

An aerial photograph of a city street grid, likely Chapel Hill, North Carolina. The image shows several multi-story buildings with flat roofs, some featuring rooftop gardens or solar panels. A central courtyard with a curved path and small trees is visible. The entire image is overlaid with a teal/cyan color filter.

# Chapel Hill LUMO Update

## Development Typology and Site Design Aspirations

December 2023

REVIEW DRAFT

# Introduction and Contents

This document provides input and guidance on a range of development types Chapel Hill is most likely to see proposed in the future. These development types are also anticipated by emerging LUMO Update directions and incorporated in the zoning “Districts” being proposed at this stage. Typology information has informed financial assessment of the potential for affordable housing or other community benefits through development density incentives.

## Purpose

To identify features that are compatible with Chapel Hill aspirations.

- Clarify the typologies recommended by the 2020 Charing our Future - Future Land Use Map Update
- Advance Shaping Our Future N-S BRT TOD and Focus Area plan recommendations
- Advance Complete Communities recommendations
- Inform and be informed by draft LUMO Update directions
- Support the LUMO Rewrite community education process

## Scope and Approach

- Assessment of recent developments to identify typical issues.
- Identification of the most likely future development types.
- Best practice examples to demonstrate preferred design strategies.
- Guidance on key features and components by building type.
- General guidance on shared design themes
- Illustration of massing, plan, section and site features.
- Application of typologies to example sites from those identified by the FLUM Update (2020) and N-S BRT TOD and Focus Area plan.

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  - 9. Town-Scale Single Family (1 - 3 Stories)
  - 10. Mid Rise-Office (5 Stories)
  - 11. Corridor Retail (1 Story)
- C. General Guidance on Shared Design Themes
- D. Case Studies of Typologies Applied to Example Sites



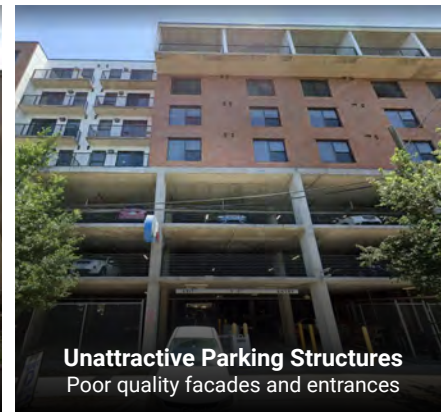
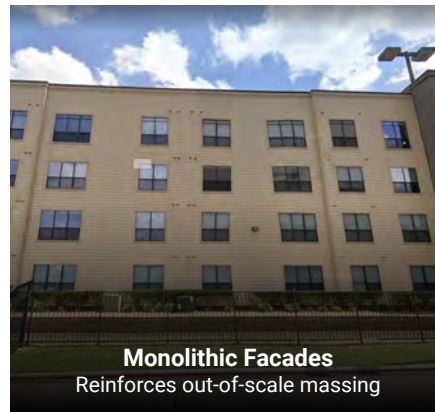
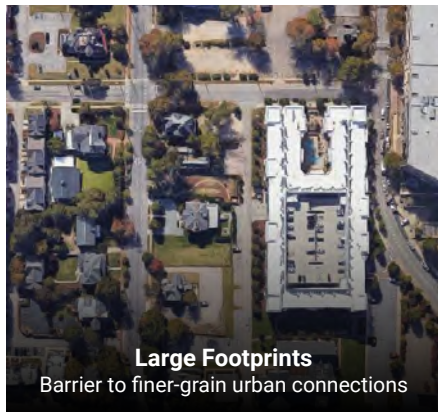
# A. Assessing Recent Developments

SOM



# Assessing Recent Developments

## Common Contemporary Development Issues



This section provides an overview of some frequent issues with typical contemporary development types – some of which have been seen in Chapel Hill and the Triangle. These are development types that are likely to be proposed again in the future. Primary design issues can impact the connectivity and walkability, relationship to streets and public realm, visual appearance and functionality of new developments. Ultimately this can affect the experience place and quality of life of neighborhoods, communities and the town as a whole.



# Assessing Recent Developments

## Wrapper Buildings



**Berkshire Apartments**  
201 S Elliott Rd, Chapel Hill, NC 27514



Berkshire Apartments from west

**Date:** 2016  
**Site Area:** 3 ac  
**Floor Area:** 320,000 sq ft  
**Height:** 90 ft (6 Stories)

**Units:** 266  
**Density:** 88 Du/ac  
**Density:** 2.5 FAR  
**Zoning:** WX-7

# Assessing Recent Developments

## Wrapper Buildings

1) Site

2) Massing

3) Expression

### What It Does Well

- A. Retail-at-grade, providing services, activating the sidewalk
- B. Street plantings to enhance pedestrian experience.

### Room for Improvement

- 1. Residential entrance not well framed relative to the street.
- 2. Lack of meaningful relationship to the intersection.
- 3. Cantilevering over the sidewalk creates a “heavy” bulk over pedestrians.





# Assessing Recent Developments

## Wrapper Buildings

1) Site

2) Massing

3) Expression

### What It Does Well

- A. Long façade broken into smaller components
- B. Retail registered as a podium

### Room for Improvement

- 1. Lack of hierarchy in the massing
- 2. Dominance of horizontal expression emphasizes building mass
- 3. Massing does not respond to the intersection



# Assessing Recent Developments

## Wrapper Buildings

1) Site

2) Massing

3) Expression

### What It Does Well

A. Integration of some locally relevant material colors.

### Room for Improvement

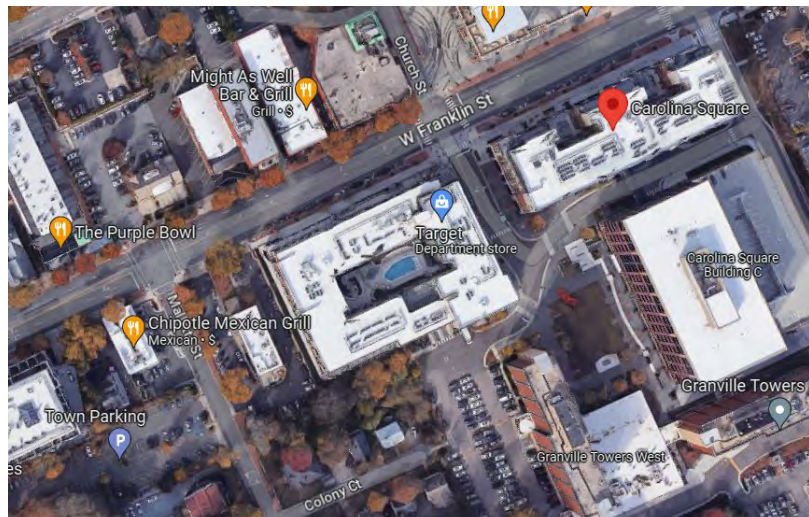
1. Multiple materials, “clip-on” material features, visual confusion
2. Horizontal “stickered” cladding emphasizes horizontality. Leads to an Institutional expression
3. Window fenestration does not express residential units.
4. Multiple window types
5. Signage for cars rather than for people.





# Podium Apartment (4-6 Stories)

## Assessing Recent Developments



**Carolina Square Redevelopment**  
123 West Franklin



Carolina Square Building B

**Date:** 2017  
**Site Area:** 1.5 ac  
**Floor Area:** 370,000 sq ft  
**Height:** 88 ft

**Units:** 246  
**Density:** 62 Du/ac  
**Density:** 5.5 FAR  
**Zoning:** TC-3-C

# Assessing Recent Developments

## Podium Apartment

### What It Does Well

- A. Retail-at-grade, providing services, activating the sidewalk
- B. Enhanced streetscape

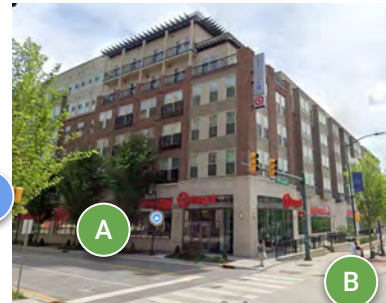
### Room for Improvement

- 1. Less careful attention to rear massing of building
- 2. Exposed service and parking areas

1) Site

2) Massing

3) Expression





# Assessing Recent Developments

## Podium Apartment

1) Site

2) Massing

3) Expression

### What It Does Well

- A. Comfortable length, depth and height relationship
- B. Facade setback shifts break-up mass
- C. Materials shifts indicate a building base, middle and top
- D. Use of brick cladding and natural colors

### Room for Improvement

- 1. Multiple roofline treatments
- 2. Exposed, double-height, covered balconies at top break visual rhythm .



# Assessing Recent Developments

## Podium Apartment

1) Site

2) Massing

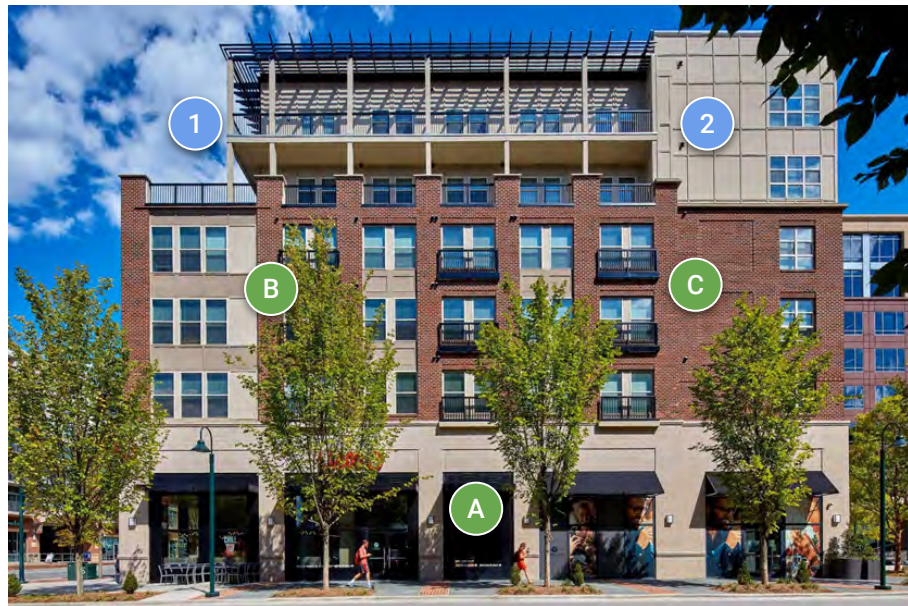
3) Expression

### What It Does Well

- A. Multiple retail bays
- B. Restrained material palette in natural tones, and limited window types
- C. Material shifts indicate a building base, middle and top

### Room for Improvement

- 1. Complicated, upper-level setback, exterior corridor and roof design
- 2. Limited vertical continuity at upper two floors: form, materials, roof



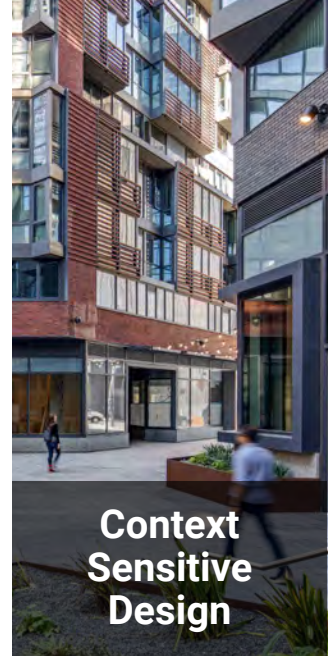


# B. Development Typology Directions

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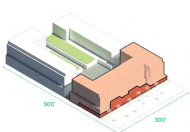
# Development Typology and Site Design Aspirations



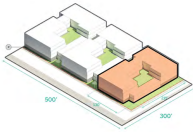
# Development Types

## Development Types

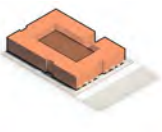
- |                              |                 |
|------------------------------|-----------------|
| 1. Mixed Use Building        | (6 + Stories)   |
| 2. Podium Apartment          | (4 - 6 Stories) |
| 3. Wrapper Apartment         | (4 - 6 Stories) |
| 4. Four Story Surface Parked | (4 Stories)     |
| 5. Multiplex                 | (2-3 Stories)   |
| 6. Cottage Court             | (2-3 Stories)   |
| 7. Townhomes                 | (2-3 Stories)   |
| 8. Duplex                    | (2-4 Stories)   |
| 9. Town-Scale Single Family  | (1 - 3 Stories) |
| 10. Mid Rise-Office          | (5 Stories)     |
| 11. Corridor Retail          | (1 Story)       |



1. Mixed Use Building



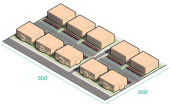
2. Podium Apartment



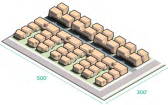
3. Wrapper Apartment



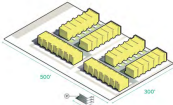
4 Story Apartment Surface Parking



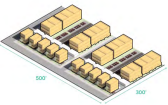
5. Multiplex



6. Cottage Court



7..Townhomes



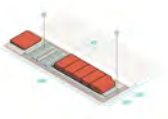
8. Duplex



9. Town-scale Single Family



10. Mid-rise Offices



11. Corridor Retail



# Selected Development Types: Typical Metrics

Residential Typology	Net Density Range (DU/ac)	Net Density Range (FAR)	Height (Stories)	Parking Type	Typical Site Area (Min)	Minimum Site Depth (Range)	Typical Site Length (Min-Max)	Building Depth (Min-Max)
1. Mixed Use Building (6+)	80 - 120+	4.5 - 6	6-8	Underground	0.6 ac	90 ft -	300 - 450 ft	Building: (55-65 ft) Podium: (90 - 200 ft)
2. Podium Apartment	80 - 110	2.7 - 3.6	4 - 6	Podium / Underground	0.8 ac	130 ft -	220 - 300 ft	125 - 180 ft
3. Wrap-around Apartment	60 - 80	3.0 - 4.5	4 - 6	Integrated Structured	2.3 ac	280 ft -	350 - 500 ft	250 - 300 ft
4. Four Story Surface Parked	40 - 60	1.3 - 1.4	4 - 6	Shared Surface / Structured	2.3 ac	180 - 210 ft	300 - 400 ft	55 - 65 ft
5. Missing Middle: Multiplex	12 - 30	0.6 - 1.3	2 - 4	Shared Surface	0.2 ac	96 - 120 ft	100 - 150ft	50 - 70 ft
6.. Missing Middle: Cottage Courts	15 - 20	0.6 - 0.8	2 -3	Shared Surface				
7. Missing Middle: Townhome	10 -20	0.4 - 0.8	2 -3	Individual / Shared	0.1 ac -	36 - 50 ft	75 - 100 ft	28 - 46 ft
8. Missing Middle: Duplex	8 - 20	0.4 - 1.0	2 -3	Shared Surface	0.1 ac	36 - 60 ft	70 - 120 ft	28 - 35 ft
9. Town-scale Single Dwelling	10-14	0.4 - 0.8	1 - 2	Individual / on lot	-	-	-	-

# Development Typology

## 1. Mixed Use Building ( 6 stories + )



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# Mixed Use Building (6 Stories +)

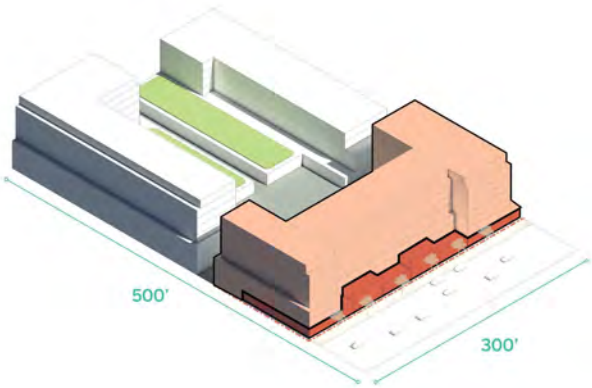
## Typology Description

Typically multiple floors of housing above a retail, commercial or community service use at grade level. Typically two floors of parking in an eight story mixed use building. Parking is located beneath the ground floor.

Retail-at-grade requires locating this typology where transit and other access can sustain this use over time. Nearby residential, employment or education uses can also sustain at grade uses.

## Typical Metrics

Min. Block Size	90 x 300 ft	Density Range (DU/Acres)	80 - 120+
Min. Site Area	0.6 ac	FAR	4.0 - 6.0
Footprint Range	20 - 35,000 sq ft	Parking	Underground / Structured
Height Range	50 ft - 96 ft	At-Grade Uses	Retail
		Construction (IBC)	Type I, II, III and V



Typical Mixed Use Building on 3.5 acres



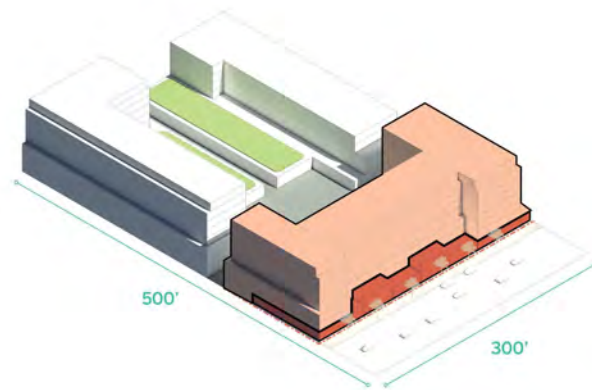
# Mixed Use Building (6 Stories +)

## Suitable Locations

- Higher-density mixed use blocks are best located close to transit.
- Locate where full or partial underground parking is economically and technically feasible.

## Challenges

- Requires the right context to support residential density and commercial use.
- Scale means that expression and materials need careful design
- Careful approach to public realm, parking access points and service areas required.



Typical Mixed Use Building on 3.5 acres

# Mixed Use Building (6 Stories +)

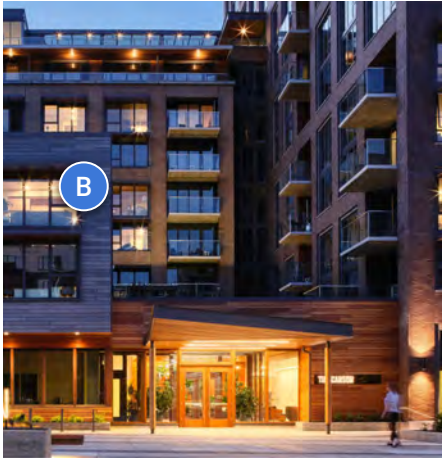
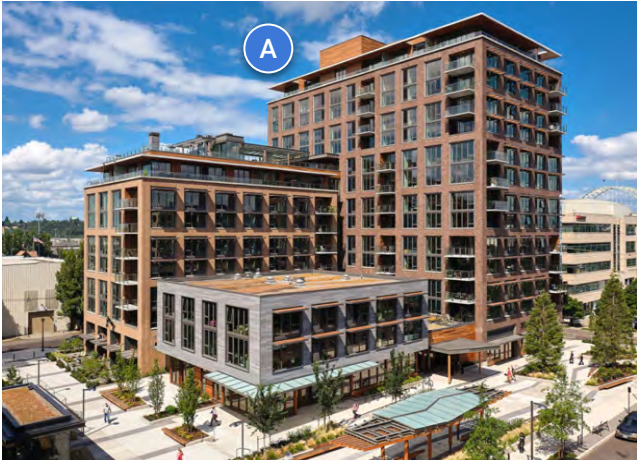
## Example High-Quality Developments

2121 NW Savier St  
(The Carson)  
Portland, OR

### POSITIVE FEATURES

- A. Varied Building Masses**  
Massing organized into separate components, creating a visual hierarchy between them.
- B. Restrained and Complementary Palette**  
Surfaces, windows, materials balance repetition and articulation.
- C. Public Realm Integration**  
Through block connections offered high quality surfaces, landscape, furniture and lighting.

Site Size	240 x 200 ft	Units	385
Site Area	1.28 ac	Unit Area Range	400 - 1,000 sq ft
Footprint	26,000 sq ft	Density (DU/AC)	300
Stories	3 - 12	FAR	7.26
		Parking Ratio	1



# Mixed Use Building (6 Stories +)

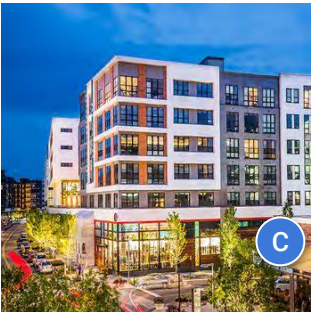
## Example High-Quality Developments

2920 District Ave  
(Modera Mosaic I)  
Fairfax, VA

### POSITIVE FEATURES

- A. Articulated Massing of Single Building**  
Massing organized into attached components.
- B. Material Shifts Linked to Massing Components**  
Surfaces, windows, materials balance repetition and articulation.
- C. Public Facing Ground Floor**  
Defined retail & public-use space
- D. On-Site Public Open Space**  
Programmable plaza.

Site Size	150 x 360 ft	Units	251
Site Area	1.14 ac	Unit Area Range	600 - 1,100 sq ft
Footprint	40,000 sq ft	Density (DU/AC)	133
Stories	6	FAR	3.06
		Parking Ratio	1+





# Mixed Use Building (6 Stories +)

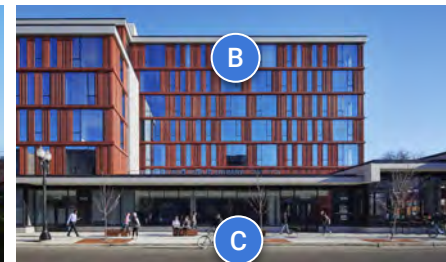
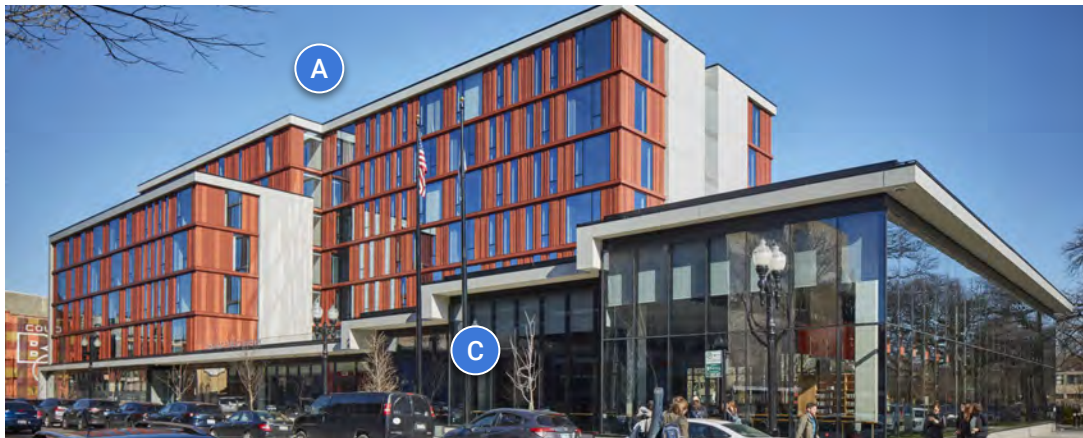
## Example High-Quality Developments

1342 W Taylor St  
(Taylor Street Apartments and Library)  
Chicago, IL

### POSITIVE FEATURES

- A. Articulated Massing of Single Building**  
Massing organized into attached components, with some stepping down to street.
- B. Limited and Complementary Palette**  
Surfaces, windows, materials balance repetition and articulation.
- C. Public Facing Ground Floor**  
Well defined community use space with transparent facade.

Site Size	150 x 250 ft	Units	73
Site Area	0.86 ac	Unit Area Range	700 - 1,000 sq ft
Footprint	20,000 sq ft	Density (DU/AC)	84
Stories	7	FAR	2.45
		Parking Ratio	0.5



# Mixed Use Building (6 Stories +)

## Example High-Quality Developments

1901 C Street SE  
(Park Kennedy)  
Washington, District of Columbia

### POSITIVE FEATURES

- A. Vertical Facade Articulation**  
Facades are divided in bays, reflecting interior unit division
- B. At-Grade Residential Entrances**  
Stoops and entryways are architecturally distinct
- C. Entrance Hierarchy & Corner Anchoring**  
The lobby entrance is distinguishable by scale and prominence, anchoring the corner.
- D. At-Grade Retail**  
Select block edges feature retail and amenities
- E. Distinct top, middle, and base**  
Horizontal facade division is proportional

Site Size	230 x 560 ft	Units	262
Site Area	2.4 ac	Unit Area Range	560 - 1190 sq ft
Footprint	44,000 sq ft	Density (DU/AC)	110
Stories	7	FAR	5.5
		Parking Ratio	0.5 to 1



# Mixed Use Building (6 Stories +)

## Aspirational Prototypical Mass

### 1. Varied Massing

Stepping down towards the street

### 2. Extending Mixed-Uses around Corners

Retail, business, community with multiple facades and entrances

### 3. Parking Entrance at Side or Rear

Accessed via secondary streets or alleys to underground parking levels.

### 4. Commercial / Community Services

Ground floors can accommodate a variety of activities beyond retail to meet community needs



### Prototype Metrics

Site Size	200 x 350 ft	Units	160
Site Area	1.6 ac	Unit Area Range	800 - 1,400 sq ft
Footprint	40,000 sq ft	Density (DU/AC)	100
Stories	8	FAR	4.11
		Parking Ratio	1 Per Unit



# Mixed Use Building (6 Stories +)

## Aspirational Prototypical Plan

### 1. On-Site Amenity Space

Provided at the rear of the building and aligned with at-grade unit entrances.

### 2. On-Site Plaza

Plaza oriented towards the street and aligned with on-site amenity space.

### 3. On-Site Retail

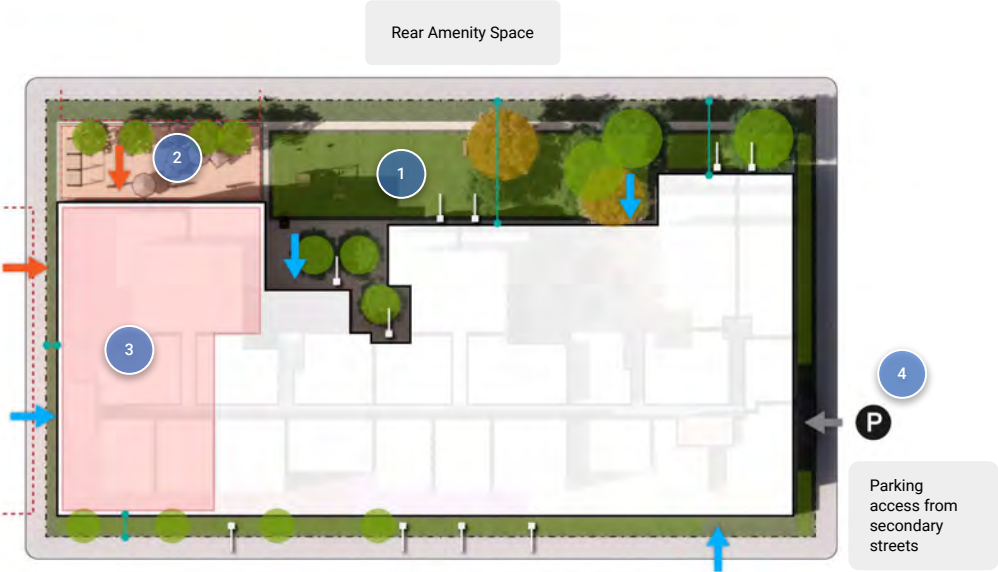
Addressing the street, co-located with plaza.

### 4. Parking Entrances On Secondary Streets

Located away from primary streets

### Prototype Metrics

Site Area	1.6 ac	Open/Amenity Space	8,000 sq ft
Site Depth	200 ft	Retail	17,000 sq ft
Site Width	350 ft	Parking Access	Side / Rear
Bldg Footprint	45,000 sq ft	Plaza Depth	37 ft
Bldg Depth	140 ft	Plaza Area	6,000 sq ft



# Mixed Use Building (6 Stories +)

## Aspirational Prototypical Section

### 1. On-Site Amenity Space

Provided at the rear of the building and aligned with at-grade unit entrances.

### 2. On-Site Plaza

Plaza oriented towards the street and aligned with on-site amenity space.

### 3. On-Site Retail

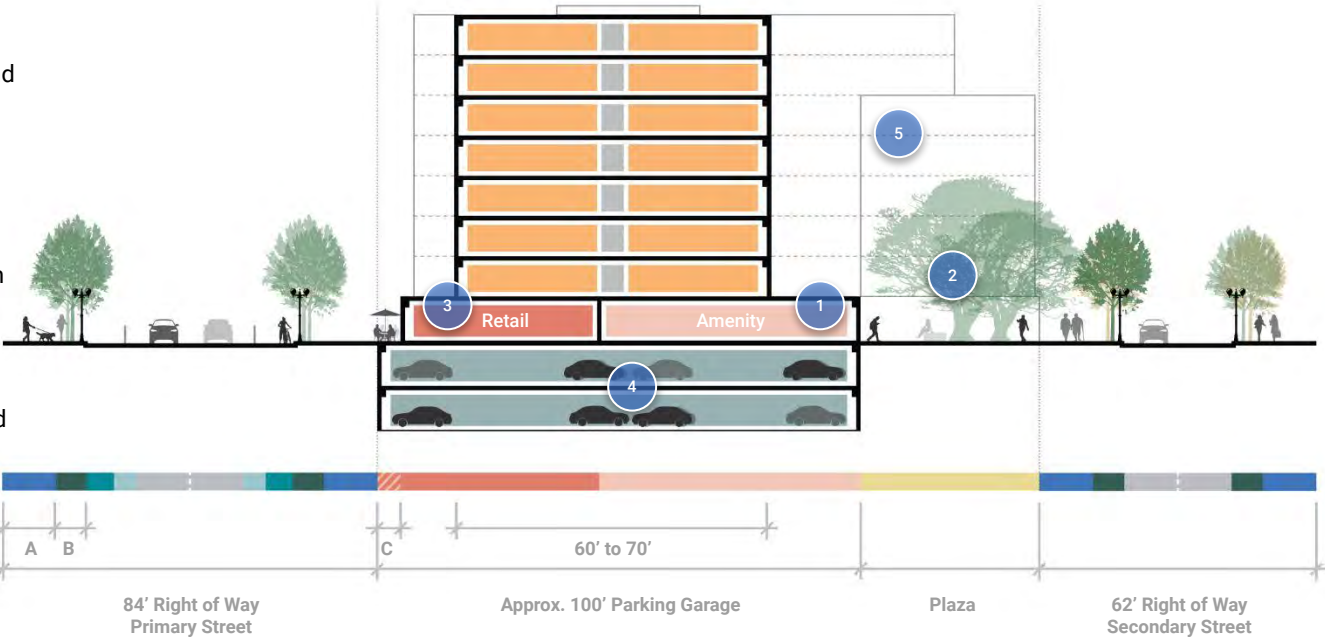
Addressing the street, co-located with Plaza to rear.

### 4. Subgrade Parking

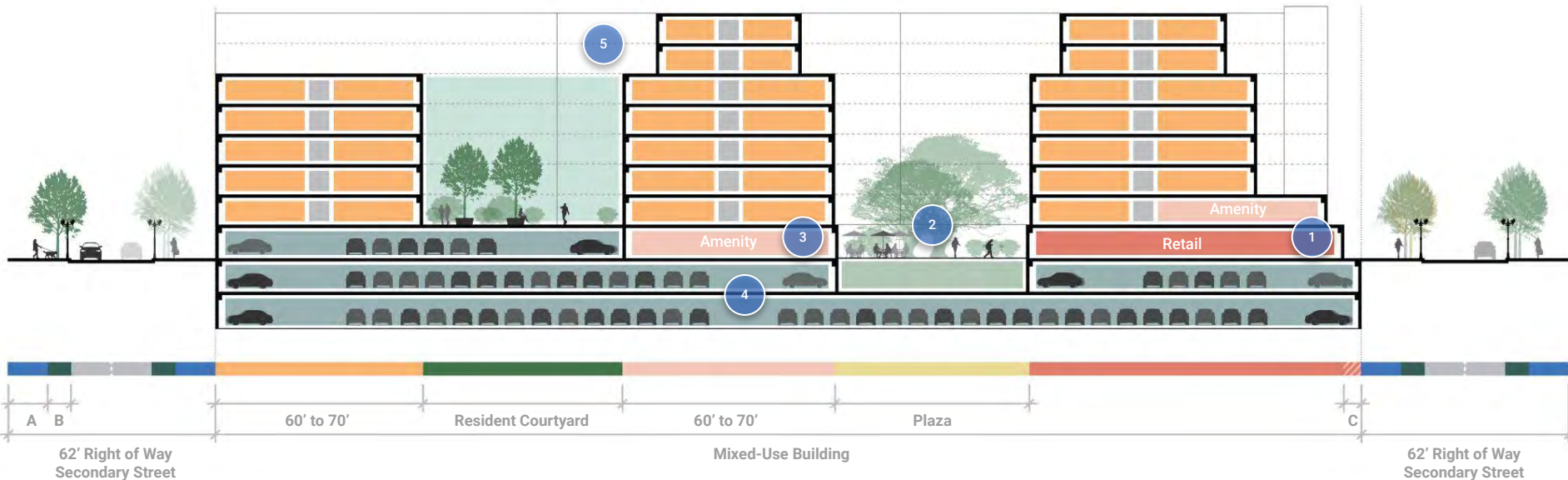
Accessed from secondary streets.

### 5. Varied Massing

Stepping down towards the street and amenity and public spaces



## Aspirational Prototypical Section





# Typology Guidance: Mixed Use Block (6 Stories +)

## Access and Connections

### 1. Primary Entrances at Intersections

Place entrances in a location visible from multiple streets.

### 2. Residential Entrances at Ground Floor

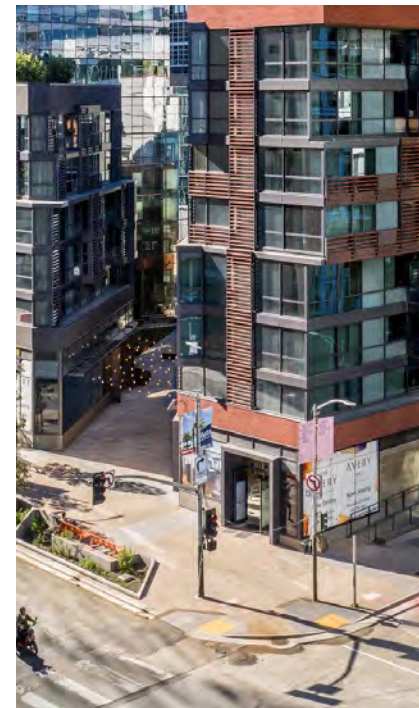
Offer units with doors from street. This creates opportunities for stoops or micro-yards.

### 3. Building Pass-throughs / paseos / openings

Create permeable pedestrian connections through large blocks. Pedestrian access routes should be clearly identifiable from adjacent streets, parks or other public environments. Connections should be 20 feet wide.

### 4. Loading Docks and Parking Access on Alleys

Create on-site alleys for building servicing and parking. Recess of screen entries from pedestrian realm.



# Typology Guidance: Mixed Use Block (6 Stories +)

## On-Site Public Open Space

### 1. On-Site Public Open Space

Developments on sites larger than 25,000 square feet, should allocate a minimum of 10% to publicly accessible open space, including plazas, shade gardens, small parks .

### 2. Promote Public Use

Include seating, lighting and signage to encourage public use, and surface treatments that allow gathering.

### 3. Include Shading

Trees or structural canopies and shade structures should be used to facilitate comfortable use of outdoor areas and amenities.



# Typology Guidance: Mixed Use Block (6 Stories +)

## Ground Floors

### 1. Provide Active Ground Floors

Retail, business, community and residential activities should be maximized at ground floors

### 2. Sustainably Locate Retail, Business and Community Uses

Non-residential uses on the ground floor should engage arterial street intersections and transit stops, where they are visible to passing traffic and transit users.

### 3. Articulate Ground Floors

Ground floor elements such as windows, retail displays, art, landscaping, canopy covering, etc., should be included to promote pedestrian activity.

### 4. Communicate Active Use

Provide regular entrances for all uses. For ground floor non-residential uses, maximize transparency. For ground floor residential uses next to the sidewalk, translucent materials can be used.

### 5. Define Private Residential Space

Define private residences with stoops, setbacks, knee-level landscaping and, or, hip level fencing.







# Development Typology

## 2. Podium Apartment (4 - 6 Stories)

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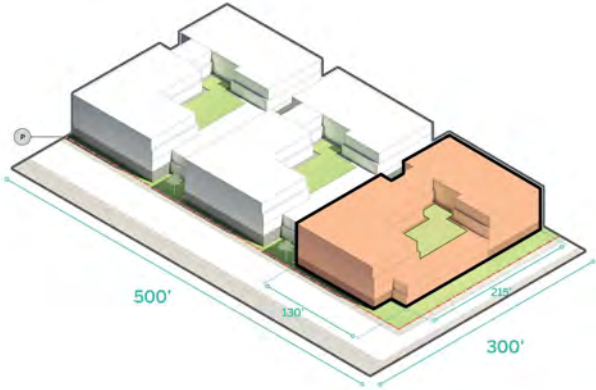
# Podium Apartment (4-6 Stories)

## Typology Description

Residential units above a mixed use, parking and service podium. Massing is often defined by the need for a contiguous parking floor within the podium, and ramp access.

## Typical Metrics

Min. Block Size	130 x 220 ft	Density Range (DU/Acres)	90 - 115
Min. Site Area	0.8 ac	FAR	2.7 - 3.8
Footprint Range	28,000 - 35,000 sq ft	Parking	Podium / Underground
Height Range	36 - 52 ft	At-Grade Uses	Retail / Parking
		Construction (IBC)	Type I, II, III



Typical Podium Apartment on 3.5ac

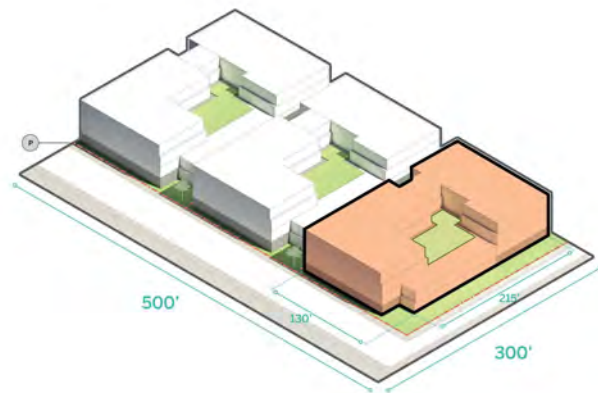
# Podium Apartment (4-6 Stories)

## Suitable Locations

- Podium apartments are best located close to transit or on arterial or primary streets.
- Applicable where neither underground parking or surface parking are feasible, and an above grade structure is required.

## Challenges

- The depth and length of this typology is strongly influenced by parking deck considerations within the podium.
- Higher residential densities will require adding more podium parking levels.
- Above grade parking may create monolithic facades unless residential or other uses wrap the structure, or it is screened with a well articulated facade.



Typical Podium Apartment on 3.5ac



# Podium Apartment (4-6 Stories)

## Massing Variations

Podium Apartment massing variations include: linear bar-buildings, bar-buildings with wings, partial courtyards, and full courtyards, among others.

Variations in the podium can create opportunities for amenity spaces and at-grade connections. Wings and courtyards will add to the overall building footprint.



Linear Bar Buildings



Bar Building with Wings



Courtyard Style



Partial Courtyard



Multiple Courtyards

# Podium Apartment (4-6 Stories)

## Example High-Quality Developments

171 W Atlantic Ave  
(Corsair Flats)  
Alameda CA

### POSITIVE FEATURES

- A. Restrained Form and Material Palette**  
Simple “C” form, with useable outdoor ground and upper floor spaces.
- B. Restrained Material Palette**  
Limited color, material and window palettes.
- C. At-Grade Unit Entrances**  
Corner placement of primary entrance enhances.

Site Size	160 x 230 ft	Units	60
Site Area	0.9 ac	Unit Area Range	600 - 1,100 sq ft
Footprint	27,000 sq ft	Density (DU/AC)	65
Stories	4	FAR	2.7
		Parking Ratio	0.5



# Podium Apartment (4-6 Stories)

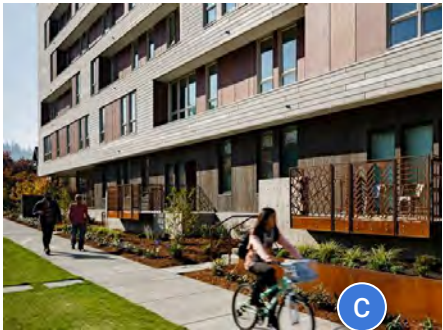
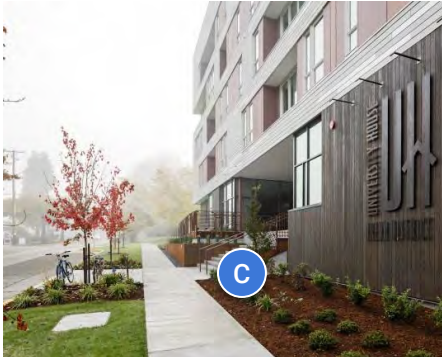
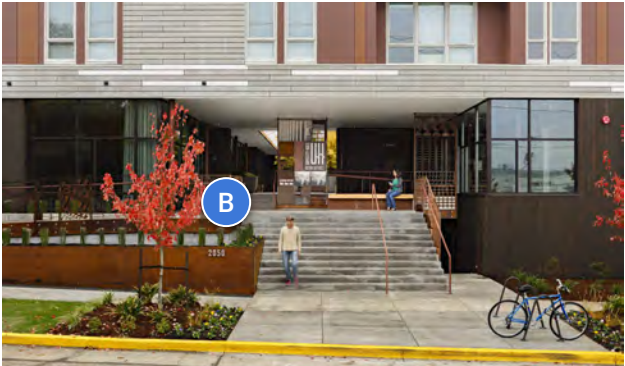
## Example High-Quality Developments

2050 E 15th Ave  
(Arena District Apartments)  
Eugene, OR

### POSITIVE FEATURES

- A. Simple Material Palette**  
That takes cues from surrounding landscape.
- B. Elevation-Change Through Landscape Elements**  
Generous ground treatments where elevation changes and primary entrances are located.
- C. Extensive Planting Perimeter**  
Achieved with generous podium setbacks

Site Size	150 x 160 ft	Units	65
Site Area	0.64 ac	Unit Area Range	670 - 1,090 sq ft
Footprint	25,000 sq ft	Density (DU/AC)	100
Stories	5	FAR	3.8
		Parking Ratio	1





# Podium Apartment (4-6 Stories)

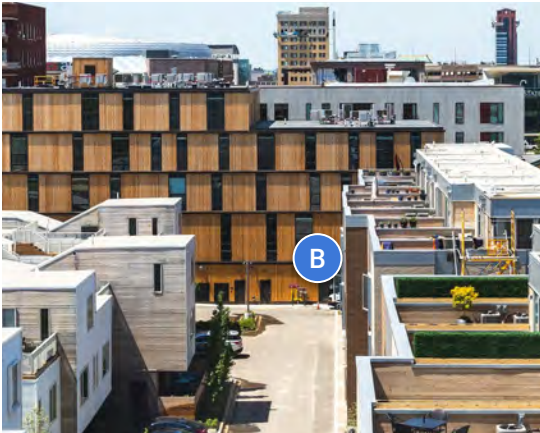
## Example High-Quality Developments

2660 John R St  
(The Residences at City Modern)  
Detroit, MI

### POSITIVE FEATURES

- A. Sensitive Massing**  
Massing takes cues from neighboring buildings.
- B. Contemporary, Low Carbon Material Palette**  
Extensive use of wood as facade material
- C. Recessed Building Entry**  
Building entrance is obvious to pedestrians yet shielded from the elements

Site Size	70 x 180 ft	Units	35
Site Area	0.3 ac	Unit Area Range	500 - 1,200 sq ft
Footprint	12,000 sq ft	Density (DU/AC)	116
Stories	5	FAR	3.7
		Parking Ratio	1



# Podium Apartment (4-6 Stories)

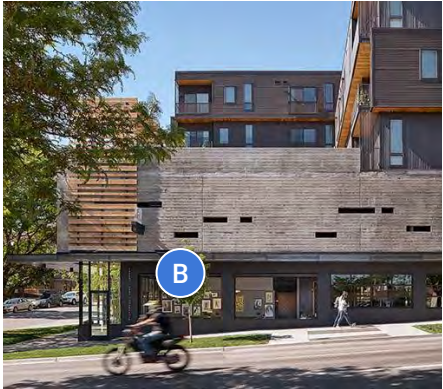
## Example High-Quality Developments

820 Sherman St  
(MOTO Apartments)  
Denver, CO

### POSITIVE FEATURES

- A. Compact Form**  
L Shaped Massing oriented away from the intersection takes bulk off the street
- B. Retail At-Grade**  
Creating a transparent and permeable facade.
- C. Parking Entrance Tucked with Elevation**  
Use of grade-change to hide parking access from the primary street.

Site Size	130 x 150 ft	Units	64
Site Area	0.44 ac	Unit Area Range	590 - 1,060 sq ft
Footprint	15,000 sq ft	Density (DU/AC)	145
Stories	5.5	FAR	2.5
		Parking Ratio	1





# Podium Apartment (4-6 Stories)

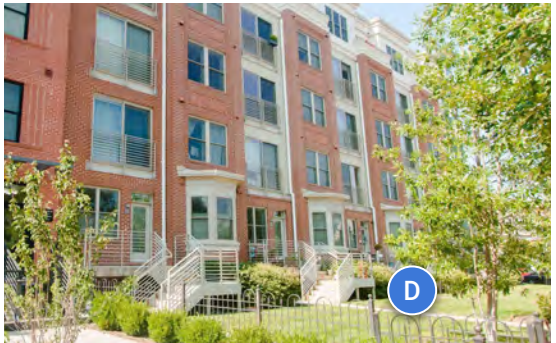
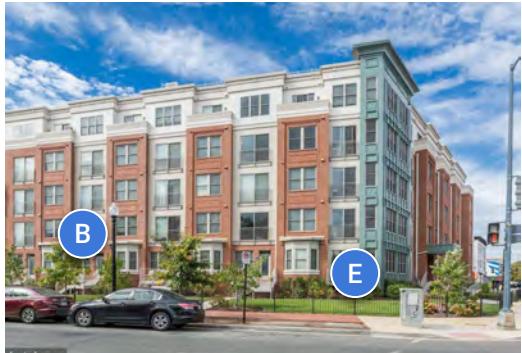
## Example High-Quality Developments

1350 Maryland Avenue NE  
(The Maryland)  
Washington, District of Columbia

### POSITIVE FEATURES

- A. Vertical Facade Articulation**  
Facades are divided in bays
- B. Articulated Massing**  
Building mass is broken down to reduce bulkiness
- C. Corner Anchoring**  
The corner is anchored by a high-detail composition.
- D. At-Grade Unit Entrances & Community Lawn**  
Stoops lead from a community lawn to ground floor units
- E. Strategic Use of Traditional Materials for Placemaking**  
Traditional construction materials are applied in interesting ways, notably the use of metal at the corner and entry.

Site Size	150 x 185 ft	Units	84
Site Area	0.6 ac	Unit Area Range	650 - 1,200 sq ft
Footprint	15,250 sq ft	Density (DU/AC)	140
Stories	5	FAR	3.5
		Parking Ratio	0.75 to 1





# Podium Apartment (4-6 Stories)

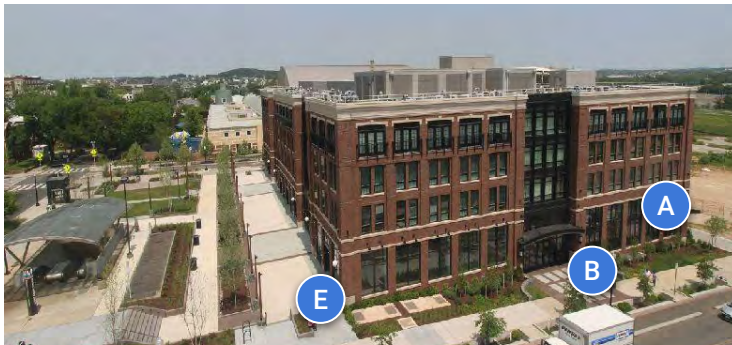
## Example High-Quality Developments

1900 C Street SE  
(The Ethel)  
Washington, District of Columbia

### POSITIVE FEATURES

- A. Vertical Facade Articulation**  
Facades are divided in bays
- B. Articulated Massing**  
Building mass is broken down to reduce bulkiness
- C. Entrance Hierarchy & Corner Anchoring**  
Corners are anchored by pavilion-like articulation
- D. At-Grade Retail**  
Select block edges feature retail and amenities
- E. Distinct top, middle, and base**  
Horizontal facade division is proportional

Site Size	270 x 225 ft	Units	100
Site Area	1.2 ac	Unit Area Range	506-683 sq ft
Footprint	27,800 sq ft	Density (DU/AC)	83
Stories	5	FAR	2.6
		Parking Ratio	0.5 to 1



# Podium Apartment (4-6 Stories)

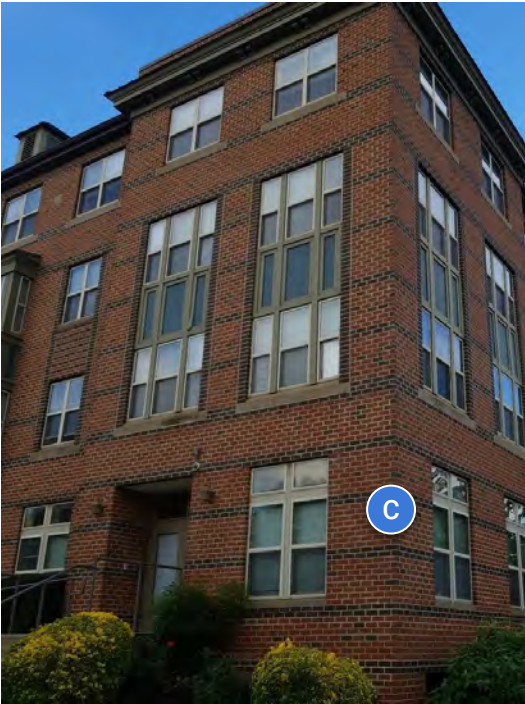
## Example High-Quality Developments

900 5th Street SE  
(Arthur Capper Senior Apartments)  
Washington, District of Columbia

### POSITIVE FEATURES

- A. **Simple Traditional Materials**  
Simple, neutral materials inform an architectural language
- B. **Distinct Top, Middle, and Base**  
Horizontal masonry detail distinguishes facade datums
- C. **Corner Articulation**  
Subtle massing and roofline changes anchor corners
- D. **Clear Front Entry/Classic Five Part Facade**  
Facade is divided with a central entry bay, two terminating bays, and connecting wings.
- E. **Semi-subgrade Parking**  
Advantageous use of grade to conceal parking

Site Size	200 x 275 ft	Units	162
Site Area	1.2 ac	Unit Area Range	555 - 700 sq ft
Footprint	33,000 sq ft	Density (DU/AC)	110
Stories	4	FAR	2.4
		Parking Ratio	0.2



# Podium Apartment (4-6 Stories)

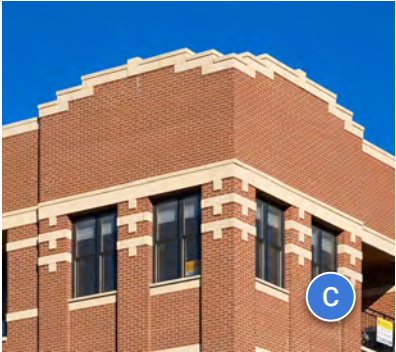
## Example High-Quality Developments

4800 N Damen Avenue  
Chicago, IL

### POSITIVE FEATURES

- A. Simple Traditional Materials**  
Simple, neutral materials inform an architectural language
- B. Distinct Top, Middle, and Base**  
Horizontal masonry detail distinguishes facade datums
- C. Corner Articulation**  
Subtle massing and roofline changes anchor corners

Site Size	130 x 220 ft	Units	42
Site Area	0.65 ac	Unit Area Range	1,300-1,600 sq ft
Footprint	28,600 sq ft	Density (DU/AC)	64
Stories	4	FAR	3.6
		Parking Ratio	1.5





# Podium Apartment (4-6 Stories)

## Aspirational Prototypical Mass

### 1. Compact Massing

Uses a variety of “L”, “C” and courtyard shapes to achieve high unit density while providing rooftop amenity space for residents.

### 2. On-Site Open Space

Placed at the rear or side of the podium to create passageways or amenity green space.

### 3. Retail At Grade

Engages the primary street and activates the ground floor.

### 4. Stoops

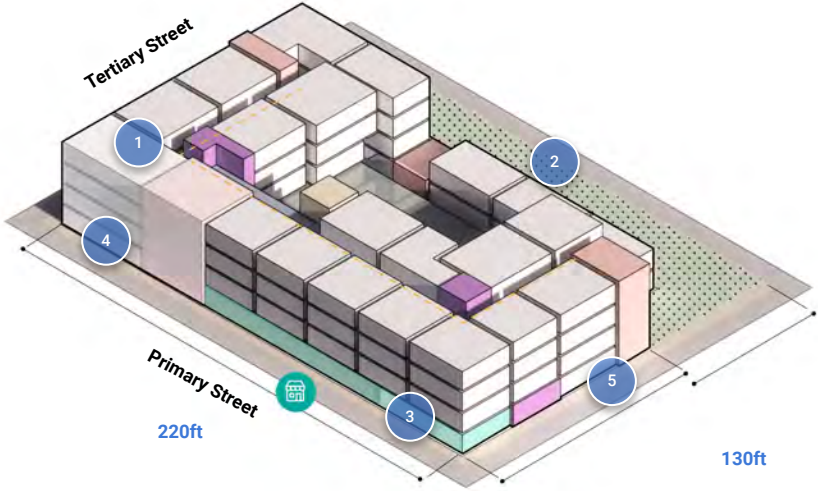
Located adjacent to on-site open space to create eyes on the street.

### 5. Parking Entrance on Secondary Streets

To protect pedestrian experience from curb cuts.

### Prototype Metrics

Site Size	160 x 230 ft	Units	60
Site Area	0.9 ac	Unit Area Range	600 - 1,100 sq ft
Footprint	27,000 sq ft	Density (DU/AC)	65
Stories	4	FAR	2.7
		Parking Ratio	0.5



\*Reference: 171 W Atlantic Ave, Alameda, CA

# Podium Apartment (4-6 Stories)

## Aspirational Prototypical Plan

### A. Visible Retail

Retail located to engage the street.

### B. Private Open Space

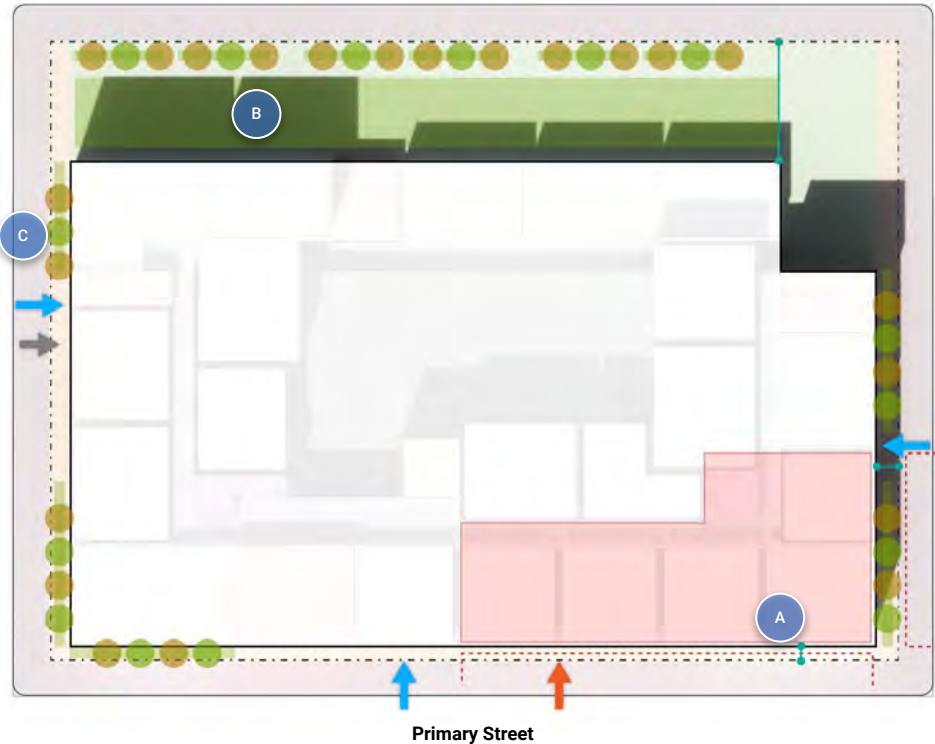
Podium apartments may include private open spaces at the ground floor - though this may be limited given space considerations. Open Spaces should have adequate landscape treatments to create shade while also being highly visible.

### C. Residential Entrances

Multiple residential entrances, each buffered with landscaping. At-grade unit entrances can be located where visibility is possible and ideally adjacent to private amenity space.

### Prototype Metrics

Site Area	0.84 ac	Open Space	8,000 sq ft
Site Depth	160 ft	Retail	6,000 sq ft
Site Width	230 ft	Parking Access	Side / Rear
Bldg Footprint	27,000 sq ft		
Bldg Depth	125 ft		



# Podium Apartment (4-6 Stories)

## Aspirational Prototypical Section

### 1. Visible Retail

Retail should be located to engage the street.

### 2. Private Open Space

Second floor courtyards are possible over parking garage podiums.

### 3. Compact Building Mass

Single loaded corridors can incorporate additional units while allowing for open space over the podium.

### 4. Wrap Parking Garage

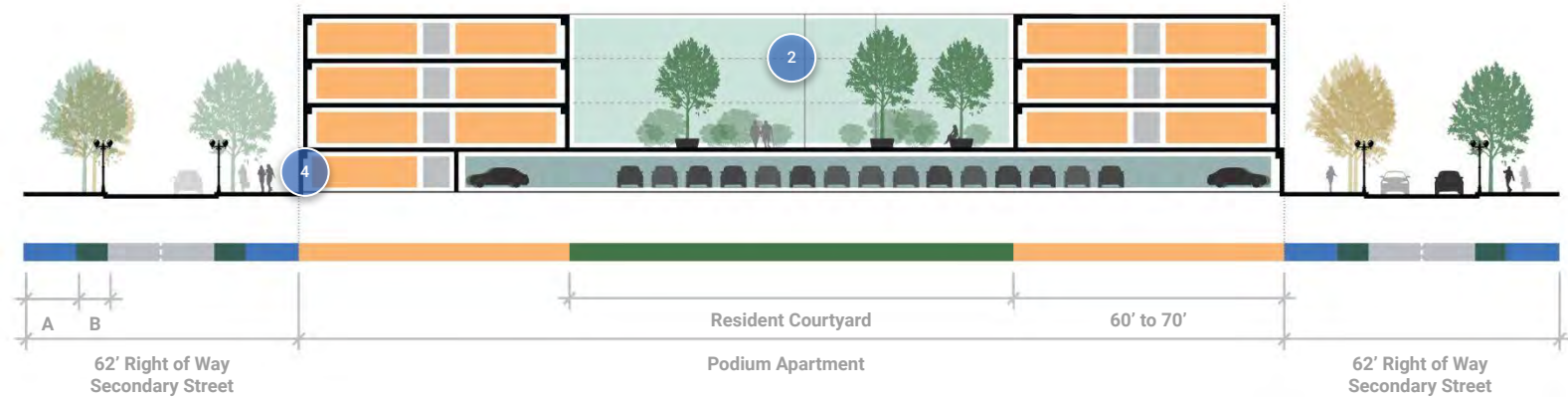
Other program can wrap the parking garage, minimizing visual impact on pedestrian experience and bringing greater value to street edges.





# Podium Apartment (4-6 Stories)

## Aspirational Prototypical Section



# Podium Apartment (4-6 Stories)

## Aspirational Prototypical Section

### 1. Visible Retail

Retail should be located to engage the street.

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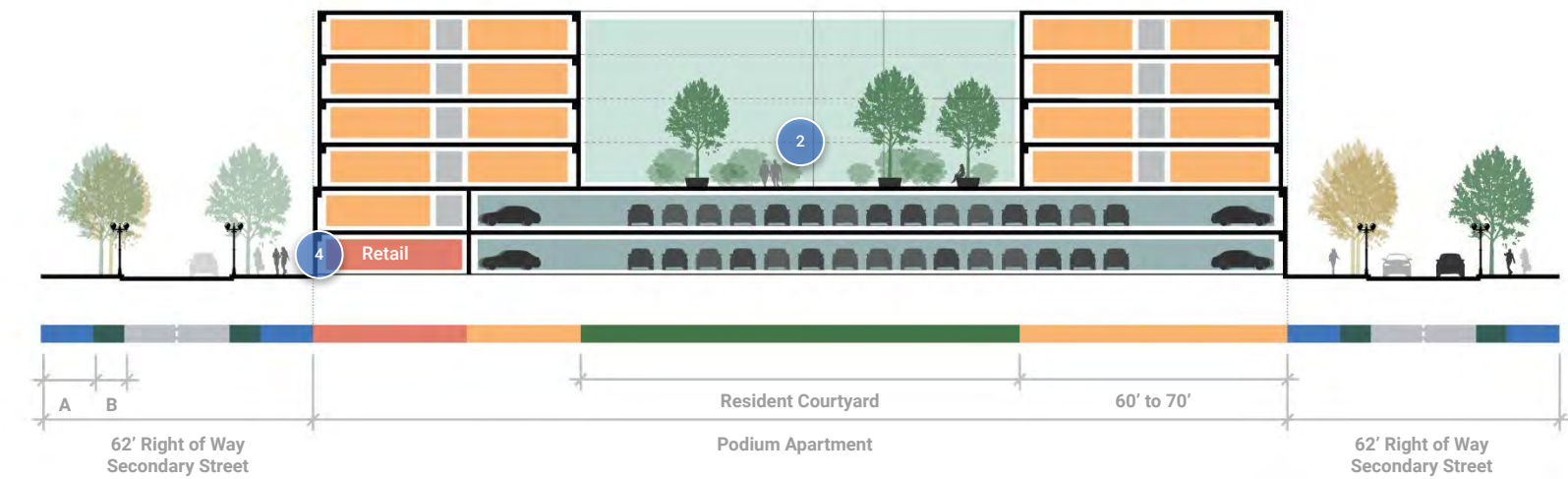
### 4. Wrap Parking Garage

Other program can wrap the parking garage, minimizing visual impact on pedestrian experience and bringing greater value to street edges.



# Podium Apartment (4-6 Stories)

## Aspirational Prototypical Section





# Typology Guidance: Podium Apartment (4-6 Stories)

## On-Site Public Open Space / Amenity Space

### 1. Rooftop Amenity Space

Areas above the podium can become amenity space for residents.

### 2. At-Grade Open Space

Achieved through building setbacks and aligned with podium retail entrances. Open spaces should be well shaded and provide sufficient depth for use.

### 3. Community Services

Community or institutional services may be located in the podium instead of or alongside retail.



# Typology Guidance: Podium Apartment (4-6 Stories)

## Access and Connections

### 1. Locate Key Entrances at Intersections

Primary entrances can address multiple streets.

### 2. At-Grade Unit Entrances

Develop units with doors onto the street. This creates opportunities for stoops.

### 3. Parking and Service Entrances

Locate parking and service entrances from alleys, or on secondary streets if recessed into the building mass and screened.



# Typology Guidance: Podium Apartment (4-6 Stories)

## Ground Floors

### 1. Responding to elevation changes.

Screening elements, material shifts, and landscape treatments can provide a positive pedestrian experience where elevation changes occur. Parking entrances may be hidden at elevation changes. An extra floor of retail may be achieved where elevation change permits without adding bulk onto the primary facade.

### 2. Transparent facades with active uses.

Uses can include retail or commercial activities. If at-grade residential entrances are present, a green buffer should be deployed through either on-site open space or perimeter planting.

### 3. Simple Material Expression at Grade

Make the primary facade more legible and enhance the curb appeal of podium buildings.





# Development Typology

## 3. Wrapper Building: 4-6 Stories

*("Texas Donut" / Wrap-Around)*



SOM

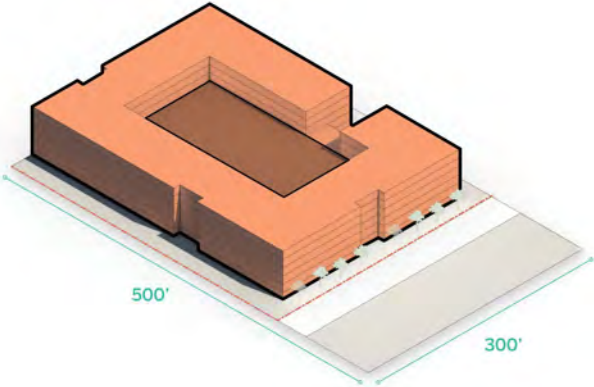
# Wrapper Building: 4-6 Stories

## Typology Characteristics

Wrapper buildings are typically organized by single-loaded apartments that “wrap” structured parking. The use of structured parking within the building creates a more pedestrian friendly and urban development than buildings with surface parking them. Apartments and retail, business or community uses at-grade activate the ground floor. In some cases, apartment floors can extend above the parking structure.

## Typical Metrics

Min. Block Size	280 x 350 ft	Density Range (DU/Acres)	90 - 115
Min. Site Area	2.25 ac	FAR	3.5 - 5.0
Footprint Range	88,000 - 35,000 sq ft	Parking	Structured Internal
Height Range	32 - 50 ft	At-Grade Uses	Retail / Parking / Residential
		Construction (IBC)	Type I, II, III



Typical Wrapper On 3.5ac Site

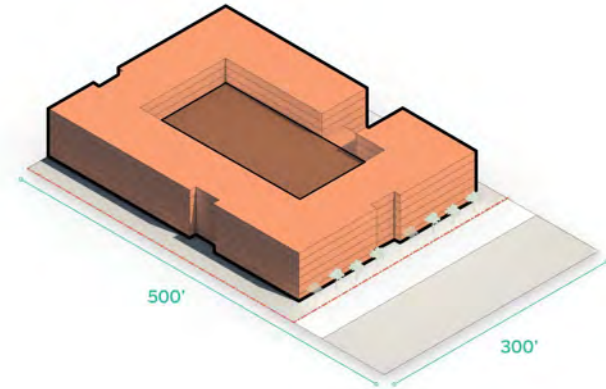
# Wrapper Building: 4-6 Stories

## Suitable Locations

- Podium apartments are best located close to transit or on arterial or primary streets.
- Applicable where underground parking and surface parking are not feasible, and an above grade structure is required.

## Key Challenges

- Require large development blocks.
- Apartments around structured parking can create large, impermeable footprints.
- Impermeable blocks due to parking garage.
- Longer building lengths require careful frontage and facade approaches



Typical Wrapper On 3.5ac Site



# Wrapper Buildings (4-6 Stories)

## Massing Variations

The design of wrapper buildings may include various wing and courtyard arrangements to achieve higher site densities.

Wings can successfully reduce visual bulk, but they require greater block depths.

Courtyards add amenities for residents, but require greater block dimensions.

Generally, while courtyards and wings create a more efficient building and increase residential unit capacity they also increase the development footprint.



Fully Wrapped + Closed Courtyard



$\frac{3}{4}$  Wrapped + Open Courtyard



Combination Wrap and Podium



Partially Wrapped + Double Loaded  
Courtyards



Winged Wrapped Building



$\frac{3}{4}$  Wrap bridged to Double Loaded

# Wrapper Buildings (4-6 Stories)

## Example High-Quality Developments

915 S Wolfe St  
(Union Wharf Apartments)  
Baltimore, MD

### POSITIVE FEATURES

- A. Restrained Material Palette**  
Linking mass with expression to reduce clutter.
- B. Articulated Building Wings**  
Break apart an otherwise monolithic facade.
- C. Steppbacks Above Three Stories**  
Reduce bulk on the street.
- D. Stoops**  
Activate ground floor with residential activity.

Site Size	260 x 660 ft	Units	281
Site Area	2.6 ac	Unit Area Range	800 - 1,100 sq ft
Footprint	105,000 sq ft	Density (DU/AC)	108
Stories	5	FAR	4.7
		Parking Ratio	1+



# Wrapper Buildings (4-6 Stories)

## Example High-Quality Developments

22 S Duncan Ave  
(Atmosphere Housing)  
Fayetteville, AR

### POSITIVE FEATURES

- A. **Common Areas and Retail Rounding Corner**  
Help orient and guide pedestrian access.
- B. **Courtyards**  
Making use of elevation changes to create grade-separated courtyards.
- C. **Material Expression Linked to Massing**

Site Size	350 x 500 ft	Units	228
Site Area	3.3 ac	Unit Area Range	600 - 1,000 sq ft
Footprint	105,000 sq ft	Density (DU/AC)	70
Stories	5	FAR	3.7
		Parking Ratio	1





# Wrapper Buildings (4-6 Stories)

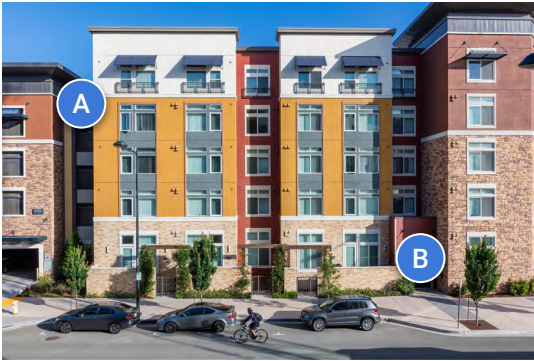
## Example High-Quality Developments

5200 Iron Horse  
(Dublin Station Apartments)  
Dublin, CA

### POSITIVE FEATURES

- A. Distinctive Top, Middle, and Bottom**  
Create legible building facade.
- B. Ground Floor Entrances**  
Create an active ground floor. Stoops or private yards achieved with building setbacks.
- C. Greening Public Realm**  
Use of permeable pavers in open spaces.

Site Size	500 x 650 ft	Units	505
Site Area	6.5 ac	Unit Area Range	600 - 1,500 sq ft
Footprint	190,000 sq ft	Density (DU/AC)	77
Stories	5	FAR	3.5
		Parking Ratio	1



# Wrapper Buildings (4-6 Stories)

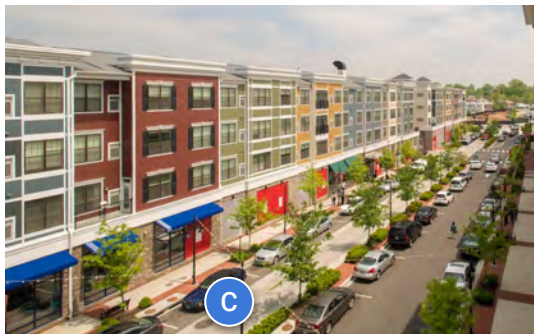
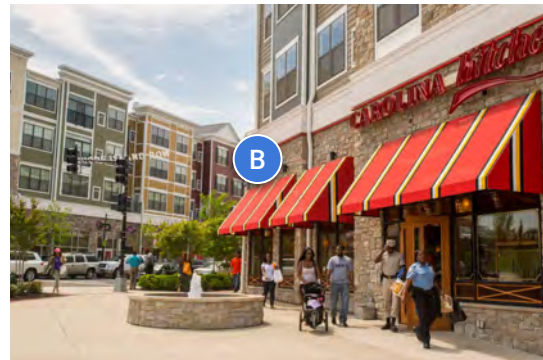
## Example High-Quality Developments

2300 Washington Place NE  
(Rhode Island Row)  
Washington, District of Columbia

### POSITIVE FEATURES

- A. Distinctive Corner Treatment**  
Corners are anchored by architecture and program
- B. Ground Floor Entrances & Retail**  
Activation by retail, amenities & service offices
- C. Public Realm Greening**  
New "main street" features a landscaped median
- D. Minimal Garage Exposure**  
Parking is wrapped with program, obscuring it from the public realm. Minimal garage facade exposure.

Site Size	470 x 510 ft	Units	278
Site Area	5.5 ac	Unit Area Range	710 - 1,150 sq ft
Footprint	184,000 sq ft	Density (DU/AC)	51
Stories	6	FAR	2.9
		Parking Ratio	1





# Wrapper Buildings (4-6 Stories)

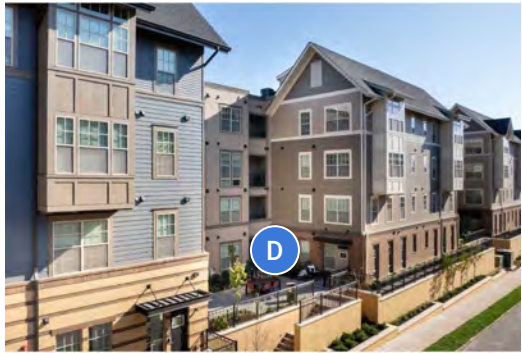
## Example High-Quality Developments

22 Robeson Street  
(Avalon Somerville Station)  
Somerville, NJ

### POSITIVE FEATURES

- A. Identifiable top, middle and base**  
Rooflines and floors inform the architecture
- B. Articulated Massing**  
Building mass is broken down to reduce bulkiness
- C. Variety within a townscape language**  
Simple detailing and sympathetic proportions, a familial use of materials.
- D. Multiple courtyards**  
Building massing shapes multiple courtyards

Site Size	770 x 200 ft	Units	373
Site Area	6.0 ac	Unit Area Range	480-1,900 sq ft
Footprint	110,000 sq ft	Density (DU/AC)	62
Stories	4	FAR	3
		Parking Ratio	1





# Wrapper Buildings (4-6 Stories)

## Aspirational Prototypical Mass

### 1. Use of Stepback to Vary Mass

Reducing building bulk on the street, setbacks begin after 3 stories. Setbacks should create a legible top, middle, and bottom of the building facade.

### 2. Setbacks for Planting & Open Space

Minor setbacks and massing articulation at the base can provide space for patios and other landscape treatments.

### 3. Retail At -Grade

Retail, if present, should be placed at corners. This ensures greater visibility from more streets, and better transparency around corners.



Site Size	280 x 305 ft	Units	125
Site Area	2 ac	Unit Area Range	800 - 1,300 sq ft
Footprint	70,000 sq ft	Density (DU/AC)	70
Stories	5	FAR	3.5
		Parking Ratio	1

\*Reference: Union Wharf Apartment,

# Wrapper Buildings (4-6 Stories)

## Aspirational Prototypical Plan

### A. Retail

Retail should be located to engage the street.

### B. Setbacks

Setbacks along the building perimeter ensure adequate space for at-grade buffered entrances.

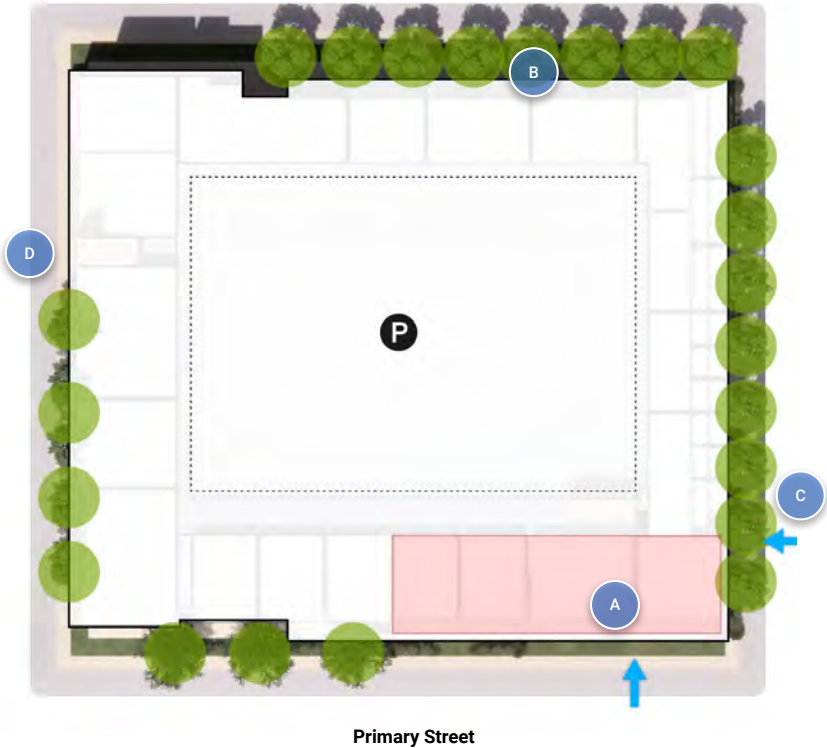
### C. Residential Entrances

Locate at highly visible corners. Where possible, buffered at-grade unit entrances create a better pedestrian experience.

### D. Parking Entrances

Parking entrances should be both visible but also hidden and located away from busy pedestrian routes.

Site Area	1.8 ac	Retail	4,000 sq ft
Site Depth	290 ft	Parking Access	Side / Rear
Site Width	270 ft		
Bldg Footprint	70,000 sq ft		
Bldg Depth	250 ft		



# Wrapper Buildings (4-6 Stories)

## Aspirational Prototypical Section

### 1. Use of Stepback to Vary Mass

Reduce building bulk from the street.

### 2. Mixed-Use At -Grade

Mixed-use related to the public realm.

### 3. Green Garage Rooftop

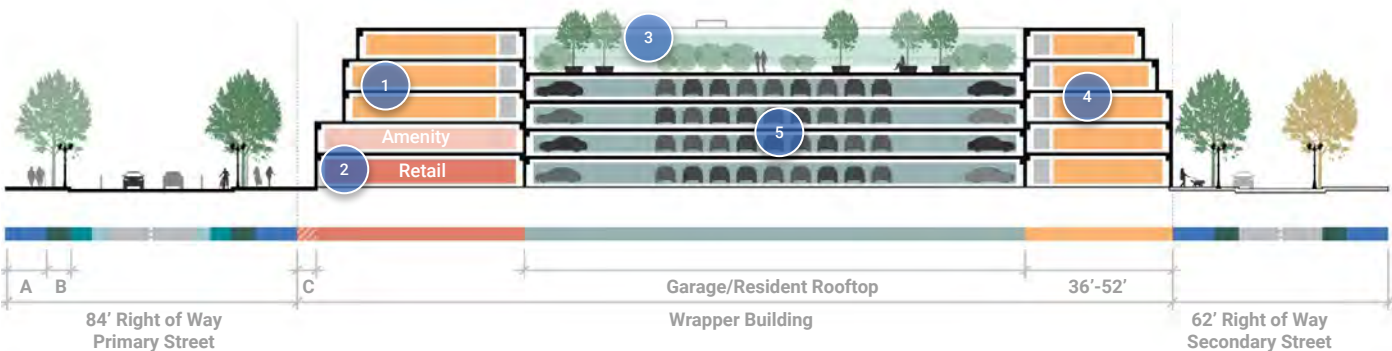
The garage structure rooftop can be a combination of resident open space, utility equipment space or a location for photovoltaic and water heating technologies.

### 4. Single-Loaded Residential Corridors

Corridors wrapping the perimeter of the parking structure give access to residential units.

### 5. Wrap Parking Garage

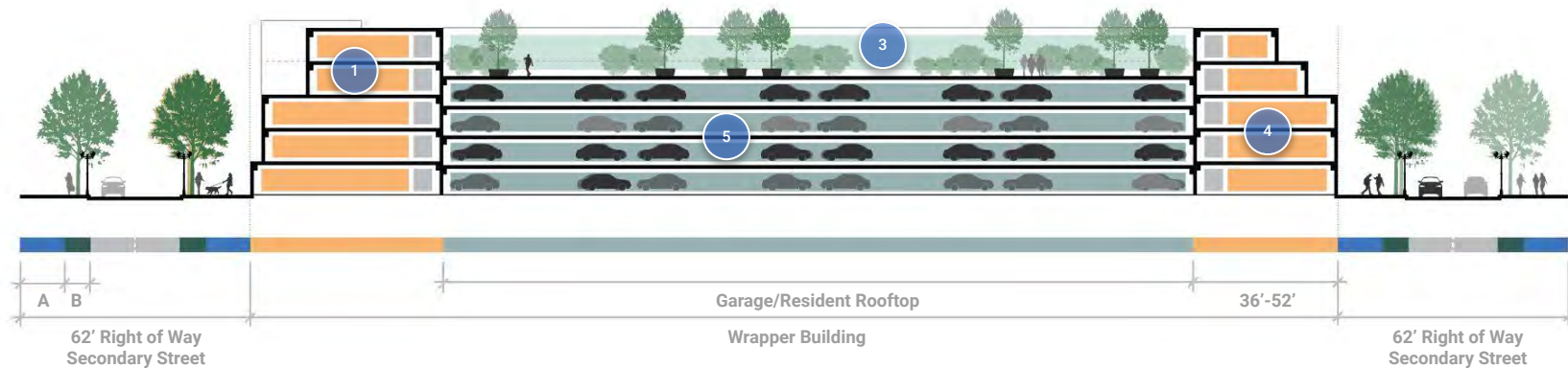
Other program can wrap the parking garage, minimizing visual impact on pedestrian experience and bringing greater value to street edges.



A. Sidewalk	12'
B. Tree Well	5'
C. Retail Frontage Setback/Patio	5' Minimum



# Wrapper Buildings (4-6 Stories) Aspirational Prototypical Section



# Wrapper Buildings (4-6 Stories)

## Access and Connections

### 1. Locate Key Entrances on Intersections

Primary entrances can address multiple streets.

### 2. On-Site Alley Connections / Passageways

Passageways through wrapper wings or courtyards are highly encouraged. This alleviates bulk and creates connections through what can be a bulky and impermeable building mass.

### 3. Parking and Service Entrances

Locate parking and service entrances from alleys, or on secondary streets if recessed into the building mass and screened.



# Typology Guidance: Wrapper Buildings (4-6 Stories)

## On-Site Public Open Space / Amenity Space

### 1. Landscaped Patios

Landscaped patios can be located at highly visible and well-lit locations for building users and the public. Tree canopy shading can be provided.

### 2. Amenity Courtyards

Larger blocks can accommodate on-site courtyards. Wrapper massing that creates courtyards through articulated wings may generate longer building facades. Longer building facades should be articulated through form or materials.





# Typology Guidance: Wrapper Buildings (4-6 Stories)

## Ground Floors

### 1. Retail, Business and Community Services

Ground level commercial space can provide a range of retail or service uses that can benefit the community. Uses should be visible and accessible from the sidewalk.

### 2. Accessory Structures

Smaller scale pavilions can be placed at on-site open spaces to create shaded activity areas. These may be used for farmers markets, performance or cultural uses.



# Typology Guidance: Wrapper Buildings (4-6 Stories)

## Ground Floors

### 1. Setbacks

Setbacks can allow for well defined, generous and landscaped building entrances.

### 2. Grade Transitions

Use active ground floors to manage grade transitions across longer frontages.

### 3. At-Grade Unit Entrances

Wrapper buildings should have residential units at grade where retail is not located. With setback provisions or elevation changes, at-grade units should incorporate entrances to increase ground activity.







# Development Typology

## 4. Four-Story, Surface Parked Apartment

SOM



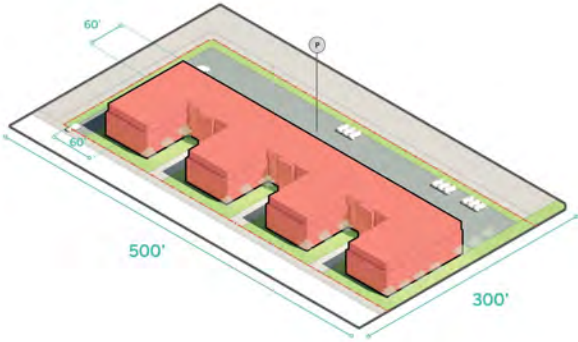
# Four-Story, Surface Parked Apartment

## Typology Characteristics

Four story apartments often accommodate parking on adjacent surface lots, as development values do not justify the cost of a parking structure. Apartment units are typically “double-loaded” in this type - meaning two units flanking a shared circulation corridor on each floor.

## Typical Metrics

Min. Block Size	210 x 450 ft	Density Range (DU/Acres)	60 - 90
Min. Site Area	2.3 ac	FAR	3.5 - 5.0
Footprint Range	88,000 - 35,000 sq ft	Parking	Surface, Rear or Side
Height Range	32 - 40 ft	At-Grade Uses	Residential
		Construction (IBC)	Type I, II, III



Basic 4 Story Surface Parked on 3.5 ac site

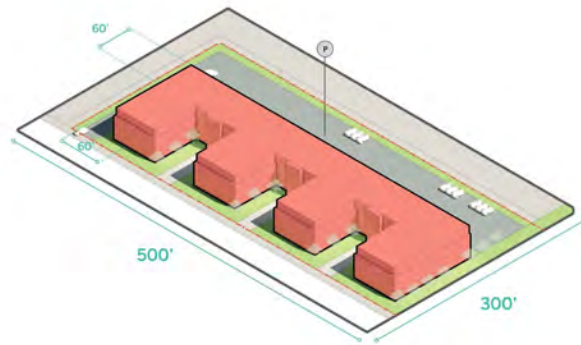
# Four-Story, Surface Parked Apartment

## Suitable Locations

- Best suited where block depth is available to provide create rear surface parking.
- Best suited where underground parking is not economically feasible.
- Advisable to place close to transit or along traffic corridors.

## Key Challenges

- Surface lots can be unattractive, serve as heat islands, generate extensive stormwater run-off, and feel unsafe after dark.



Basic 4 Story Surface Parked on 3.5 ac site

# Four-Story, Surface Parked Apartment

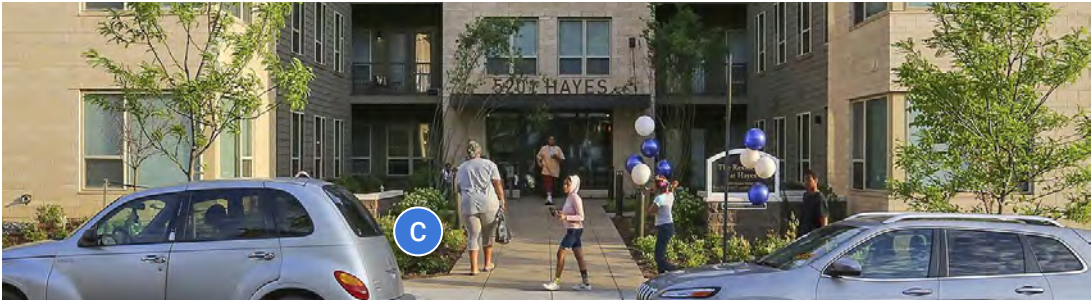
## Example High-Quality Developments

5201 Hayes Street NE  
(Residences at Hayes)  
Washington, DC

### POSITIVE FEATURES

- A. Natural Materials**  
Warm and natural materials that create an attractive building facade
- B. Winged massing**  
Achieves higher net-density while also reducing building bulk
- C. Entrances lined with planting**  
Gardens at ground level at each entrance create a positive pedestrian experience

Site Size	240 x 430 ft	Units	150
Site Area	2.4 ac	Unit Area Range	500 - 900 sq ft
Footprint	40,000 sq ft	Density (DU/AC)	63
Stories	4	FAR	1.6
		Parking Ratio	1





# Four-Story, Surface Parked Apartment

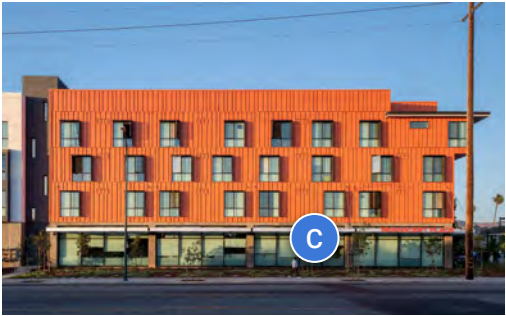
## Example High-Quality Developments

2450 Senter Rd  
(Renascent Place)  
San Jose, CA

### POSITIVE FEATURES

- A. **Courtyard Mass**  
Simple horseshoe building plan to create an internal courtyard.
- B. **Several Green Spaces**  
Courtyard incorporates landscape features.
- C. **Simple Materials**  
Simple selection of cladding material and color..

Site Size	580 x 780 ft	Units	160
Site Area	2.5 ac	Unit Area Range	350 - 700 sq ft
Footprint	26,000 sq ft	Density (DU/AC)	65
Stories	4	FAR	0.85
		Parking Ratio	1



# Four-Story, Surface Parked Apartment

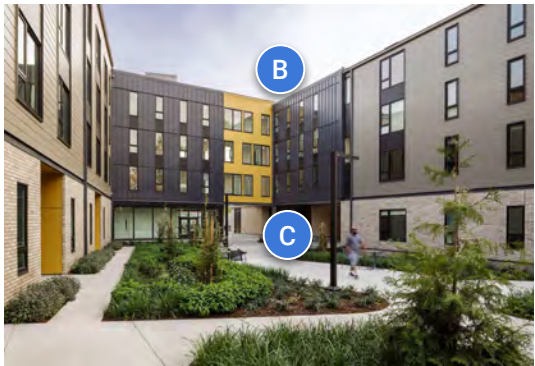
## Example High-Quality Developments

2133 N Argyle St  
(Argyle Apartments)  
Portland, OR

### POSITIVE FEATURES

- A. Cohesive Massing**  
Clear relationship of scale and form.
- B. Simple Material Palette**  
Emphasizes a clear hierarchy of massing.
- C. Several Courtyards**  
On-site plazas and playgrounds.

Site Size	190 x 460 ft	Units	189
Site Area	2 ac	Unit Area Range	450 - 1,100 sq ft
Footprint	42,000 sq ft	Density (DU/AC)	95
Stories	4	FAR	1.72
		Parking Ratio	1



# Four-Story, Surface Parked Apartment + Townhouse

## Example High-Quality Developments

1605 NW A St.  
(Red Barn)  
Bentonville, AR

### POSITIVE FEATURES

- A. **Simple Massing**  
Forms are simple, with pitched roofs and carved recesses into the massing.
- B. **Simple Material Palette**  
Materiality reflects rural edge context in a contemporary manner.
- C. **Identifiable Communities**  
Townhomes and apartments are arranged in smaller clusters, scaled to sub-communities.

Site Size	-	Units	137
Site Area	12.66 ac	Unit Area Range	800 - 1,100 sq ft
Footprint	117,000 sq ft	Density (DU/AC)	12
Stories	2 - 3	FAR	2
		Parking Ratio	1.5 - 2





# Four-Story, Surface Parked Apartment Aspirational Prototypical Mass

## 1. “L”, “S” and “C” Shapes

Various massing strategies offer alternatives to the typical bar building. Different organizational strategies can create well proportioned plazas, parks, and passageways.

## 2. Through Site Connections

Create permeable access, and limit the total length of impermeable building facade.

## 3. Plazas at Corners

Offer better visibility throughout the day. If possible, plazas should be located adjacent to building retail.

## 4. Parking Lot Landscaping

Providing shade and stormwater management.

Site Size	195 x 460 ft	Units	189
Site Area	2 ac	Unit Area Range	450 - 1,100 sq ft
Footprint	38,000 sq ft	Density (DU/AC)	95
Stories	4	FAR	1.72
		Parking Ratio	1



\*Reference: Argyle Apartments

# Four-Story, Surface Parked Apartment Aspirational Prototypical Plan

## A. Retail

Retail should be located to engage the street. Ideally plazas and open spaces should be located within close proximity and with clear connections.

## B. Private Open Space

A mix of private and public open spaces should be encouraged to create a variety of ground floor activity.

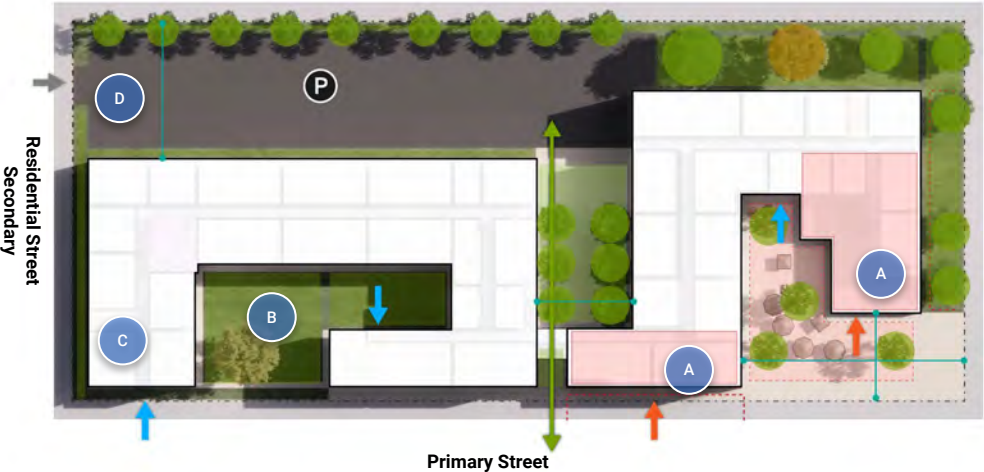
## C. Residential Entrances

Multiple residential entrances encourage ground floor activation and offers better visibility.

## D. Parking Entrances

Parking should be tucked behind buildings and screened with landscaping elements where parking lots are adjacent other residential buildings.

Site Area	2 ac	Open Space	18,000 sq ft
Site Depth	195 ft	Retail	6,000 sq ft
Site Width	460 ft	Parking Access	Side
Bldg Footprint	38,000 sq ft	Plaza Depth	20 ft
Bldg Depth	56 ft	Plaza Area	4,000 sq ft



# Four-Story, Surface Parked Apartment Aspirational Prototypical Section

## 1. Shape Open Space

Use building massing to create courtyards and open spaces.

## 2. Parking Landscaping

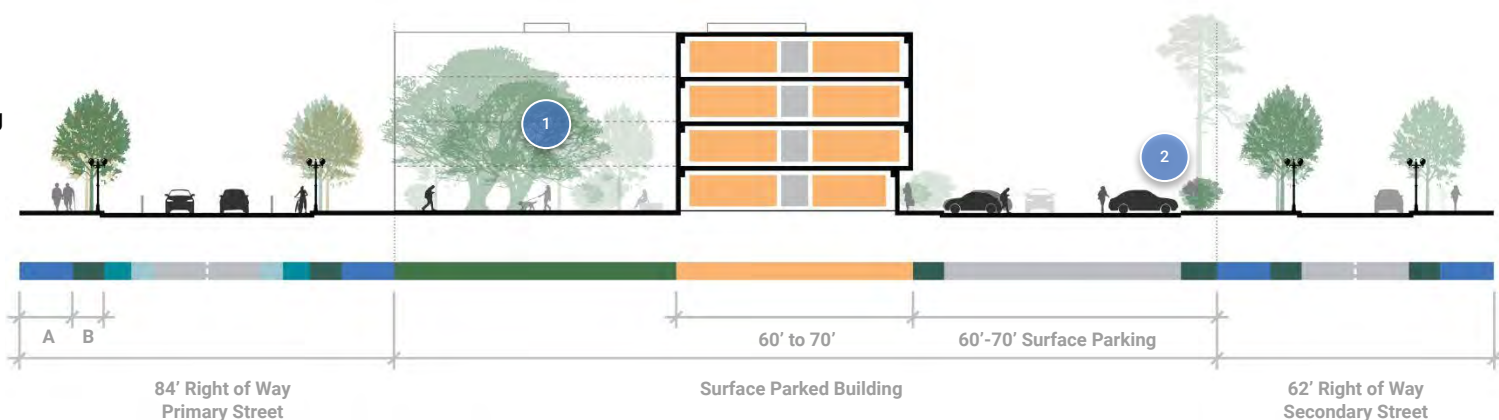
Landscape, shade and stormwater management required.

## 3. Through Site Connections

Create permeable access, and limit the total length of building facades.

## 4. Anchor Corners

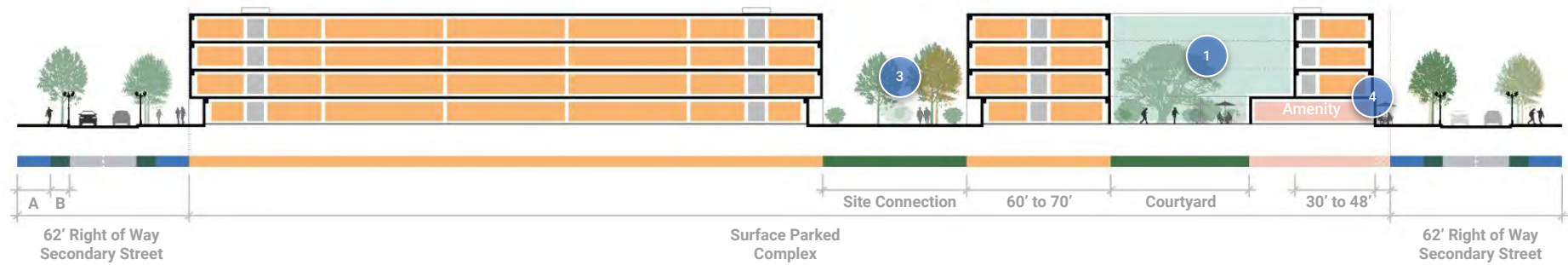
Concentrate plazas, amenities, and commercial spaces near intersections to focus.



A. Sidewalk	12'
B. Tree Well	5'
C. Retail Frontage Setback/Patio	Allowable in Open Space



# Four-Story, Surface Parked Apartment Aspirational Prototypical Section



# Typology Guidance: Four-Story, Surface Parked Apartment

## Access and Connections

### 1. Primary Entrances Addressing the Street

Locate entrances in visible locations and to support building identity.

### 2. Building Pass-throughs / paseos / openings

Locate connections through large blocks where permeability would support a porous urban framework and the pedestrian experience.

### 3. At-Grade Unit Entrances

Develop units with doors facing onto the street. This also creates opportunities for stoops.

### 4. Loading Docks Screened or on Alleys

On-site alleys for building loading and servicing is encouraged..



# Typology Guidance: Four-Story, Surface Parked Apartment

## On-Site Public Open Space

### 1. On Site Open Spaces

The provision of landscaped gathering, seating and play spaces for use by residents and others is encouraged.

### 2. On-Site Alley Connections / Passageways

On-site connections across a site improves the pedestrian experience and the permeability of a neighborhood. This is particularly important for longer apartments that extend the full width of large blocks.





# Typology Guidance: Four-Story, Surface Parked Apartment Ground Floors

## 1. At-Grade Retail, Business and Community Space

Ground floor activation by non-residential uses is encouraged in viable and sustainable locations. Building depths may limit activities to smaller retail or services.

## 2. Landscaped Setbacks

Generous setbacks to create green spaces and connections area encouraged. This is important as a buffer where residential units are at-grade, facing a street..



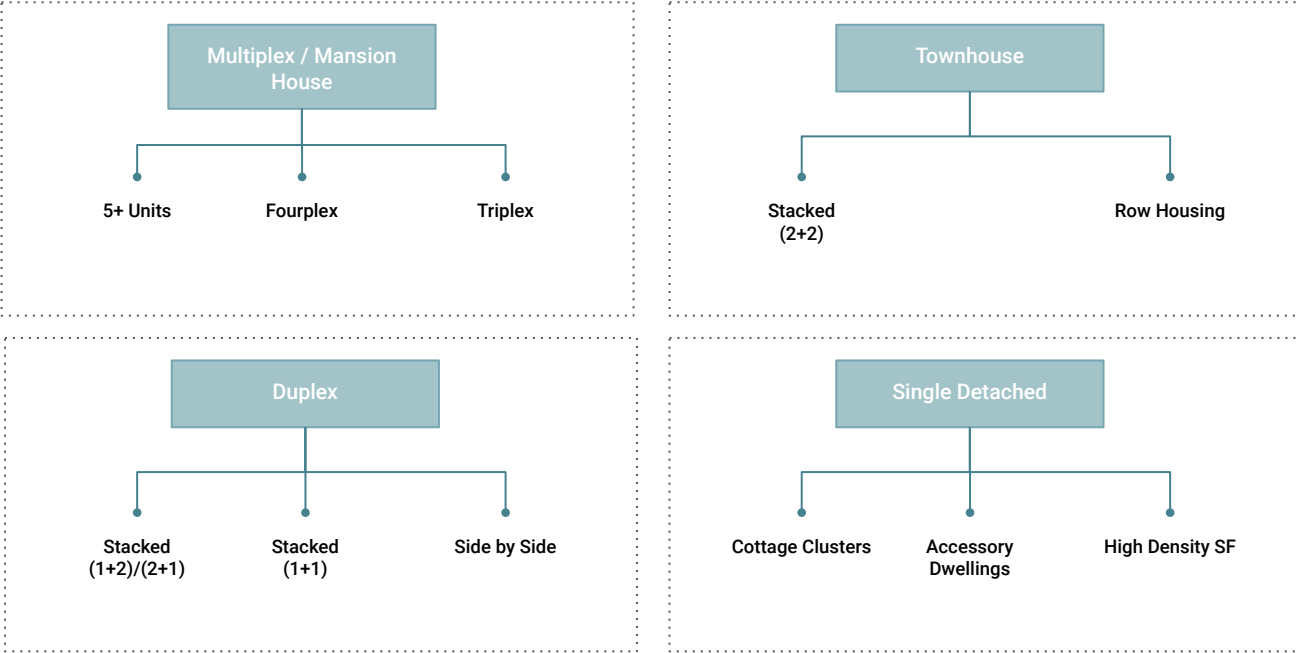
# Development Typology

## Missing Middle Housing



# Missing Middle Housing

## Missing Middle Housing Types





# Missing Middle Housing

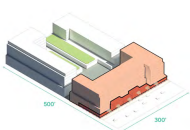
## Typical Features and Metrics

	Multiplex			Townhouse		Duplex		Detached		
Feature	Multiplex (5+)	Four-plex	Triplex	Townhouse (Stacked)	Townhouse (Row)	Duplex (Stacked)	Duplex (Side-by-Side)	Cottage Court	Accessory Dwelling	High Density Single Family
Attachment	Detached	Either	Either	Attached	Attached	Either	Attached	Detached	Detached	Detached
Entry/Access	Interior	Interior	Interior	Interior	Exterior	Interior	Exterior	Exterior	Interior	Exterior
Lot Type	Shared	Shared	Shared	Shared	Single	Shared	Single / Shared	Single / Shared	Shared	Single
Open Space	Shared	Shared	Shared	Shared	Private / Shared	Shared	Private	Private / Shared	Shared	Private
Orientation	Street	Street	Street	Either	Either	Street	Street	Internal	Internal	Street
Net DU/Ac Range	20 - 50	18 - 35	20 - 25	14 - 25	10 - 25	8 - 25	8 -19	15 - 30	~10	8 - 12
Stories	2 - 3	2 - 3	2 - 3	3 - 4	2 - 3	2	1 - 2	1 - 2	2-3	1 -3
Driveway	Shared	Shared	Shared	Shared	Private	Shared	Private / Shared	Shared	Shared	Private
Lot Area ±	7,500 - 15,000	4,500 - 10,000	3,500 - 8,300	3,500 - 8,300	1,500 - 3,000 sq ft	3,500 - 10,500	4,500 - 6,000	10,000 - 22,500	-	1,500 - 4,200
Lot Width ±	75 - 120	45 - 75	40 - 65	40 - 65	20 - 25'	35 - 70'	40 - 75 ft	100 - 160 sq ft	30 - 60 sq ft	30 - 60 sq ft
Lot Depth ±	100 - 150	100 - 150	85 - 150	85 - 150	85 - 120'	100 - 150'	50 - 80 sq ft	100 - 150 sq ft	NA	50 - 70 sq ft
Footprint Gross ±	9,600 sq ft	5,800 sq ft	4,200 sq ft	4,200 sq ft	2,600 sq ft	1,700 sq ft	3,400 sq ft	4,800	1,400 sq ft	1,400 sq ft

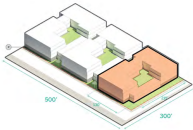
# Development Types: Missing Middle

## Development Types

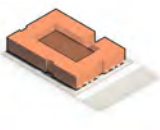
- |                              |                 |
|------------------------------|-----------------|
| 1. Mixed Use Building        | (6 + Stories)   |
| 2. Podium Apartment          | (4 - 6 Stories) |
| 3. Wrapper Apartment         | (4 - 6 Stories) |
| 4. Four Story Surface Parked | (4 Stories)     |
| 5. Multiplex                 | (2-3 Stories)   |
| 6. Cottage Court             | (2-3 Stories)   |
| 7. Townhomes                 | (2-3 Stories)   |
| 8. Duplex                    | (2-4 Stories)   |
| 9. Town-Scale Single Family  | (1 - 3 Stories) |
| 10. Mid Rise-Office          | (5 Stories)     |
| 11. Corridor Retail          | (1 Story)       |



1. Mixed Use Building



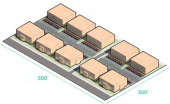
2. Podium Apartment



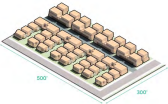
3. Wrapper Apartment



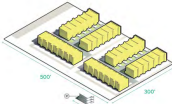
4 Story Apartment Surface Parking



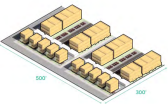
5. Multiplex



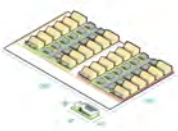
6. Cottage Court



7..Townhomes



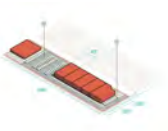
8. Duplex



9. Town-scale Single Family



10. Mid-rise Offices



11. Corridor Retail

# Development Typology

## 5. Multiplex / Mansion House



SOM



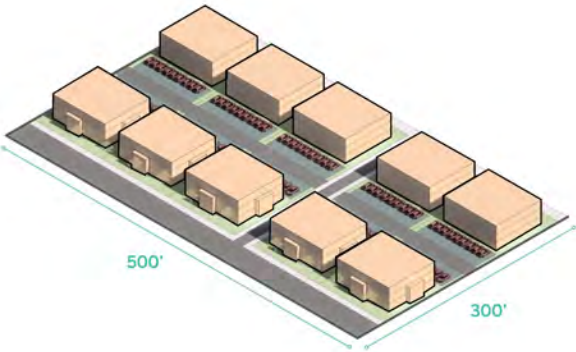
# Missing Middle: Multiplex

## Typology Characteristics

Multiplex (or mansion housing) is a group of eight to twelve walk-up units which may share a common entrance. Typically there is only one shared entrance. Multiplexes may also be termed based on their unit count + ‘plex’. Such as a four-plex, six-plex or eight-plex.

## Typical Metrics

Min. Block Size	95 x 100 ft	Density Range (DU/Acres)	20 - 50
Min. Site Area	0.22 ac	FAR	0.6 - 1.3
Footprint Range	4,800 - 9,000 sq ft	Parking	Rear, Side
Height Range	16 - 24 ft	At-Grade Uses	Residential
		Construction (IBC)	Type I, II



Multiplex buildings on 3.5 acre site

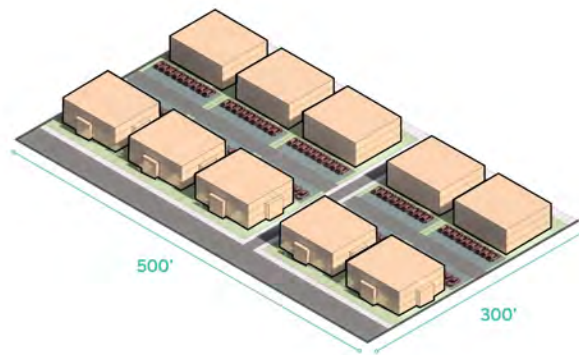
# Missing Middle: Multiplex

## Suitable Locations

- Multiplexes are best suited where densities above a triplex are desired, but smaller lot dimensions do not make a larger apartment feasible.
- Best suited in neighborhoods where smaller, moderate density buildings are applicable.

## Key Challenges

- Will require either covered or uncovered parking solutions based on the number of units.
- Typically harder to incorporate into larger development sites unlike townhouses and triplex



Multiplex buildings on 3.5 acre site

# Missing Middle: Multiplex

## Example High-Quality Six Plex

3538 N Lowell Ave  
Chicago, IL

### POSITIVE FEATURES

- A. **Simple Use of Materials**  
Restrained use of materials for cladding, balconies, and entrances.
- B. **Setbacks with Planting Strip**  
Lawn is supplemented with tree plantings

Site Size	125 x 175 ft	Units	6
Site Area	0.5 ac	Unit Area Range	1,350 sq ft
Footprint	3,400 sq ft	Density (DU/AC)	12
Stories	3.5	FAR	0.5
		Parking Ratio	1



1) Infill (1-2 Parcels)

2) Multi-site (2-4 Parcels)

3) Block (4+ Parcels)



# Missing Middle: Multiplex

## Example High-Quality Multiplex (5+)

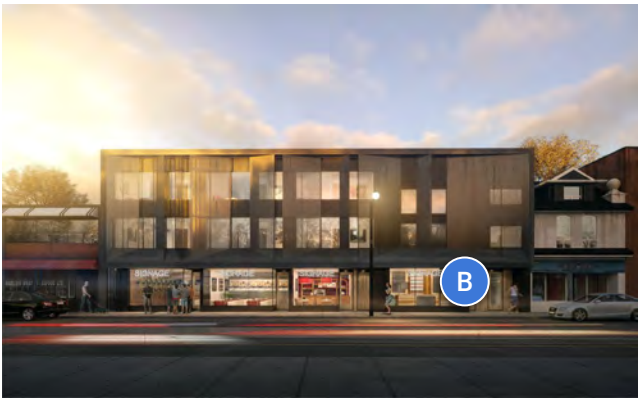
377 Broadview Ave  
(The Broadview Terraces)  
Toronto, ON

### POSITIVE FEATURES

- A. **At-Grade Entrances**  
Engages the Street
- B. **At-Grade Retail and Services**  
Creates a transparent and permeable ground floor.

Site Size	75 x 90 ft	Units	11
Site Area	0.1 ac	Unit Area Range	400 - 800 sq ft
Footprint	7,500 sq ft	Density (DU/AC)	100
Stories	3.5	FAR	3
		Parking Ratio	-

- 1) Infill (1-2 Parcels)
- 2) Multi-site (2-4 Parcels)
- 3) Block (4+ Parcels)



# Missing Middle: Multiplex

## Example High-Quality 4-Plex + 6-Plex Block

- 1) Infill (1-2 Parcels)
- 2) Multi-site (2-4 Parcels)
- 3) Block (4+ Parcels)

588 SE 217th Ave  
(Twelve Mile Crossing)  
Gresham, OR

### POSITIVE FEATURES

- A. **At-Grade Entrances**  
Engages the Street
- B. **Rear Parking Placement**  
To keep cars off the pedestrian experience.
- C. **Simple Materials and Simple Roof Forms**  
Clearly expresses ground floors and common entranceways.

Site Size	280 x 480 ft	Units	82
Site Area	2.9 ac	Unit Area Range	900 - 1,200 sq ft
Footprint	25,000 sq ft	Density (DU/AC)	28
Stories	3	FAR	0.55
		Parking Ratio	1+



# Missing Middle: Multiplex

## Example High-Quality Multiplex (5+)

- 1) Infill (1-2 Parcels)
- 2) Multi-site (2-4 Parcels)
- 3) Block (4+ Parcels)

1212 Larkin  
(Larkin Place)  
Elgin, IL

### POSITIVE FEATURES

- A. **At-Grade Entrances**  
Engages the street with stoops and porches.
- B. **Vehicular Role Minimized**  
Parking is relegated to a collective surface lot to the rear, with accessible at-grade entries
- C. **Contextual Vernacular**  
Architectural style reflects neighboring homes and townscape context

Site Size	285 x 530 ft	Units	48
Site Area	3.5 ac	Unit Area Range	450 - 800 sq ft
Footprint	365,000 sq ft	Density (DU/AC)	13
Stories	2	FAR	2.4
		Parking Ratio	-





# Missing Middle: Multiplex

## Aspirational Prototypical Mass

### 1. Primary Entrance Communicated Clearly in Massing

Multiplexes are characterized by a common entry to the building. Also called a “walkup”. Entrances should be clearly visible to both residents and pedestrians and well-lit. Buffering between the building entrance and the sidewalk can be achieved with green planting areas.

### 2. Parking Tucked Behind If Possible

Using existing alleys if available or introducing front-loaded access if needed. Larger block developments can use a single common driveway to access all parking areas for multiple buildings.

### 3. Front Yard for Planting and Rear Yard to Screen Parking

Plantings and setbacks can be used to create a continuity and a context-sensitive response to surrounding density.

Site Size	70 x 125 ft	Units	4 / 6 / 8+
Site Area	0.2 ac	Unit Area Range	500 - 1,000 sq ft
Footprint	2,100 sq ft	Density (DU/AC)	20 - 40
Stories	2	FAR	
		Parking Ratio	



# Missing Middle: Multiplex

## Aspirational Prototypical Plan

### 1. Compact Floor Plan

A 6-plex can be achieved with greater building depth without requiring internal circulation or 3 stories. Compact massing ensures that a multiplex can blend into neighboring missing middle types.

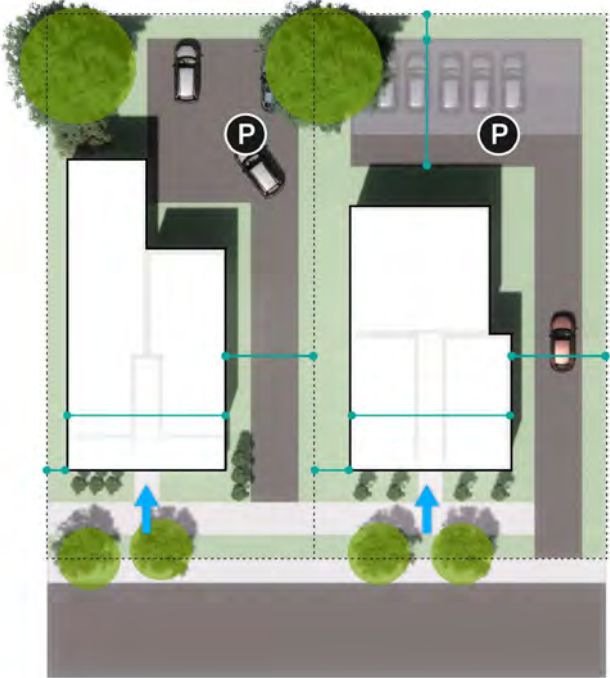
### 2. Shaded Parking

Rear parking can be shaded using vegetation or with a covered parking garage. Additional setbacks should be considered if a parking garage is used.

### 3. Well Landscaped Setbacks.

Setbacks should incorporate extensive planting, street furniture, or other landscape elements to create a better relationship with the sidewalk.

Site Area	0.2 ac
Site Depth	70 ft
Site Width	125 ft
Bldg Footprint	2,100 sq ft
Bldg Depth	66 ft



Street

# Missing Middle: Multiplex

## Aspirational Prototypical Section

### 1. Primary Entrance Communicated Clearly in Massing

Multiplexes are characterized by a common entry to the building. Frequently this enters into a stair hall, accessing units on a second floor. Additional points of egress may lead to parking or shared landscape spaces.

### 2. Parking Tucked Behind If Possible

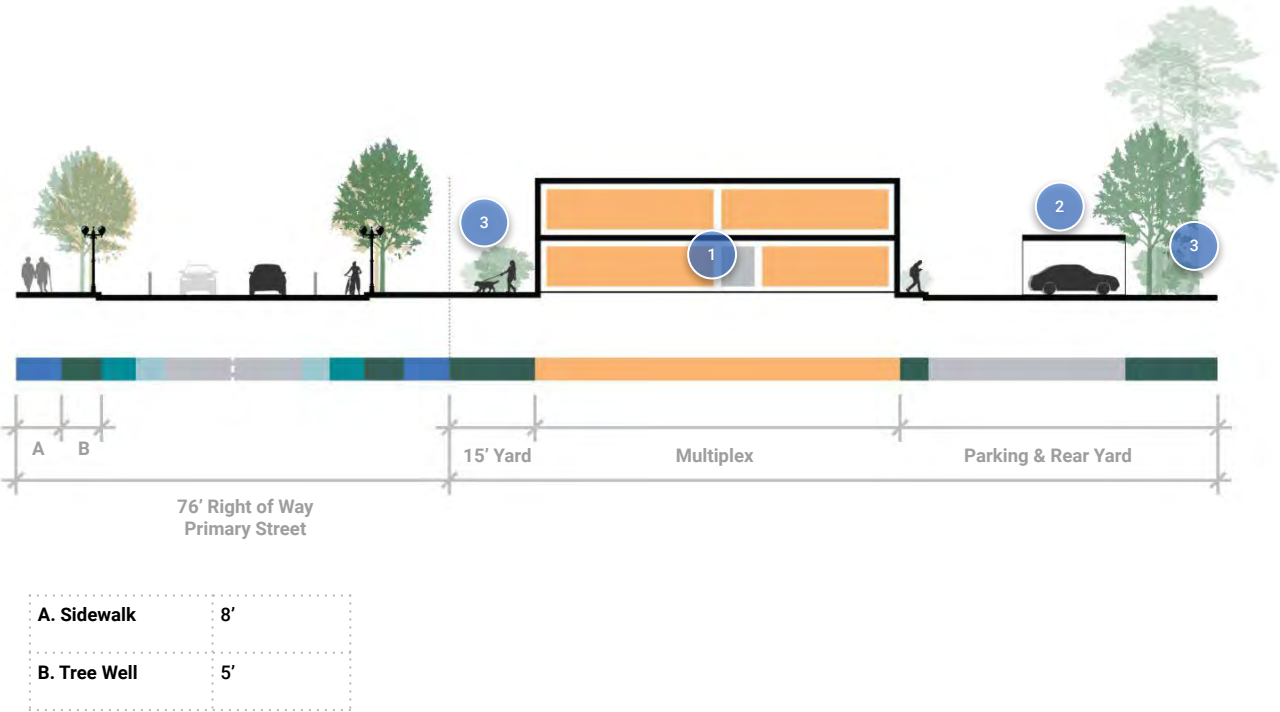
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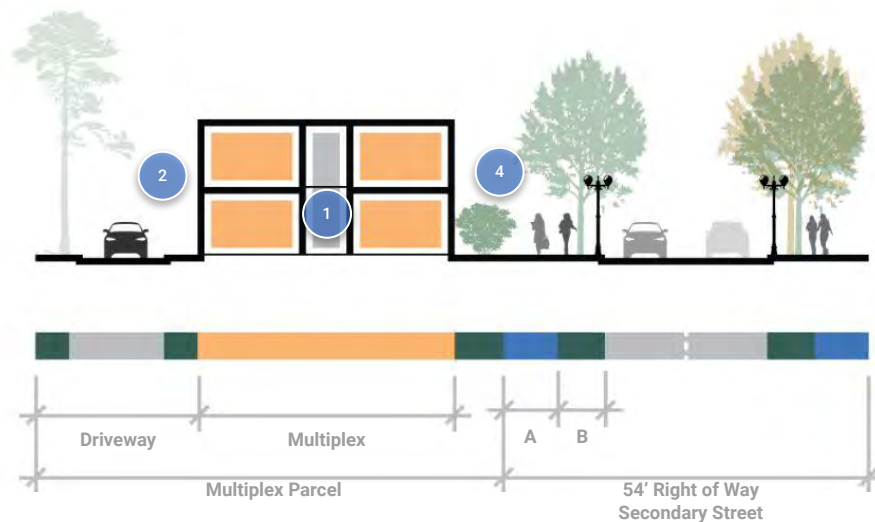
Setbacks should incorporate extensive planting, street furniture, or other landscape elements to create a better relationship with the sidewalk.





# Missing Middle: Multiplex

## Aspirational Prototypical Section



# Development Typology

## 6. Cottage Courts



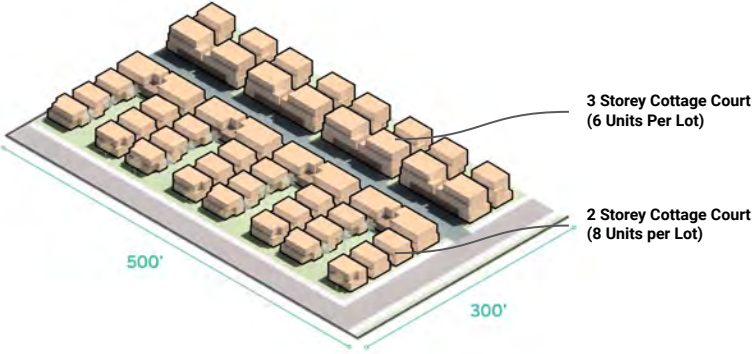
# Missing Middle: Cottage Courts

## Typology Characteristics

One to three story buildings oriented around a single courtyard. Parking may be located in the rear of the lot or maybe be incorporated into the courtyard itself. These buildings may be a mix of various multiplex types, triplexes, or townhouses.

## Typical Metrics

Min. Block Size	100 x 150 ft	Density Range (DU/Acres)	15-30
Min. Site Area	15,000 sq ft	FAR	0.51 - 0.7
Footprint Range	960 - 2,800 sq ft	Parking	1-2 per unit
Height Range	16 - 30 ft	At-Grade Uses	Residential
		Construction (IBC)	Type III and V



Cottage Courts on 3.5 acre site



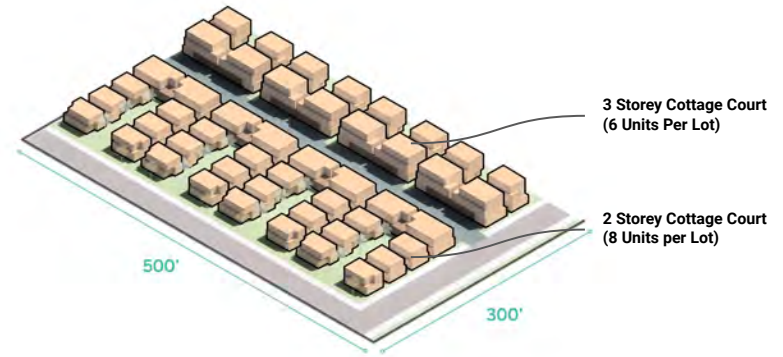
# Missing Middle: Cottage Courts

## Suitable Locations

- Urban infill.
- Greenfield development.

## Key Challenges

- Getting the development to 'pencil' or be financially lucrative.
- Meeting requirements of zoning ordinances.
- Market acceptance is slow because new cottage court projects are rare.



Cottage Courts on 3.5 acre site

# Missing Middle: Cottage Courts

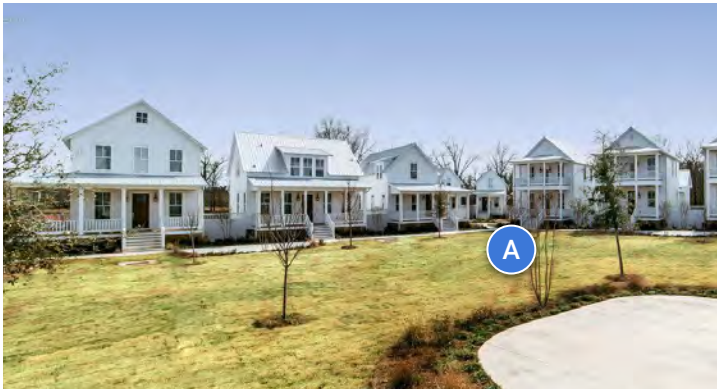
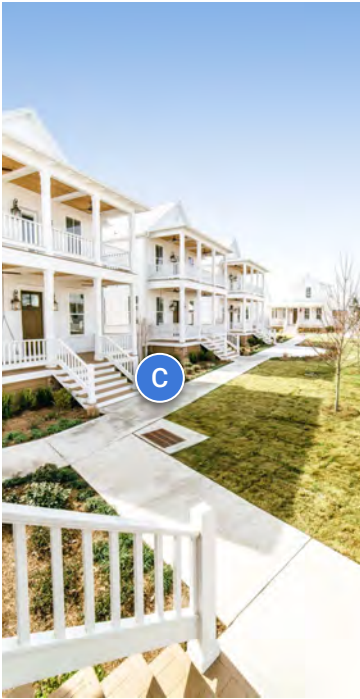
## Example High-Quality Developments

Heritage Village Cottage Court  
Barling, AR

### POSITIVE FEATURES

- A. Variety of Plans**  
Six different house plans of varying size were used to add variety to the development
- B. Simple Forms**  
Massing relies on pitched roofs and porch projections for variety.
- C. Consistent Character**  
Curated window, door, railing and roof details as well as color scheme unify unit types.

Site Size	500 x 700 ft	Units	17
Site Area	2.12 ac	Unit Area Range	675 - 1,830 sq ft
Footprint	20,000 sq ft	Density (DU/AC)	8
Stories	2	FAR	2.3
		Parking Ratio	1+



# Missing Middle: Cottage Courts

## Example High-Quality Developments

The Borough  
Carlton Landing, OK

### POSITIVE FEATURES

- A. Low Carbon Materials**  
Load-bearing masonry walls and timber are sustainable as well as aesthetically pleasing
- B. Simple Forms**  
Massing relies on pitched roofs and porch projections for variety.
- C. Consistent Character**  
Curated window, door, railing and roof details unite the myriad of unit types.

Site Size	125 x 170 ft	Units	8
Site Area	0.34 ac	Unit Area Range	720 - 1,080 sq ft
Footprint	3,000 sq ft	Density (DU/AC)	23
Stories	2	FAR	2.4
		Parking Ratio	1+





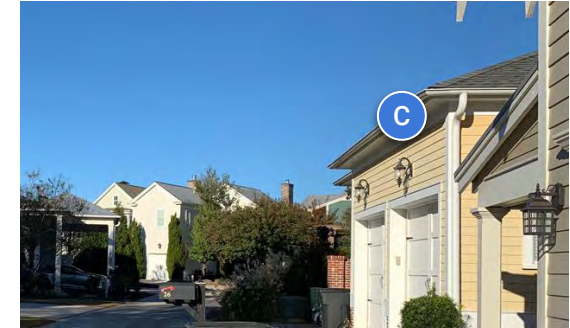
# Cottage Courts

## Example High-Quality Developments

North Augusta, SC

### POSITIVE FEATURES

- A. Homes Address Shared Space**  
Homes face onto a landscaped “court”.
- B. Appropriate Scale**  
The smaller unit footprints contribute to the comfortable scale of the development.
- C. Rear Parking Access**  
Ensures front doors and living spaces address the central open space.



# Missing Middle: Cottage Courts

## Example High-Quality Developments

- 1) Infill (1-2 Parcels)
- 2) Multi-site (2-4 Parcels)

129 Armstrong St  
(Hintonburg Six)  
Ottawa, ON

- A. Simple Material Palette
- That creates a unified development
- B. All Units Visible from the Street
- Front doors of rear units clearly visible from the curb.
- C. Corner Planting
- Enhance pedestrian experience

Site Size		Units	
Site Area		Unit Area Range	
Footprint		Density (DU/AC)	
Stories		Density (FAR)	
		Parking Ratio	



# Missing Middle: Cottage Courts

## Example High-Quality Developments

- 1) Infill (1-2 Parcels)
- 2) Multi-site (2-4 Parcels)

Ottawa, ON

- A. Simple Material Palette
- That creates a unified development
- B. All Units Visible from the Street
- Front doors of rear units clearly visible from the curb
- C. Tucked Parking
- As part of internal courtyard space

Site Size		Units	
Site Area		Unit Area Range	
Footprint		Density (DU/AC)	
Stories		Density (FAR)	
		Parking Ratio	





# Cottage Courts / Mews

## Aspirational Prototypical Mass

1. Text to follow  
Text to Follow



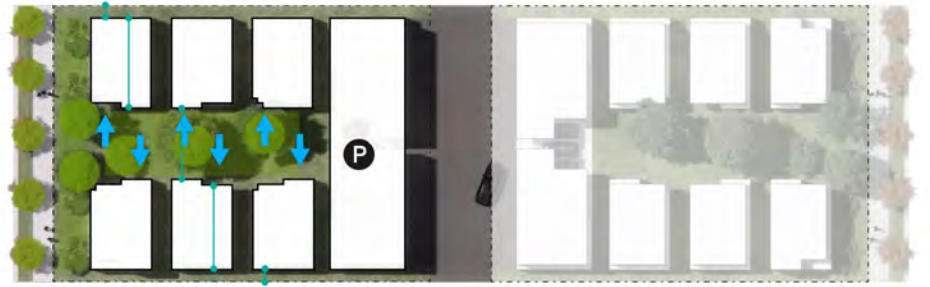
Site Size		Units	
Site Area		Unit Area Range	
Footprint		Density (DU/AC)	
Stories		FAR	
		Parking Ratio	

# Cottage Courts / Mews

## Aspirational Prototypical Mass

### 1. Text to follow

Text to Follow



# Development Typology

## 7. Townhouses



SOM



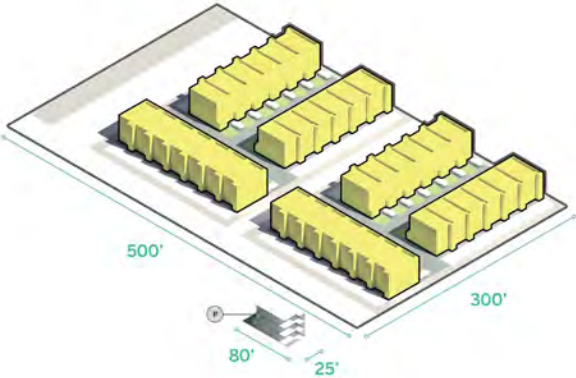
# Townhouses

## Typology Characteristics

Townhouses are homes arranged side-by-side at the ground and sharing a party wall. Each home typically has its own parking. Townhomes may also be called rowhouses. Access to parking may be via rear or alley or front loaded. Parking in the rear may be simple surface parking or a private garage.

## Typical Metrics

Min. Block Size	37 x 100 ft	Density Range (DU/Acres)	8 - 25
Min. Site Area	0.1 ac	FAR	0.51 - 0.7
Footprint Range	960 - 2,800 sq ft	Parking	1+ per unit
Height Range	16 - 24 ft	At-Grade Uses	Residential
		Construction (IBC)	Type III and V



Townhouses on 3.5 ac site.

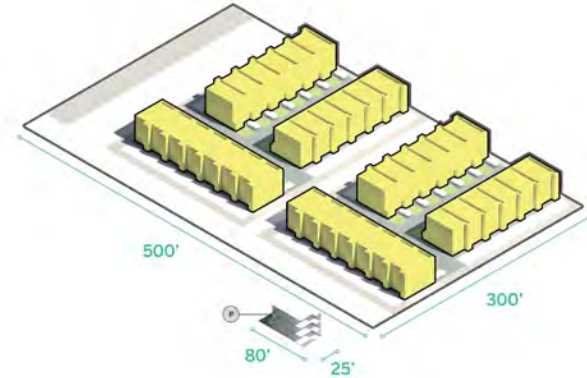
# Townhouses

## Suitable Locations

- Urban infill.
- Block strip redevelopment.
- Accompanying Four Story or Mixed Use developments within a TOD area as a transitional density to surrounding lower density neighborhoods.

## Key Challenges

- Locating parking away from the primary street through an alley. Sufficient block depth and width is needed if a driveway is required.
- Achieving adequate open space.



Townhouses on 3.5 ac site.

# Townhomes

## Example High-Quality Developments

317 NE Burwood Mews  
(Trailhead Mews)  
Bentonville, AR

### POSITIVE FEATURES

- A. Simple Forms**  
Clear organization and restrained articulation.
- B. Rear Parking Access**  
Ensures front doors and living spaces address the street.
- C. Natural Colors and Materials**  
Emphasis on bright, context sensitive materials.

Site Size	180 x 190 ft	Units	16
Site Area	0.78 ac	Unit Area Range	1,400 sq ft
Footprint	700 sq ft	Density (DU/AC)	21
Stories	3	FAR	1
		Parking Ratio	1





# Townhomes

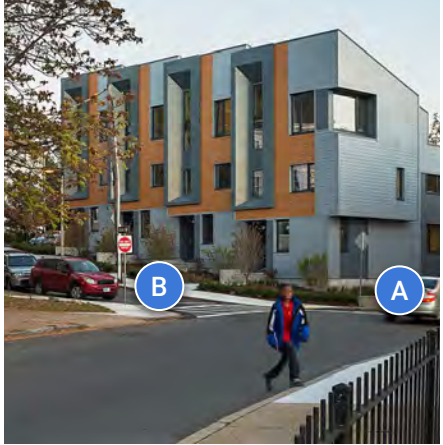
## Example High-Quality Developments

226 - 232 Highland  
(E+ Townhouses)  
Boston, MA

### POSITIVE FEATURES

- A. Simple Forms**  
Clear organization and restrained articulation.
- B. All Units Visible from the Street**  
Front doors and living spaces clearly visible from the street.
- C. Grade Transition along Street**  
Individual units shift entrance and unit heights to manage steep grade change

Site Size	75 x 85 ft	Units	4
Site Area	0.15 ac	Unit Area Range	1,900 sq ft
Footprint	940 sq ft	Density (DU/AC)	26
Stories	3	FAR	1.8
		Parking Ratio	1



# Townhomes

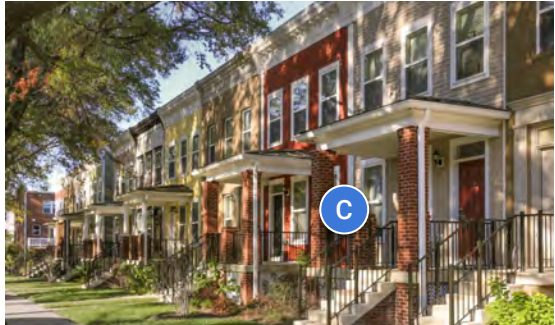
## Example High-Quality Multi-Block Development

226 - 232 Highland  
(MetroTowns at Parkside)  
Washington, District of Columbia

### POSITIVE FEATURES

- A. Simple Forms**  
Clear organization and restrained articulation.
- B. Thematic Variety**  
Materials, proportions and style are consistent while allowing for variation on a vernacular theme
- C. Distinct Units**  
Shared rhythm with trim, color, roof variations.
- D. Identifiable Front Entries**  
Front porches and stoops and rear vehicular access

Site Size	650 x 750 ft	Units	125
Site Area	9 ac	Unit Area Range	-
Footprint	110,000 sq ft	Density (DU/AC)	14
Stories	2 to 3	FAR	3.5
		Parking Ratio	1



# Townhomes

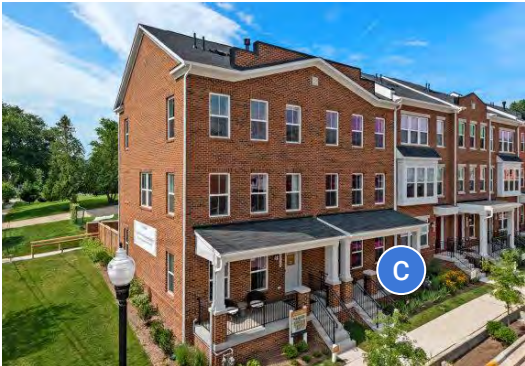
## Example High-Quality Multi-Block Development

4512 12th Street NE  
(Townhomes at Michigan Park)  
Washington, District of Columbia

### POSITIVE FEATURES

- A. Simple Forms**  
Clear organization and restrained articulation.
- B. Thematic Variety**  
Materials, proportions and style are consistent while allowing for variation on a vernacular theme
- C. Distinct Units**  
Shared rhythm with trim, color, roof variations.
- D. Identifiable Front Entries**  
Front porches and stoops and rear vehicular access

Site Size	450 x 500 ft	Units	80
Site Area	4.2 ac	Unit Area Range	1,400-1,600 sq ft
Footprint	45,000 sq ft	Density (DU/AC)	19
Stories	3	FAR	4
		Parking Ratio	2





# Townhomes

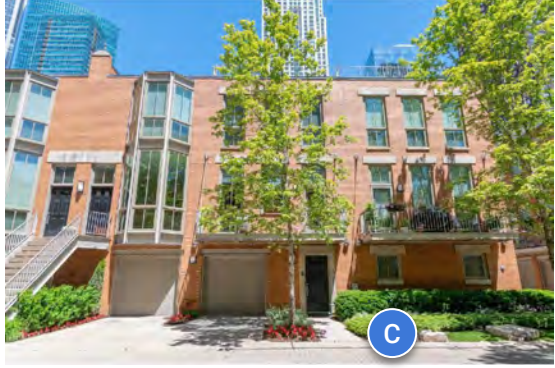
## Example High-Quality Multi-Block Development

103-113 W Chestnut Street  
(East Water Place Townhomes)  
Chicago, IL

### POSITIVE FEATURES

- A. Simple Forms**  
Clear organization and restrained articulation.
- B. Unified Appearance**  
Simple masonry, limestone lintels and bay windows are hallmark details of the development
- C. Extensive Landscaping**  
Semi-private front gardens, planted alleyways, and landscaping.
- D. Identifiable Front Entries**  
Front stoops and direct access to the street.

Site Size	540 x 200 ft	Units	56
Site Area	2.8 ac	Unit Area Range	2,200-2,800 sq ft
Footprint	68,000 sq ft	Density (DU/AC)	20
Stories	3	FAR	1.2
		Parking Ratio	2



# Townhomes

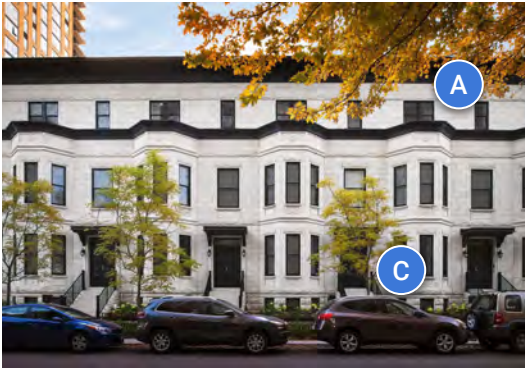
## Example High-Quality Single Plot Development

103-113 W Chestnut Street  
(Chestnut Row Homes)  
Chicago, IL

### POSITIVE FEATURES

- A. Simple Forms**  
Clear organization and restrained articulation.
- B. Unified Appearance**  
Continuous entablatures, rusticated foundation and attic floor unify the townhomes into a identifiable community
- C. Distinct Units**  
Bay windows and stoops indicate distinct units
- D. Identifiable Front Entries**  
Front stoops and direct access to the street.

Site Size	144 x 108 ft	Units	8
Site Area	0.35 ac	Unit Area Range	3,000 sq ft
Footprint	15,800 sq ft	Density (DU/AC)	22
Stories	3	FAR	2.9
		Parking Ratio	2





# Townhomes

## Example High-Quality Single Plot Development

550-556 W Grant Place  
(Grant Place Townhomes)  
Chicago, IL

### POSITIVE FEATURES

**A. Simple Forms**

Clear organization and restrained articulation, strong repetition.

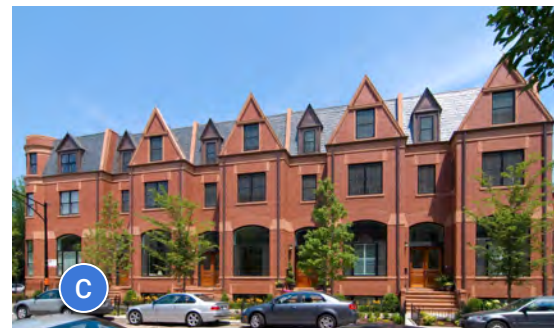
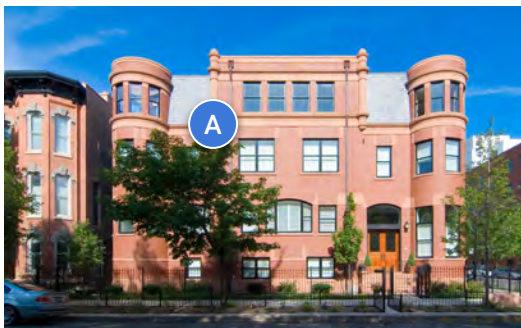
**B. Distinct Units**

Bay windows and stoops clearly indicate distinct units

**C. Identifiable Front Entries**

Front stoops with projecting architectural canopies have direct access to the street.

Site Size	65 x 125 ft	Units	5
Site Area	0.2 ac	Unit Area Range	6,000 sq ft
Footprint	8,125 sq ft	Density (DU/AC)	25
Stories	3	FAR	3.6
		Parking Ratio	2





# Townhome

## Aspirational Prototypical Mass

### 1. Limiting Row Lengths

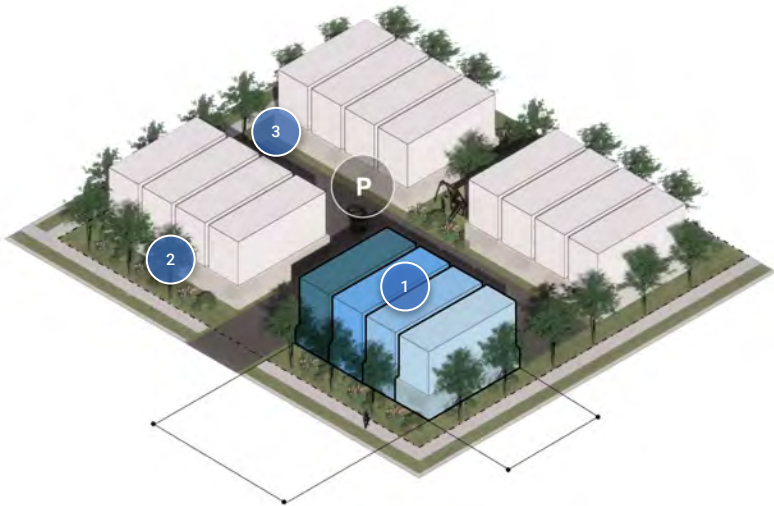
Rows of four to six attached units allow light and air and vegetation.

### 2. Homes addressing the Street, Parking at the Rear

Townhomes address the street in a more attractive way if driveways, garage doors or even surface parking areas are internal to the development.

### 3. Parking At-Grade

Townhomes can achieve higher densities by using the ground level as a parking garage. This can be particularly true where elevation change allows for an additional half-story without exceeding three visible stories.



Site Size	180 x 190 ft	Units	16
Site Area	0.78 ac	Unit Area Range	1,400 sq ft
Footprint	700 sq ft (each)	Density (DU/AC)	21
Stories	3	FAR	1
		Parking Ratio	1

# Townhome

## Aspirational Prototypical Plan

### 1. Setbacks

Allow for on-site landscape and tree plantings.

### 2. On-Site Open Space

When developed as part of a larger block redevelopment - open space can be located on-site in-between townhome clusters. This open space can be utilized as play spaces, neighborhood pocket parks, or stormwater infrastructure where runoff is expected.

### 3. Through Site Connections

Create permeable access, and limit the total length of impermeable building facade.

Site Area	0.78 ac
Site Depth	190 ft
Site Width	180 ft
Bldg Footprint	700 sq ft (each)
Bldg Depth	46 ft



# Townhome

## Aspirational Prototypical Section

### 1. Homes address the street, with landscaped fronts

Townhomes address the street in a more attractive way if vehicular areas are internal to the development and fronts feature landscaping or front yards.

### 2. Parking At-Grade

Townhomes can achieve higher densities by using the ground level as a parking garage.

### 3. Rooftop Terraces

Private terraces may be provided for each unit, adding a further landscape amenity.

### 4. Limiting Row Lengths

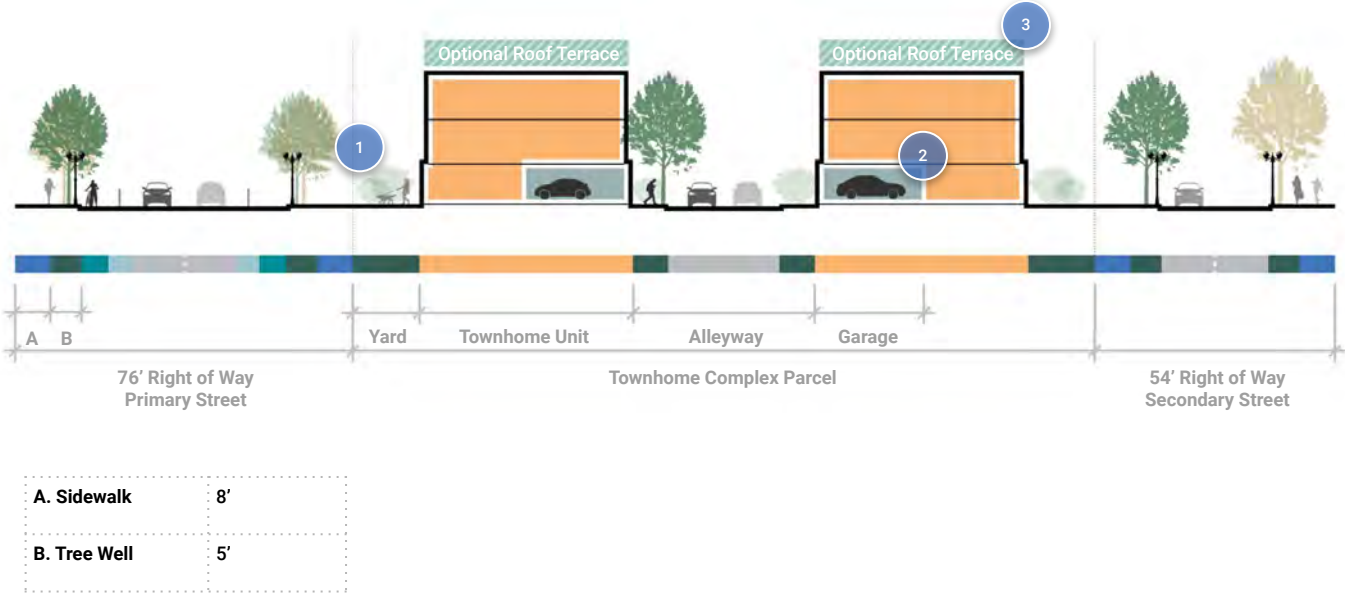
Rows of 4-6 attached units allow light and air and vegetation.

### 5. Through Site Connections

Create permeable access, and limit the total length of impermeable building facade.

### 6. Landscaped Setbacks

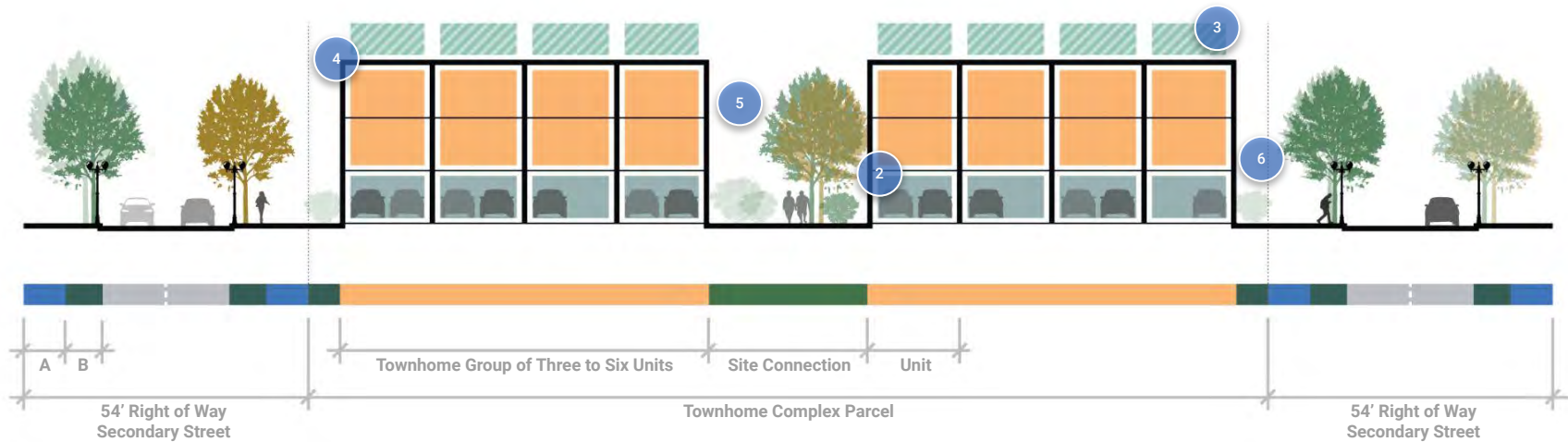
Dependent on condition, landscaped setbacks or lawns may add a town-like character. In denser urban environments, this may be reduced to a small planter.





# Townhome

## Aspirational Prototypical Section



# Development Typology

## 8. Missing Middle: Duplex (Stacked)



SOM

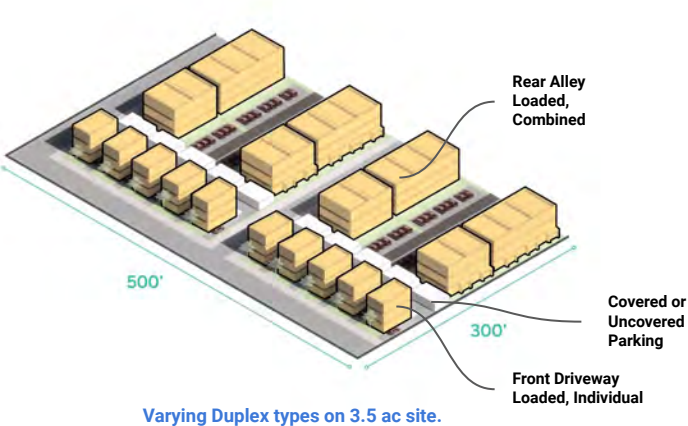
# Missing Middle: Duplex

## Typology Characteristics

Typically a single floor and a double floor unit. Two separate entrances are found at ground floor leading to each unit. The groundfloor is typically a studio or one bedroom unit. Upper two floors can be a two or three bedroom unit with rooftop access. Two plus two configurations are also possible. Half below grade floors are also sometimes incorporated, reducing the overall building height.

## Typical Metrics

Min. Block Size	37 x 100 ft	Density Range (DU/Acres)	8 - 25
Min. Site Area	0.1 ac	FAR	0.51 - 0.7
Footprint Range	960 - 2,800 sq ft	Parking	1+ per unit
Height Range	16 - 24 ft	At-Grade Uses	Residential
		Construction (IBC)	Type III and V





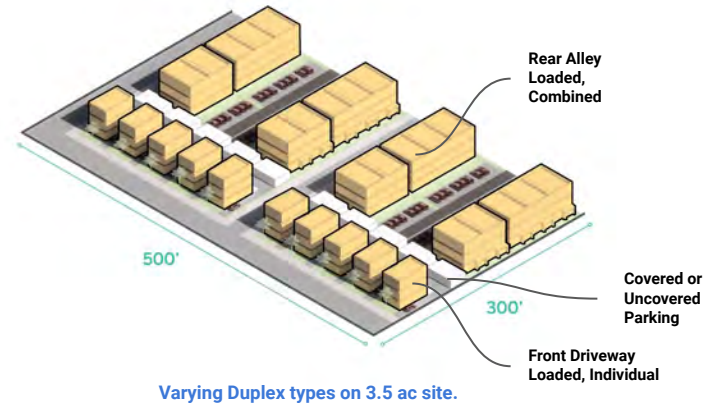
# Missing Middle: Duplex

## Suitable Locations

- Can be co-located with other typologies in mixed density developments or neighborhoods.
- Best suited where alley loading or parking is possible.

## Key Challenges

- May require one parking space per unit and an accessory garage building or dedicated driveway space on the lot.
- Examples of poor articulation and material selection being replicated at scale.



# Missing Middle: Stacked Duplex

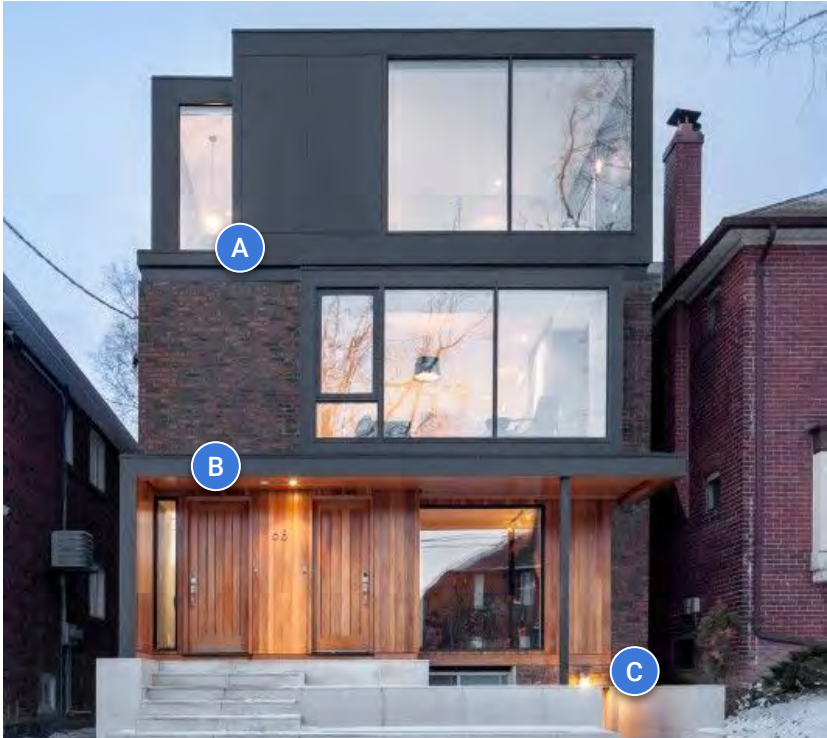
## Example High-Quality Infill

Midtown Duplex  
Toronto, ON, Canada

### POSITIVE FEATURES

- A. **Simple Massing Articulation**  
Subtle elements that distinguish duplex units.
- B. **Restrained Selection of Materials**  
Complementary and context-sensitive material palette.
- C. **Eyes on the Street**  
High level of fenestration and transparency.

Site Size	37 x 100 ft	Units	2
Site Area	0.1 ac	Unit Area Range	1,800 sq ft
Footprint	960 sq ft	Density (DU/AC)	20
Stories	3.5	FAR	0.6
		Parking Ratio	1



1) Infill (1-2 Parcels)

2) Multi-site (2-4 Parcels)

3) Block (4+ Parcels)

# Missing Middle: Duplex

## Example High-Quality Stacked Duplex

1) Infill (1-2 Parcels)

2) Multi-site (2-4 Parcels)

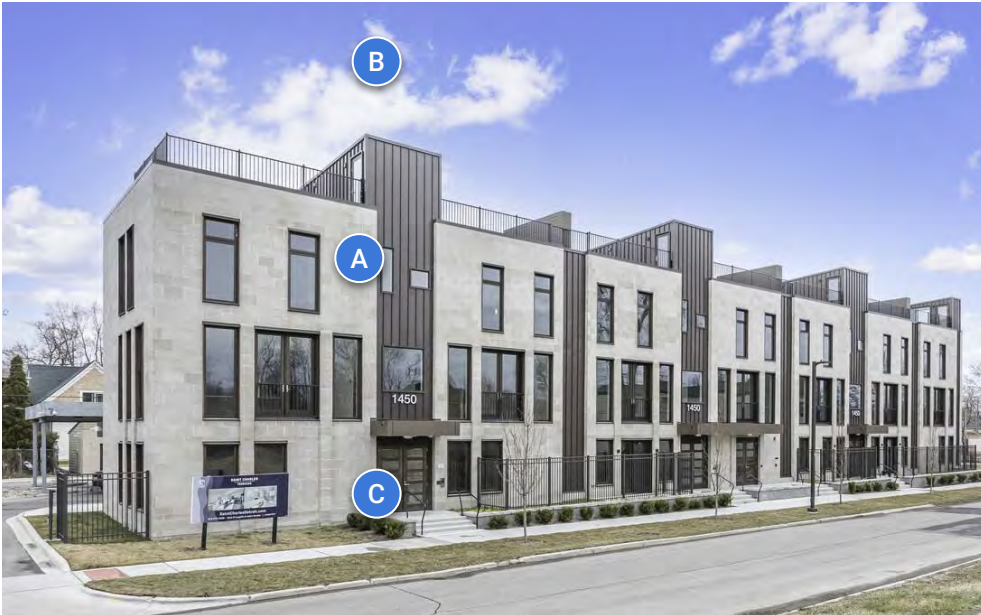
3) Block (4+ Parcels)

1450 Townsend St  
(Saint Charles Terraces)  
Detroit, MI

### POSITIVE FEATURES

- A. **Simple Material Choices**  
Limited and complementary palette.
- B. **Vertical Articulation**  
Balances horizontal rhythm
- C. **Landscape Buffer**  
Mediates ground units meeting the sidewalk

Site Size	73 x 230 ft	Units	16
Site Area	0.38 ac	Unit Area Range	460 - 920 sq ft
Footprint	5,400 sq ft	Density (DU/AC)	41
Stories	3	FAR	0.96
		Parking Ratio	1





# Missing Middle: Duplex

## Example High-Quality Stacked Duplex Block

- 1) Infill (1-2 Parcels)
- 2) Multi-site (2-4 Parcels)
- 3) Block (4+ Parcels)

Jackson & 12th St NE  
(Jackson Place Flats)  
Washington, DC

### POSITIVE FEATURES

- A. **Simple Material Choices**  
That reflect surrounding context
- B. **Vertical Articulation**  
Create a visual rhythm that emphasizes modules
- C. **Corner Planting**  
Creates green space at the intersection

Site Size	122 x 180 ft	Units	34
Site Area	0.5 ac	Unit Area Range	400 - 900 sq ft
Footprint	9,400	Density (DU/AC)	60
Stories	3.5	FAR	1.29
		Parking Ratio	1



# Missing Middle: Duplex + ADUs + Single Family

## Example High-Quality Duplex

588 SE 217th Ave  
(La France Walk)  
Atlanta, GA

### POSITIVE FEATURES

- A. Identifiable Entrances**  
Stoops and porches are visible from street
- B. Unit Type Variety, Unifying Character**  
Thematic architectural character unify a diverse range of unit types.
- C. Simple Materials and Simple Roof Forms**  
A language of peaked rooflines and vernacular materials such as wood slat and shingle siding
- D. Sustainable Site Design Principles**  
Water cisterns, solar arrays, and Tesla Powerwalls

Site Size	-	Units	25
Site Area	2.5 ac	Unit Area Range	-
Footprint	-	Density (DU/AC)	10
Stories	2 to 3	FAR	0.5
		Parking Ratio	0.5 to 1



1) Infill (1-2 Parcels)

2) Multi-site (2-4 Parcels)

3) Block (4+ Parcels)

# Missing Middle: Duplex + Townhome

## Example High-Quality Block Development

- 1) Infill (1-2 Parcels)
- 2) Multi-site (2-4 Parcels)
- 3) Block (4+ Parcels)

588-608 N Fair Oaks Avenue  
(Fair Oaks Court)  
Pasadena, CA

### POSITIVE FEATURES

- A. **Climate Responsive Vernacular Architecture**  
Porches, balconies, and deep eaves mitigate sun intensity
- B. **Simple Prismatic Forms**  
Peaked roofs and squared projections mitigate massing.
- C. **At-Grade Unit Entrances & Community Lawn**  
Shared porches or stoops address the street
- D. **Massing Shapes Shared Landscape**  
A central courtyard is surrounded by the dwelling units.
- E. **Refined Material Palette, Variety in Color**  
Traditional wood elements are paired with complementary color schemes allow for variety on a craftsman theme.

Site Size	285 x 310 ft	Units	34
Site Area	1.75 ac	Unit Area Range	750 -1 ,750 sq ft
Footprint	36,000 sq ft	Density (DU/AC)	23
Stories	4	FAR	1.5
		Parking Ratio	2.5





# Missing Middle: Duplex + Townhome

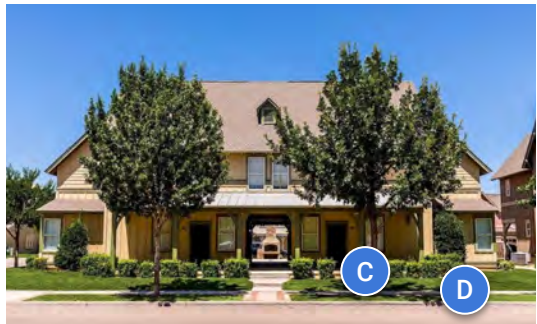
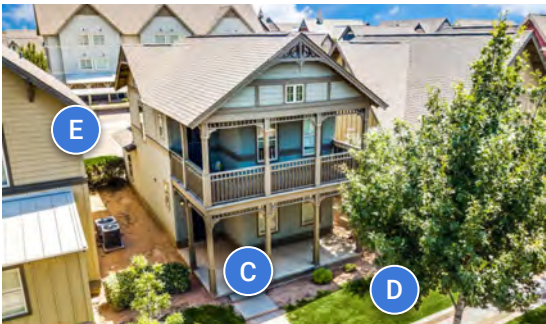
## Example High-Quality Multi-Block Developments

2001 9th Street  
(The Cottages/The Collective)  
Lubbock, TX

### POSITIVE FEATURES

- A. Cohesive Massing**  
Clear relationship of scale and form.
- B. Simple Material Palette**  
Emphasize a clear hierarchy of massing through material.
- C. Identifiable Street Entries**  
Units feature both front and back entries, embracing the street as well as parking
- D. Landscaped Setbacks, Front Porches/Stoops**  
Well-landscaped and feature community porches.
- E. Hidden Parking**  
Surface lots are behind clusters of units

Site Size	720 x 1,125 ft	Units	241
Site Area	18.6 ac	Unit Area Range	1,155-1,850 sq ft
Footprint	228,000 sq ft	Density (DU/AC)	13
Stories	2 to 3	FAR	1.6
		Parking Ratio	1.25



# Missing Middle: Duplex

## Aspirational Prototypical Mass

### 1. Units Organized in a Row

Higher unit densities can be achieved with the use of a common vertical access point.

### 2. Generous Setbacks

Landscaped setbacks with at-grade plantings to buffer the building and the sidewalk.

### 3. Visible Common Access Points

Common access points should be visible. Expresses with either material changes, mass articulation, or landscape elements.

### 4. Parking Access

Parking access should come off alleyways and access rear garages or lots where possible.

Site Size	73 x 230 ft	Units	16
Site Area	0.38 ac	Unit Area Range	460 - 920 sq ft
Footprint	5,400 sq ft	Density (DU/AC)	41
Stories	3	FAR	0.96
		Parking Ratio	1



\*Reference: Saint Charles Terraces

# Missing Middle: Duplex

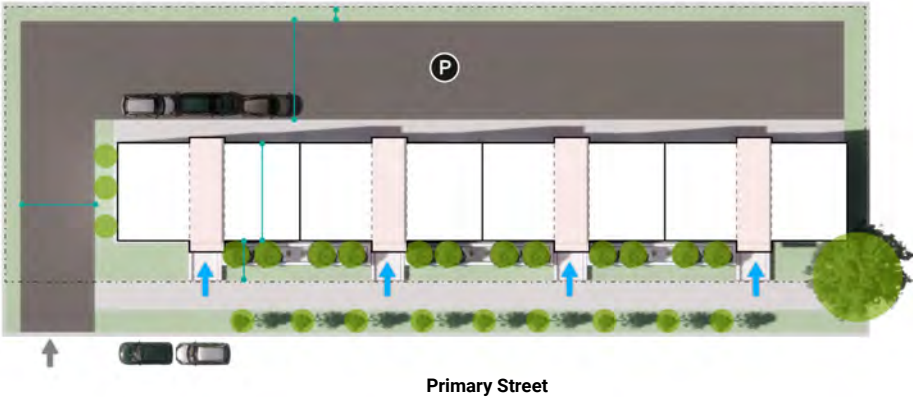
## Aspirational Prototypical Plan

### 1. Entrances Buffered with Planting

Landscape elements within building setbacks.  
Strategic placement of trees along site edges and driveway entrances to screen parking surfaces.

### 2. Parking On-Site and On-Street

Parking onsite to meet parking minimums but on-street parking should be encouraged to reduce impermeable block coverage.



Site Area	0.38 ac
Site Depth	73 ft
Site Width	230 ft
Bldg Footprint	5,400 sq ft
Bldg Depth	28 ft



# Missing Middle: 2 Over 1 Duplex

## Aspirational Prototypical Section

### 1. Generous Landscaped Setbacks

Landscaped setbacks with at-grade plantings to buffer the building and the sidewalk

### 2. Entrances Buffered with Planting

Building setbacks should be landscaped, particularly along front facades.

### 3. Parking Access

Parking access should come off alleyways and access rear garages or lots where possible. If two rows of duplexes share a block, parking can be access from a central drive.

### 4. Rooftop Terraces

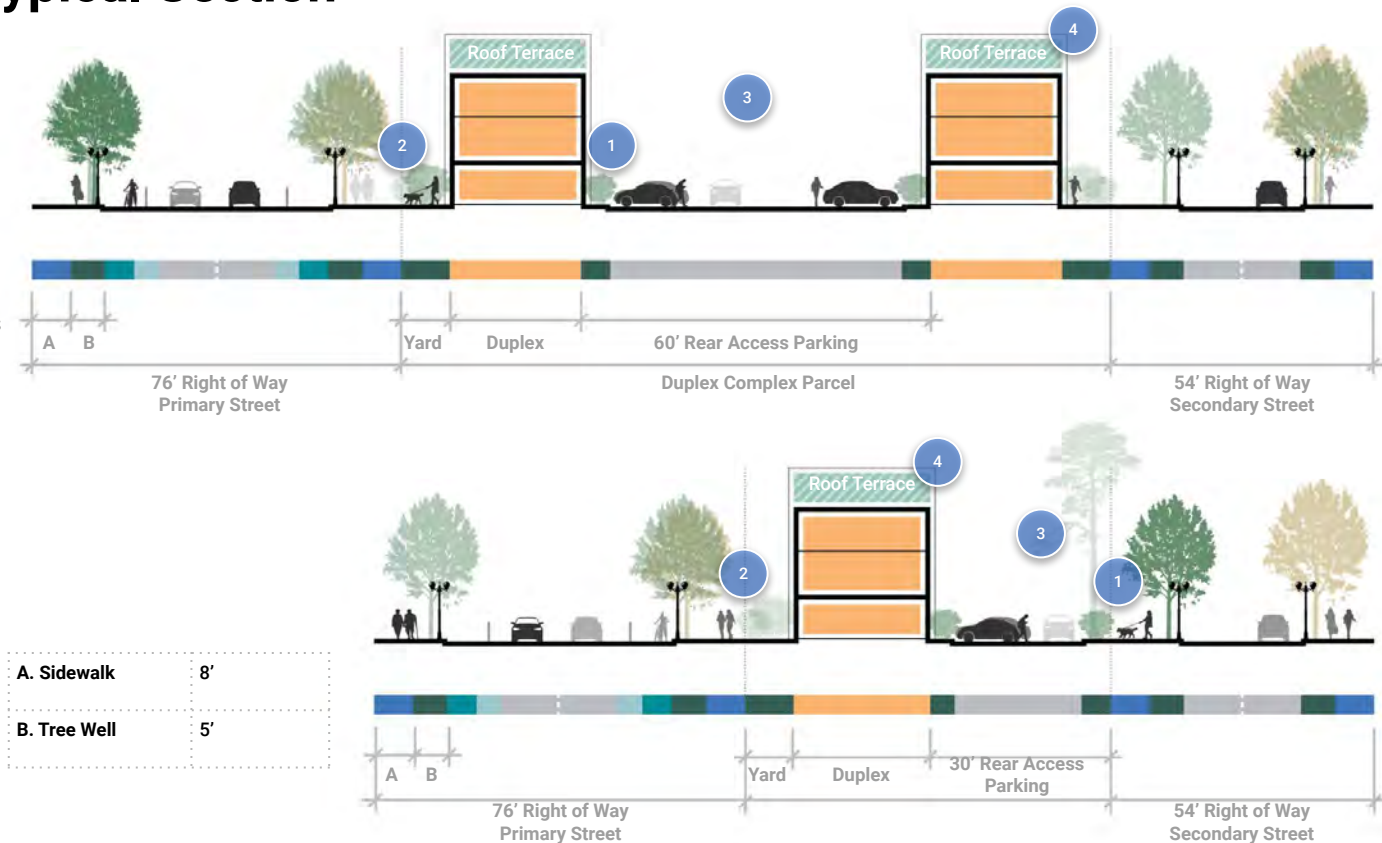
Private terraces may be provided for each unit, adding a further landscape amenity.

### 5. Units Organized in a Row

Units are organized in clusters across the site.

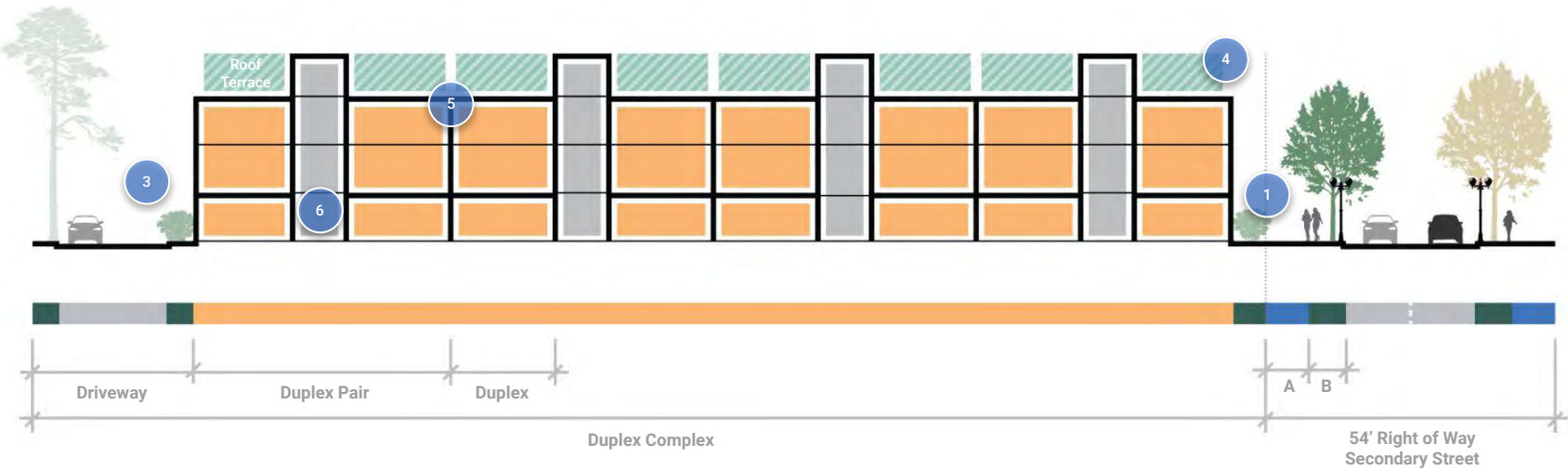
### 6. Common Access Point

Higher unit densities can be achieved with a common vertical access point.



# Missing Middle: 2 Over 1 Duplex

## Aspirational Prototypical Section



# Missing Middle: 2 Over 2 Duplex

## Aspirational Prototypical Section

### 1. Generous Landscaped Setbacks

Landscaped setbacks with at-grade plantings to buffer the building and the sidewalk

### 2. Entrances Buffered with Planting

Building setbacks should be landscaped, particularly along front facades.

### 3. Parking Access

Parking access should be from alleyways and access rear garages or lots where possible. If two rows of duplexes share a block, parking can be access from a central drive.

### 4. Rooftop Terraces

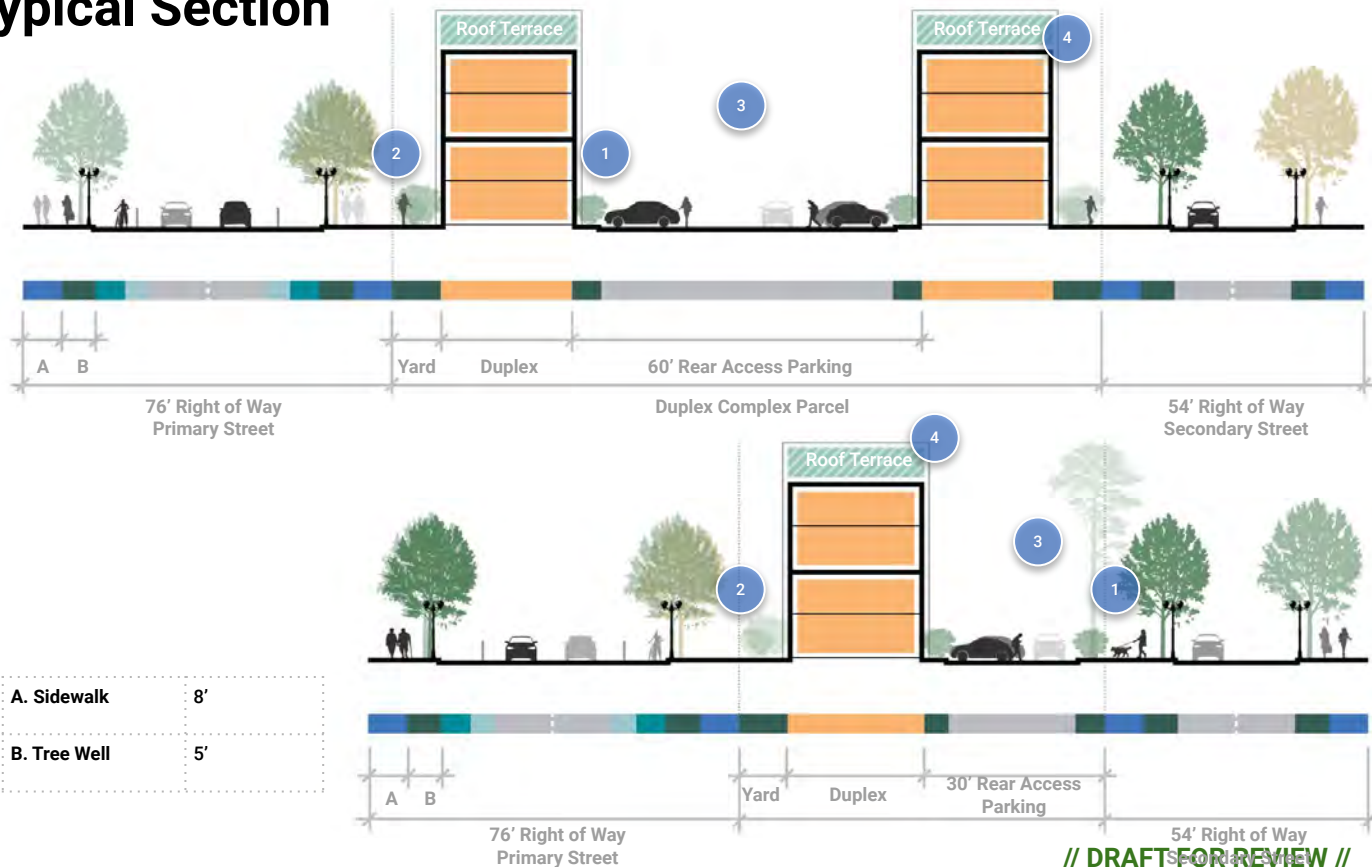
Private terraces may be provided for each unit, adding a further landscape amenity.

### 5. Units Organized in a Row

Units are organized in clusters across the site.

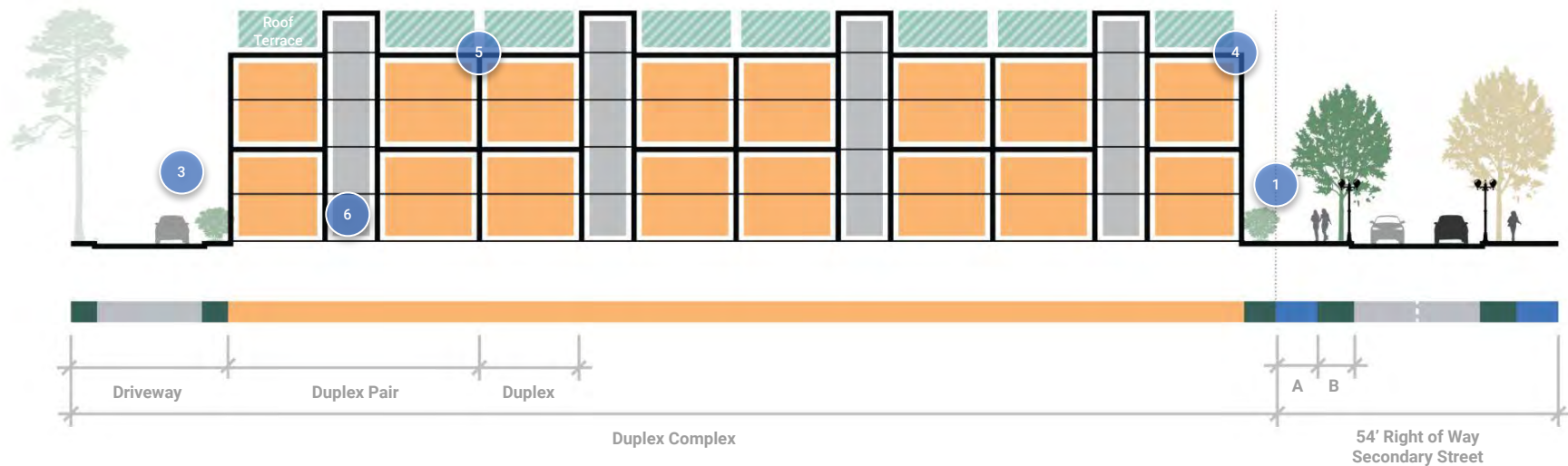
### 6. Common Access Point

Higher unit densities can be achieved with a common vertical access point.





# Missing Middle: 2 Over 2 Duplex Aspirational Prototypical Section





# Development Typology

## 9. Town Scale Single Family

SOM



# Single Family

## Example High-Quality Developments

Colebrook Ln  
(Midtown at Cottonwood Creek)  
Colorado Springs, CO

- A. **Simple Material Palette**  
Natural materials and colors unify identity.
- B. **Diversity of Unit Forms**  
Front variety of roof forms and mirroring of floor plans creates diversity.
- C. **Parking on Site Interior**  
Rear garages enhance pedestrian experience on street.

Site Size (Each)	28 x 76 ft	Units	1
Site Area (Each)	2,100 sq ft	Unit Area Range	1,600-4,800 sq ft
Footprint	800 sq ft	Density (DU/AC)	20
Stories	2 - 3	FAR	0.75
		Parking Ratio	1



# Development Typology

## 10. Corridor Retail





# Corridor Retail

## Typology Description

Corridor retail buildings encompass a broad range of types including: neighborhood stores, convenience stores, town center and “main street” shops, supermarkets, superstores and retail warehouses.

They are characterized by a primarily auto oriented format, and are often located on high traffic arterial and collector streets.

## Aspirations

Goals for this typology are to support a walkable public realm, frame the street wall, and minimize the visual impact of parking.



# Corridor Retail

## Design Directions

Bring building facades to street setbacks to support a walkable public realm and maximize building frontage at streets.

Avoid surface parking in front of retail along the street.

Place entrances on streets, as well as from any parking locations.

At least one entrance from the sidewalk is required and should be designed as the primary entrance.

Storefronts should be predominantly glass, with high visibility transmittance that allows visual connections from outside to inside and vice versa.

Include façade articulation such as colonnades, recesses, awnings, and different materials to contribute to a fine-grained, active pedestrian environment at the street level.

Activate setbacks with landscape for shade and ornament, furnishings with areas for sitting, and lighting for evening use.



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# Development Typology

## 11. Office





# Office

## Typology Description

Office buildings are primarily used for private sector business operations. They also frequently used by government and institutions for administration. Office buildings may also host research and technology functions.

Footprint and floor plate dimensions are driven by standard operating requirements, while the approach to parking often defines site arrangements.

## Aspirations

Goals for this typology are to support a walkable public realm, frame the street wall, and minimize the visual impact of parking.



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# Office

## Design Directions

Bring building facades to street setbacks to support a walkable public realm and maximize building frontage at streets.

Place employee and visitor entrance on streets.

Provide an active ground floor, including ground floor transparency into office building operations. Translucent glazing may be used where privacy is required.

Large expanses of glass, glass curtain walls, or glass buildings are discouraged.

Unoccupied spaces, mechanical and utility rooms and blank walls should not face the streets.

Parking should be placed at the interior or rear of the site.

Shared use parking across office, retail and entertainment uses with different peak hours and days should be used to reduce total parking area demands.



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# C. General Guidance on Common Themes

SOM



An architectural rendering of a sustainable residential development. The scene features several modern, multi-story houses with light-colored, vertically-slatted siding and dark, gabled roofs. The houses are arranged in a row, with a paved walkway leading from the foreground towards the buildings. To the left of the walkway is a lush garden with various plants and a wooden fence. A person is walking on the path towards the right. The entire image has a teal color overlay.

# General Guidance

## 1. Sustainability

SOM

# General Guidance

## Sustainability - Energy Conservation

### Building Placement

Minimize energy consumption in new development by encouraging compact development with buildings spaced to provide shade to each other and the spaces between them at different times of the day.

Encourage the placement of trees close to buildings to provide shading.

### Building Shading

Encourage the use of external shading for south and west facing windows and the use treated glass to reduce heat gain.

South facing balconies should be recessed or have shades above windows or vertical fins to minimize solar gain.

External shading devices such as ground floor awnings and fins on upper floors are encourage to minimize direct solar gain.





# General Guidance

## Sustainability - Green Roofs

### Roofs

Green or vegetated roofs are encouraged for larger roof area residential, commercial and institutional buildings, to reduce heat gain and support habitat.

Rooftop landscaping should incorporate species that are resilient and self-sustaining in the Chapel Hill climate.

Roof surface areas not used for vegetated green roof, solar energy or utility systems should have a light reflecting surface to reduce heat gain.

Buildings over five stories should have accessible usable roof tops, with rooftop landscape and, or, rooftop gardens.

The use of rooftop photovoltaic installations (solar panels) is encouraged.

The use of roof based solar hot water systems is encouraged.





# General Guidance

## Sustainability - Landscape and Open Space

### Sustainable Landscape and Open Spaces

Retain existing trees, native soils and natural slopes where possible.

Landscaped areas should be planted with species relevant to North Carolina's Piedmont region, and resilient to it's climate.

Landscape and open space design should incorporate courtyards shaded by buildings for some of the day for main gathering places to provide comfortable outdoor spaces.

Natural rainfall or the use of greywater should be used for irrigation in lieu of potable water resources.

Open grid pavement systems, that have openings to soil or vegetation, should be used where appropriate to reduce impervious surface and decrease run-off and urban heat island effects.

The use of pervious, light colored material should be maximized in the hardscape of public areas, plaza and courtyard surfaces, bike trails and pedestrian walkways.



# General Guidance

## Sustainability – Stormwater Management

### Stormwater Runoff Management

On site stormwater management should be prioritized to reduce runoff and its impact on neighboring properties and local utilities.

Bioswales can be incorporated into the design of surface parking areas, medians and landscape strips bordering streets, catching runoff from impermeable surfaces.

High quality bioswales and other stormwater catchment facilities can add landscapes that reduce run-off, reduce heat island effects and are aesthetically pleasing.

Bioswales and stormwater catchment areas should be planted with native species that can handle the region's rainfall and support local ecosystems.





# General Guidance

## 2. On-Site Open Space



SOM



# General Guidance

## On-Site Open Space - Outdoor Living & Recreation

### Outdoor Living Rooms

Plazas and outdoor site amenities should be designed as “outdoor living rooms” for casual use. A variety of furnishings, activities and scales of space can add a richness to the environment, encouraging engagement and interaction.

### Active Recreation

Outdoor activities can encourage engagement and community growth. These activities should be inclusive, considering many ages and abilities. Key areas should be designated for these activities and they should not impact pedestrian accessibility.

### Shade Structures

Shade structures can extend the use of a space into warmer months and can visually identify a center or meeting place.

### Minimum Accessibility Links

On-site pedestrian routes should have a minimum 5' width for pedestrian comfort and accessibility. These paths should utilize easily navigable materials for all users.





General Guidance

## 3. Sidewalks & Pedestrian Zones

SOM



# General Guidance

## Sidewalks & Pedestrian Zones – Spill-Out Business Activity

### Cafe & Retail Spill-Out Space

Provision for retail or cafe business activity to spill out of the building adjacent to sidewalks is encouraged, or onto defined sidewalk spaces where the public realm is wide enough to accommodate additional activity.

### Retail & Cafe Perimeter Fences

Cafe and retail perimeter fences up to 3' in height may be provided. Solid fencing is discouraged. Planters, decorations, signs, or other elements projecting into pedestrian zones are discouraged in order maintain pedestrian accessibility.

### Define Spill-Out Spaces with Vegetation

Where possible, define outdoor amenity spaces such as sidewalk cafes, plazas and retail spill-out spaces with vegetation. Whether street trees or well-curated planters, these elements can add a layer to the streetscape. Elements should be placed to maintain pedestrian accessibility, and designed to be stored seasonally if not fixed.





# General Guidance

## Sidewalks & Pedestrian Zones – Landscape and Furnishing Zone

### Landscape and Furnishing Zone

Space for plantings, street and pedestrian lighting, and street furnishings can be provided adjacent to curbs. This zone can be considered a slower pedestrian zone intended for rest or recess from the street, adjacent to the primary pedestrian walking path.

This slower pedestrian zone can benefit from a change in paving texture to distinguish it from more active pedestrian walking zones.

Planting areas and tree pits can define the dimensions of this slower pedestrian zone. Landscape zones may range from four to six feet wide, providing enough depth from curb to active pedestrian zone for benches, other street furnishings, signage and bus shelters.



# General Guidance

## Sidewalks & Pedestrian Zones - Pedestrian Safety

### Parallel Parking as Pedestrian Protection

The provision of parallel parking can add an extra layer between the pedestrian realm and active vehicular lanes on the busiest streets. Parked vehicles can narrow the perceived driving zone and influence drivers to slow down, thereby enhancing pedestrian safety.

### Intersection Bump-Outs

On streets with parallel parking spaces, curbs should bump out the depth of the parking lane to allow greater pedestrian visibility. Bump-outs both allow pedestrians see oncoming traffic past parked vehicles, it also clearly defines the ends of the parking lanes and narrows streets at intersections. These enlarged corners can function as informal plazas and meeting places, adding to the streetscape.

### Pedestrian Refuge Islands

The design of medians on major thoroughfares such as Martin Luther King Jr Boulevard should feature comfortable places for pedestrian crossing. These spaces should also function as comfortable refuge zones, allowing the pedestrian to wait for passing traffic.



# General Guidance

## Sidewalks & Pedestrian Zones - Lighting

### **Pedestrian Realm Lighting**

Lighting in the public realm should consider both pedestrians and adjacent vehicular traffic.

Taller street lamps intended to light vehicular lanes are typically spaced at a distance 2.5 to 3 times the height of the pole.

Bollard or similar pedestrian lighting are frequently spaced 10' to 15' in high traffic areas such as sidewalks while a broader spacing of 20' to 25' is frequently appropriate for plazas, urban parks and more casual spaces.

Fixtures which feature downlighting are preferred to minimize light pollution, which frequently impacts the sleep cycles of both humans and wildlife.

Lighting is encouraged to use integrated photovoltaic systems for energy generation.

Photocells should be included to ensure lights operate only when daylight is insufficient.





## General Guidance

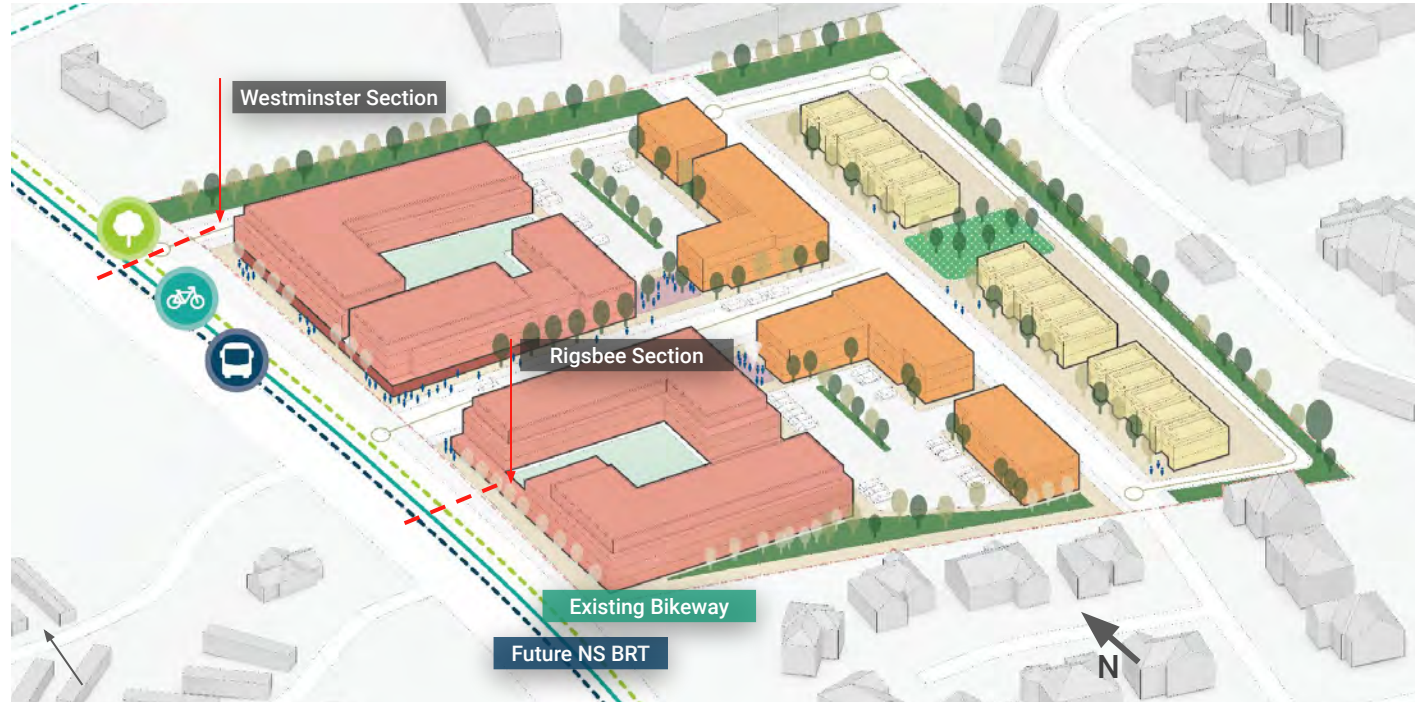
# Sidewalks & Public Realm Zones – Future N. MLK Jr. Blvd Case Study

The distance from curb to back of the right of way / property line can vary along MLK Jr Boulevard, creating locally specific conditions.

Frequently this results in available space for the public realm. At times this can be used for additional retail spill-out space. A landscaped zone at the curb may also be possible.

In other locations, the available space may be narrower, and a setback required to provide a sufficient dimension for spill out and landscape and furnishing features.

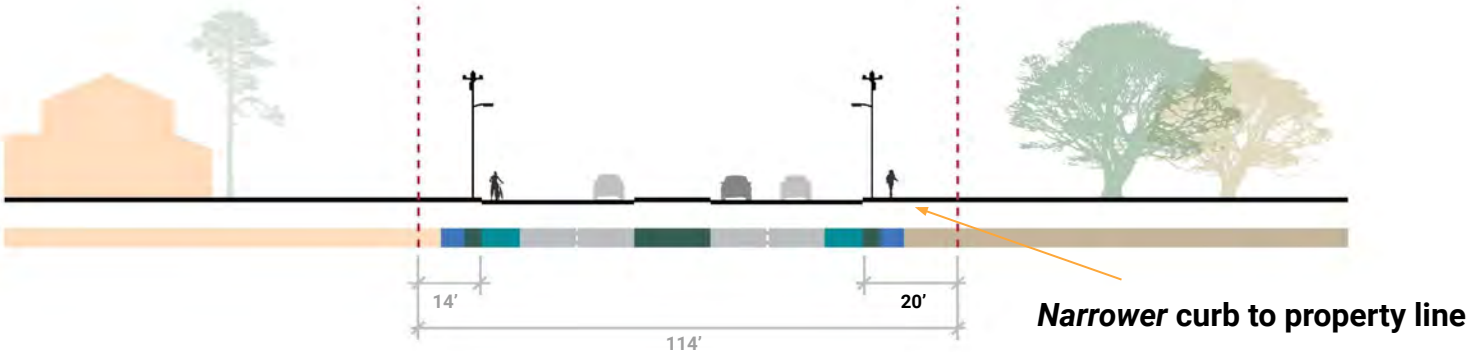
A minimum of 17' from the curb may be required along most major streets for public realm, in combination with a 5' to 7' setback beyond this to create sufficient public realm. In some cases, a wider public dimension is available



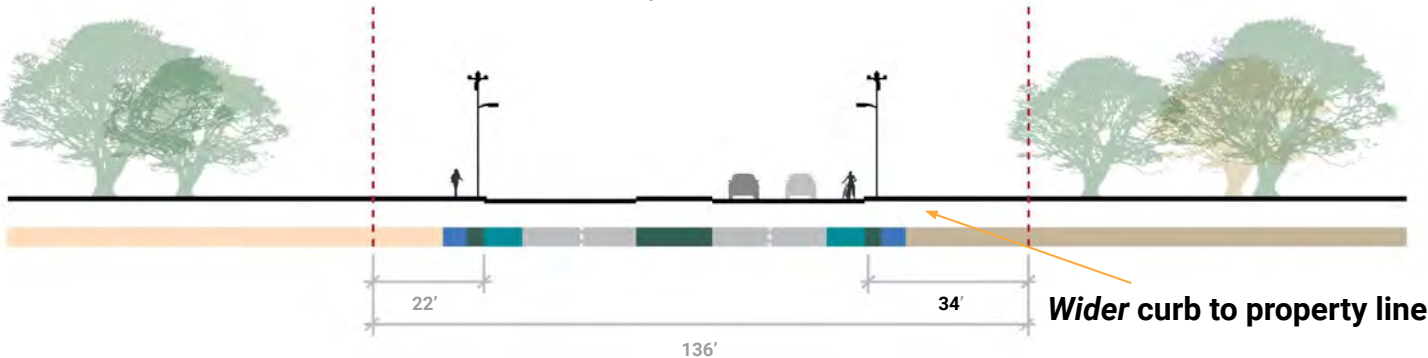
# General Guidance

## Example Exploration: Creating a Pedestrian Oriented Public Realm

Martin Luther King Jr. Blvd at Rigsbee



Martin Luther King Jr. Blvd at Westminster



Edge of ROW / Property Line

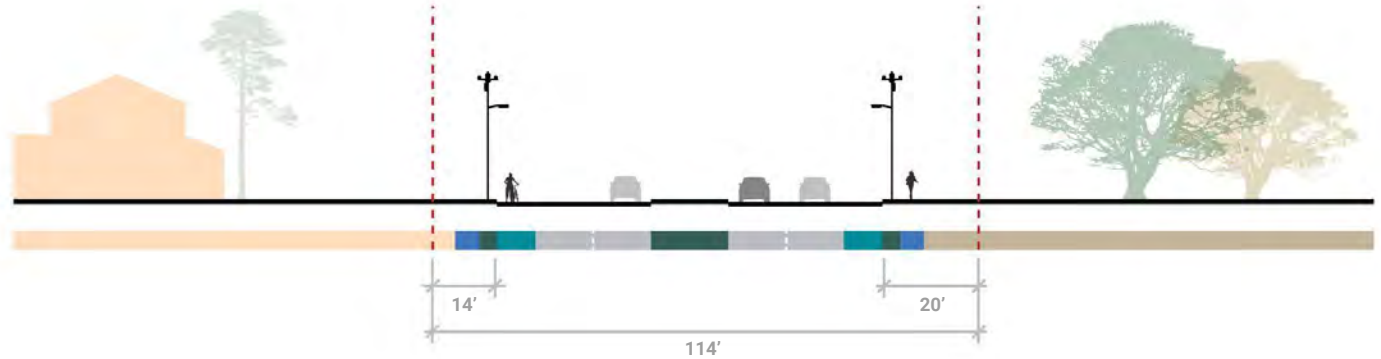
# General Guidance

## N. MLK Jr. Boulevard/Rigsbee Example

N. MLK Jr Boulevard near the Rigsbee Mobile Home Park has a comfortable curb to edge of Right of Way/Property Boundary condition.

Sitting 20' from the curb, this property boundary may provide a sufficient public realm depth.

The opposite property boundary is closer to the curb, requiring a setback into the property to achieve a desirable public realm depth.

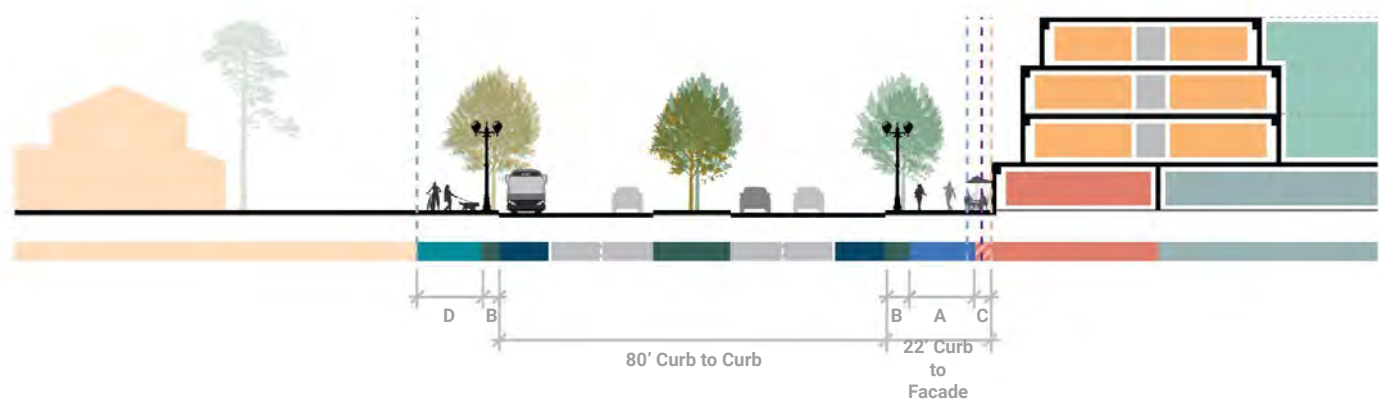




# General Guidance

## N. MLK Jr. Boulevard/Rigsbee Example

With an additional 2' setback from the property boundary, the public realm accommodates retail spill-out space, a pedestrian sidewalk area, and a tree pit between the building facade and curb.



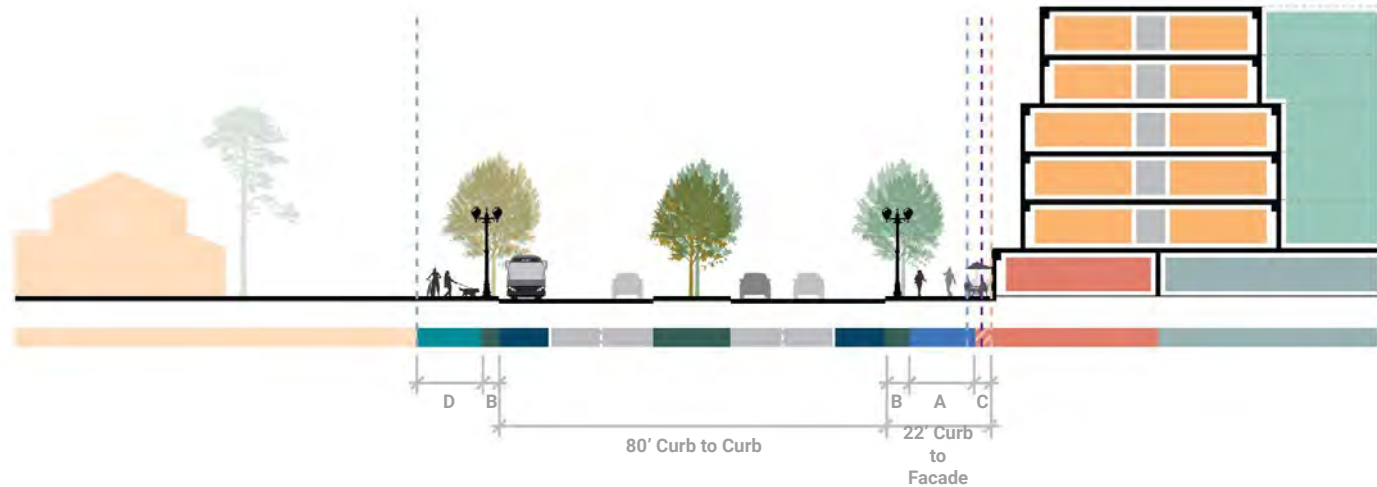
<b>MLK @ Rigsbee</b> Proposed Option 1	
<b>A. Sidewalk</b>	12'
<b>B. Treepit</b>	5'
<b>C. Retail Setback</b>	5' to 7'
<b>D. Shared User Trail</b>	12'
<b>E. Desired Public Realm</b>	17'-30'

# General Guidance

## N. MLK Jr. Boulevard/Rigsbee Example

With an additional 2' setback from the property boundary, the public realm accommodates retail spill-out space, a pedestrian sidewalk area, and a treepit between the building facade and curb.

The building façade increases from 15' to 30' range between lower and upper stories to respond to fire requirements.

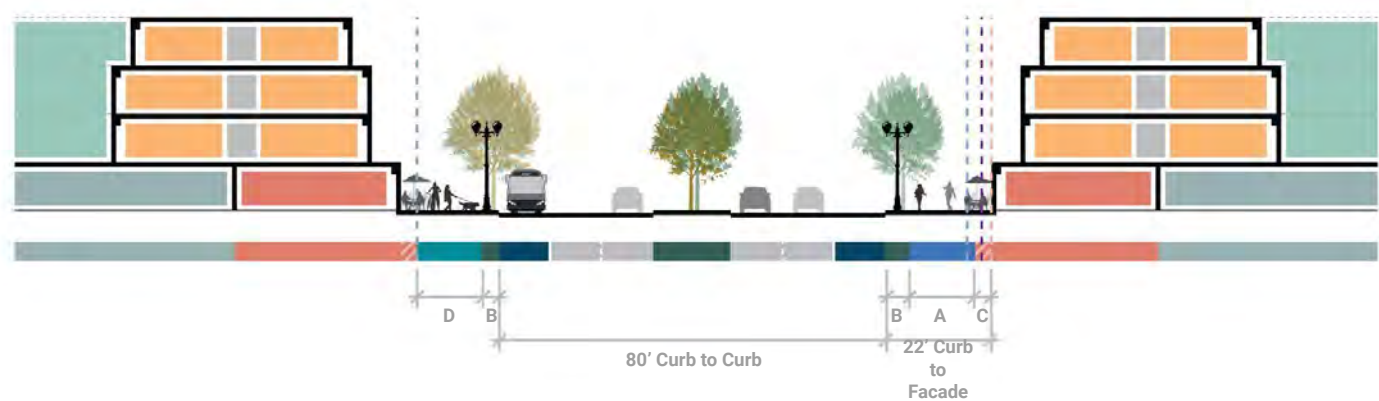


<b>MLK @ Rigsbee</b> Proposed Option 2	
<b>A. Sidewalk</b>	12'
<b>B. Treepit</b>	5'
<b>C. Retail Setback</b>	5' to 7'
<b>D. Shared User Trail</b>	12'
<b>E. Desired Public Realm</b>	17'-30'

# General Guidance

## N. MLK Jr. Boulevard/Westminster Example

If both sides of the street are developed with similar design approaches, a more urban boulevard with generous public realm, a shared user path and defined street walls can be created.



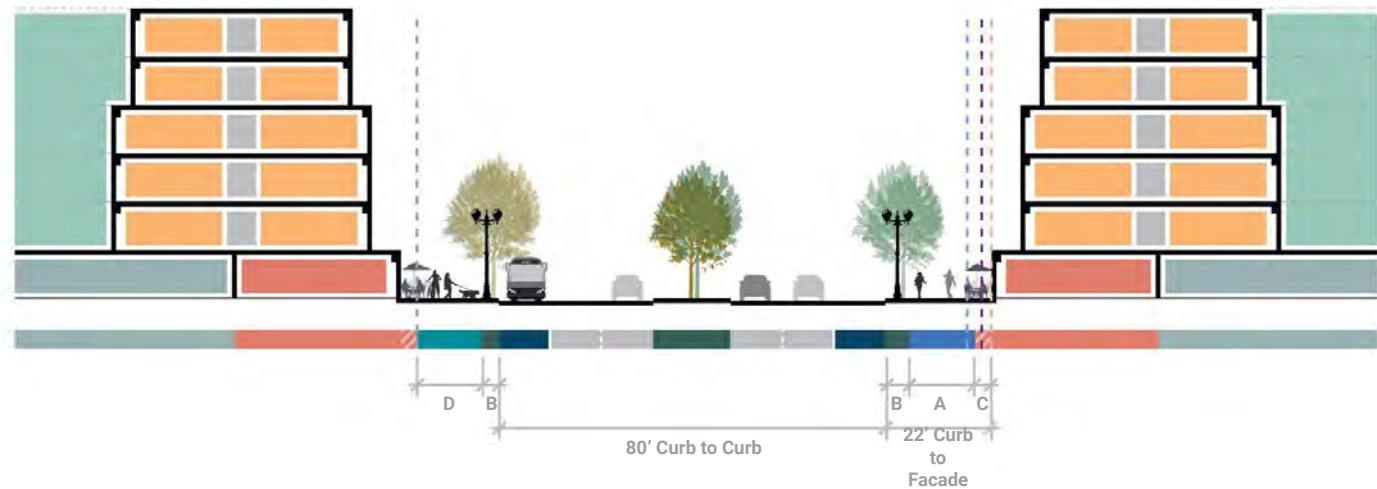
<b>MLK @ Rigsbee</b> Proposed Option 1 Expanded	
<b>A. Sidewalk</b>	12'
<b>B. Tree pit</b>	5'
<b>C. Retail Setback</b>	5' to 7'
<b>D. Shared User Trail</b>	12'
<b>E. Desired Public Realm</b>	17'-30'



# General Guidance

## N. MLK Jr. Boulevard/Westminster Example

If both sides of the street are developed with similar design approaches, a more urban boulevard with generous public realm, a shared user path and defined street walls can be created.



<b>MLK @ Rigsbee</b> Proposed Option 2 Expanded	
<b>A. Sidewalk</b>	12'
<b>B. Treepit</b>	5'
<b>C. Retail Setback</b>	5' to 7'
<b>D. Shared User Trail</b>	12'
<b>E. Desired Public Realm</b>	17'-30'

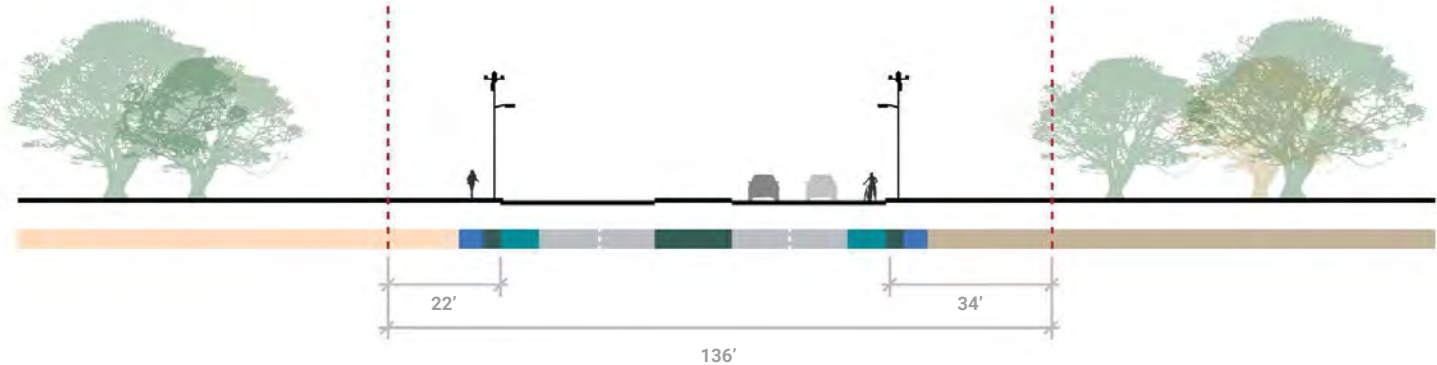
# General Guidance

## N. MLK Jr. Boulevard/Westminster Example

MLK Jr Boulevard near Westminster Drive has a wider depth from curb to back of right of way/property boundary.

Sitting 34' from the curb, this property boundary exceeds the desired public realm depth.

The opposite property boundary also exceeds the desired public realm depth, allowing any retail setback occur in the ROW.



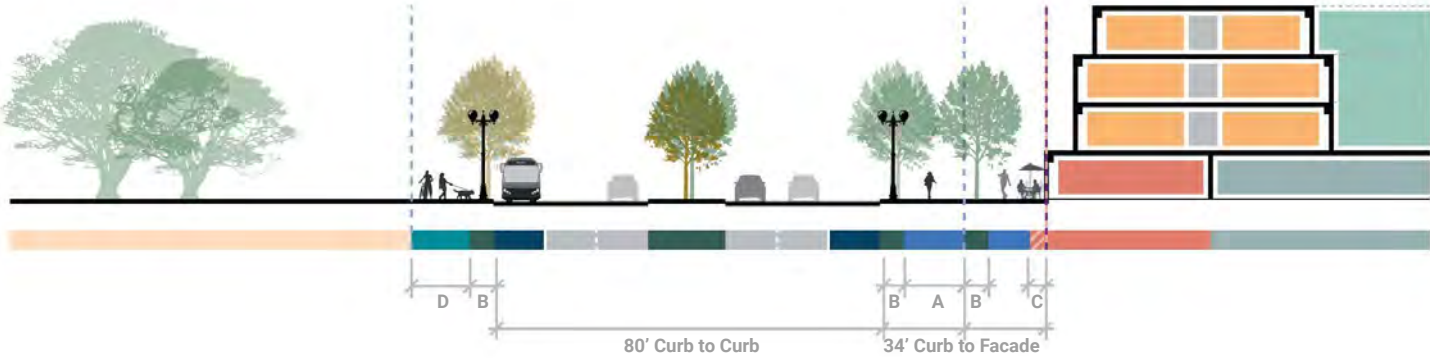
# General Guidance

## N. MLK Jr. Boulevard/Westminster Example

With 34' between curb and property boundary, the retail spill-out space is easily accommodated outside the property boundary and within the right of way.

An additional sidewalk and tree pit are also possible with the public right of way.

There may be a case that a setback is not required, and that the façade should be brought forward to create a street enclosure.



<b>MLK @ Rigsbee</b> Proposed Option 1	
<b>A. Sidewalk</b>	12'
<b>B. Treepit</b>	5'
<b>C. Retail Setback</b>	5' to 7'
<b>D. Shared User Trail</b>	12'
<b>E. Desired Public Realm</b>	17'-30'



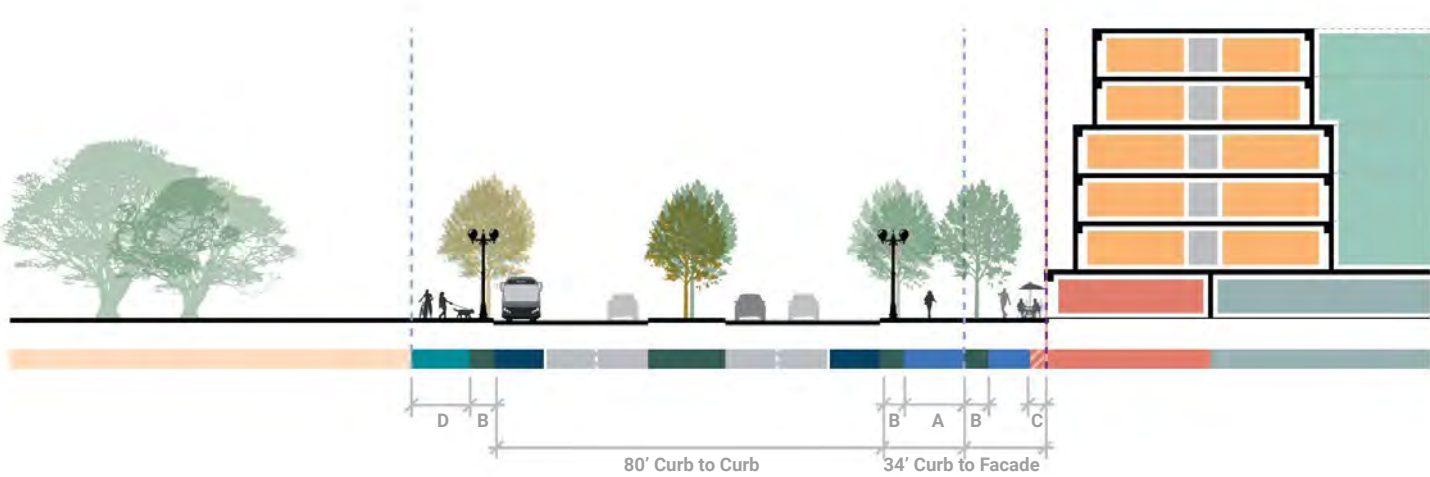
# General Guidance

## N. MLK Jr Boulevard/Westminster Example

With 34' between curb and property boundary, the retail spill-out space is easily accommodated outside the property boundary and within the right of way.

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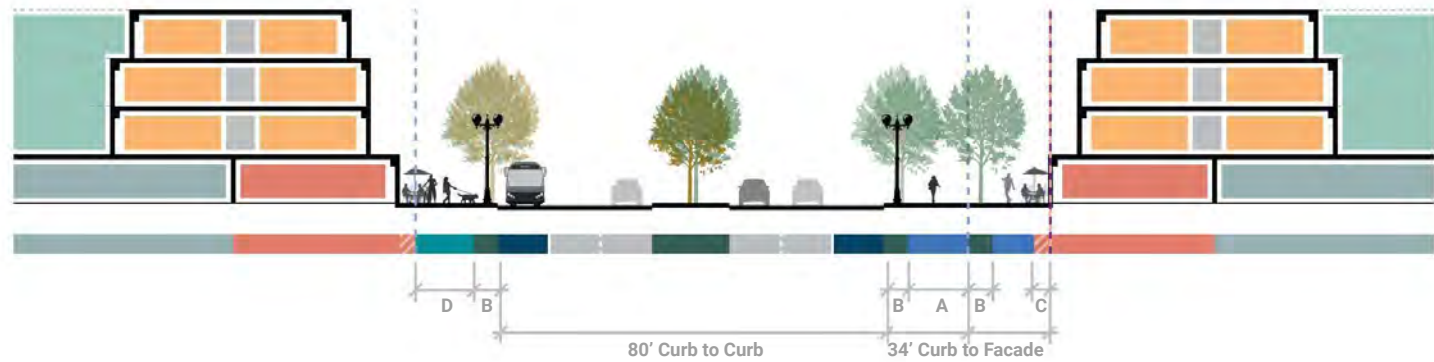


<b>MLK @ Rigsbee</b> Proposed Option 2	
<b>A. Sidewalk</b>	8'-12'
<b>B. Treepit</b>	5'
<b>C. Retail Setback</b>	5' to 7'
<b>D. Shared User Trail</b>	12'
<b>E. Desired Public Realm</b>	17'-30'

# General Guidance

## N. MLK Jr Boulevard/Westminster Example

If both sides of the street are developed with similar design approaches, a more urban boulevard with generous public realm, a shared user path and defined street walls can be created.

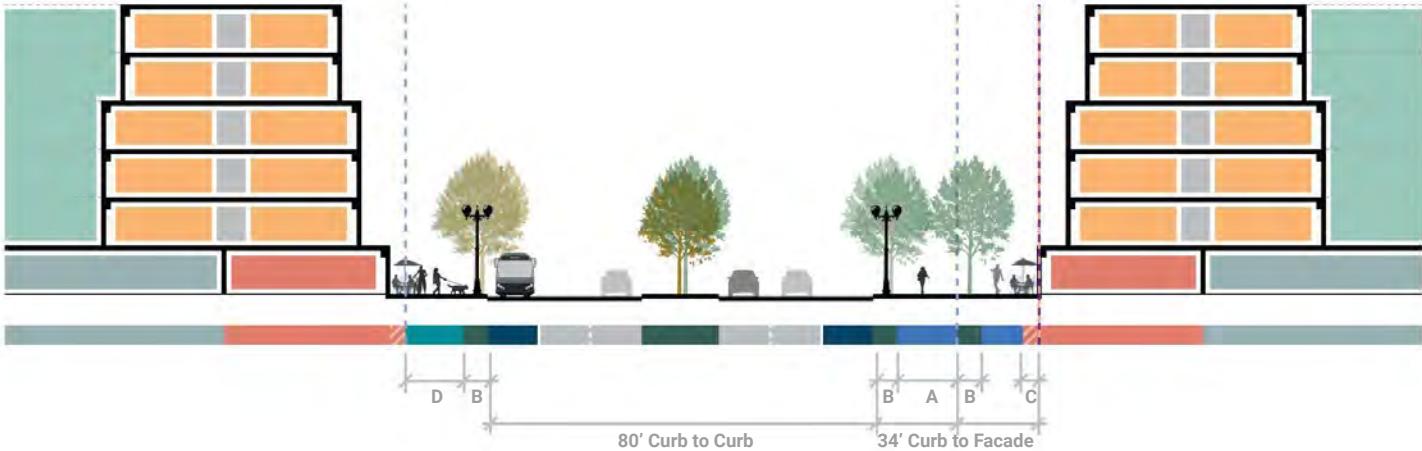


<b>MLK @ Rigsbee</b> Proposed Option 1 Expanded	
<b>A. Sidewalk</b>	8'-12'
<b>B. Treepit</b>	5'
<b>C. Retail Setback</b>	5' to 7'
<b>D. Shared User Trail</b>	12'
<b>E. Desired Public Realm</b>	17'-30'

# General Guidance

## N. MLK Jr Boulevard/Westminster Example

If both sides of the street are developed with similar design approaches, a more urban boulevard with generous public realm, a shared user path and defined street walls can be created.



MLK @ Rigsbee	
Proposed Option 2 Expanded	
A. Sidewalk	8'-12'
B. Treepit	5'
C. Retail Setback	5' to 7'
D. Shared User Trail	12'
E. Desired Public Realm	17'-30'





General Guidance

## 4. Bikeways & Micro-mobility Facilities

SOM

# General Guidance

## Bikes and Micro Mobility Trails

### Bike and Micro Mobility Trails in New Development

Bikeways and greenways can become central features of new developments, and connect to a “larger everywhere to everywhere” network.

A landscaped bikeway also become a landscape buffer for development. Layering canopy trees, plantings, bioswales and other linear landscape features can create a rich, sustainable environment as well as a scenic pathway.

### Multipurpose Surfaces

Suitable materials should be selected for plazas or other landscape areas shared by bikes and pedestrians.

### Bikeway Signage

Appropriate signage indicating destinations, route names, and key benchmark distances should be included along bikeways. Signage should be legible at riding speed. Wayfinding can be a branding opportunity for new developments and existing communities alike.

### Bike Scale Lighting Strategies

Path lighting should be a key feature of any bikeway design. Bollards should be spaced 15' to 20' apart along highly trafficked bike routes.





# General Guidance

## Bikes and Micro Mobility Parking and Storage

### Bike and Micro-Mobility Parking

Exterior bicycle racks, bicycle storage and micro-mobility facilities should be located close to the building entrance to encourage use by residents, workers and visitors.

Outdoor bike parking and storage should have some screening from views from the public realm, both for pedestrian experience and bike user security. This can be achieved by locating storage behind vegetated screens, or architectural fences.

Shade is encouraged over designated outdoor bike and scooter parking areas. This will improve user comfort as well as minimize heat island effect.

Designated areas for bike-share and scooter-share programs should be provided within larger development typologies. These spaces shall be secure, with access limited to residents.

Interior bike storage shall be easily accessible and near building exits.





# General Guidance

## 5. Vehicle Parking

SOM

# General Guidance

## Parking - Structure Integration

### Structure Location

Parking structures should be placed at the interior of blocks, and parking below grade is encouraged.

### Structure Screening

Parking structures should be concealed behind residential, commercial, or community uses facing streets.

Visible parking floors should face the interior of a block or an alley and be screened with materials compatible with the materials used in the building facade.

Parking structures should have short ramps and level parking floors oriented so that a horizontal plane faces public streets.

### Conversion Potential

Parking structures should be designed to allow potential conversion to other uses (e.g., residential, commercial and office) by using level floors, appropriate floor to ceiling heights (typically higher) and short ramps between floors. Additionally, ramps should be located internally, freeing potential street facades from sloped geometry.





# General Guidance

## Parking - Vehicle Access to Structures

### Vehicle Entries

Vehicle entrances to parking structures should be placed on secondary streets or public or on-site alleys to minimize curb-cuts on arterial or collector streets.

Vehicle entrances should be located away from corners to reduce on-street car queuing impacts on pedestrians and vehicle traffic and transit operations at intersections.

Parking gates and controls should be recessed within the structure to allow vehicles to pull into the building enclosure before encountering ticketing or access control.

Parking entrances should have mechanical doors that close when not in use by vehicles.





# General Guidance

## Parking - Surface Lots

### Surface Parking Screening

Any new surface parking lots which face sidewalks should install high quality landscaping, fencing and lighting along any sidewalk edges and follow TOD requirements.

### Sustainable Parking Strategies

Surface parking lots should have at least 25% of spaces as covered parking spaces with photovoltaic panels. In addition to energy production, the shade reduces heat island effects.

### Pedestrian Comfort & Safety

Surface parking lots should have well defined internal pedestrian routes with enhanced surface treatments such as painted crosswalks, physical separation of walkways through parking stall areas with curbs, and definition through landscape that also provide shade, and signs alerting drivers to crossings over driveways.

Any blank building walls facing surface parking lots visible from sidewalks should include landscape screening, murals or attached lighting to enhance the aesthetics of the wall.



An aerial photograph of a city street grid, overlaid with a teal color. The image shows a dense urban environment with various building footprints and street layouts. The text is positioned in the upper left corner.

# General Guidance

## 5. Servicing & Utilities

SOM



# General Guidance

## Servicing & Utilities - Waste, Refuse and Service Facilities

### Locating Waste, Refuse and Service Facilities

Waste facilities at larger buildings should be placed within the enclosure of buildings. Building waste storage or compacting facilities should not face streets, on-site plazas or public open spaces.

Service entries should be accessed from public or on-site alleys, to reduce the visual impact on sidewalks and streets. Service facilities should be screened by doors, which should remain closed except when in use by vehicles entering and exiting.

### Screening Service & Refuse Areas

Any solid waste receptacles at smaller buildings that are located outside of the building envelope should be shielded by providing a structure or enclosure that is compatible with the primary building materials.

Delivery, loading and refuse areas shall be screened from all streets, parks or other public environments. Such screening may comprise vegetation, fencing, walls or other opaque building materials.





# General Guidance

## Servicing & Utilities - Utility Equipment Enclosures

### Utility Equipment Screening

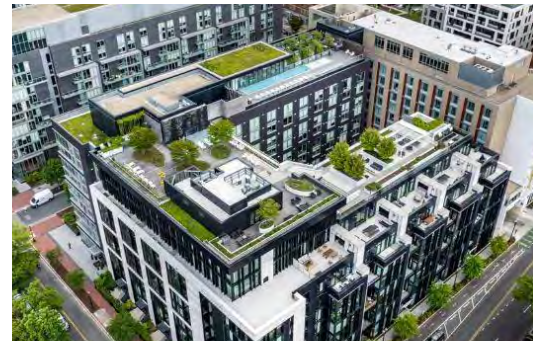
Above grade utilities, transformers, regulators or meter boxes should be shielded away from views from the primary pedestrian entrance.

Avoid attaching exposed utilities, transformers and meter boxes to the front façade or facing sidewalks.

Equipment should be screened with high quality materials which are of a similar quality and compatible with the materials used in the building façade.

### Roof Equipment Penthouse Design

As more people will be able to see neighboring building roofs, attention should be paid to roof utility enclosures. Roof utility equipment should be consolidated, enclosed and screened from view from other buildings with high quality materials. This can be combined with Green Roof treatments.





# General Guidance

## 6. Fences & Screening

SOM



# General Guidance

## Fencing & Screening - Architectural Perimeters

### Architectural Perimeter Screening

Where used, shorter fence and perimeter wall heights around residential, commercial or institutional developments are preferred.

Any fence or wall bordering the pedestrian realm shall be a maximum height of 4.5' and made of a maximum of 80% opaque material.

A security fence or wall may be up to 6' tall, but comprised of only 50% opaque material.

Perimeter walls and fences should be constructed from sustainable, low-carbon materials such as wood, fieldstone or other locally sourced materials.





# General Guidance

## Fencing & Screening - Vegetated Perimeters

### Vegetated Perimeters

Vegetated property boundaries (also known as living fences) are encouraged as a green and sustainable alternative to architectural perimeter screens.

Evergreen plants are strongly recommended for vegetated screens.

Layered landscaping is strongly recommended, with an evergreen layer to the rear.

Vegetated screening can coincide with other sustainable features, such as bioswales and catchment areas.

Combining fence types can add interest and distinguish degrees of privacy.

Architectural screens, trellises or other support structures can host living walls or climbing plants. This combines the best of a firm architectural boundary and green materials.



# General Guidance

## 7. Materials

SOM



## General Guidance

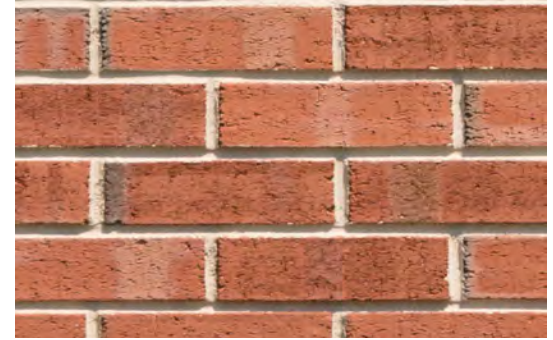
# Materials - Sustainable Materials

### Source Local Materials

Local materials are sustainable as well as culturally relevant to a place.

Chapel Hill's traditional architecture has utilized clay brick, limestone, fieldstone, slate and wood as well as a variety of architectural metals. These traditional materials may also be used in contemporary, innovative ways.

Sustainably harvested/certified woods, recycled materials (recovered content plastic, concrete, glass, steel, rubber, etc.) and products with low embodied energy (e.g., wood or other bio-based products, locally harvested stone) should be used.





# General Guidance

## Materials - References & Interpretations

### Reference Appropriately

Color and material references can connect a project to its location and host community. Chapel Hill's historic districts are a wealth of potential references, from the austerity and monumentality of the Neoclassical and Colonial Revival styles to the rich earth tones and neutrals of the Queen Anne, Tudor and Craftsman styles.

Given the region's forested character, regional landscape references are also appropriate.



# General Guidance


## Materials - Interpretation

### Allow Contemporary Interpretation

Traditional materials may be interpreted creatively, blending time-tested craftsmanship with contemporary design techniques.





An aerial photograph of a city street grid, likely in Chapel Hill, North Carolina. The image shows a dense arrangement of multi-story buildings, mostly in shades of yellow and orange, suggesting a warm, possibly late afternoon or early morning light. A central open lot with some trees and a few people is visible in the lower center. The overall tone is warm and urban.

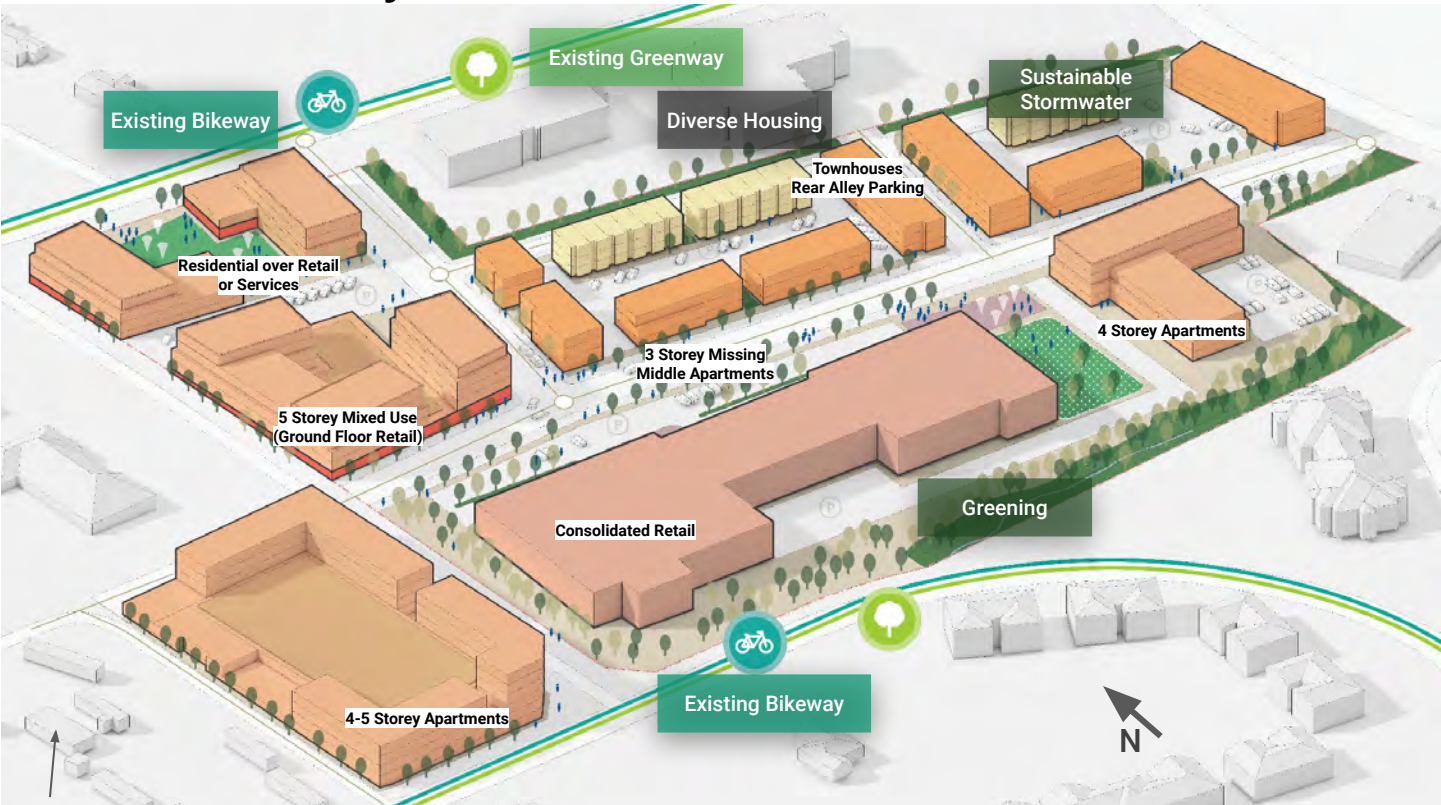
# D. Case Study Typologies Applied to Example Sites

This section provides examples of the application of typology guidance to example, case study sites in Chapel Hill. These sites were identified as likely to see change by the FLUM (2020) Shaping Our Future N-S BRT TOD and Focus Area plan.

Examples are provided for informational and illustrative purposes and do not represent a site development proposal by the Town of Chapel Hill.



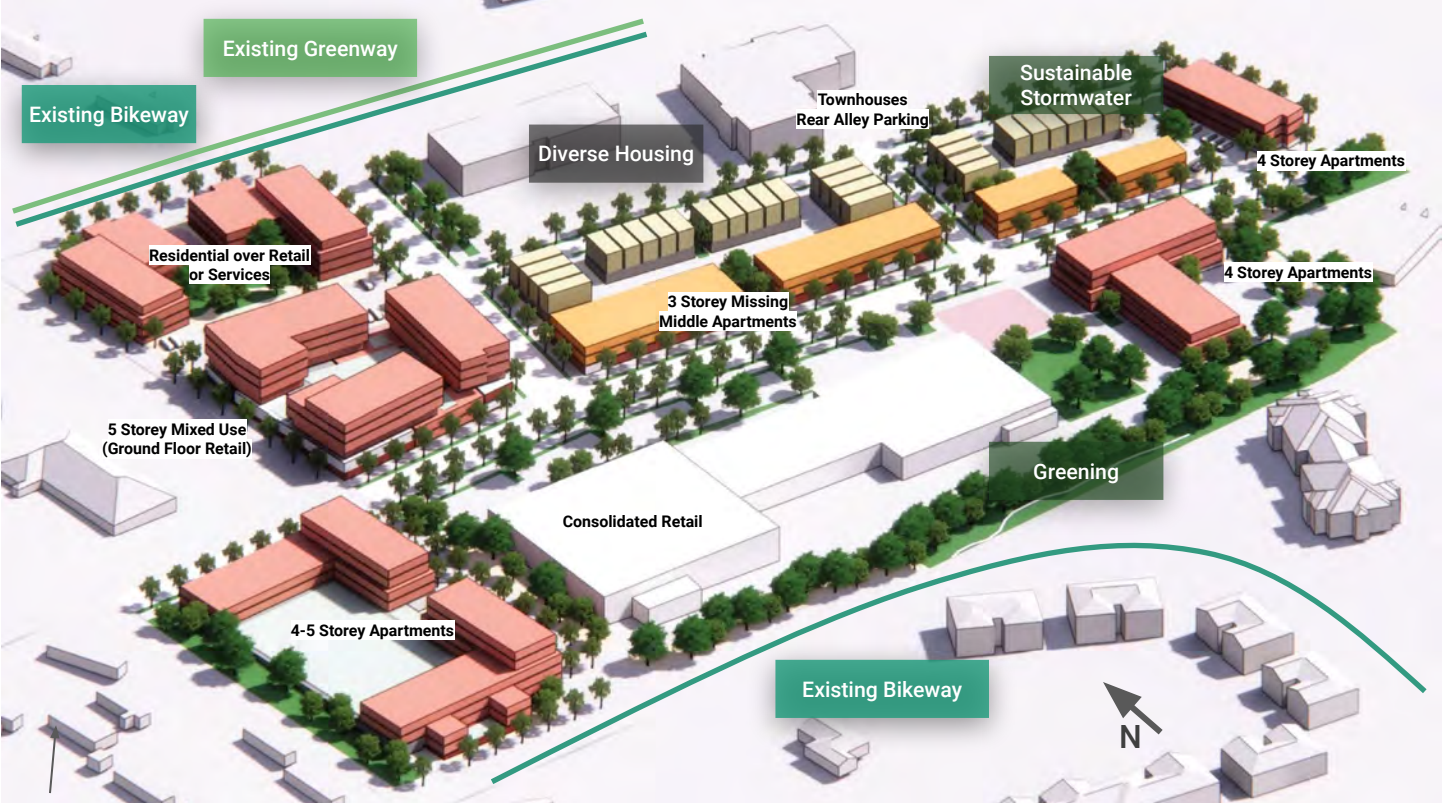
# Case Study Exploration: Timberlyne Mall



Timberlyne Mall: TOD Plan

Townhomes	18
Apartments	320-340
Dwelling Units per Acre Approx	33-35

# Case Study Exploration: Timberlyne Mall



## Timberlyne Mall: LUMO Case Study 1

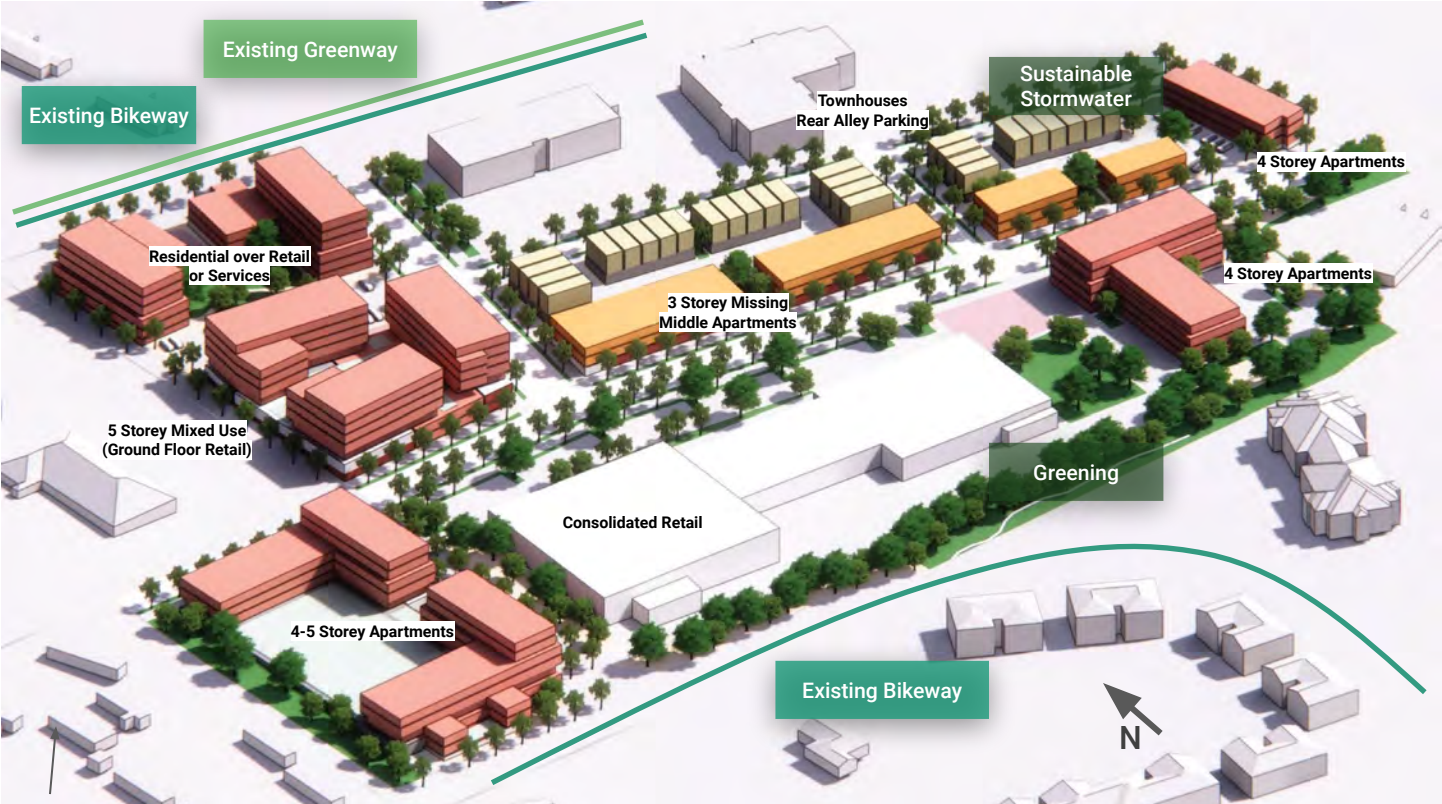
Townhomes	28
Apartments*	404
Dwelling Units per Acre	39

\*Assumes 1k sqf average units

*Draft outputs: subject to refinement*



# Case Study Exploration: Timberlyne Mall



**Timberlyne Mall: LUMO Case Study 2**

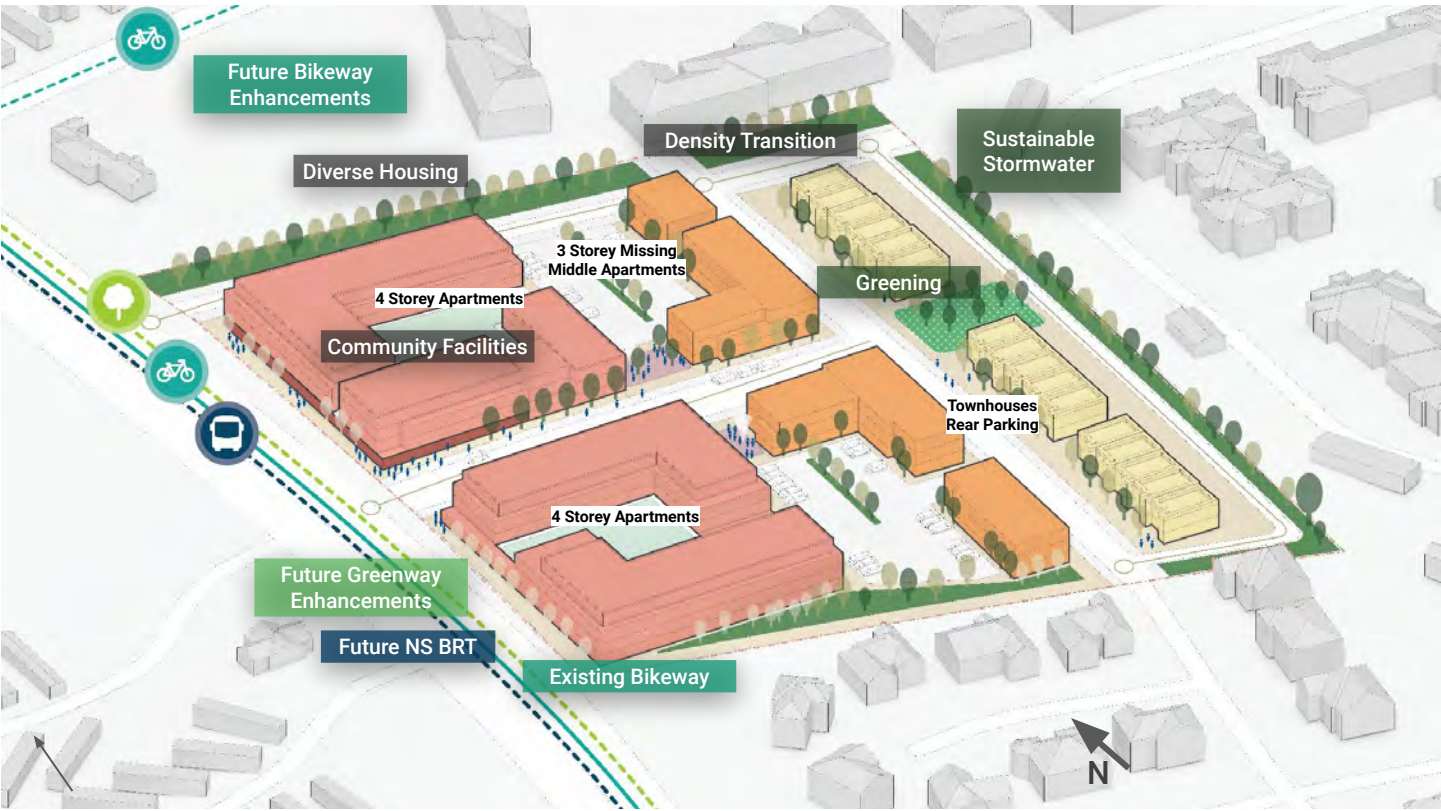
Townhomes	28
Apartments*	460
Dwelling Units per Acre	47

\*Assumes 1k sqf average units

*Draft outputs: subject to refinement*



# Case Study Exploration: Westminster Drive



Westminster Drive: TOD Plan

Townhomes	15
Apartments	185
Dwelling Units per Acre	24

# Case Study Exploration: Westminster Drive



Westminster Drive: LUMO Case Study 1	
Townhomes	20
Apartments*	250
Dwelling Units per Acre	30
*Assumes 1k sqf average units	

Draft outputs: subject to refinement



# Case Study Exploration: Westminster Drive



Westminster Drive: Case Study 2

Townhomes	0
Apartments*	366
Dwelling Units per Acre	44

\*Assumes 1k sqf average units

Draft outputs: subject to refinement



# Case Study Exploration: Homestead Road



Homestead Road: TOD Plan

Townhomes	12
Apartments/Duplexes	250
Dwelling Units per Acre	21

# Case Study Exploration: Homestead Road



## Homestead Rd: LUMO Case Study 1

Townhomes	32
Apartments/Duplexes*	220
Dwelling Units per Acre	20

\*Assumes 1k sqf average units

*Draft outputs: subject to refinement*

# Case Study Exploration: Homestead Road



## Homestead Rd: Case Study 2

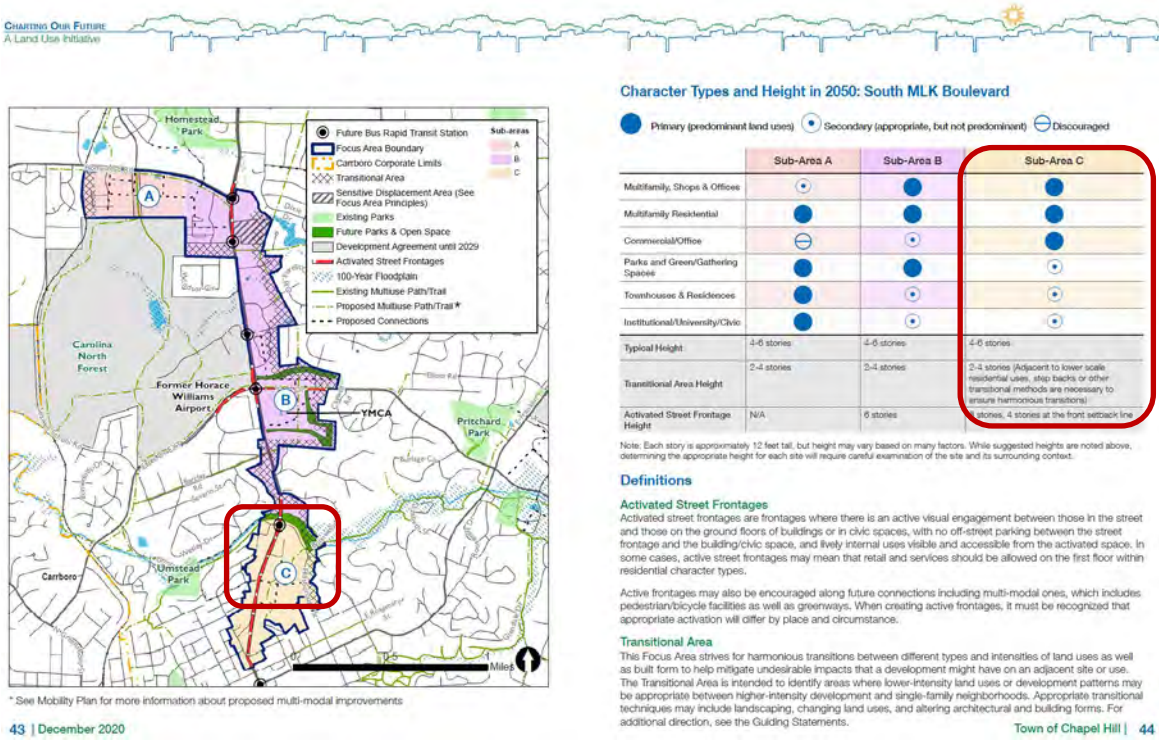
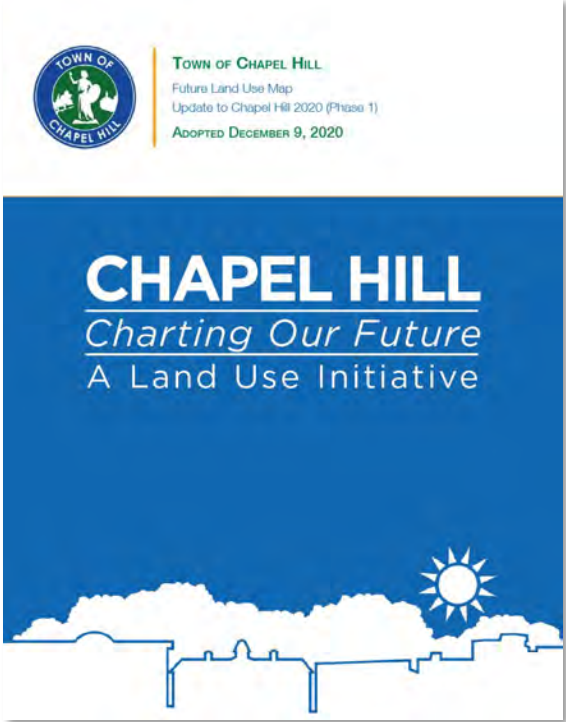
Townhomes	15
Apartments/Duplexes*	292
Dwelling Units per Acre	25

\*Assumes 1k sqf average units

*Draft outputs: subject to refinement*



# Case Study Exploration: South MLK Blvd Focus Area - Mid Town



# Case Study Exploration: South MLK Blvd Focus Area - Mid Town



## Midtown Case Study 1

Townhomes	18
Apartments*	738
Dwelling Units per Acre	34

\*Assumes 1k sqf average units

*Draft outputs: subject to refinement*

# Case Study Exploration: South MLK Blvd Focus Area - Mid Town



## Midtown Case Study 2

Townhomes	18
Apartments*	908
Dwelling Units per Acre	42

\*Assumes 1k sqf average units

*Draft outputs: subject to refinement*



An aerial photograph of a city street grid, likely Chapel Hill, North Carolina. The image shows several multi-story buildings with flat roofs and numerous windows. A central courtyard or park area is visible, surrounded by the buildings. The entire image has a teal or cyan color overlay.

# Chapel Hill LUMO Update

## Development Typology and Site Design Aspirations

December 2023

REVIEW DRAFT