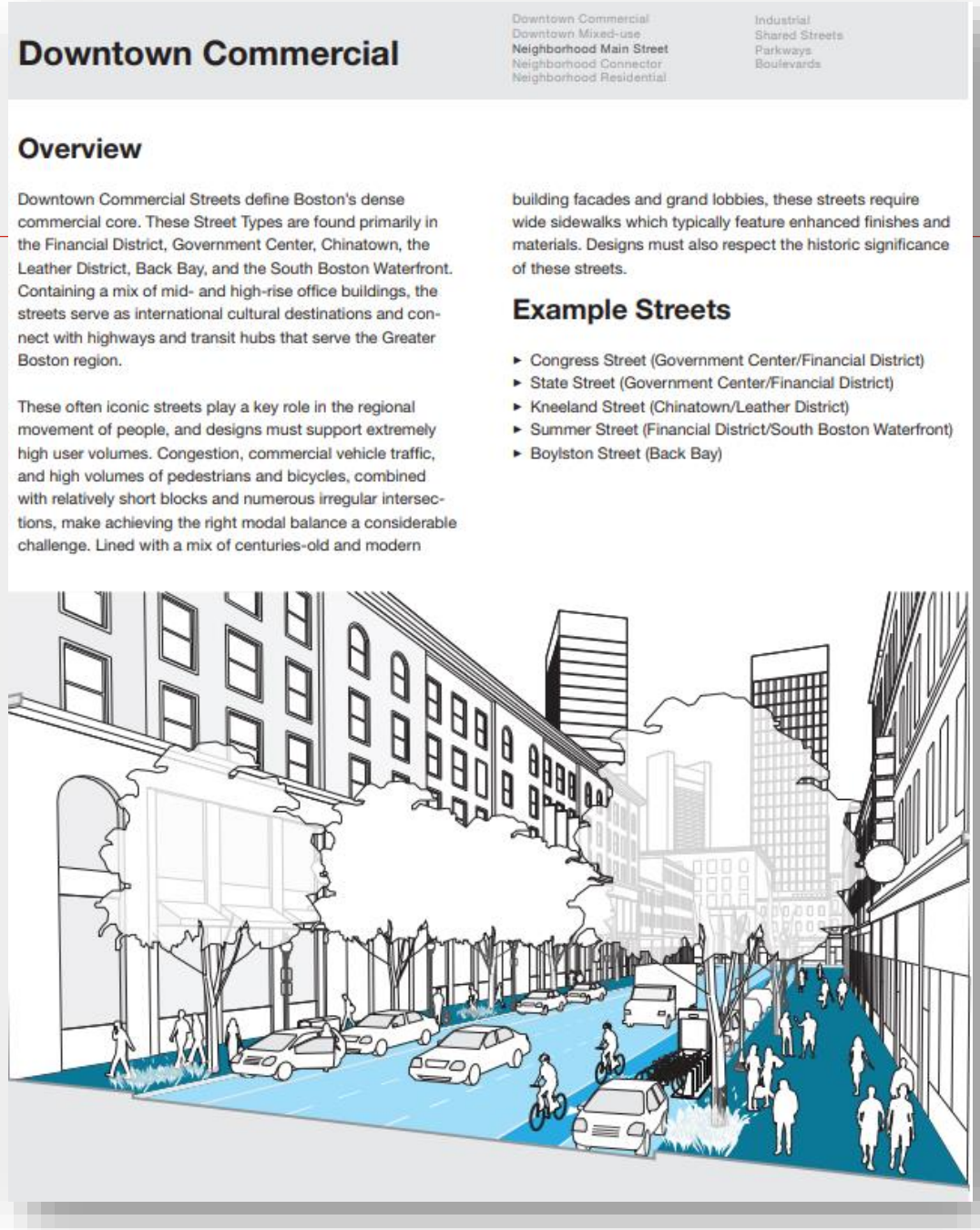
Guide Outline

1. Introduction
2. Street Types



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TOOLE DESIGN

Guide Outline

1. Introduction
2. Street Types

RECOMMENDED WIDTH CHART FOR DALLAS COMPLETE STREETS ELEMENTS				
	Mixed-Use Streets		Commercial Streets	
Recommended Designation	Min	Pref	Min	Pref
Pedestrian Zone[2]				
Frontage zone:[3]				
Frontage zone[3]	-	-	-	-
Sidewalk clear zone:[4]				
Sidewalk clear zone	6'	8'- 15'	5'	6'- 10'
Buffer/furnishing zone:				
Buffer with street tree	6'	8'	6'	10'
Buffer (adjacent to on-street parking)[5]	2'	6'	2'	6'
Buffer (adjacent to travel lane, on-street parking not permitted)[5]	5'	8'	5'	10'
Curb zone:[6]				
Curb zone width[6]	6"	1'- 2'	6"	1'- 2'
Street Zone				
Parking zone:[7]				
Parallel parking	7'	8'	-	-
Back-in angled parking[8]	15'	22'	-	-
Flex lane[9]	12'	15'	-	-
Travelway zone—lanes on thoroughfares:				
General purpose inside travel lane[10]	10'	11'	10'	11'
Inside travel lane (adjacent to bicycle lane and parking lane)	10'	10'	-	-
Inside travel lane (adjacent to bicycle lane and curb, parking not permitted)	10'	10'	10'	11'

TOOLE DESIGN

Guide Outline

1. Introduction
2. Street Types

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

	Pedestrian Zone			Street Zone		
Contextual Street Types and Functional Classifications	Frontage Zone (private)	Sidewalk Clear Zone	Buffer/Furnishing/Curb Zone	Parking Zone	Travelway Zone	Median Zone
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	5	1	4
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

High Priority
Medium Priority
Low Priority

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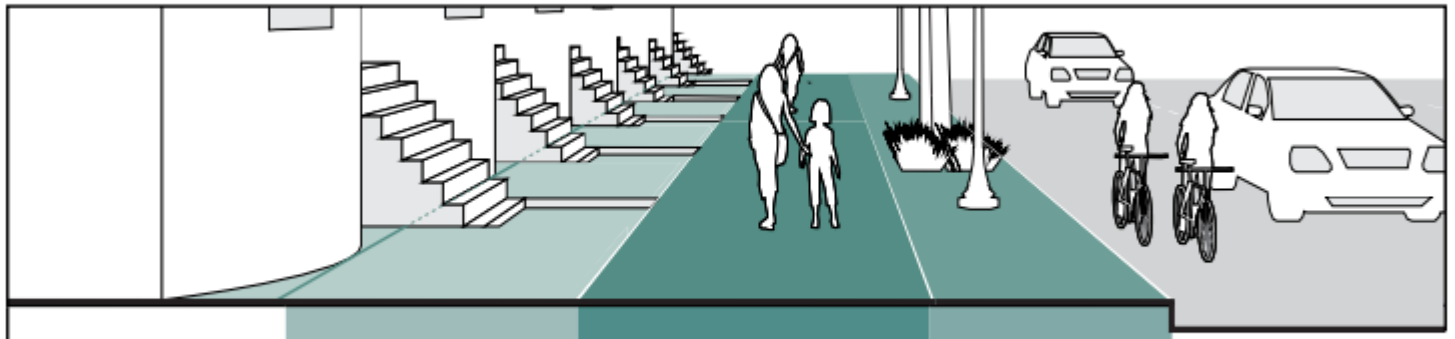
Guide Outline

1. Introduction
2. Street Types
3. Sidewalks

Preferred Widths for Sidewalk Zones



Street Type	Frontage Zone[1] Door swings, Awnings, Café seating, Retail signage and displays, Building projections	Pedestrian Zone[2] Zone should be clear of any and all fixed obstacles. Clear space for pedestrian travel only.	Amenity Zone[3] Street lights and utility poles, Street trees, Bicycle racks, Parking meters, Transit stops, BMPs, Street furniture and signage	Total Width
Commercial Connector	2'-5'	6'-15'	6'-10'	14'-30'
Main Street	2'- 6'	6'-10'	6'-10'	14'-22'
Mixed Use Boulevard	2'- 6'	6'-18'	6'-10'	14'-30'
Neighborhood Connector	2'	6'-8'	6'-7'	14'-17'
Neighborhood Residential	2'	6'	5'-7'	11'-13'
Parkway	N/A	6'-10'	5'-10'	11'-20'
Industrial	2' or N/A	6'	5'-7'	11'-15'
Shared Streets	2'	N/A	N/A	N/A

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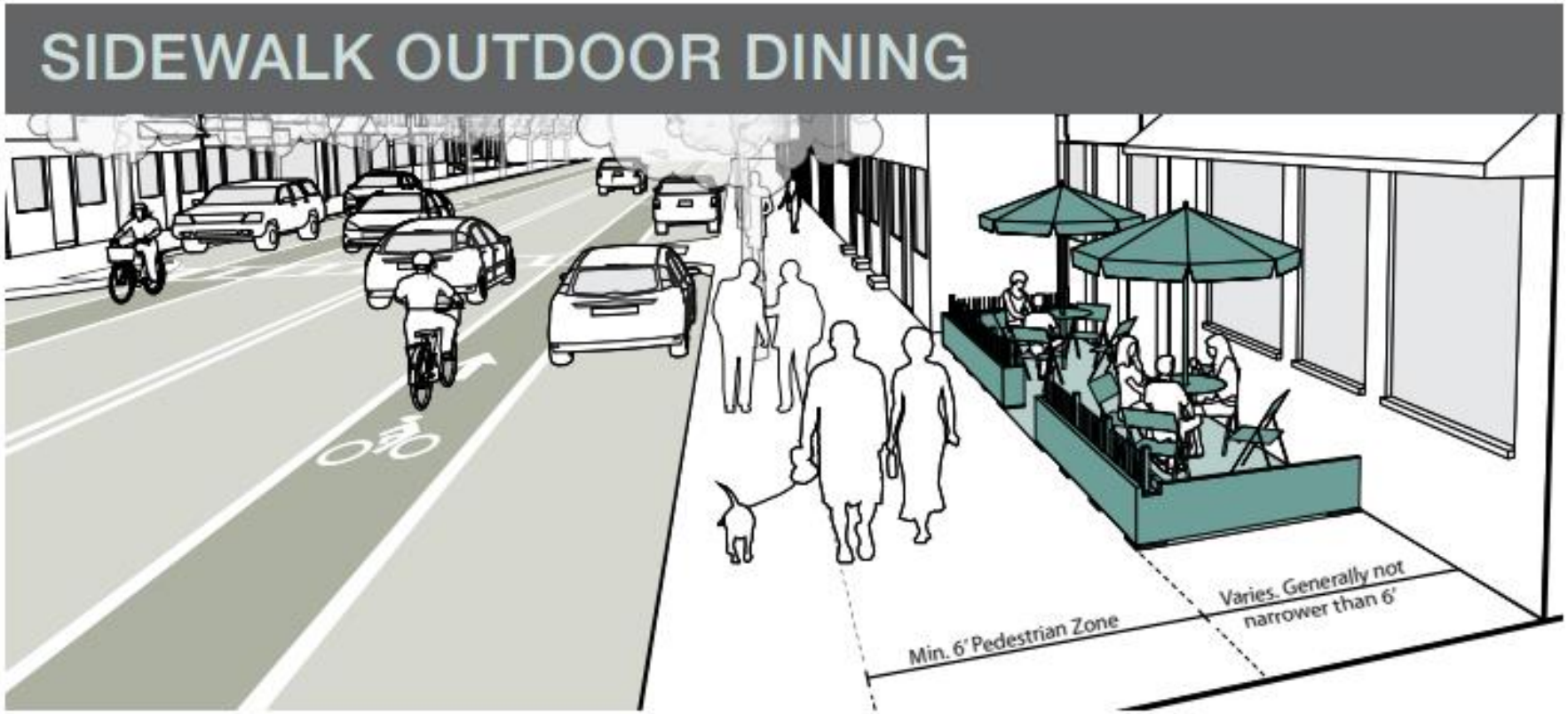

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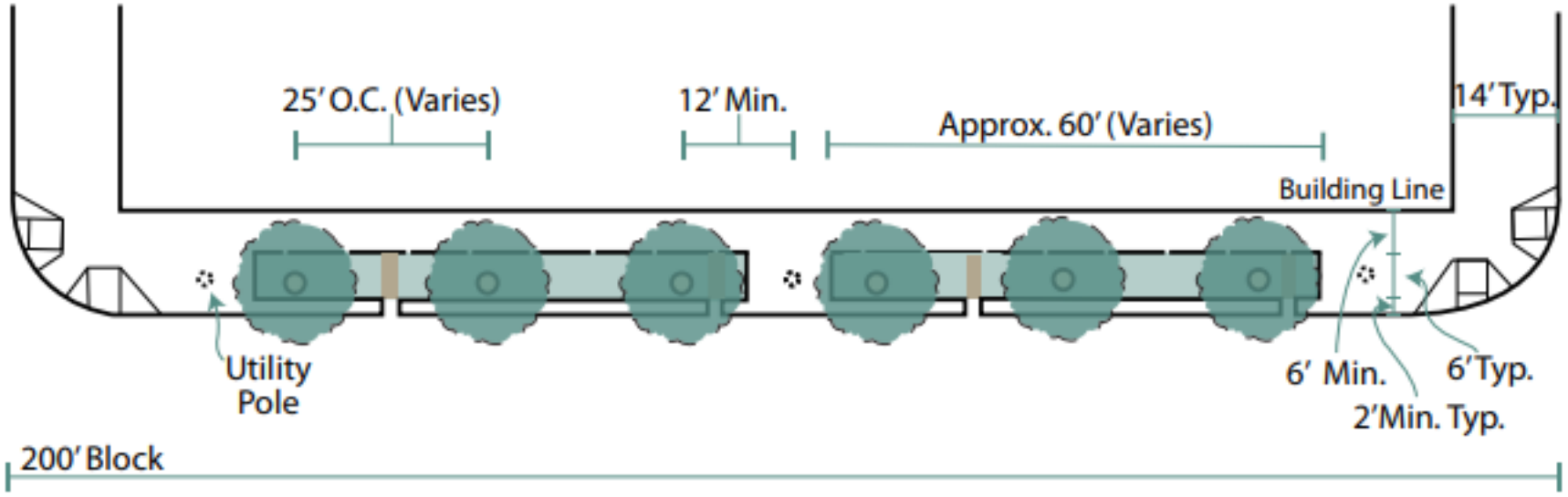

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Guide Outline

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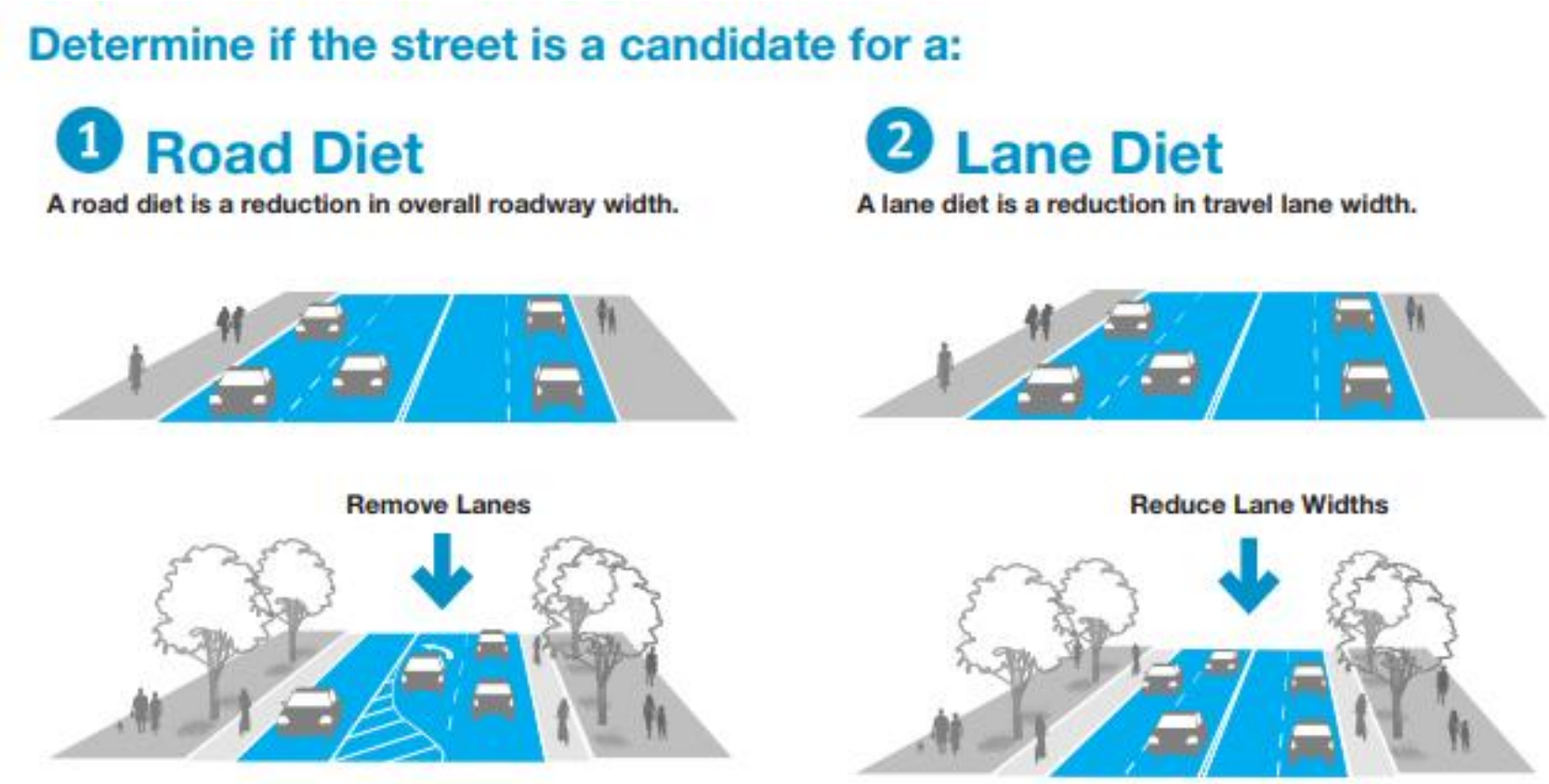
3. Sidewalks
4. Street Zone



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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.

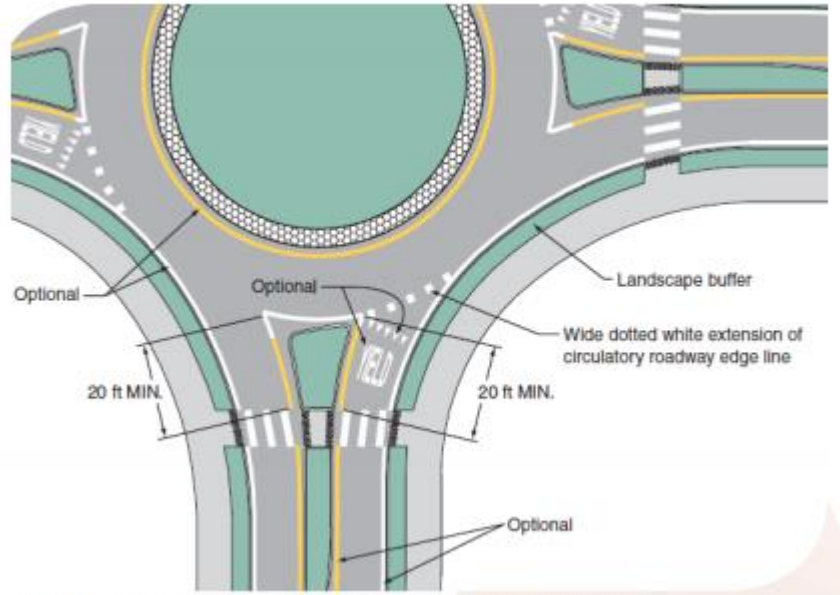
Uncontrolled Intersections

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 crosswal
midblock crossings is provided in this
create signalized midblock crossings.



Example of markings for approach and circulatory roadways at a roundabout

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Guide Outline

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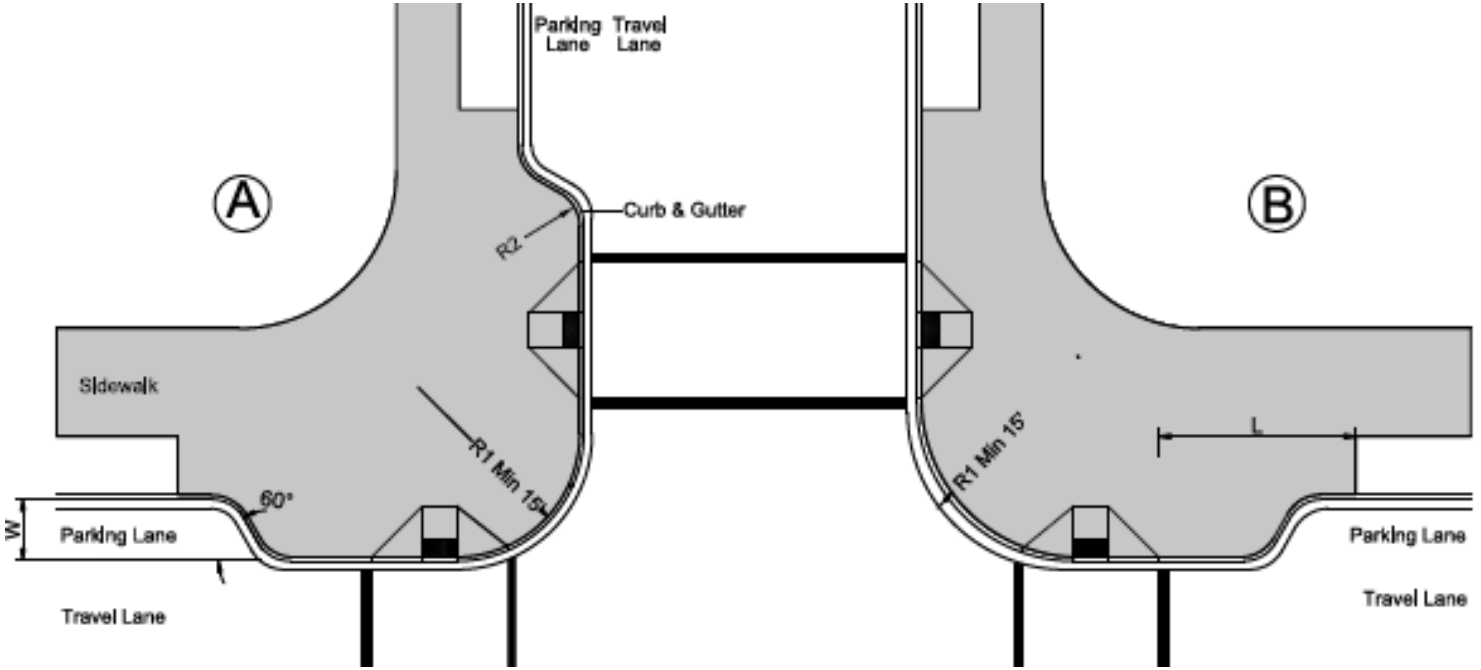

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Guide Outline

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 pro be designed to be comfortably traversed at the desired design speed, but uncomfortable at higher s profiles can have the unintended consequence of encouraging drivers to slow at speed humps but t Gaps should be provided between the curbline and the end of the speed hump to allow stormwater

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

Speed (mph)	Spacing (feet)
10	250
15	300
20	
25	

Speed Hump showing drainage bypass along curbline and chine in background (Seattle, WA)

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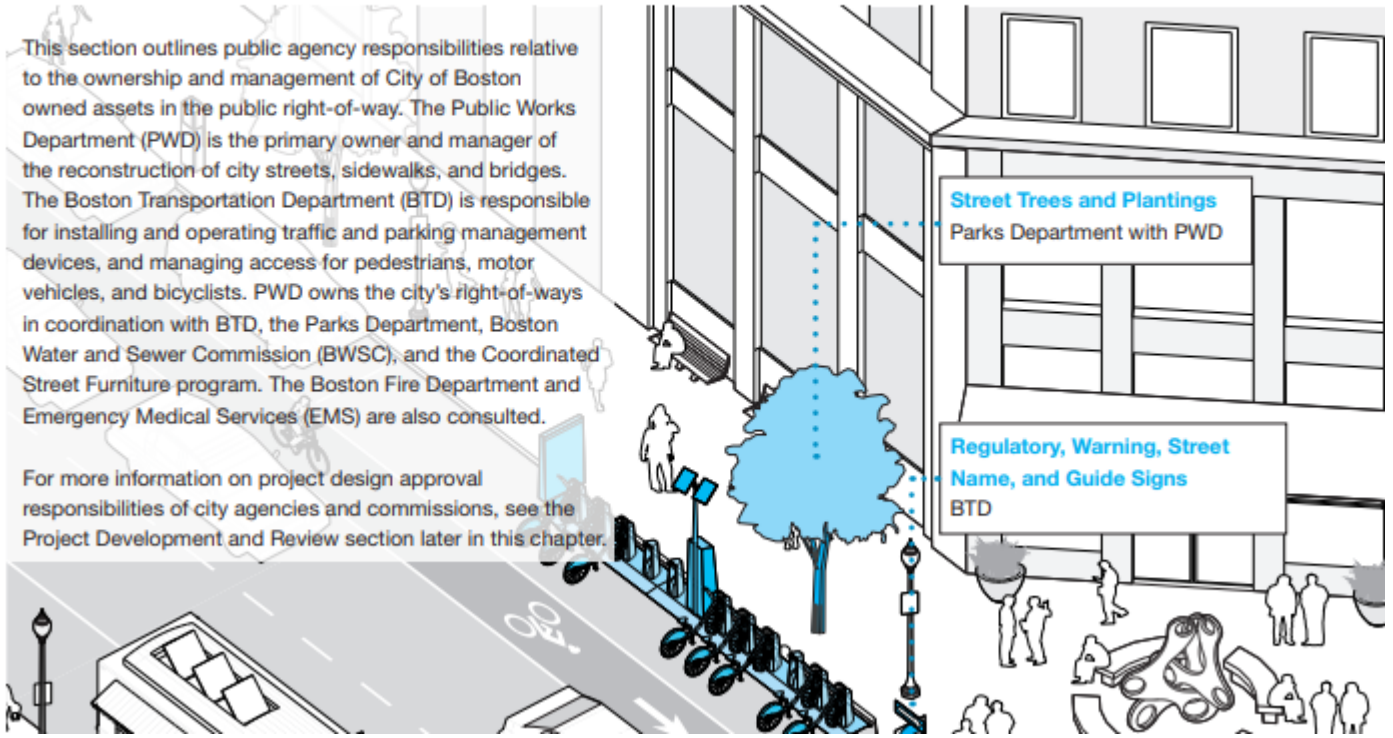
Guide Outline

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



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Street Types

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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?

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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

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Special Streets

- Alleys
- Residential Shared Streets
- Commercial Shared Streets
- Rustic Roads / Exceptional Rustic Roads

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Design Parameters

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Draft Design Parameters

By street type, draft:

- Lane widths
- Target speeds

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Breakout Session

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