



Image Credit: Architizer

# 5

# PARKING AND ACCESS

- 5A Parking Structures, On-Street Parking and Surface Parking
- 5B Bicycle Parking
- 5C Access

**INTENT**

The location, form and design of parking facilities, as well as the manner in which buildings are accessed from the street, have important implications for the form, layout and character of blocks and their streetscapes within CRDs and CRAs. When creatively accommodated within a site, parking and access design can enable active, pedestrian-oriented streetscapes and building frontages while still supporting buildings' essential functions and daily operations. If not located appropriately, they can detract from how an area looks and functions.

To fit within an urban context, parking and access design should reinforce, rather than detract from, the pedestrian- and bicycle-friendly character of CRDs and CRAs. In practice, this means limiting the overall amount of parking; locating parking on-street, underground, and/or in structures to the maximum extent feasible; and concealing any off-street parking facilities from the street. It also requires creatively integrating parking structures into building sites to minimize the visual impact of these facilities and maintain an active and appealing pedestrian environment at street level.

Moreover, while development in CRDs and CRAs should enable convenient vehicular access to a site, the impacts of vehicular access on the streetscape should be mitigated by consolidating access points and locating service and loading facilities away from major streets.



## INSPIRATION



Image Credit: Rhodeside & Harwell

Chicago, IL



Image Credit: Mutual Materials

Portland, OR

Integrated, well-designed and appropriately-located parking contributes to a high-quality, pedestrian-oriented environment and urban character

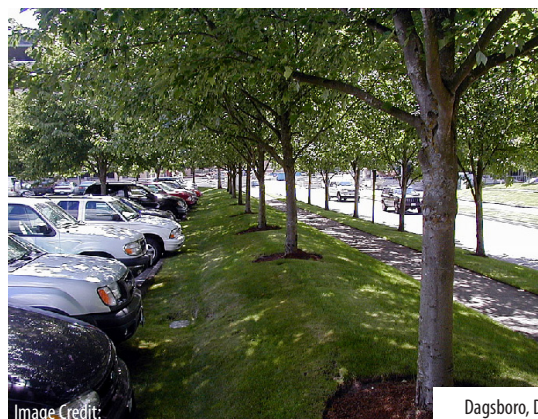


Image Credit:

Dagsboro, DE

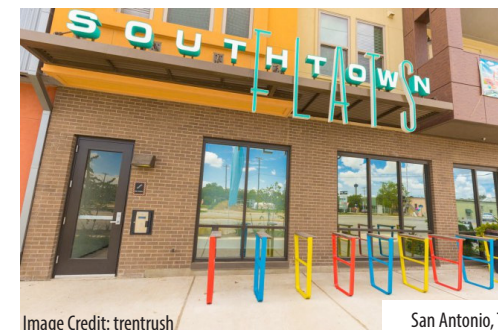


Image Credit: trentrush

San Antonio, TX



Image Credit: Google Earth

Alexandria, VA



# 5A

## PARKING STRUCTURES, ON-STREET PARKING AND SURFACE PARKING

Vehicular parking can be accommodated on a site in a variety of ways, ranging from underground parking and above-ground parking structures to on-street parking and surface parking lots. While each type of parking facility has its place, the County discourages surface parking lots in CRDs and CRAs, and encourages underground and structured parking, as well as on-street parking on designated streets, to reinforce the urban character of these districts.

Regardless of the type of parking, the design and location of parking facilities can determine whether or not a CRD or CRA supports the urban design character envisioned in Comprehensive Plans for each area. The following design principles and strategies provide further guidance on the design and location of types of parking facilities to ensure consistency with the County's vision for these areas. (See *Graphic 13: Surface Parking* and *Graphic 14: Structured Parking*).



### RIGHT

Artistic facade treatment enlivens what would otherwise be a blank wall above the garage entrance  
Image Credit: Fairfax County

Bethesda, MD

## DESIGN PRINCIPLES

**Provide parking underground or in parking structures that are integrated with primary uses, wherever feasible.** Ideally, parking should be provided underground. If that is not feasible, parking structures that are integrated into the rest of the building either as a podium or wrapped with other uses are preferred over free standing parking garages, which are highly discouraged. Retail, building lobbies, and other active uses or entrances should be incorporated into the ground floor of parking structures. Where parking structures are not faced with building uses, they should be appropriately screened and treated to enhance their visual appearance. A trash management plan should be developed to reduce litter and dumping within and near parking facilities.

**Locate any surface parking to the sides or rear of a building and incorporate appropriate screening, landscaping and stormwater management.** Surface parking, except for on-street or limited “teaser” parking, is discouraged. If surface parking is provided, it should be located to the sides or rear of a building, as parking lots in front of buildings detract from the pedestrian environment and decrease the comfort level of pedestrians. Parking lots should not inhibit pedestrian access between streets and buildings. All surface parking areas should use screening and sustainable design techniques to minimize their impact on the pedestrian experience and on the environment. The amount of impervious surface area should be minimized and landscaped areas maximized. Any redevelopment or improvements to existing developments in which surface parking lots will remain should include enhancement of the parking lot’s landscaping and stormwater management to reduce stormwater runoff, minimize negative visual impacts, and reduce heat-island effects.

## DESIGN PRINCIPLES (CONTINUED)

**Incorporate on-street parking for convenience and pedestrian safety.** On-street parallel parking, including short-term residential and retail parking, can contribute to the activity on the street. The provision of limited amounts of highly visible, convenient parking is desirable for retail, civic and entertainment uses. On-street parking also increases safety and comfort for pedestrians by acting as a barrier and buffer between moving vehicles and the sidewalk. The presence of on-street parking also encourages drivers to travel at slower speeds, giving pedestrians, cyclists and motorists more time to react to the presence of one another.

**Minimize the overall quantity of parking.** The need to provide sufficient parking should be balanced against the goals of implementing walkable places and reducing reliance on the automobile. To minimize the impact of parking on the quality of the built environment, strategies that result in the reduction of the total number of parking spaces are encouraged, and parking facilities should be sited to support shared use and efficient access.



Miami, FL



Los Angeles, CA

### TOP

Surface parking lot design incorporates bioswale to collect stormwater runoff  
Image Credit: Ciara Gonzalez



Hyattsville, MD

### BOTTOM LEFT

Parking garage screening using mix of plant materials and architectural elements  
Image Credit: Fairfax County

### BOTTOM RIGHT

On-street parking offers convenient access to nearby businesses while also functioning as a buffer between moving vehicles and pedestrians  
Image Credit: Fairfax County



## GRAPHIC 13: SURFACE PARKING

### SIDE PARKING



Image Credit: GBD architects



Portland, OR

Image Credit: GBD architects

- 1 Side parking enables the building to front the street and maintains a pedestrian-oriented streetscape
- 2 Landscaping near sidewalk screens the parking area from the street and minimizes visual impact
- 3 Side of building faces pedestrian pathway, which connects parking to the building entrances

### REAR PARKING



Image Credit: Google



Newport News, VA

Image Credit: Google

- 1 Continuous building frontage with majority of parking in rear, enables continuous building frontage along streets
- 2 Surface parking located at rear of building
- 3 Access to parking from secondary street

### TEASER PARKING

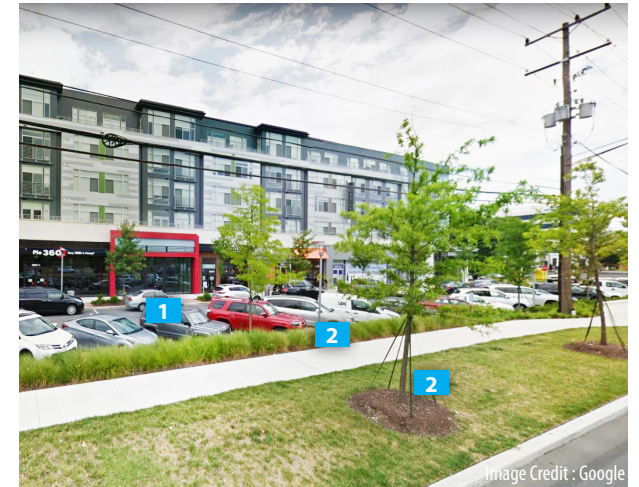


Image Credit: Google



Rockville, MD

Image Credit: Hord Coplan-Mach

- 1 Teaser parking maintains pedestrian-oriented streetscape while providing some visible convenience parking for retail customers
- 2 Parking screened from street by landscaping (trees and understory planting)
- 3 Continuous streetscape along entire building frontage and parking access road



## GRAPHIC 14: STRUCTURED PARKING

### WRAPPED

Parking structure surrounded by buildings on multiple sides



Plano, TX

Image Credit: Transitoriented.com

- 1 Parking garage integrated into internal portion of development
- 2 Service street access to parking
- 3 Continuous building frontage along streets, due to location of parking in rear

### STRUCTURED

Free-standing parking structure, which may include other uses on ground floor



Arlington, VA

Image Credit: Flickr Dan Reed

- 1 Retail uses on ground floor of parking structure
- 2 Façade treatment disguises and conceals parking on upper stories
- 3

### PODIUM

Parking integrated into middle floors of building



Fairfax, VA

Image Credit: blog.wethmangroup.com

- 1 Retail uses at ground floor maintain pedestrian-oriented streetscape
- 2 Podium parking above ground floor, concealed by exterior screening
- 3



Boulder, CO

Image Credit: Flickr BeyondDC

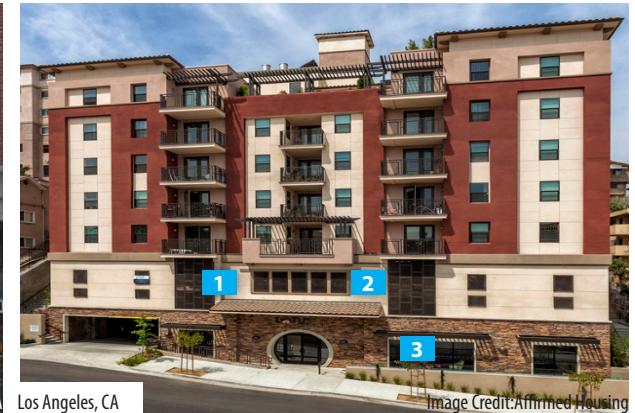
- 1 Parking garage hidden behind retail uses facing the street
- 2 Entrances to parking from the street
- 3



West Chester, PA

Image Credit: TCA

- 1 Windows facing the street at ground level create pedestrian-oriented streetscape
- 2 Façade treatment of parking structure conceals parking on the upper floors and reflects architectural style of the surrounding buildings
- 3 Discreet but visible signage directing vehicles to parking



Los Angeles, CA

Image Credit: Ammed Housing

- 1 Podium parking located between ground floor and residences on upper stories
- 2 Façade treatment conceals parking and blends into architecture of the building
- 3 Ground floor of building reinforces pedestrian-oriented streetscape



# 5A.1

## PARKING STRUCTURES

### DESIGN STRATEGIES

#### 1 PARKING STRUCTURE DESIGN

- A. Parking should be provided in underground structures to the extent feasible. If not provided underground, parking structures should be integrated into a building.
- B. Stand-alone, above-grade parking structures are strongly discouraged. Where parking structures do exist, they should be wrapped with active uses, particularly in areas where a high volume of pedestrian traffic is anticipated.
- C. The architecture of the parking structure should be generally consistent with the architecture of the building with which it is associated. It should also be compatible with adjacent buildings, through the use of similar architectural styles, materials and detailing.
- D. Articulation and detailing of exposed facades (public art installations, vertical planting, or other architectural features) should be provided for visual interest, to break up monotonous facades, and to disguise the parking uses within. Facades should be designed to reduce light pollution caused by headlights shining on to adjacent buildings.



**RIGHT**

Parking garage with solar power collection canopies on the roof  
Image Credit: City of Missoula

Missoula, MT

- E. Ground plantings and landscaping should be incorporated along exposed exterior faces of parking structures to conceal internal parking facilities and to buffer the parking structure from adjacent land uses.
- F. Garage openings should occupy no more than 20 percent of the street frontage; wherever possible, the exposed face of these structures should not be located on streets that have high volumes of pedestrian and vehicular traffic.
- G. The ground floors of parking structures should have 16- to 20-foot ceiling heights for safety and to allow for the possibility of civic uses during off-peak times or for future repurposing into uses other than parking. Higher ceiling heights can also allow for trash and recycling collection to take place within the garage. In addition to higher floor to ceiling heights, ramped floor-plates should be minimized to allow garages to be adapted to other uses, where feasible.
- H. Green roofs, solar panels, solar panel canopies on rooftops, park space, or recreational amenities should be considered for incorporation into the top deck of a parking structure. Shade structures designed to make open parking decks more attractive and usable should be incorporated where feasible.

#### 2 ACCESSIBILITY AND AMENITIES

- A. Access to parking should be clearly signed to facilitate vehicle access and reduce pedestrian and bicycle conflicts.
- B. Dedicated parking areas for non-vehicular modes of transportation, including bicycles and motorcycles, should be incorporated into new and existing parking structures.
- C. The incorporation of smart technologies such as parked car sensors and dynamic signage should be considered.
- D. Electric vehicle charging stations and associated parking spaces are encouraged in parking structures to accommodate the growing number of electric vehicles.

## DESIGN STRATEGIES

### 1 LOCATION AND FEATURES

- A. On-street parking should be parallel, not perpendicular or angled to the street.
  - B. On-street parking should be designed to minimize vehicular conflicts with bicyclists and pedestrians and to maintain sight lines for people walking, biking and driving. Strategies to address these concerns include restricting on-street parking within 10-30 feet of corners and painted or physical buffers between bicycle facilities and parking lanes that provide for the space required to open the doors of parked cars.
  - C. On-street parking spaces should not exceed a width of 8.5 feet, inclusive of the curb and gutter.
  - D. The use of permeable paving in parking stalls is encouraged on private streets.
  - E. On streets with on-street parking, intersections should incorporate curb bulb-outs or landscape islands, wherever possible, to reduce vehicle speeds and minimize the distance for pedestrians to cross the street.
  - F. A 2-foot paved step-off zone, inclusive of the curb, should be included between the roadway and the Landscape Panel on streets with on-street parking.
  - G. Designated, on-street moped/motorcycle parking spaces should be incorporated to accommodate these modes of transportation and to minimize inefficient use of vehicular parking spaces.
  - H. The need for designated, on-street drop-off and pick-up areas for deliveries and for ridesharing companies should be considered as a means of reducing issues such as double-parking, blocking of bicycle lanes, and conflicts with transit. These areas should be clearly marked with signs and conveniently located near major destinations and entrances to buildings.
- I. Available parking technology should be utilized to the maximum extent feasible to increase the efficiency and convenience of on-street parking. Strategies include prioritizing the use of mobile parking apps and consolidating pay stations to conserve streetscape space for other furnishings, plantings, and amenities.



Bethesda, MD



Naples, FL

## 5A.2 ON-STREET PARKING

### TOP

On-street parking located adjacent to a retail street  
Image Credit: Fairfax County

### BOTTOM

2-foot refuge strip adjacent to a Landscape Panel prevents people exiting vehicles from walking into landscaped areas  
Image Credit: James Dougherty, Towncrafting



## 5A.3 SURFACE PARKING

### TOP

Surface parking lot effectively  
concealed by the surrounding  
townhomes, which face the street  
Image Credit: Fairfax County



Hyattsville, MD

### BOTTOM

Pedestrian path connecting surface  
parking lot to the building entrance  
provides safety and comfort  
Image Credit: Rhodeside and Harwell



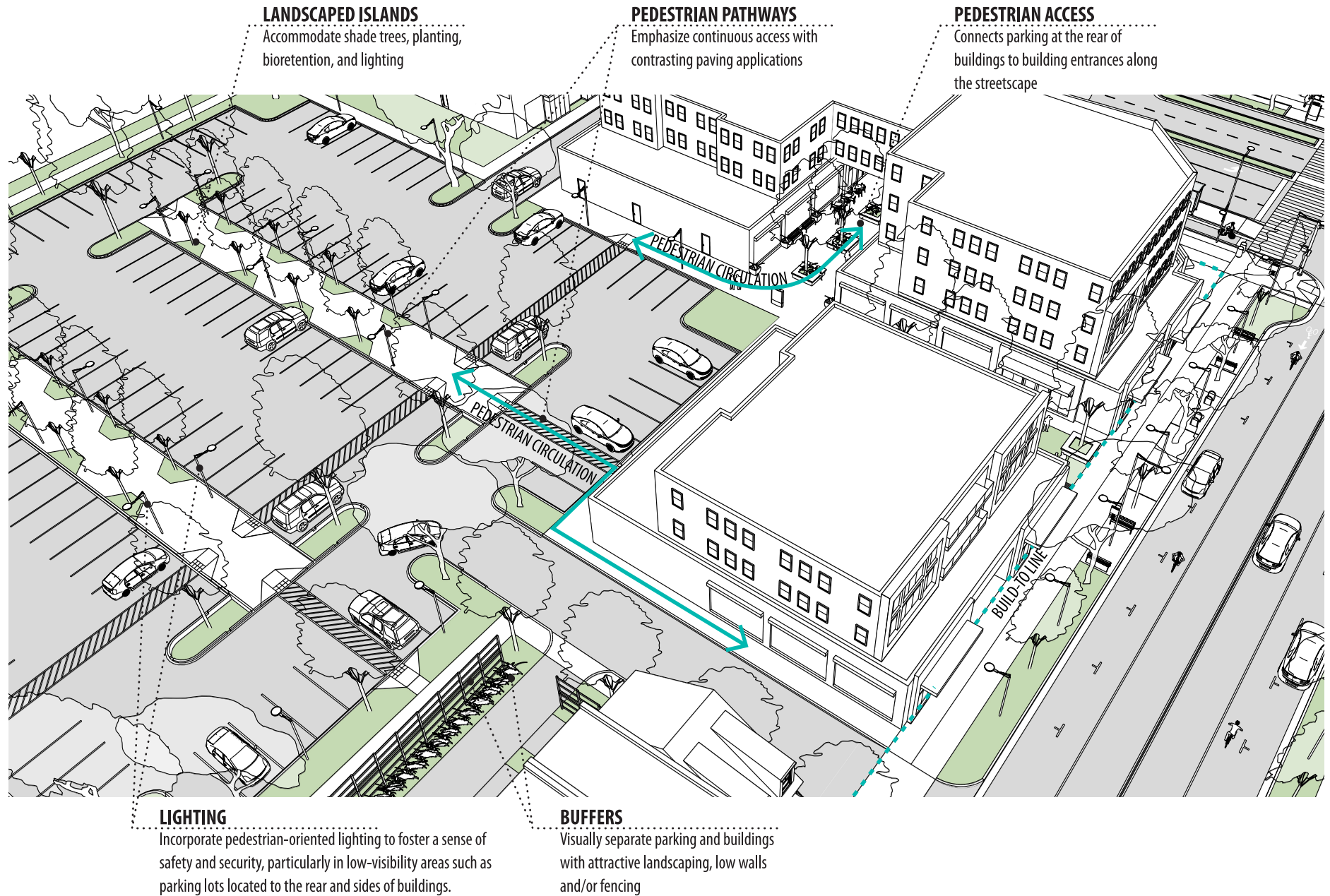
Alexandria, VA

## DESIGN STRATEGIES

### 1 LOCATION AND FEATURES

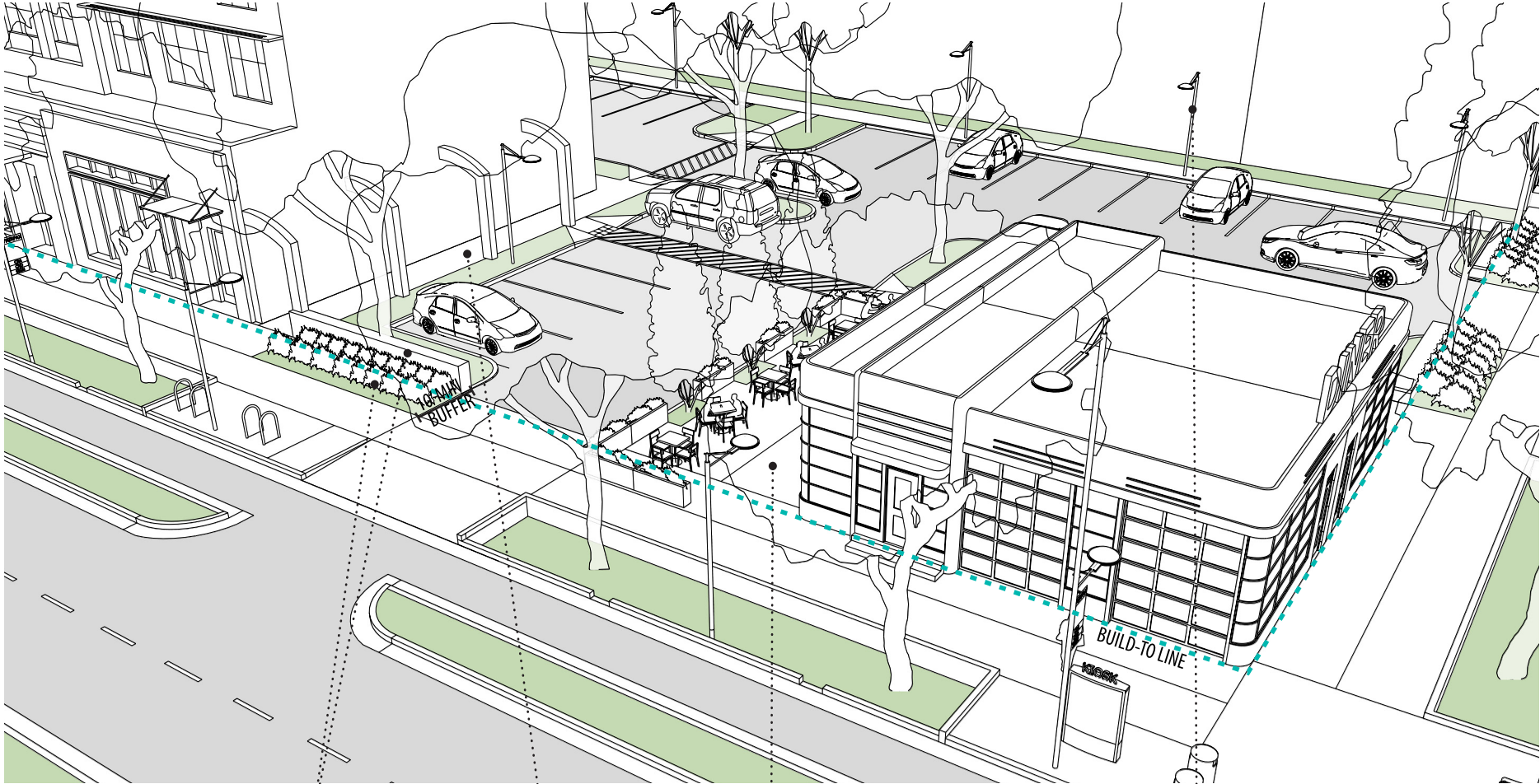
- A. Surface parking, if provided, should be located to the sides or rear of the building and not in front of the building. (See *Graphic 15: Surface Parking Configurations - Rear Parking* and *Graphic 16: Surface Parking Configurations - Side Parking*).
- B. A clearly defined pedestrian pathway should connect the parking lot to the building entrance. This pathway should be well landscaped; lighted; be made of a contiguous, contrasting material such as concrete or pavers; and, be a minimum of 5-feet in width. Pedestrian wayfinding signage should be provided, where appropriate.
- C. Landscaping, screens, berms, high-quality fences, and/or low walls should be used to shield parking from sidewalks, streets, and adjacent uses. A row of trees, landscaping, and a low 18 – 36-inch-high continuous row of shrubs should be provided as a buffer between the sidewalk and the parked vehicles.
- D. Landscaped islands provided within, or along the periphery of parking lots should have a minimum width of 10 feet to accommodate healthy growth of trees and shrubs. In addition, these islands are encouraged to be used as stormwater capture basins or rain gardens.
- E. Convenience “teaser” parking, if provided, should be located to the side rather than the front of the building whenever possible. It should be limited to one row of parking between the street and the building. If located in the front of a building, teaser parking should be oriented to the streetscape side of the parking area. (See *Graphic 17: Surface Parking Configurations - Teaser Parking*).
- F. Safety and security of less visible parking areas, particularly those located at the rear and sides of a building, should be considered. If not visible from street or public spaces, parking areas should be well lit. Dead-end corridors or areas where people could hide should be avoided.

## GRAPHIC 15: SURFACE PARKING CONFIGURATIONS - REAR PARKING





GRAPHIC 16: SURFACE PARKING CONFIGURATIONS - SIDE PARKING

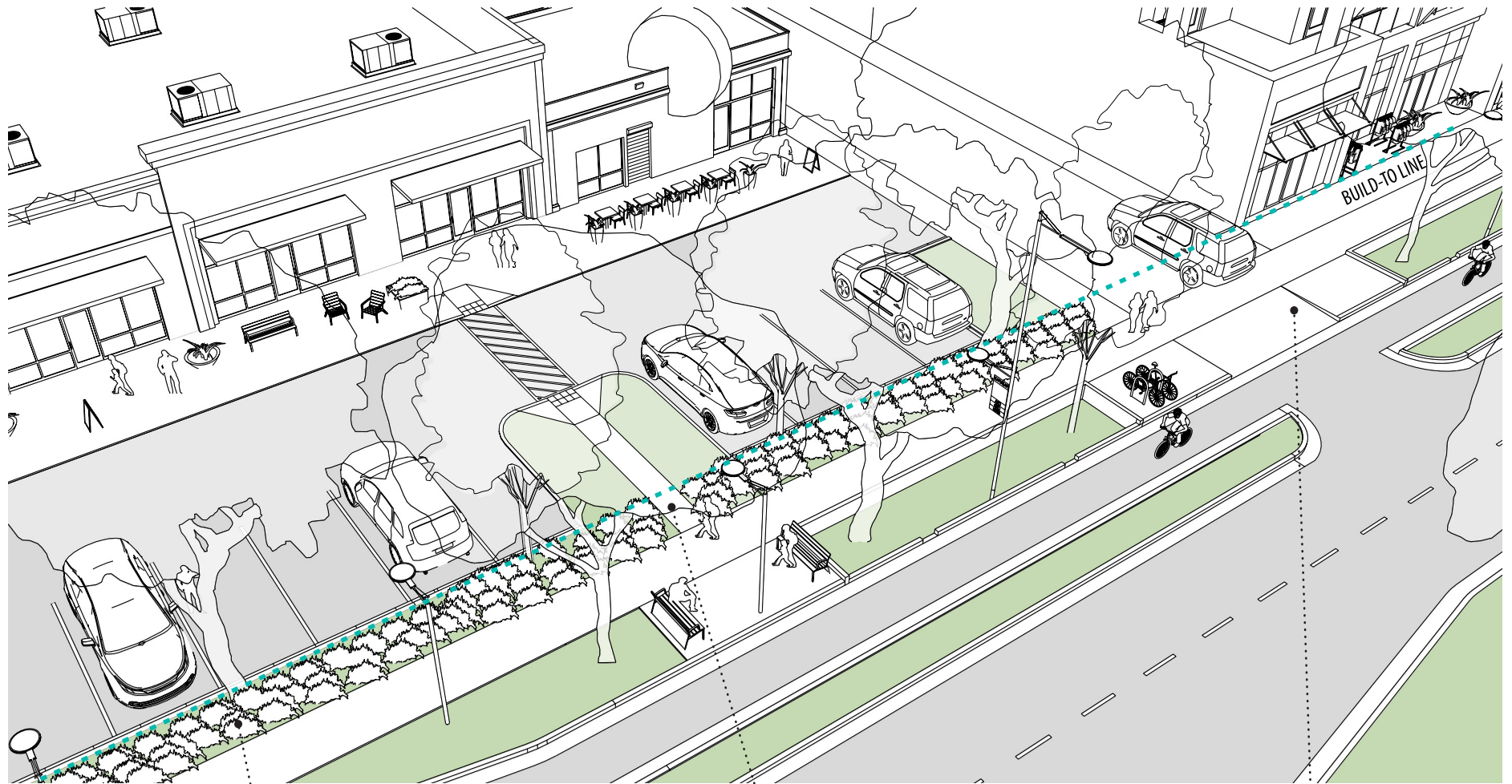


**SCREENING**  
Landscaping and low walls screen parking from the streetscape

**PEDESTRIAN PATHWAYS**  
Connect between parking/amenity and building entrances

**LIGHTING**  
Incorporate pedestrian-oriented lighting to foster a sense of safety and security, particularly in low-visibility areas such as parking lots located to the rear and sides of buildings.

## GRAPHIC 17: SURFACE PARKING CONFIGURATIONS - TEASER PARKING



### **BUFFER**

Landscaping and/or low walls between sidewalks and teaser parking

### **PEDESTRIAN ACCESS**

Direct pathway connecting the streetscape/sidewalk through parking lot to building entrances

### **PARKING ACCESS**

Access to front/side teaser parking and additional parking at the rear of buildings



## 5B BICYCLE PARKING

Bicycle parking is a key component of a bicycle network. The secure, convenient provision of bicycle parking facilitates the use of bicycles as a means of both recreation and transportation. Bicycle parking facilities should be decentralized so that they are available near multiple destinations and accommodate the inherent flexibility of bicycles as a mode of travel.

The Fairfax County Department of Transportation provides guidance on short-term and long-term bicycle parking, including how to site bicycle parking, how to select the type of bike parking, and how to size facilities for a development. Moreover, Table 2B, Bicycle Parking Requirement for Urban Centers and Transit Station Areas in the [“Bicycle Parking Guidelines,”](#) describes appropriate locations for bicycle parking, desired types of parking facilities and the required quantity of bicycle parking spaces based on building type and square footage. Volume II: District Design Guidelines may provide additional recommendations on the proper location of bicycle racks and rack design features.



### RIGHT

Bicycle parking room internally-housed within parking garage helps promote cycling as a mode of transportation by providing secure and covered space

Image Credit: Fairfax County

Reston, VA

## DESIGN PRINCIPLES

**Emphasize proximity, functionality and quantity as key considerations in the design of bicycle parking.** Bicycle racks, bike lockers, and bicycle parking rooms should be situated for convenience and safety for those who use bicycles on both a regular and on an infrequent basis. They should be sited in locations that are easily visible to a passersby, both to encourage use and for security.

**Identify bicycle parking locations early in the design process, rather than as an afterthought.** Appropriate locations for both long-term and short-term bicycle parking should be identified early in the design process so that they are properly integrated into the design of the site. Bicycle racks should be incorporated into parks, streetscapes, and private spaces such as courtyards, parking garages, and areas adjacent to transit stations. Whenever possible, bicycle parking should be located in buildings, or under covered areas, awnings or overhangs to make bicycle transportation more viable for daily, year-round use.

**Select bicycle racks that complement the design and character of streetscapes and open spaces.** Aesthetics are an important consideration for bicycle racks that are visible in the public realm. Rack selection should be coordinated with other site furnishings to create a cohesive aesthetic.

## DESIGN STRATEGIES

### 1 BICYCLE RACKS

- A. Bike racks should be located in the Amenity Zone, in the Building Zone, or within the ground floor of a building's parking garage, and should not intrude into the sidewalk or other pedestrian activity areas.
- B. The preferred bicycle rack type is the inverted "U" rack or variation of the "U" rack. Bike racks should be anchored to the ground at two points (see photo examples).
- C. If located outside, bicycle racks should complement the style of other streetscape furnishings to create a cohesive pedestrian environment. Bike racks should be made of metal with a powder-coated finish.
- D. Public art or branding may be integrated into bicycle racks along with other functional elements of the streetscape.



Springfield, VA

### 2 LOCATION OF BICYCLE PARKING

- A. Short-term bicycle parking should be visible from and located generally within 50-feet of the building entrance it serves. In larger developments, short-term bicycle parking should be spread throughout the site. Locations should be determined in conjunction with the pedestrian circulation plan for the area or site.
- B. Long-term bicycle parking for residents or office workers should be located within 100-300 feet of the building entrance. Bicycles should be protected from the weather and parking provided within a secured space.
- C. Both short-term and long-term bicycle parking is encouraged to be located in parking structures, either as part of the original design or as retrofits to existing structures. Even in existing structures without designated bicycle parking areas, there are often "leftover" spaces that can be repurposed as bicycle parking areas.
- D. Bike corrals may be appropriate in areas with anticipated high-volumes of bicycle traffic such as near parks, transit stations, or large shopping centers, and should generally accommodate 8-12 bicycles. Bike corrals are typically located on streets adjacent to the curb.

#### LEFT

Bicycle racks reflect specific branding elements

Image Credit: Rappaport Properties



# 5C ACCESS

While vehicular access to parking, service and loading facilities is essential to the daily operations of a development, the manner in which vehicles access the site from the street can have significant implications. When access is well-coordinated, consolidated, context-sensitive and located away from busy streets, it can support and preserve the desired urban design character of a block and its streetscapes. When access strategies do not respect the surrounding context—for example, when streets are lined with excessive access points and curb cuts, or when loading and service activities disrupt other street functions or visually detract from the character of a streetscape—access-related impacts can diminish or erode urban design character while increasing opportunities for conflicts between pedestrians and vehicles.

## DESIGN PRINCIPLES

**Consolidate and limit the overall number of access points into a development.** Access points along a street should be located in ways that minimize the extent to which vehicular access disrupts street functions and the continuity of the streetscape. Wherever possible, access points should be consolidated to limit the number of curb cuts and minimize conflicts between pedestrians and vehicles.

**Locate access points, loading docks, and other service and loading areas on side streets and service streets.** Vehicular access points, as well as the facilities and designated locations for service and loading activities, should be located on Local and service streets to avoid disruptions to the primary street activities and the overall visual continuity of these streets.

### LEFT

Multiple parking and loading entrances co-located on an alley street and clearly marked with building mounted signage. The facade of the garages blends into the building architecture using consistent materials with the rest of the building  
Image Credit: Fairfax County



Alexandria, VA

### RIGHT

Excessive curb cuts along a street creates safety hazards for pedestrians and cyclists  
Image Credit: Stephen Lee Davis via t4america.org



Atlanta, GA

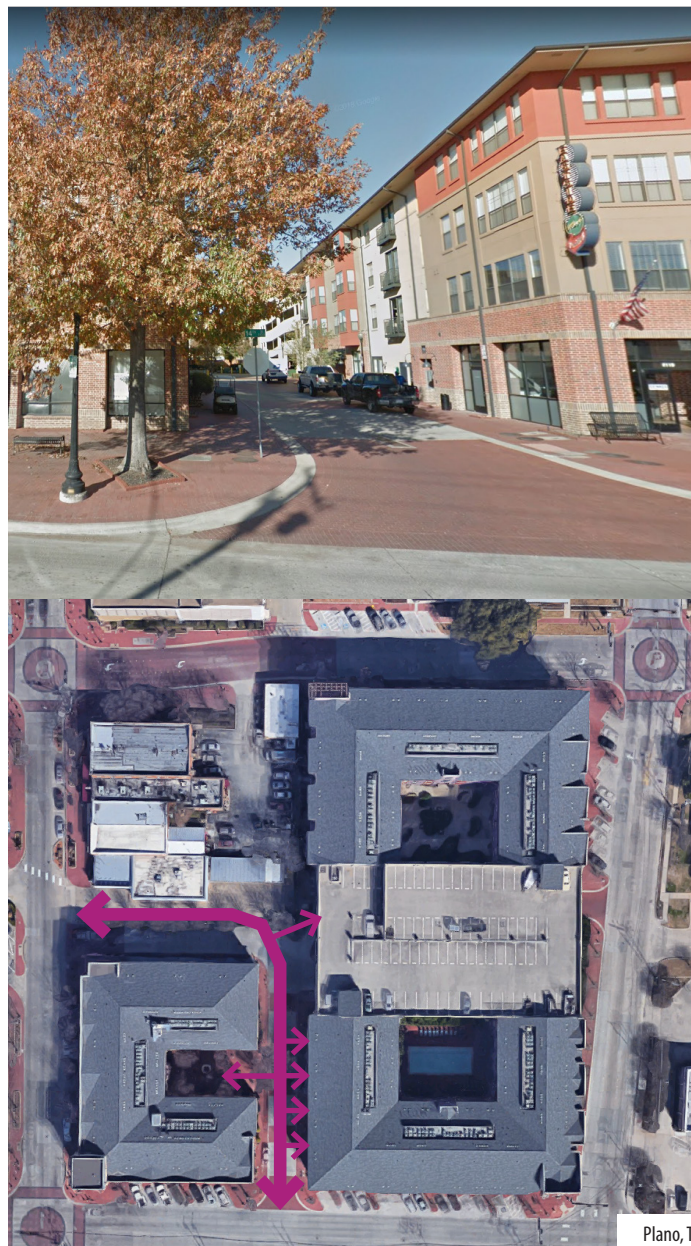
## DESIGN STRATEGIES

### 1 CONSOLIDATED ACCESS FROM THE STREET

- A. Vehicular access points into a site should be consolidated to simplify traffic patterns and to minimize conflicts among pedestrians, bicyclists, and vehicles.
- B. Care should be taken to maintain sidewalk continuity. Vehicular access points on streets intended to experience a high volume of pedestrian traffic should be minimized. Single-use sites should not have more than one or two vehicular access points.
- C. Opportunities to consolidate property access points with adjacent parcels should be explored to limit interruptions in the streetscape.
- D. Driveway access points between the site and the roadway should be designed to meet minimum requirements for turning movements, safety and visibility while not intruding excessively upon the pedestrian environment. See *Section 2C ("Intersections")* for additional detail regarding intersection design.
- E. Access to building sites via midblock service streets is encouraged as a means of minimizing the number of curb cuts along the streetscape and facilitating efficient access for both commercial and residential buildings.

### 2 SERVICE AND LOADING ACCESS

- A. Whenever possible, loading, trash pickup and other services should be co-located along service streets.
- B. Access to loading areas should be provided from side streets or service streets at the rear of buildings or in locations that minimize impacts to adjacent properties. Loading spaces should not be sited on Primary Pedestrian Streets and on those with retail storefronts.



Plano, TX

#### LEFT

Consolidating entrances on a shared service street provides access to a public parking garage and private residential units as well as for loading. Image Credit: Google Earth