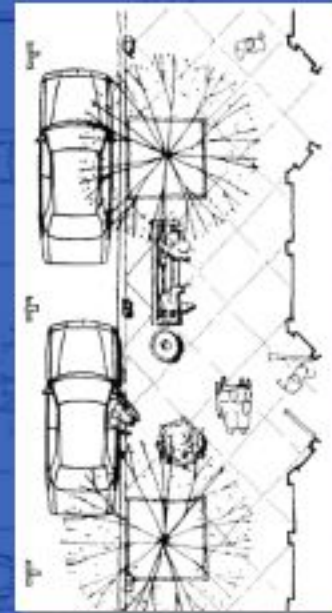
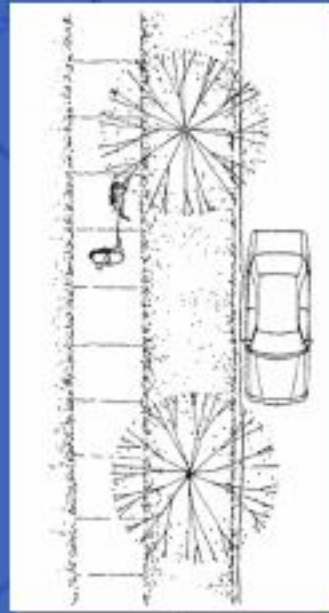


Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities

ITE Proposed Recommended Practice



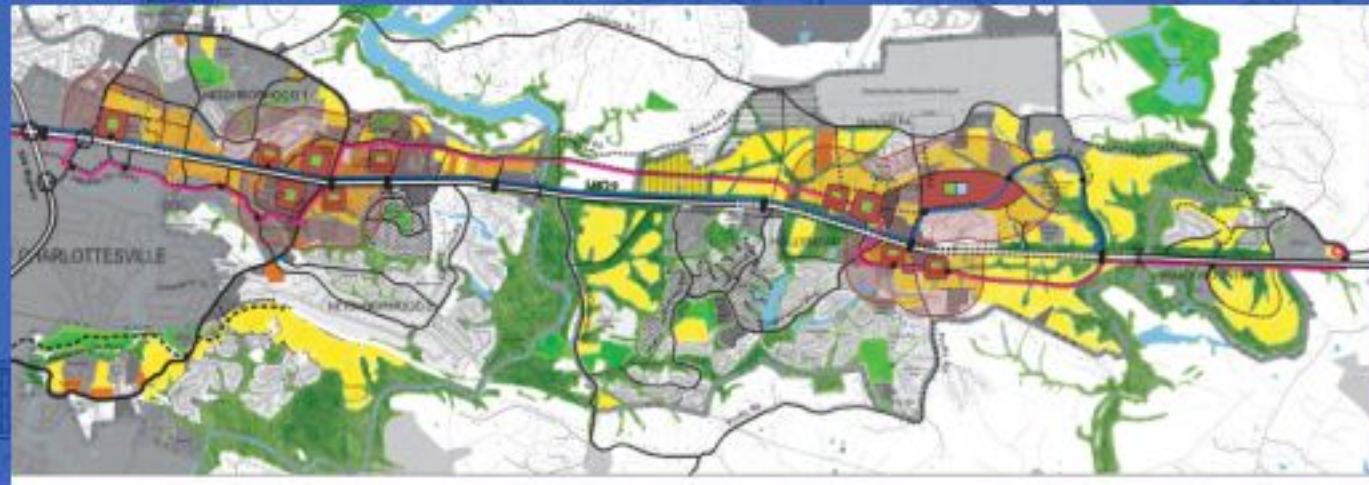
Urban Design Details

Marcy McInelly – Urbsworks

Phil Erickson – Community Design + Architecture

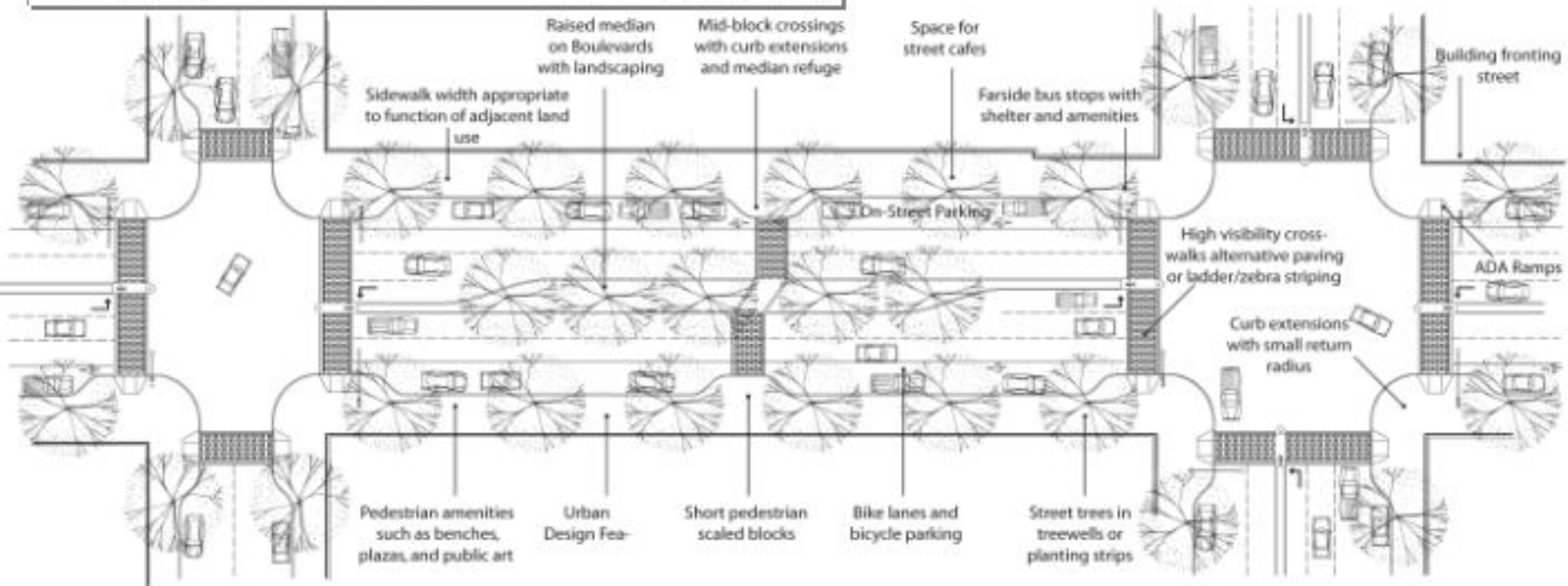
Defining Context & Thoroughfares Together

- City & Corridor
- Neighborhood
- Building & Site
- Regional Patterns
 - Moving from suburban to urban*
 - Land Use Patterns
 - Transportation Network



Places29 – Albemarle County, Virginia

CSS Elements in Urban Contexts



Design Guidance: Roadside

- Roadside zones
- Public places
- Placement of roadside facilities
- Public art
- Sidewalk width and function
- Pedestrian buffers
- Sidewalk/driveway/alley crossings
- Street furniture
- Utilities
- Landscaping/street trees

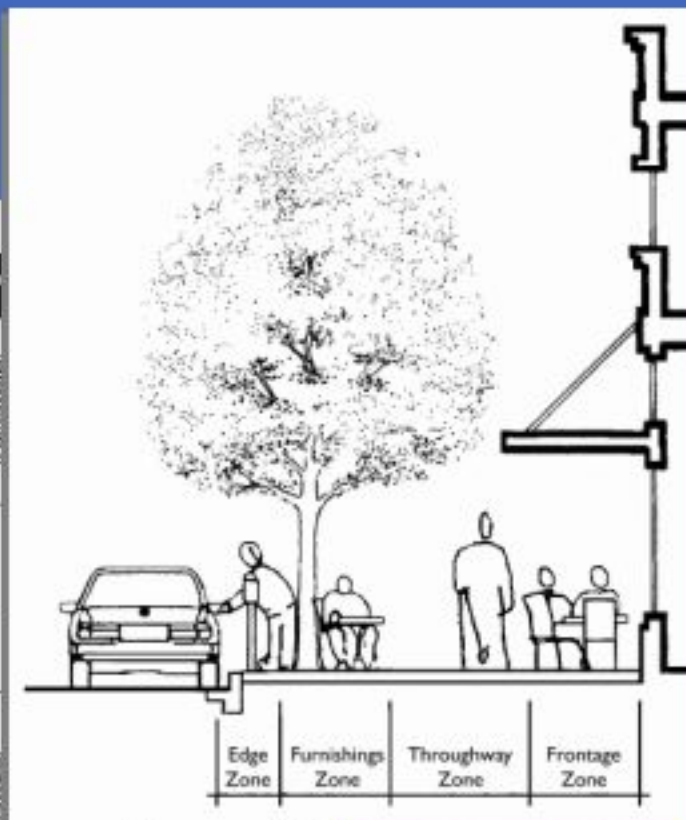


Roadside Design

- Roadside Zones

Table 8.1 Recommended Roadside Zone Dimensions

		CONTEXT ZONE AND PREDOMINANT GROUND FLOOR LAND USE OR FRONTAGE									
Sidewalk Zone [1]		C-4 and C-5		C-4 w/ Predominantly Commercial Ground Floor Use		C-4 w/ Predominantly Residential Frontage		C-3 w/ Predominantly Commercial Ground Floor Use			
Boulevard	Edge	1.5 ft. 2.5 ft. at diagonal parking		1.5 ft. 2.5 ft. at diagonal parking		0.5 ft.		1.5 ft. 2.5 ft. at diagonal parking			
	Furnishings	7 ft. (trees in tree wells)		7 ft. (trees in tree wells)		8 ft. (landscape strip w/ trees and grasses, or groundcover)		7 ft. (trees in tree wells)			
	Throughway	10 ft.		8 ft.		8 ft.		6 ft.			
	Frontage	3 ft.		2.5 ft.		8 ft. a long lawn and groundcover 1 foot along low walls, fences and hedges 1.5 ft. along facades, tall walls and fences		1.5 ft.			
Boulevard Without Parking	Edge					0.5 ft.					
	Furnishings					10 ft. (landscape strip w/ trees and groundcover, or low shrubs)					
	Throughway					8 ft.					
	Frontage					8 ft. a long lawn and groundcover 1 foot along low walls, fences and hedges 1.5 ft. along facades, tall walls and fences					
Avenue	Edge	1.5 ft. 2.5 ft. at diagonal parking		1.5 ft. 2.5 ft. at diagonal parking		0.5 ft.		1.5 ft. 2.5 ft. at diagonal parking			
	Furnishings	With Parking	5 ft. trees in tree wells	6 ft. (trees in tree wells)	8 ft. (landscape strip w/ trees and grasses, or groundcover)	6 ft. (trees in tree wells)	8 ft. with buffer landscaping	8 ft. (landscape strip w/ trees and grasses, or groundcover)	8 ft. with buffer landscaping	6 ft. (trees in tree wells)	
		Without Parking	8 ft. with buffer landscaping	8 ft. with buffer landscaping	8 ft. with buffer landscaping	8 ft. with buffer landscaping	8 ft. with buffer landscaping	8 ft. with buffer landscaping	8 ft. with buffer landscaping	8 ft. with buffer landscaping	
	Throughway	9 ft.		6 ft.		6 ft.		6 ft.			
Street	Edge	1.5 ft. 2.5 ft. at diagonal parking		1.5 ft. 2.5 ft. at diagonal parking		0.5 ft.		1.5 ft. 2.5 ft. at diagonal parking			
	Furnishings	6 ft. (trees in tree wells)		8 ft. (trees in tree wells)		5 ft. (landscape strip w/ trees and grasses, or groundcover)		6 ft. (trees in tree wells)			
	Throughway	6 ft.		6 ft.		6 ft.		6 ft.			
	Frontage	2.5 ft.		2.5 ft.		8 ft. a long lawn and groundcover 1 foot along low walls, fences and hedges 1.5 ft. along facades, tall walls and fences		2.5 ft.			



Edge Zone Furnishings Zone Throughway Zone Frontage Zone

6 ft.	8 ft. a long lawn and groundcover 1 foot along low walls, fences and hedges 1.5 ft. along facades, tall walls and fences	8 ft.
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NOTES: Recommended dimensions for the throughway zone may be wider in active commercial areas.

See Table 5.2 in Chapter 5 for discussion of minimum roadside zone widths in constrained conditions.

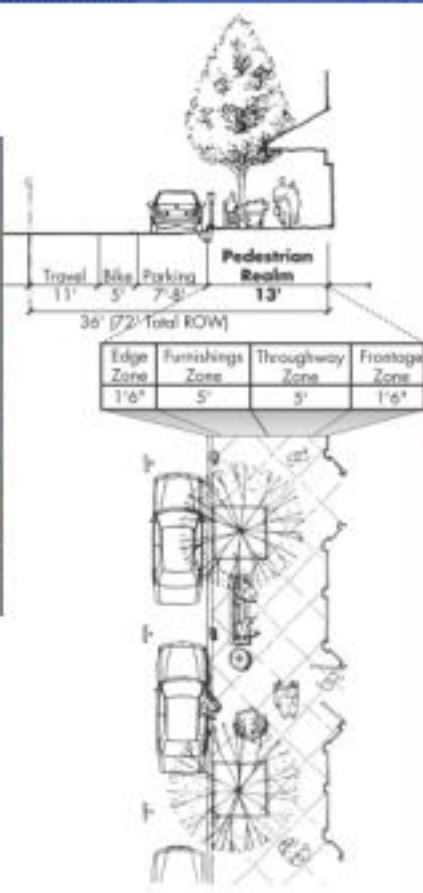
[1] In AKGHOT's Guide for the Planning, Design, and Operation of Pedestrian Facilities, the furnishing zone is termed the "buffer" zone, and the frontage zone is termed the "by distance."

Roadside Design

- Zones - Vary based on Context & Thoroughfare Type



Berkeley, CA



Coronado, CA



Roadside Design

- Roadside zones:
 - Edge Zone
 - Furnishings Zone
 - Throughway Zone
 - Frontage Zone
- Function and dimensions vary by context zone
 - **General Urban (C-4) Avenue**



Conventional Arterial (10 foot Roadside Zone)



General Urban Avenue (16 foot Roadside Zone)

Roadside Design

- Roadside zones:
 - Edge Zone
 - Furnishings Zone
 - Throughway Zone
 - Frontage Zone
- Function and dimensions vary by context zone
 - **General Urban (C-4)
Boulevard**



Conventional Arterial (8 foot Roadside Zone)



General Urban Avenue (16.5 foot Roadside Zone)

Character - Roadside Elements

- Pedestrian-scaled Signage
 - Should be at a human-scale in a pedestrian-supportive area.
- Public Art
 - Can effectively add whimsy to the pedestrian environment.



Intersection Design

- Avoiding large undefined open spaces
- Providing safe circulation for all modes

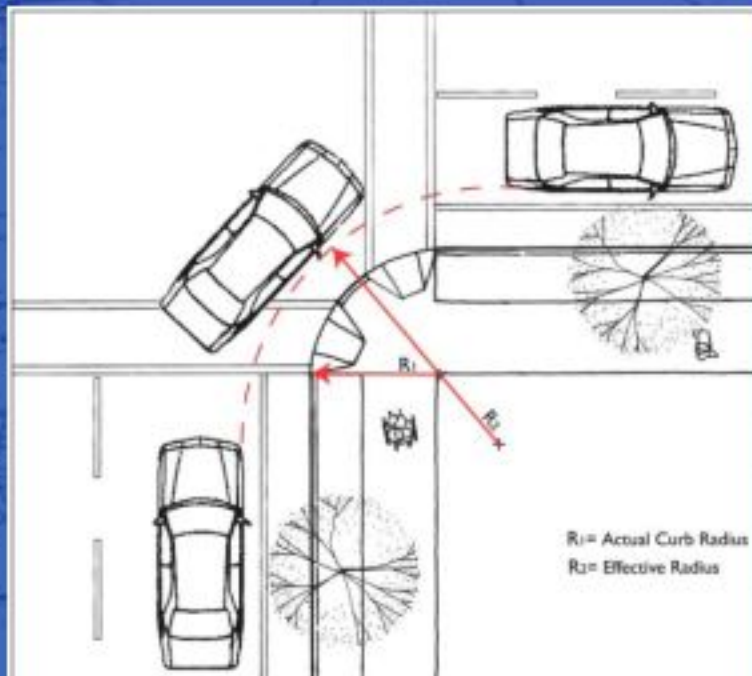


Figure 10.8 The existence of parking and bicycle lanes creates an "effective" turning radius that is greater than the curb return radius. Source: Community, Design + Architecture, adapted from the *Oregon Bicycle and Pedestrian Plan*.

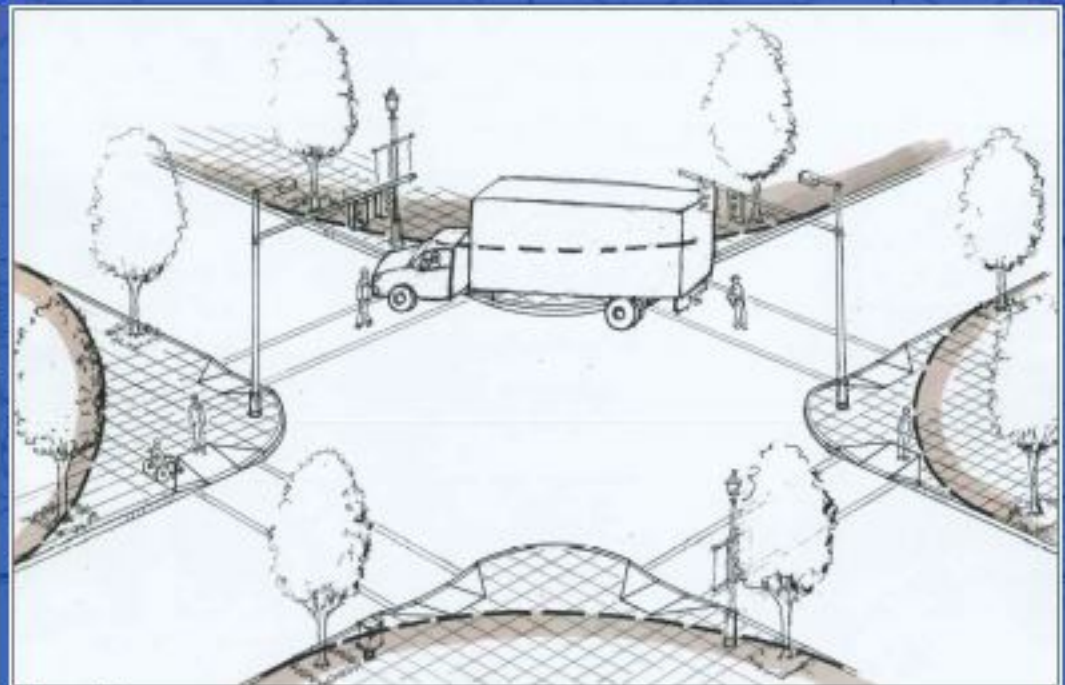


Figure 10.7 Smaller curb return radii shorten the distance that pedestrians must cross at intersections. The occasional turn made by large trucks can be accommodated with slower speeds and some encroachment into the opposing traffic lanes. Source: Kimley-Horn and Associates Inc.

Intersection Design

- Crosswalks
 - Recommendations for marking crosswalks
 - Textured paving can make crossings more visible to drivers

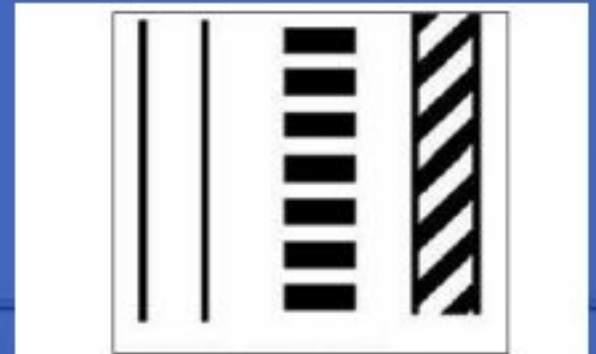


Figure 10.13 The three primary types of crosswalk markings (from left to right) are transverse, longitudinal and diagonal. Source: Kimley-Horn and Associates Inc.



Figure 10.17 Use of contrasting material and bollards to delineate the pedestrian and vehicle areas. Source: Kimley-Horn and Associates Inc.



Charter of the New Urbanism

- Principles that support context sensitive thoroughfare design
- At the regional, city and town level [8]:

“The physical organization of the region should be supported by a framework of transportation alternatives. Transit, pedestrian, and bicycle systems should maximize access and mobility throughout the region while reducing dependence upon the automobile.”

Intersection Design

- Curb Extensions
 - 6 to 7 feet into parking lane
 - Accommodate turning radii of design vehicle
 - Maintain surface drainage

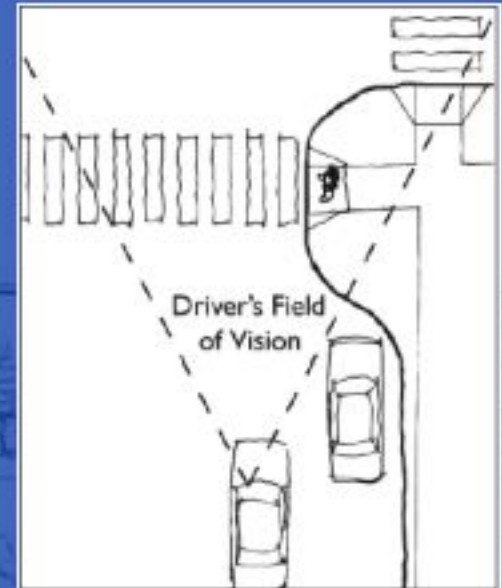


Figure 10.15 Curb extensions can improve pedestrian visibility and reduce crossing distance. Source: Community, Design + Architecture.



Solana Beach, California

Intersection Design

- Avoiding large undefined open spaces

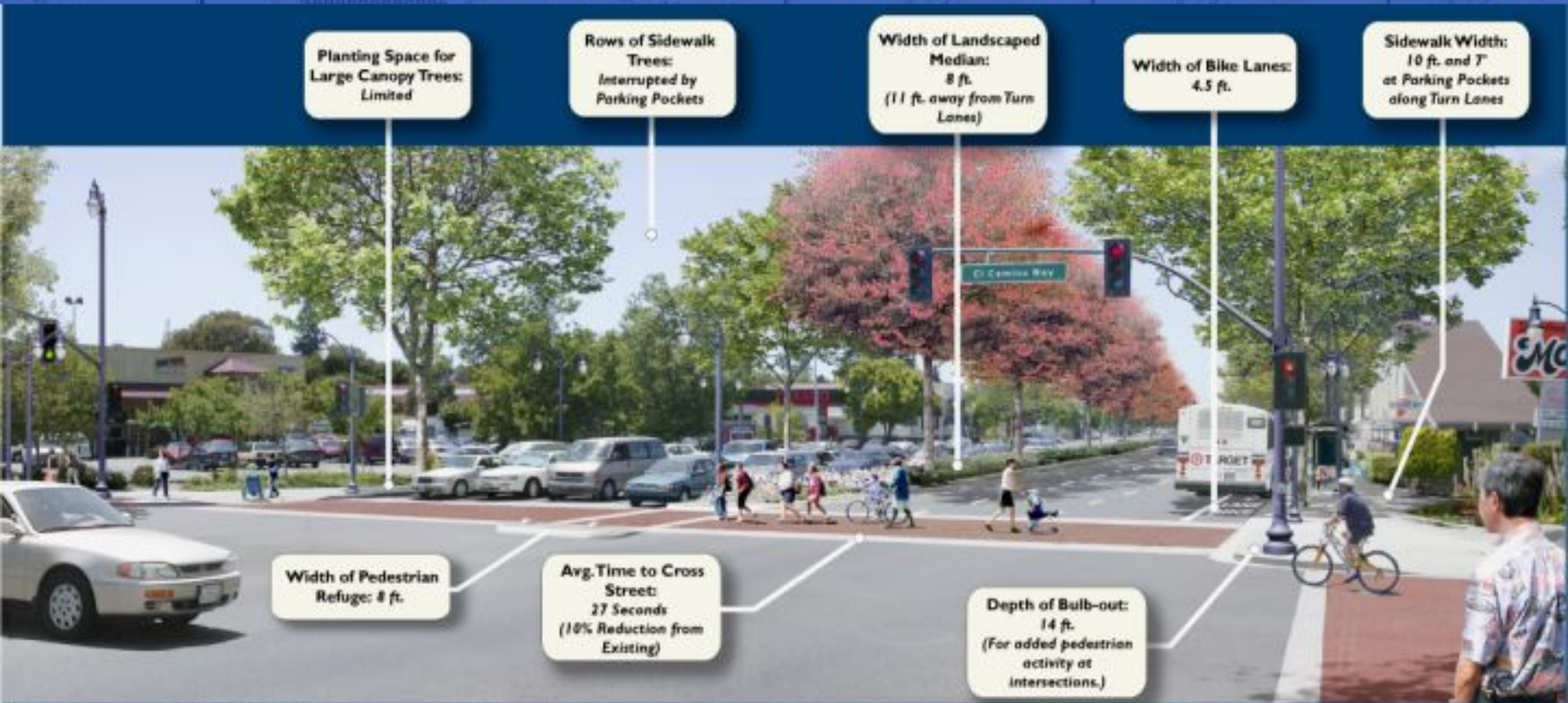


Boulevard & C-3 Suburban - El Camino Real, Palo Alto, CA

Visualization by Urban Advantage

Intersection Design

- Creating opportunities to improve context



Boulevard & C-3 Suburban - El Camino Real, Palo Alto, CA

Design by CDHA and Fehr & Peers - Visualization by Urban Advantage

Intersection Design

Existing - *115 foot crossing distance*

- Street & Lane Width - 6 lanes, 12 to 21 ft. wide
- Curb Radii - 30+ ft.



Boulevard & C-3 Suburban - El Camino Real, Palo Alto, CA

Visualization by Urban Advantage

Intersection Design

Redesign - 95 foot crossing distance - 17% reduction

- Street & Lane Width - 6 lanes, 11 ft. wide w/ bike lanes
- Protected Median Refuge - 8 ft.
- Curb Radii - 20 ft.



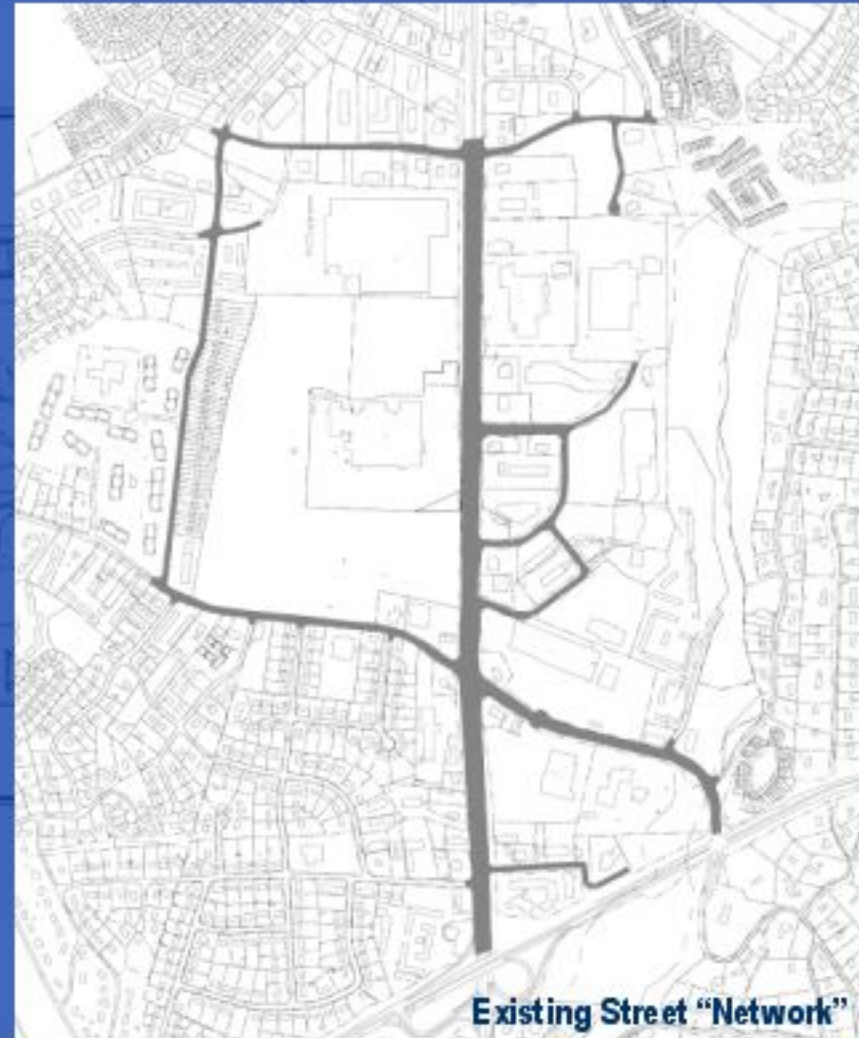
Boulevard & C-3 Suburban - El Camino Real, Palo Alto, CA

Design by CDHA and Fehr & Peers - Visualization by Urban Advantage

Bringing All the Elements Together

Changing Thoroughfare & Context

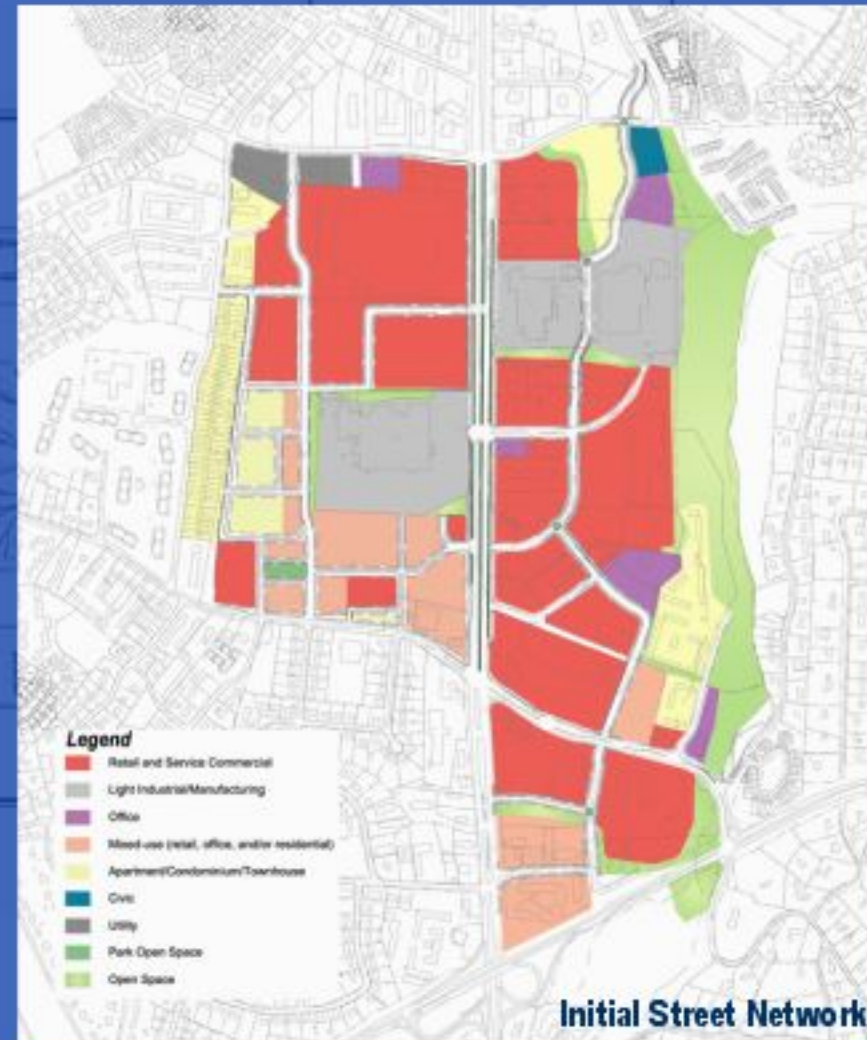
- Lack of a complete network concentrates all traffic on US29
 - Regional through
 - Regional commute
 - Local commute
 - Local shopping and
 - Local within the study area



US29H250 Project – Charlottesville & Albemarle County, Virginia

Changing Thoroughfare & Context

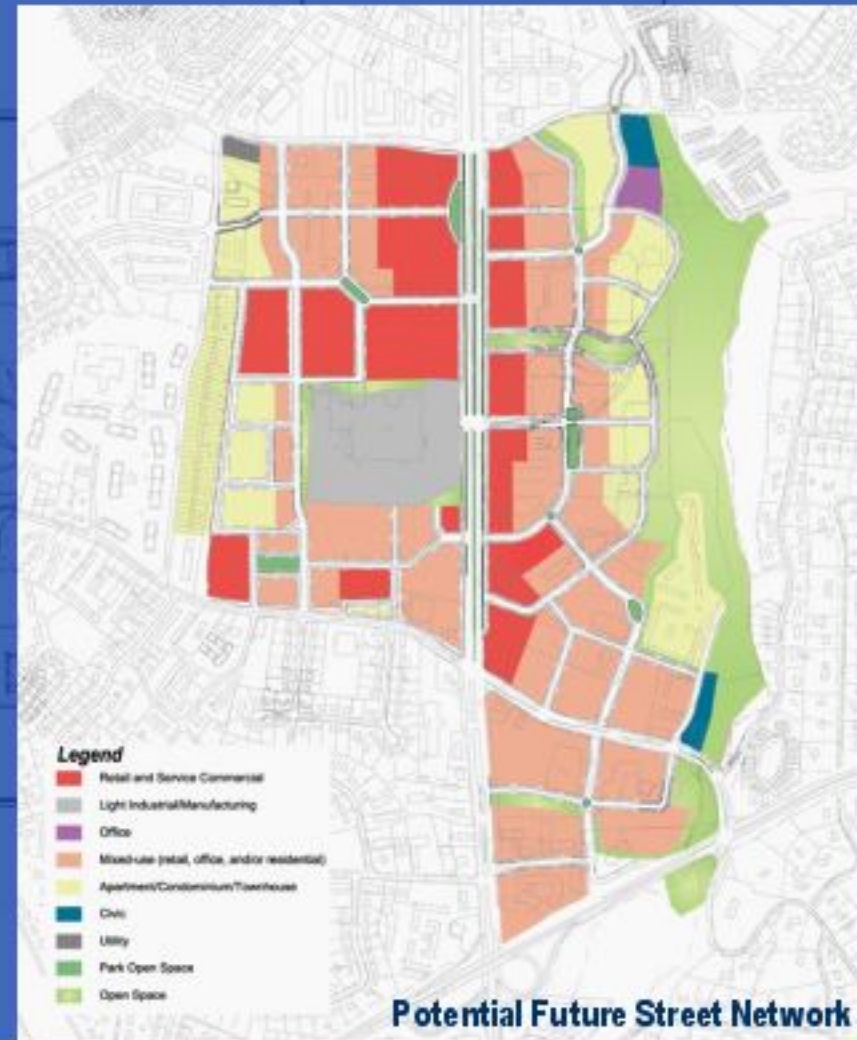
- Creating a Network of Streets
- 3 streets for local service
 - Hillsdale Drive
 - Albemarle Place Streets
 - Commonwealth Drive
- Allows US 29 to serve longer Regional trips



US29H250 Project – Charlottesville & Albemarle County, Virginia

Changing Thoroughfare & Context

- Potential for a finer grain network of streets
- Support transition from
 - C-3: Suburban to
 - C-5: Urban Center



US29H250 Project – Charlottesville & Albemarle County, Virginia

Changing Thoroughfare & Context

- Arterial Street
- C-3: Suburban



US29H250 Project – Charlottesville & Albemarle County, VA

Design by CDA and MMA – Visualization by Urban Advantage

Changing Thoroughfare & Context

- Boulevard Thoroughfare
- C-4: General Urban



US29H250 Project – Charlottesville & Albemarle County, VA

Design by CDA and MMA – Visualization by Urban Advantage

Charter of the New Urbanism

- Principles that support context sensitive thoroughfare design
- At the neighborhood, district and corridor level [11]:

“Neighborhoods should be compact, pedestrian-friendly, and mixed-use. Districts generally emphasize a special single use and follow the principles of neighborhood design when possible. Corridors are regional connectors of neighborhoods and districts; they range from boulevards and rail lines to rivers and parkways.”

Changing Thoroughfare & Context

- Avenue Thoroughfare
- C-5: Urban Center



US29H250 Project – Charlottesville & Albemarle County, VA

Design by CDA and MMA – Visualization by Urban Advantage

Charter of the New Urbanism

- Principles that support context sensitive thoroughfare design
- At the neighborhood, district and corridor level [12]:

“Many activities of daily living should occur within walking distance, allowing independence to those who do not drive, especially the elderly and the young. Interconnected networks of street should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy.”

Charter of the New Urbanism

- Principles that support context sensitive thoroughfare design
- At the block, street and building level [19]:

“A primary task of all urban architecture and landscape design is the physical definition of streets and public spaces as places of shared use.”

Charter of the New Urbanism

- Principles that support context sensitive thoroughfare design
- At the block, street and building level [22]:

“... development should adequately accommodate automobiles. It should do so in ways that respect the pedestrian and the form of public space.”

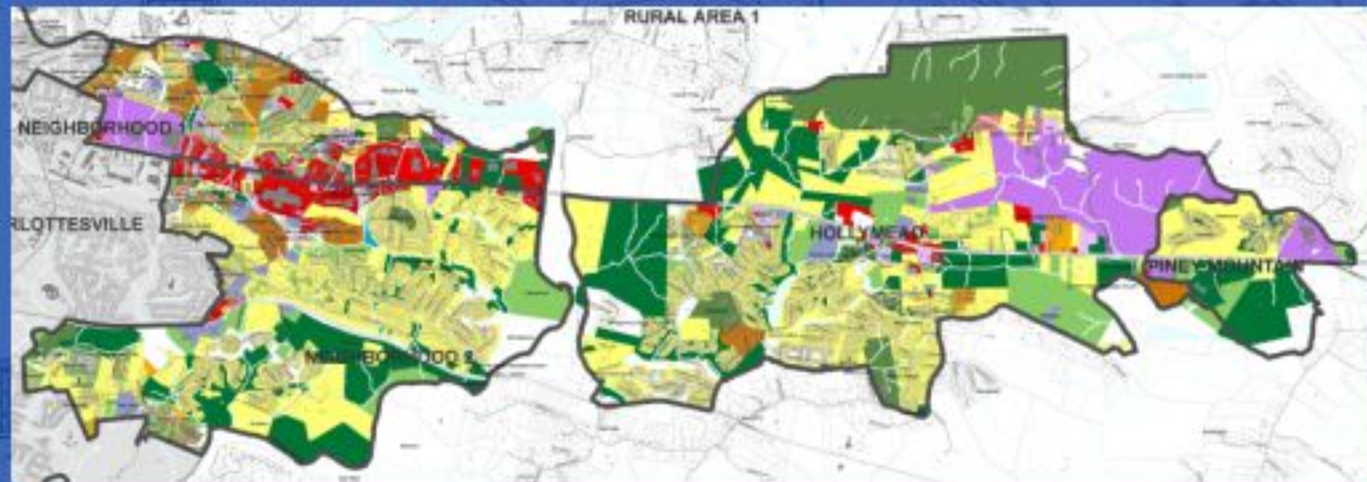
Charter of the New Urbanism

- Principles that support context sensitive thoroughfare design
- At the block, street and building level [23]:

“Streets and squares should be safe, comfortable and interesting to the pedestrian. Properly configured, they encourage walking and enable neighbors to know each other and protect their communities.”

Defining Context & Thoroughfares Together

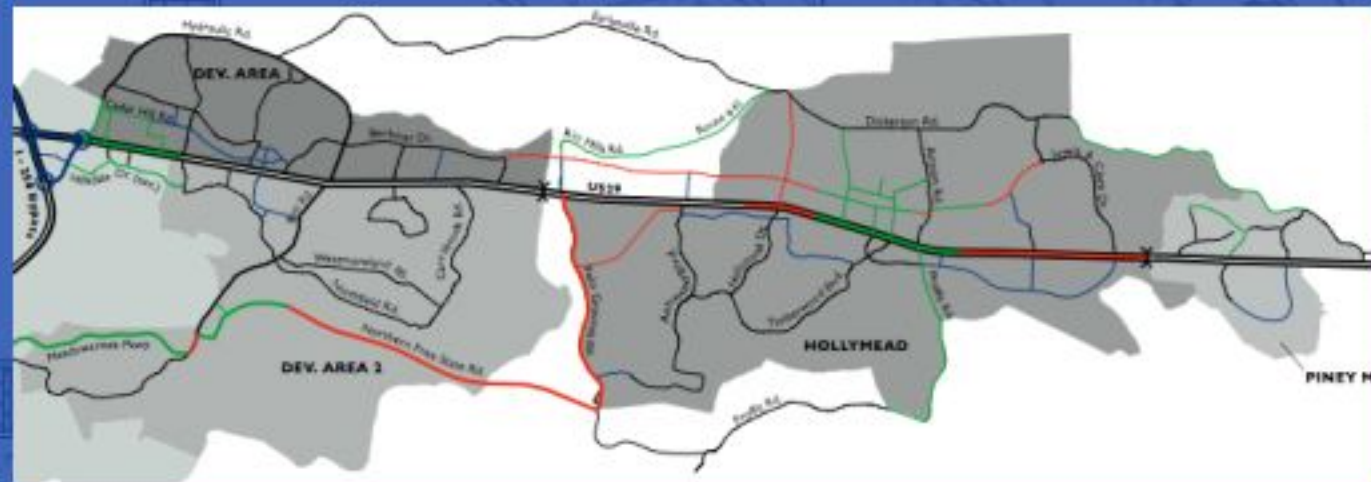
- City & Corridor
- Neighborhood
- Building & Site
- Regional Patterns
 - Moving from suburban to urban*
 - Land Use Patterns
 - Transportation Network



Places29 – Albemarle County, Virginia

Defining Context & Thoroughfares Together

- **City & Corridor**
- Neighborhood
- Building & Site
- Regional Patterns
 - Moving from suburban to urban*
 - Land Use Patterns
 - **Transportation Network**



Places29 – Albemarle County, Virginia