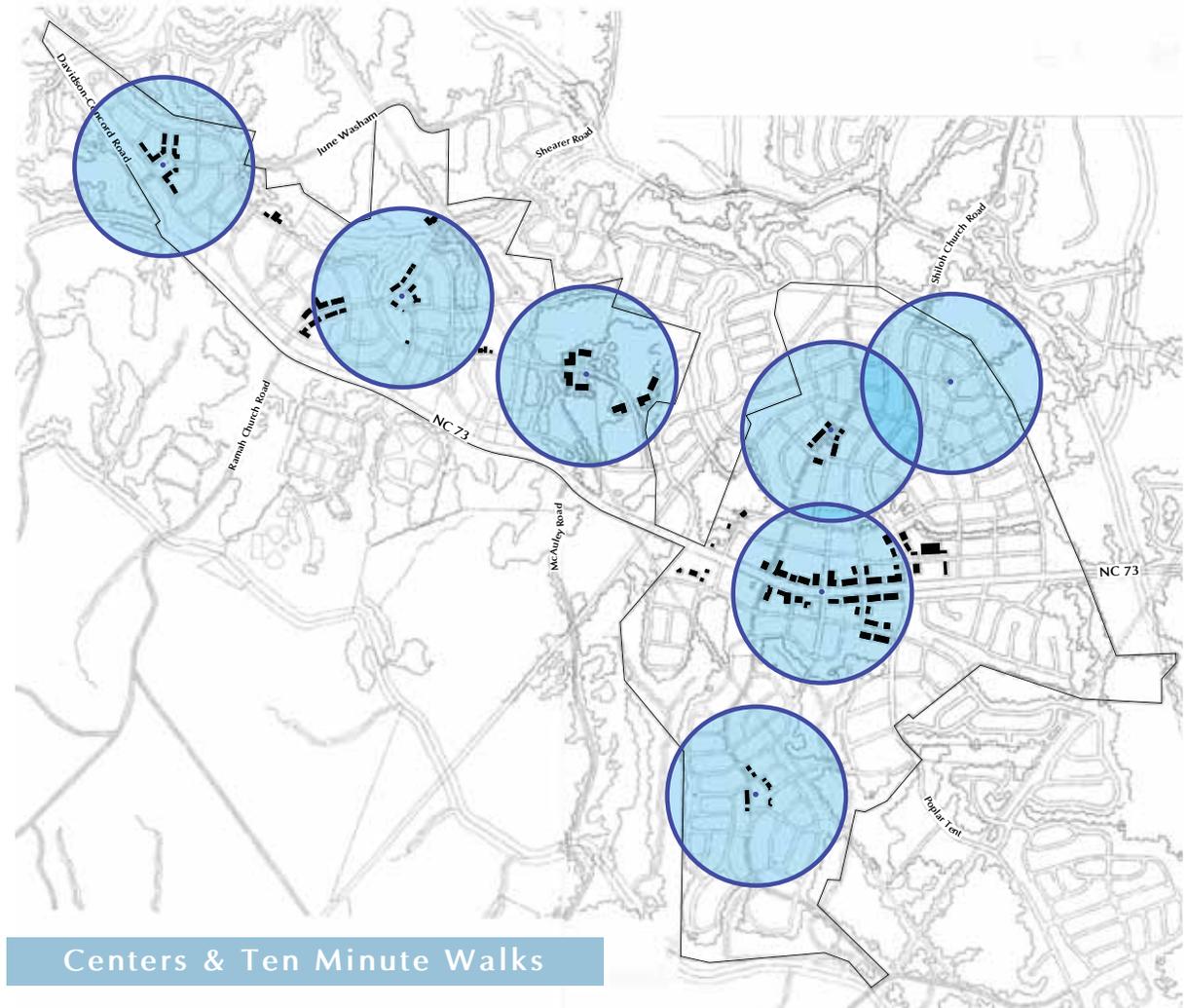## Introduction

Many factors affect the quality of a public realm. In order to create a sense of community and a safe environment, there are a number of design considerations involving street layout appropriate to adjacent uses, the pedestrian experience, placement of buildings and their relationship to the street and similar.
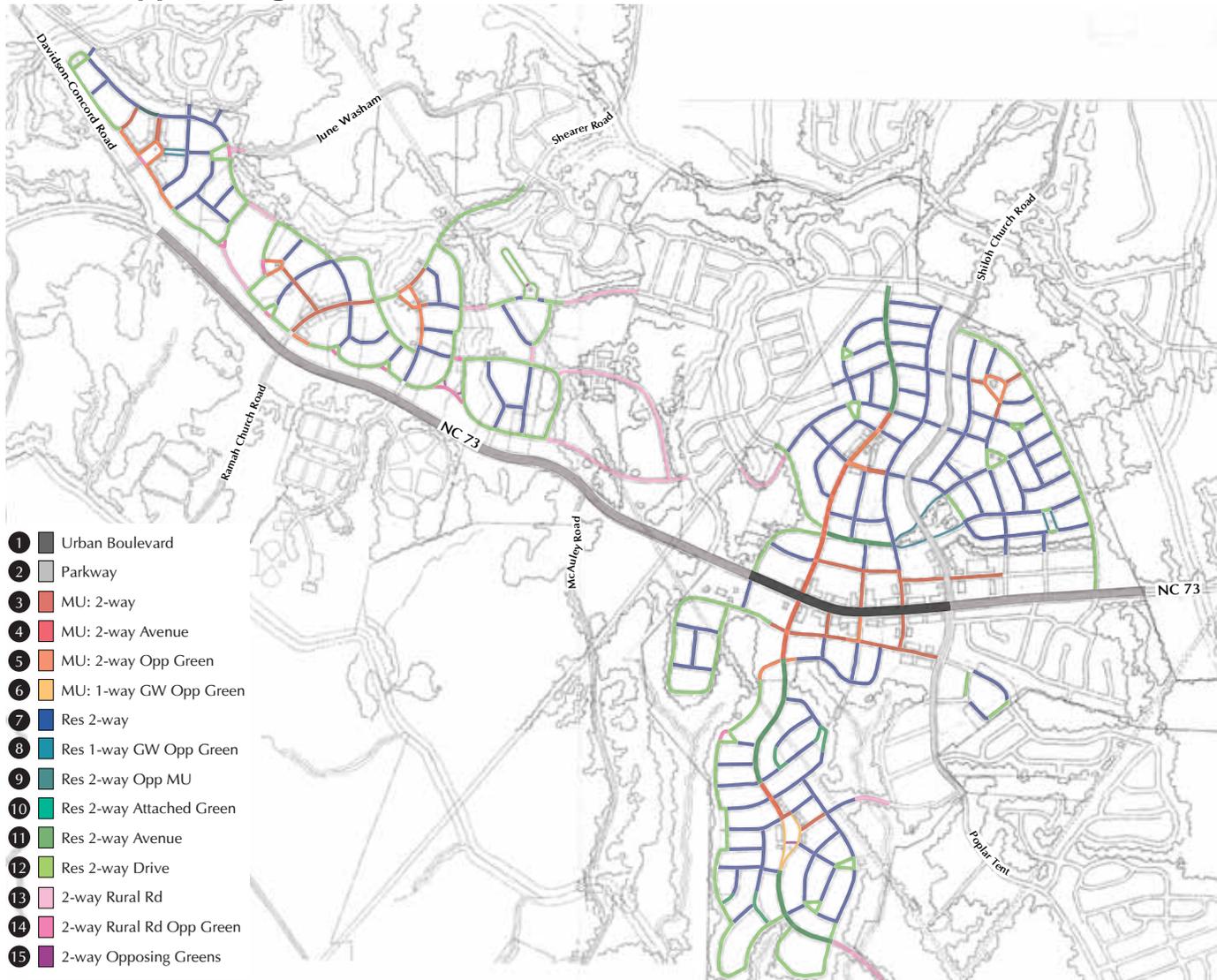
There is a concern for not only the aesthetic experience of NC 73, but also the overall health of the land and the people who live on it.

Covered in this chapter are recommended principles that in combination with proper design details are the building blocks of a Community, concerning:

- Recommended street types

- How to create a quality public realm: Principles of how buildings meet the street, building placement, location of front doors

- The Pedestrian experience

Davidson-Concord Road
June Washam
Shearer Road
Shiloh Church Road
Ramah Church Road
NC 73
McAuley Road
NC 73
Poplar Tent

Centers & Ten Minute Walks

Street Type Diagram

The Access Plan (Chapter 7) makes specific recommendations as to the minimal network of streets in the Small Area Plan. This chapter provides recommendations as to the variety of streets that could be created if the Masterplan were followed. As streets transition from rural to urban settings they change character and how they are used. For example, in a Neighborhood Center, the street may have wide sidewalks and on-street parking to create a comfortable retail environment. That same street may transition to a more rural drive adjacent to a green space. A pathway may only be necessary. Transitions in character from rural roads to urban streets is integral to the overall experience within the area covered in the Small Area Plan.

On the following pages are sections and plans of each of these street types, coded by number and color.

Legend:

1. Urban Boulevard
2. Parkway
3. MU: 2-way
4. MU: 2-way Avenue
5. MU: 2-way Opp Green
6. MU: 1-way GW Opp Green
7. Res 2-way
8. Res 1-way GW Opp Green
9. Res 2-way Opp MU
10. Res 2-way Attached Green
11. Res 2-way Avenue
12. Res 2-way Drive
13. 2-way Rural Rd
14. 2-way Rural Rd Opp Green
15. 2-way Opposing Greens
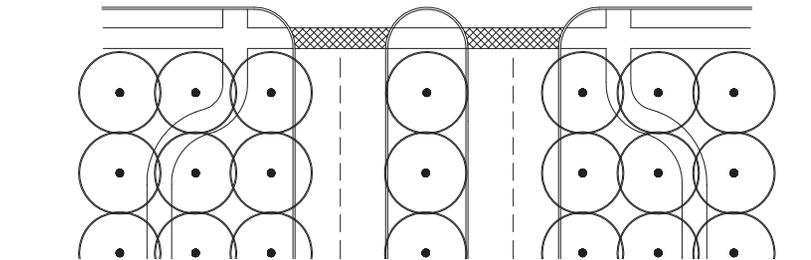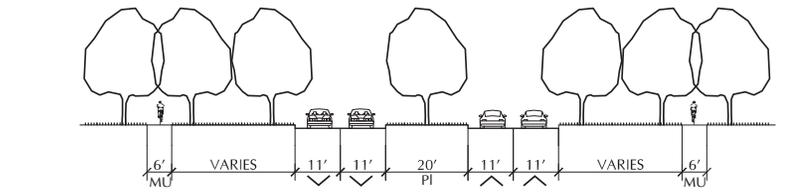
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NC 73

NC 73 is proposed as a Parkway until it reaches the Central Business District. At this point the road transitions into an urban Boulevard with frontage roads.

| 1 | **Urban Boulevard** |

| 2 | **Parkway** |
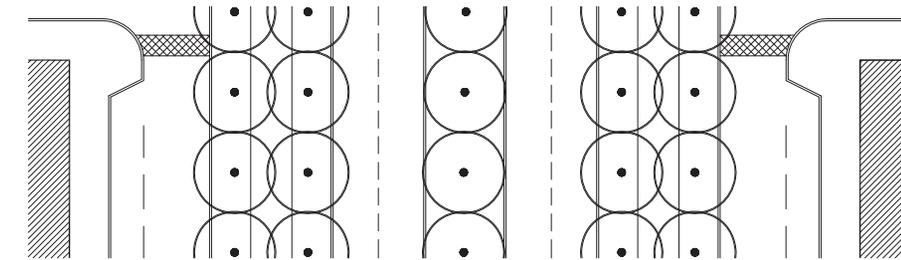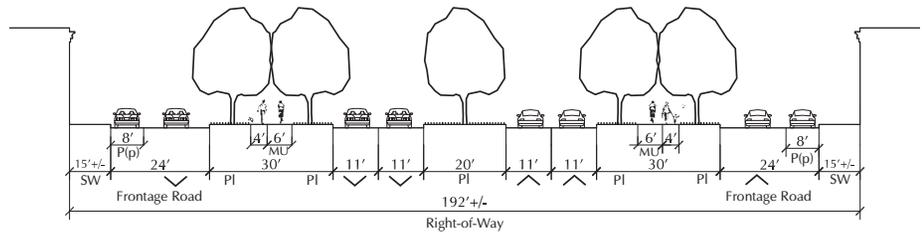
The center lanes accommodate the 4 lanes of higher-speed traffic. The frontage roads accommodate slower, local traffic and are lined with parallel parking and a mix of uses, including retail and dining establishments with space for outdoor seating on the wide sidewalks. The center median is a green swath and serves as a safe spot for crossing pedestrians.

The Parkway is based upon preservation of viewsheds.
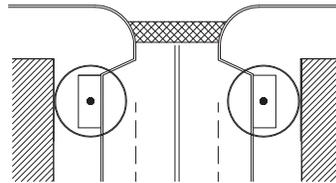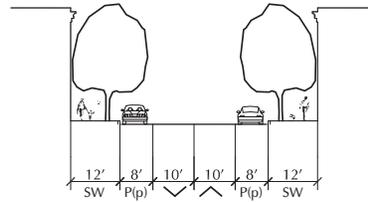
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Mixed-Use

Mixed-use includes all streets that are not exclusively residential. The emphasis is on creating an interesting and comfortable environment with sidewalks and on-street parking. In some cases the intent is to create an ideal setting for retail and outdoor dining.
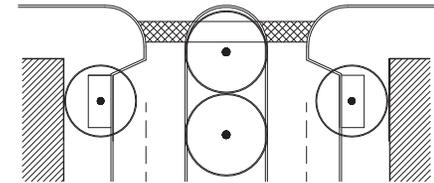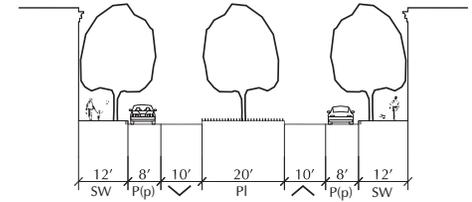

3 Two-way

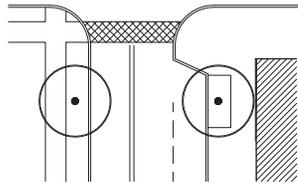| 12'	8'	10'	10'	8'	12'
SW	P(p)			P(p)	SW

4 Two-way Avenue

12'	8'	10'	20'	10'	8'	12'
SW	P(p)		Pl		P(p)	SW

5 Two-way Opposite Green

5' 6' 10' 10' 8' 12'
SW Pl ∨ ∧ P(p) SW

6 One-way Give-way

5' 6' 16' 8' 12'
SW Pl ∧ P(p) SW
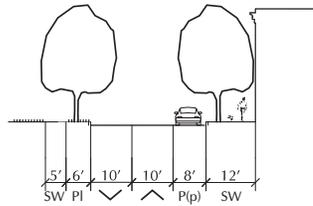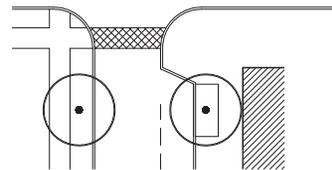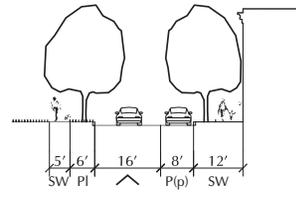
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Residential

Residential streets range from the wide gracious streets with a median and large houses, to the more intimate Give-Way Lane.

7	**Two-way**

8	**One-way Give-Way Opposite Green**

9	**Two-way Opposite Mixed Use**

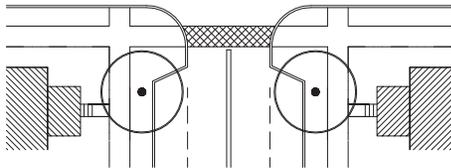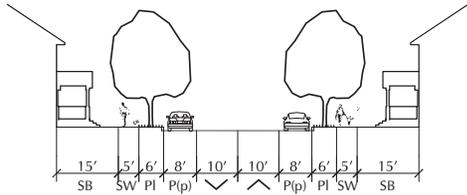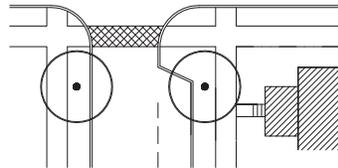| 15'	5'	6'	8'	10'		10'	8'	6'	5'	15'
SB	SW	Pl	P(p)				P(p)	Pl	SW	SB

5'	6'	16'	8'	6'	5'	15'
SW	Pl		P(p)	Pl	SW	SB

15'	5'	6'	8'	10'		10'	8'	12'
SB	SW	Pl	P(p)				P(p)	SW

Narrow lanes and parallel parking help to physically and subconsciously enforce the speed limit.
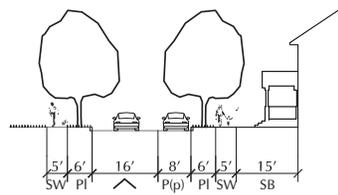
Private parking for residents is located at the rear of the houses, with overflow parking in parallel spaces along the street.

Commercial or retail uses must be in comparable scale to surrounding buildings.

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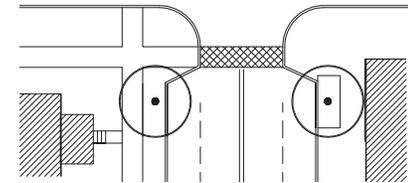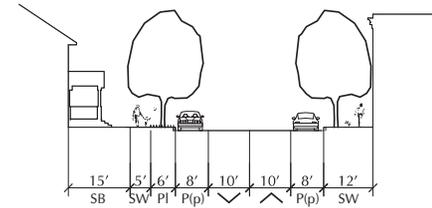## 10 Two-way Attached Green

15'	5'	VARIES	5'	6'	10'	10'	8'	6'	5'	15'
SB	SW		SW	Pl	∨	∧	P(p)	Pl	SW	SB

11 Two-way Avenue

15'	5'	6'	8'	10'	20'	10'	8'	6'	5'	15'
SB	SW	Pl	P(p)	∨	Pl	∧	P(p)	Pl	SW	SB

12 Two-way Drive

5'	6'	10'	10'	8'	6'	5'	15'
SW	Pl	∨	∧	P(p)	Pl	SW	SB
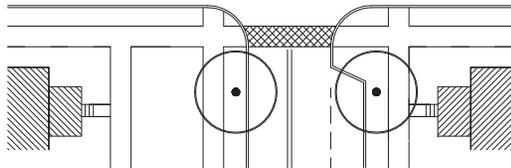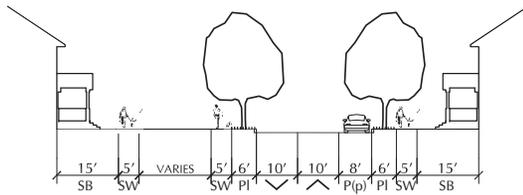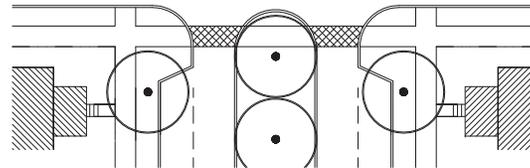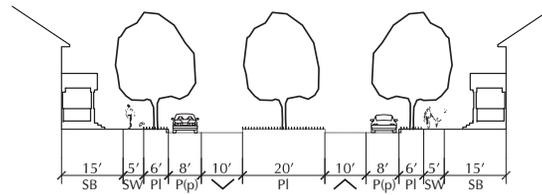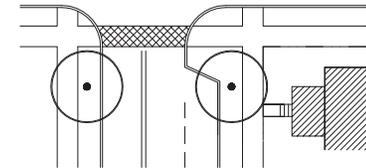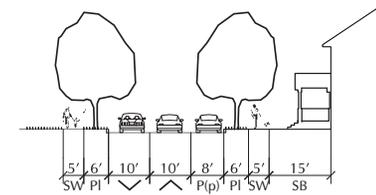
Rural

Rural roads should be narrow and winding, so as to discourage speeding by motorists. The road can be thoughtfully designed to frame views. Pathways for pedestrians and bicyclists are recommended.

13 | **Two-way**

5' 6' 10' 10' 6' 5'
SW Pl ∨ ∧ Pl SW
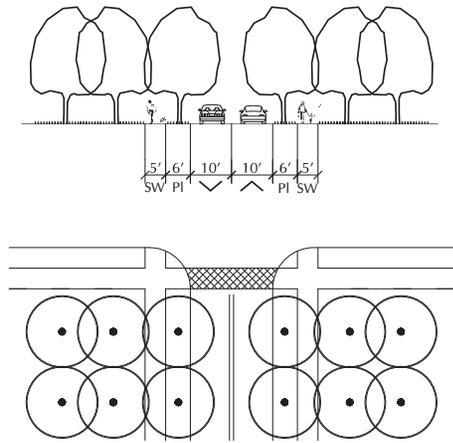
14 | **Two-way Opposite Green**

5' 6' 10' 10' 6' 5'
SW Pl ∨ ∧ Pl SW

15 | **Two-way Opposing Greens**

5' 6' 10' 10' 6' 5'
SW Pl ∨ ∧ Pl SW

Urban Design Recommendations:
Blocks & Streets

Previous chapters have addressed urban design principles regarding the design of centers, neighborhoods, network and open space. This section addresses additional principles of urban design at the block scale.

As pedestrians walk from block to block there should be consistent visual interest and comfort. Several variables play a role in influencing this environment:

1. Comfortable sidewalk experience.
2. The design of intersections and crossing points.
3. A variety of buildings and lot widths.
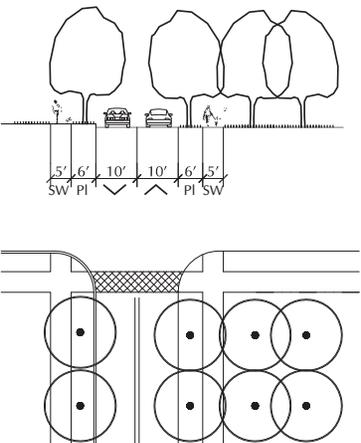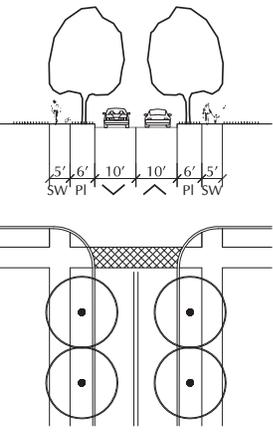4. The fronts of buildings should define the street.
5. Public spaces should be defined by the fronts of buildings.
6. Off-street parking and service areas are located behind buildings.

1. Comfortable Sidewalk Environment:

Sidewalks are public, outdoor rooms. When well-designed these spaces are interesting and comfortable and people linger, encouraging shopping and dining. When streets and sidewalks are not comfortable and interesting, pedestrians will not use them.

Retail streets and residential streets differ in important design details.

On this retail street, the sidewalk is serving three roles. The portion adjacent to the storefront has seating for outdoor dining. The center is unobstructed for walking. The edge of the sidewalk has street shade trees and street furnishings such as trash receptacles.

Though this sidewalk is not expansive, approximately 13 feet wide, it is an interesting public space.

Strong visual merchandising, signage and creative solutions for benches, planting and art keep the retail experience interesting.

Retail Environments

In retail environments, the important features include wide sidewalks, shade and on-street parking. Sidewalks should be wide to allow a variety of experiences to occur such as dining, shopping and strolling. In retail environments, a twelve-foot wide sidewalk is minimum to provide enough space for outdoor dining and to allow people to walk next to each other and pass others easily. Trees, awnings and colonnades provide shade. On-street parking creates a buffer from moving cars.

Residential Streets

On predominantly residential streets, there is a variety of street types, ranging from wide Avenues to narrow Lanes. Typically, wider streets have larger homes with deeper front yards, sidewalks and swales with trees that help to create the more generous proportion. Narrow Lane streets may have little to no swale with buildings closer to the street and may rely on tree planters and trees leaning from private property for green coverage. Sidewalks can be much more narrow, as residential streets typically have fewer pedestrians.

A twelve foot sidewalk on this residential street incorporates shade tree planters that are offset from the stoop and front steps, so as not to create a pinch point.

On this residential street, a wide swale and planting strip and building setback create a green expanse.

In comparison to the image above, this building is situated closer to the street, and is adjacent to a narrower swale. Regardless the street appears green through a combination of trees in the public swale and lean-to trees from the front gardens on private property.

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2. The design of intersections and crossing points

The design of intersections should allow for safe and comfortable pedestrian crossing. This requires visual cues for motorists to stay alert and slow down. The design should limit the crossing distance, with travel and turning lanes as narrow as possible. When the crossing distances are excessive to the point of not allowing pedestrians to cross in one signal cycle, a median should be provided as a safe waiting space.

Turning radii should be small so as to discourage motorists from speeding. This will also limit the crossing distance.

3. A variety of buildings and lot widths are encouraged.

Buildings and the spaces between buildings create visual variety. Overt repetition of buildings, especially with poor architectural quality, can create a monotonous environment.

4. The fronts of buildings define the blocks.

The quality of the public realm is made safe and inviting by having the fronts of buildings define the streets. Operable doors and windows should face the street to create destinations on the street and provide natural surveillance.

5. Public spaces should be defined by the fronts of buildings.

Public spaces feel safer through natural surveillance created by operable doors and windows. Sight lines should be maintained through public spaces, with shrubs trimmed low and tree limbs trimmed above 10 feet.

6. Off-street parking and service are located behind buildings.

Back-of-house uses such as off-street parking, garages, delivery and garbage pickup should be kept out of view from the street.

Green Building Practices

Along with the creation of dense, walkable centers, green building practices can be utilized to increase the sustainability of new development in the study area. Green building practices include the manner in which a site is developed, the materials utilized in construction, building design and building systems design. LEED (Leadership in Energy & Environmental Design) Certification is a voluntary, consensus-based group of standards set by the United States Building Council to evaluate development of buildings and sites according to green building principles. Green building practices are evaluated according to site design, water efficiency, energy use and atmosphere, materials and their resources, indoor environmental quality, innovation and design process.

Sustainable site design includes practices such as:

• Reducing site disturbance, limiting the footprint of development, and creating compact development

• Minimizing site disturbance by limiting erosion and controlling sediment

• Reducing heat islands by limiting asphalt and other impervious surfaces that generate heat

• Stormwater Management, the treatment of water quality on site, which can include passive filtration on site and green roofs

• Alternative Transportation, which can include providing a flex car on site, or onsite design features such as bicycle storage. This can also include offsite policy such as providing public transportation or alternative fuel vehicles

Water Efficiency:

• Irrigation methods, using reduced water quantities through xeric and native plantings, or use of potable water

• Recycling water through potable water systems

• Capturing water through cistern systems

Energy and Atmosphere, building and building systems designs that utilize less energy:

• Utilizing renewable energy through building systems such as photo voltaic cells

• Design of buildings for passive cooling and heating

• Utilizing building systems that cool and heat utilizing "fuzzy logic" to minimize the consumption of energy

Materials and Resources:

• Construction waste management, containing and recycling material during construction

• Use of recycled, post-consumer and post-industrial materials

• Storage and collection of recyclables

• Use of building materials from within the region, to minimize energy costs from transporting those materials

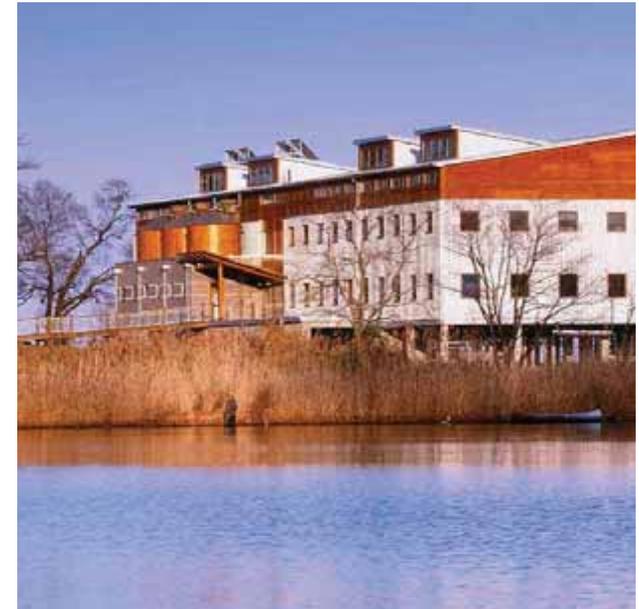• Rapidly renewable materials

Indoor Environmental Quality:

• Ventilation effectiveness

• Low-emitting materials such as paints, carpet, adhesive, sealants, composite woods and agrifiber

Green roof at Chicago City Hall

The Chesapeake Bay Foundation Headquarters is a LEED certified building.

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