

PART 4

BUILDING SCALE ANALYSIS

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This is a planning study intended to show basic urban patterns and data trends throughout areas of the City of Richmond so as to help inform policy decision-making. It is not intended to determine legal compliance or noncompliance of an individual building or property with any portion of Chapter 30 - Zoning of the Code of Ordinances. This analysis has been performed using data from the City of Richmond, visual assessment, and other sources. Data are not guaranteed.

ANALYSIS ACROSS SCALES

City Scale



Mapping contextual patterns and misalignments between existing patterns and zoning.

Identify areas with nonconformities and areas with unbuilt zoning capacity.

What are the most prevailing types non-conformities visible at the city scale?

RESULT: City-wide misalignments and selection of 10 representative areas to analyze at the neighborhood scale

Neighborhood Scale

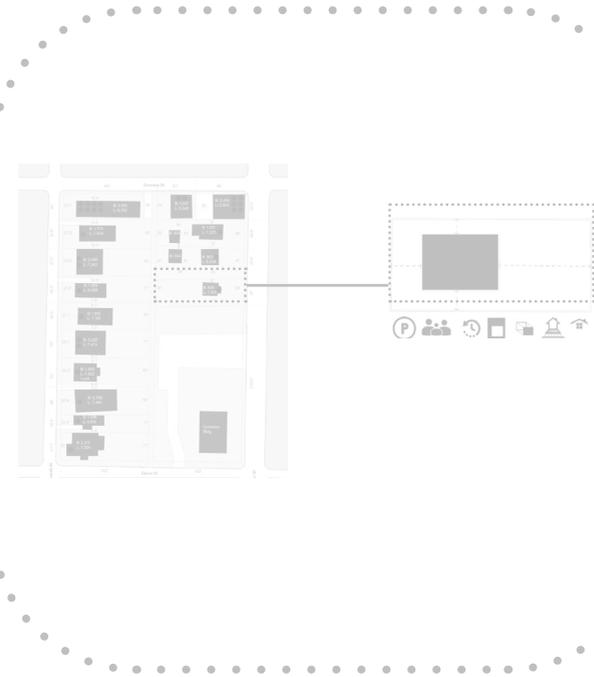


Mapping misalignments between existing patterns and zoning.

What are the most prevailing types of form non-conformities visible at the neighborhood scale?

RESULT: Sub-patterns in each representative study area. Select 12 representative blocks to test qualitative and metric-specific patterns

Block Scale



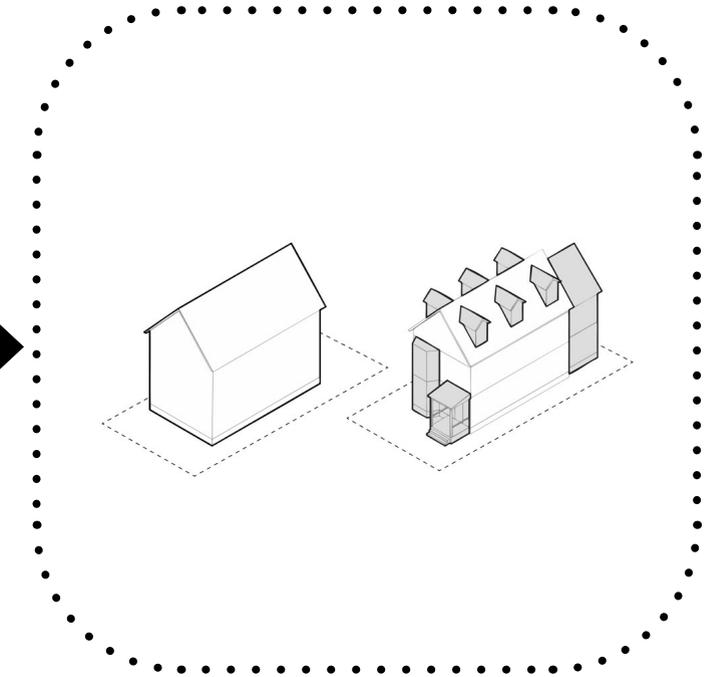
Illustrating misalignments between existing patterns and zoning.

Illustrating contextual patterns.

What are the most strategic things we need to regulate at the block scale?

RESULT: Sub-patterns in each block analysed

Building Scale



Illustrating misalignments between existing patterns and zoning.

Illustrating relationship between buildings and the public realm.

What are the most strategic things we need to regulate at the building scale?

RESULT: Building taxonomy to test potential code changes.

BUILDING SCALE ANALYSIS

Building Frontage

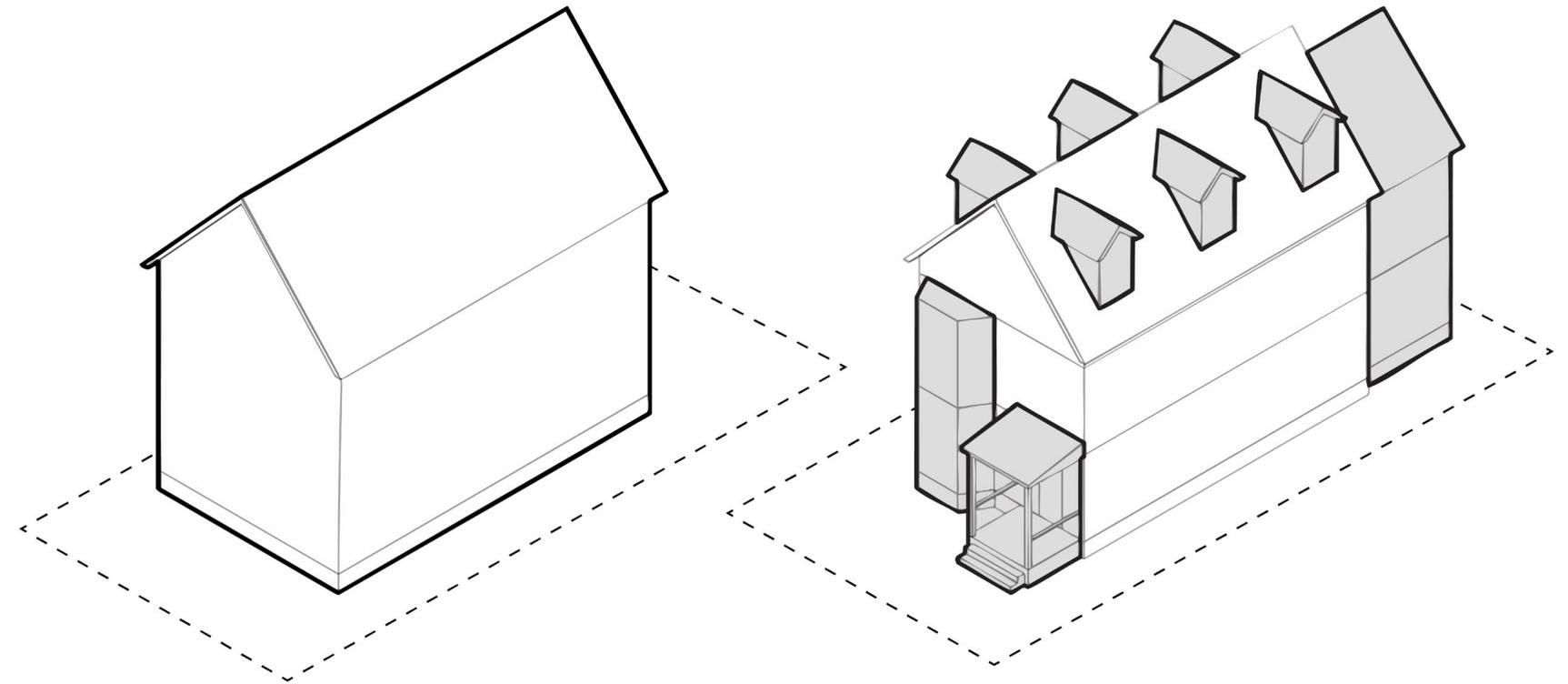
- + Frontage Components
- + Frontage Elevation
- + Front Yard Landscaping

Setbacks

- + Front Setback range
- + Side Setbacks
- + Corner condition

Character

- + Ground and Upper Floors Fenestration
- + Roofline



BUILDING FORM ANALYSIS METHODOLOGY

Selection of Buildings

The building patterns to analyze were determined based on the block scale analysis's main takeaways: lot width, front and side setbacks, and property type (attached or detached). The examples analyzed aim to cover the most common patterns found in residential areas with the most nonconformities determined in previously analyzed scales in this pattern book (R-5, R-6, R-7, R-63). The analysis prioritized patterns that described how the buildings engaged with the street (building frontage) and the relationship between neighboring structures (setbacks). Each example includes a photo overlay highlighting the observations and patterns relevant to crafting future zoning.

This building scale analysis aims to provide an overview of some of the most prevalent building patterns found throughout the city of Richmond. It is meant to serve as a reference to inform policy decision-making. This analysis should not be regarded as a definitive listing of all possible building patterns within the city.



Example of a photo overlay highlighting different patterns regarding frontage and setbacks.

R-6/R-63: DETACHED URBAN HOUSES

Description

This is the essential building pattern that shapes large sections of traditional neighborhoods of the city. It exists in several variances, depending on the building elevation from the street, depth of the front setback, location along the block, and if the building is grouped with one or both neighbors.

- Building massings sit close to each other, with buildings frequently placed right at one of the side property lines.
- Although buildings are detached, multiple detached houses can be adjoined to one or both neighbors.
- 2-3 stories high, with the third story usually distinct by a mansard or cornice.
- Typical three-window facade rhythm.
- Lots are 20+ feet wide.
- Always a porch or a stoop
- Principal buildings in corner lots tend to have only one principal facade and no side street yard, with occasional exceptions.



R-6/R-63: DETACHED URBAN HOUSES

Example 1: Detached Urban Houses

Building Frontage

Frontage Components

- + Consistent presence of a roofed porch or a stoop.
- + Average porch depth of about 5-6 ft.
- + Occasional presence of a bay window in the facade.

Frontage Elevation

- Raised ground floor from the street level by 2-3 feet.

Front Yard Landscaping

- Mixed presence of landscaped and hardscape front yards
- Mixed presence of fences, no taller than 3 ft.

Setbacks

Front Setback: Between 12-18 ft deep

Side Setbacks:

- Principal building sits at or close to one of the side lot lines.
- The opposite side setback has a side yard of about 3 ft.

Corner condition

- Principal buildings in corner lots tend to have only one principal facade and no side street yard, with exceptions.

Character

Ground and Upper Floors Fenestration

- About even split between solid wall and windows both in the ground floor and upper stories.
- Most examples follow a three-window rhythm pattern.

Roofline

- Most buildings have a shed or flat roofline.
- Examples with a third story are commonly done by adding a mansard.



Jackson Ward

R-6/R-63: DETACHED URBAN HOUSES

Building Frontage

Frontage Components

- + Consistent presence of a roofed porch or stoop encroaching on the front yard with stairs leading up to the ground floor.
- + Average porch depth of about 5-6 ft.

Frontage Elevation

- Ground floor is significantly raised from the street level by half a story.
- The semibasement is often used as additional dwelling unit. Access to the semi basement is done by a stair down.

Front Yard Landscaping

- Mixed presence of landscaped and hardscape front yards and mixed presence of fences, no taller than 3 ft.

Setbacks

Front Setback: Various, between 8-18

Side Setbacks:

- Principal building sits at or close to one of the side lot lines.
- The opposite side setback has a side yard of about 3 ft.

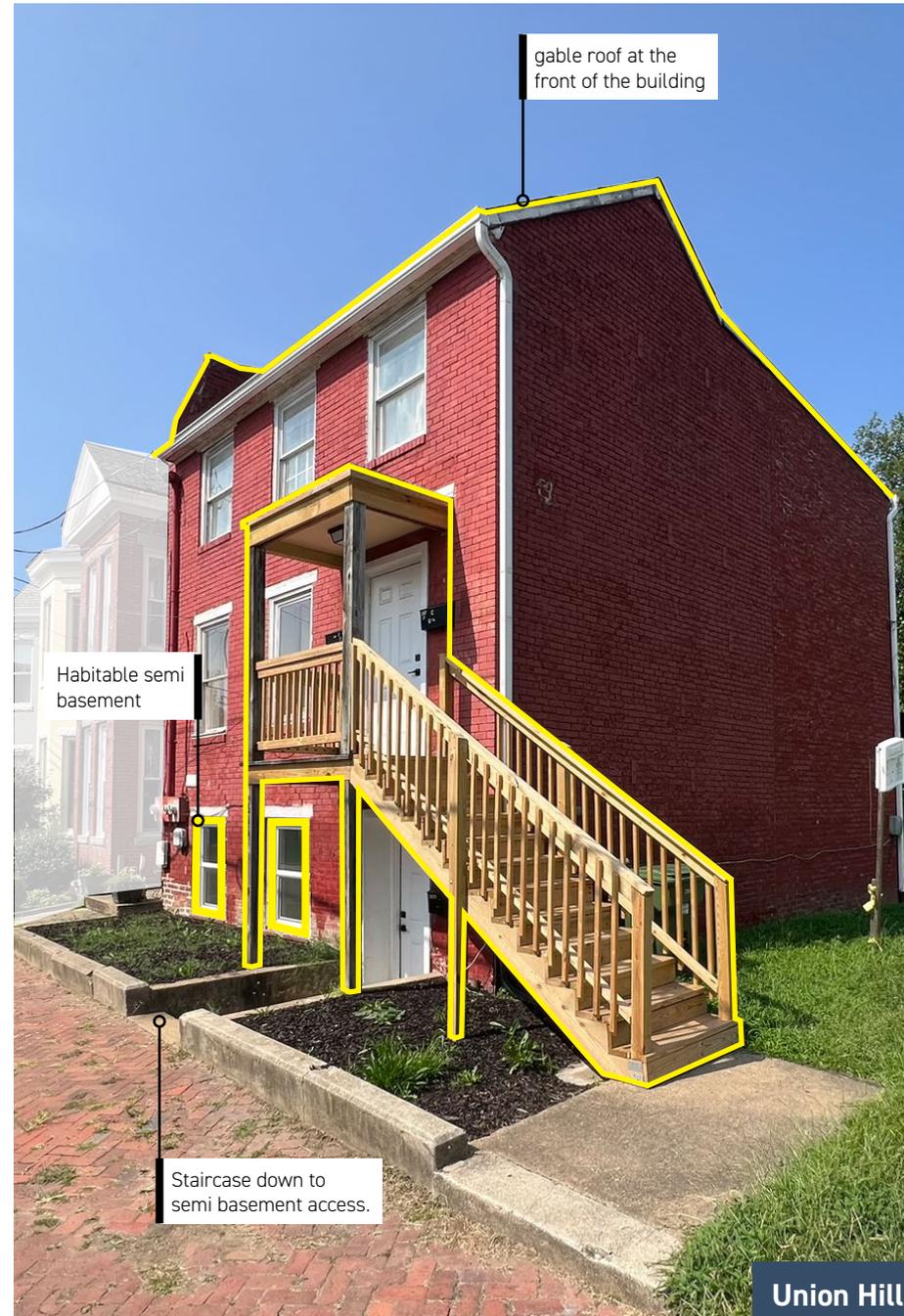
Character

Ground and Upper Floors Fenestration

- About even split between solid wall and windows both in the ground floor and upper stories.
- Most examples follow a three-window rhythm pattern.

Roofline

- Most buildings have a shed or flat roofline.
- Examples with a third story are commonly done by adding a mansard.



Example 2: Detached Urban Houses with Semi-basement



R-6/R-63: DETACHED URBAN HOUSES

Example 3: Grouped Detached Urban Houses

Description

Two or more detached urban houses that grouped in a continuous massing but do not share a common sidewall and their architectural elements are independent of each other.

Building Frontage

Frontage Components

- Individual roofed porches or stoops encroaching on the front yards. Average porch depth of about 5-6 ft.

Frontage Elevation

- Ground floor is raised from the street level by 2-3 feet.

Front Yard Landscaping

- Mixed presence of landscaped and hardscape front yards and mixed presence of fences, no taller than 3 ft.

Setbacks

Front Setback: Between 12-18 ft deep

Side Setbacks:

- Principal building sits at the side lot line with one or both sides of the building touching the neighboring sidewall.
- The end of the building group tends to have a narrow side setback of about 3ft.

Corner condition

- Principal buildings in corner lots tend to have only one principal facade and no side street yard, with exceptions,

Character

Roofline

- Most buildings have a shed or flat roofline.
- Third story is commonly done by adding a mansard.



Jackson Ward

R-6/R-63: DETACHED URBAN HOUSES

Example 4: Detached Urban House with raised yards

Building Frontage

Frontage Components

- + Consistent presence of a porch (roofed or unroofed) or a stoop on the front yard.
- + Average porch depth of about 6-8 ft.

Frontage Elevation

- Ground floor has a significant grade change from the street requiring stairs.

Front Yard Landscaping

- Front yards are commonly landscaped and rare presence of fences.

Setbacks

Front Setback: Deep front setbacks of 20-35 ft

Side Setbacks:

- Narrow spacing of 3-4 ft between buildings. The principal building sits at or close the side setbacks.

Corner condition

- Principal buildings in corner lots tend to have only one principal facade and no side street yard, with exceptions.

Character

Ground and Upper Floors Fenestration

- High fenestration both in the ground floor and upper stories.
- Most examples follow a three-window rhythm pattern in the upper floor and a large window in the ground floor.

Roofline

- Mix of side-gabled and mansard rooflines with dormer and/or framing sidewalls.



R-6/R-63/R-7: ATTACHED HOUSES

Description

While similar to two or more grouped detached urban houses, this building pattern consists of a continuous building form and a continuous architectural language in a unified massing across several parcels. This pattern may vary depending on the building elevation from the street, depth of the front setback, location along the block, and if the building includes two or more partitions.

- Building massings sit close to neighboring parcels, with the end of the attached building group having narrow side yards.
- 2-3 stories high, with the third story usually distinct by a mansard or cornice.
- Lots tend to be very narrow, 13-16 feet wide. They are narrower than the parcels of grouped detached houses.
- Frequent use of porches or stoops
- Occasionally includes a bay window.



R-6/R-63/R-7: ATTACHED HOUSES

Example 1: Semi-Detached Houses

This building massing is divided only between two parcels.

Building Frontage

Frontage Components

- Frequent use of a continuous unified roofed porch across both of the front yards.
- Average porch depth of about 5-6 ft.

Frontage Elevation

- Ground floor is usually raised from the street level by 2-3 feet, sometimes higher.

Front Yard Landscaping

- Mixed presence of landscaped and hardscape front yards.

Setbacks

Front Setback: Between 10-18 ft, occasionally deeper

Side Setbacks: About 3-6ft on the detached side..

Corner condition

- Buildings in corner lots tend to have only one principal facade and no side street yard, with exceptions.

Character

Ground and Upper Floors Fenestration

- About even split between solid wall and windows both in the ground floor and upper stories.
- Most examples follow a three-window rhythm pattern.
- Some examples of a two-window fenestration

Roofline

- Most buildings have a shed roof.
- Two-story building massing.



R-6/R-63/R-7: ATTACHED HOUSES

Example 2: ROW Houses

This building massing is divided in three or more parcels.

Building Frontage

Frontage Components

- Frequent use of a continuous unified roofed porch across the front yards. Average porch depth of about 5-6 ft.
- Facades tend to have a plane change.

Frontage Elevation

- Ground floor is raised from the street level by 2-3 feet.

Front Yard Landscaping

- Mixed presence of landscaped and hardscape front yards and mixed presence of fences, no taller than 3 ft.

Setbacks

Front Setback: Between 10-18 ft deep

Side Setbacks:

- The end of the building group tends to have a narrow side setback of about 3ft.

Corner condition

- Buildings in corner lots tend to have only one principal facade and no side street yard, with exceptions.

Character

Ground and Upper Floors Fenestration

- About even split between solid wall and windows both in the ground floor and upper stories.
- Most examples follow a three-window rhythm pattern.

Roofline

- Most buildings have a shed or flat roofline.



Jackson Ward

R-6/R-63/R-7: ATTACHED HOUSES

Example 3: Attached ROW Houses (Oregon Hill)

Building Frontage

Frontage Components

- Frequent use of a continuous roofed porch across the front yards.
- Eclectic architectural language between parcels
- Average porch depth of about 5-6 ft.
- Facades tend to have a plane change.

Frontage Elevation

- Ground floor is minimally raised from the street level.

Front Yard Landscaping

- Mixed presence of landscaped and hardscape front yards and mixed presence of fences, no taller than 3 ft.

Setbacks

Front Setback: Around 10-12 ft deep

Side Setbacks:

- There is continuous frontage built along the street without any separation between building groups.

Character

Ground and Upper Floors Fenestration

- Even ratio of solid wall and openings in the ground floor. Relatively higher percentage of solid walls than windows on the upper stories.
- Being a narrower lot width, houses tend to follow a two-window rhythm pattern instead.

Roofline

- Most buildings have a shed or flat roofline.



Oregon Hill

R-6: WALK-UP BUILDINGS

Description

Walk-ups are two or three stories, containing 4 to 12 dwelling stacked units, similar in scale to adjacent houses.

Building Frontage

Frontage Components

- Constant presence of porches with stacked balconies on top
- Average porch depth of about 6-8 ft.
- Central entrance in between porches

Frontage Elevation

- Ground floor is raised from the street level by 2-3 feet.
- They usually follow the elevation and setbacks of the surrounding houses.

Front Yard Landscaping

- Front yards are commonly landscaped and rarely fenced.

Setbacks

Front Setback: Depending on the neighborhood various depths range from 15-30 ft, depending on the neighborhood

Side Setbacks: Narrow side yards. Occasionally, walk-ups are grouped in a continuous attached form.

Corner condition

- Buildings in corner lots tend to have only one principal facade and no side street yard, with exceptions.

Character

Ground and Upper Floors Fenestration

- Relatively higher percentage of solid walls than windows

Roofline

- Mansard roofs are typical, with cross-gables creating accents in corners or architectural bays.



Museum District

R-5/R-4: DETACHED HOUSES

Description

This is the primary building pattern in most of Richmond's residential areas. It consists of any freestanding residential building set back from its neighbors and set back from the street by a front yard. It exists in several variances, depending on the building elevation from the street, depth of the front setback, number of stories, and presence of accessory dwelling units.

- Building massings are setback on all sides by distinguishable yards
- Houses usually are 1 to 2 stories high. Many R-5 neighborhoods with 1-story detached houses are being retrofitted with 2-story new buildings.
- Detached houses typically front the street with a single primary stoop or porch, even if multiple entrances exist.
- Detached houses contain one primary dwelling, with some cases of other units being retrofitted.
- Front yards range from 15-40 ft, depending on the neighborhood.
- Usually, houses are raised from the street level by 2-3 feet, with some cases being more due to significant terrain changes.



R-5/R-4: DETACHED HOUSES

Example 1: Detached Houses (Church Hill North)

Building Frontage

Frontage Components

- It almost always includes a porch or a stoop encroaching on the front yard.
- Average porch depth of 6-8 ft.

Frontage Elevation

- Houses are raised from street level due to terrain elevation.
- Two-story houses with a porch can be raised further by 4-5ft

Front Yard Landscaping

- Landscaped front yards with and rare presence of fences.

Setbacks

Front Setback: Around 18-25 ft, with exceptions

Side Setbacks:

- Occasional narrow side yards, especially in lots with substandard widths

Corner condition

- Principal buildings in corner lots tend to have only one principal facade with a landscaped side street yard.
- Some houses might have a secondary entrance.

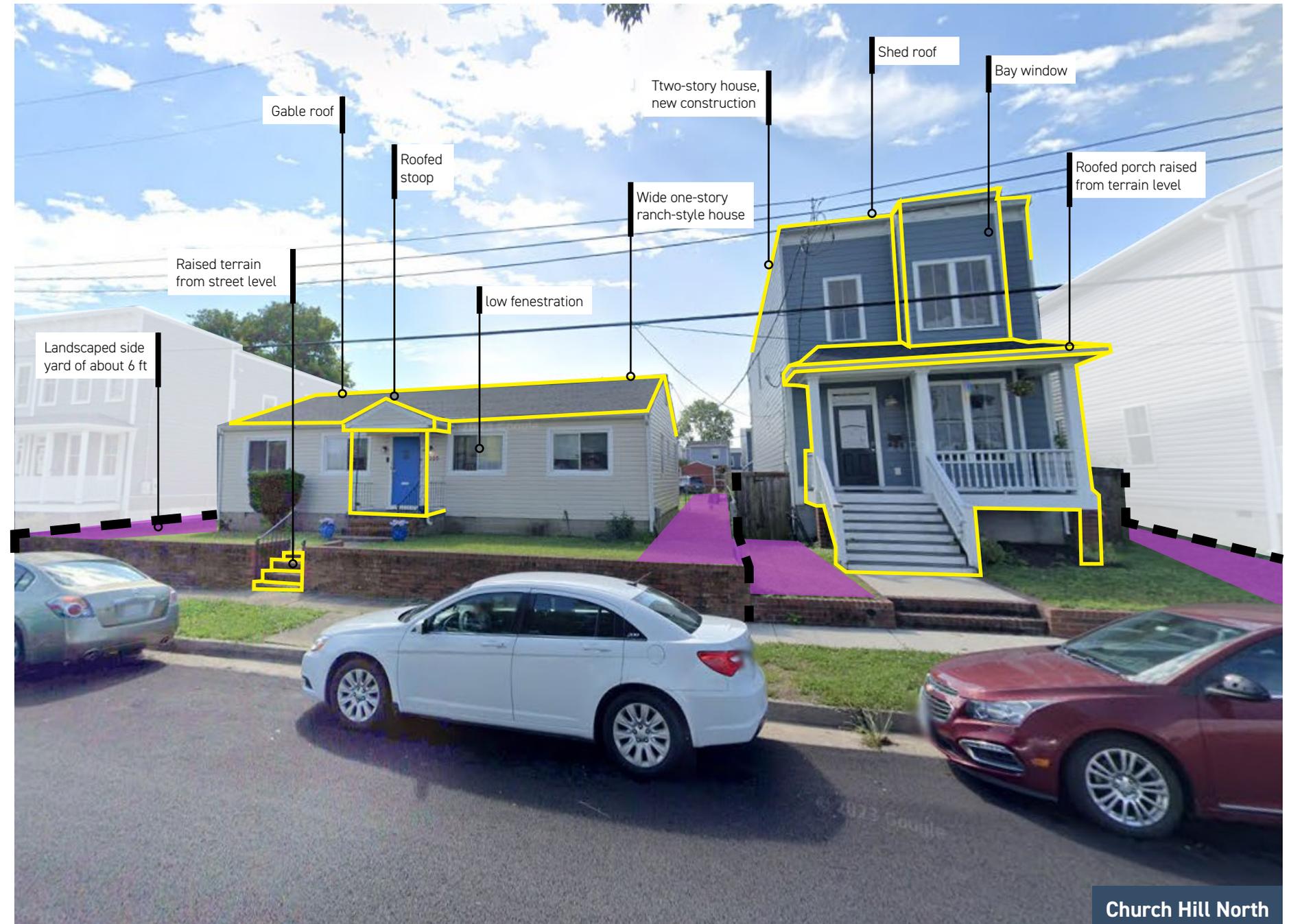
Character

Ground and Upper Floors Fenestration

- Newer buildings have higher fenestration, varying between neighborhoods

Roofline

- Mix of gable, shed and hip roofs.



R-5/R-4: DETACHED HOUSES

Example 2: Detached Houses (Oak Grove)

Building Frontage

Frontage Components

- It almost always includes a porch or a stoop encroaching on the front yard.
- Average porch depth of 6-8 ft.

Frontage Elevation

- Houses are raised from street level by 2-3 ft
- Two-story houses with a porch can be raised further by 4-5ft

Front Yard Landscaping

- Landscaped front yards with and rare presence of fences.

Setbacks

Front Setback: Around 20-25 ft, with exceptions

Side Setbacks:

- Occasional narrow side yards, especially in lots with substandard widths

Corner condition

- Principal buildings in corner lots tend to have only one principal facade with a landscaped side street yard.
- Some houses might have a secondary entrance.

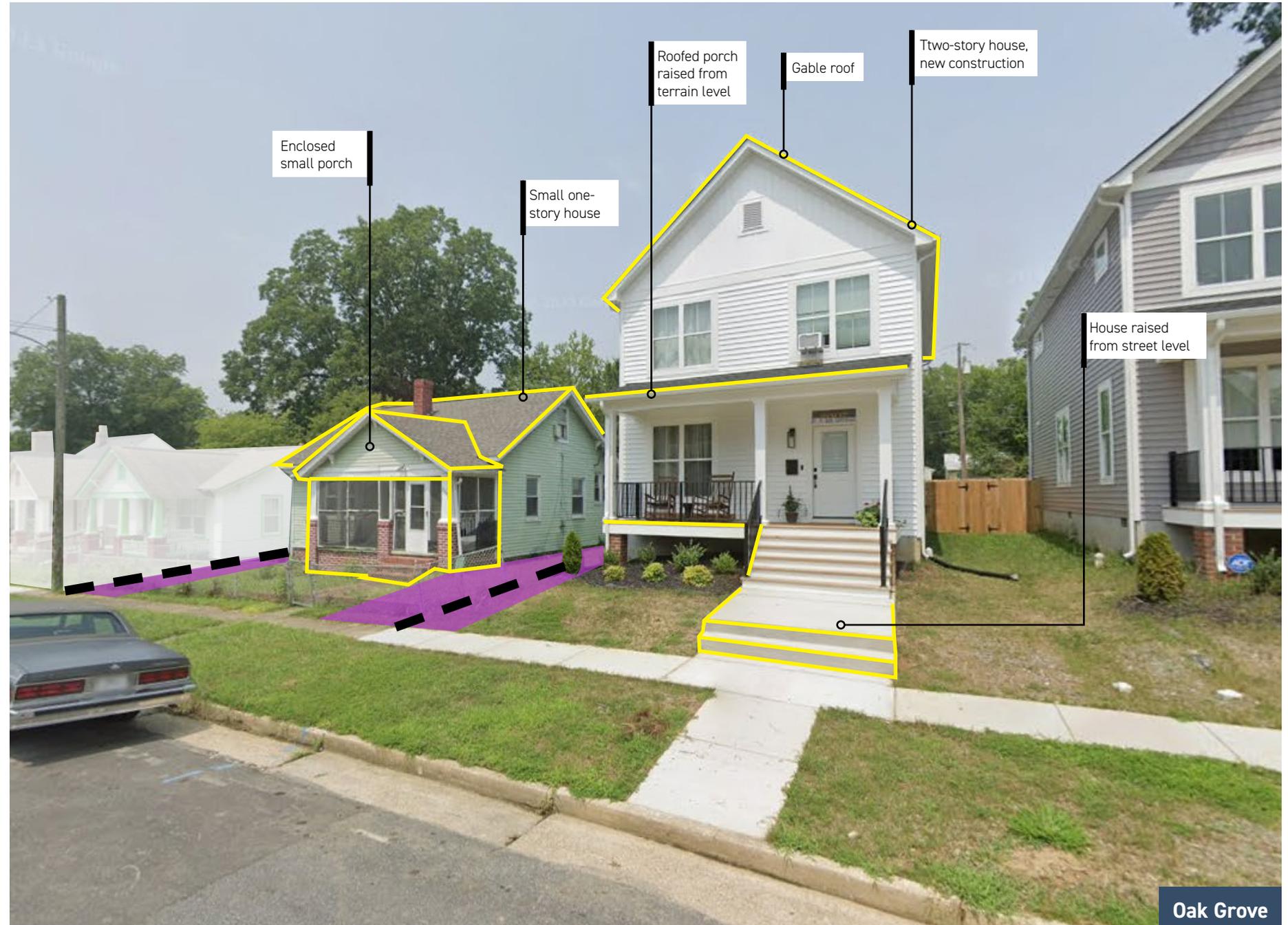
Character

Ground and Upper Floors Fenestration

- Newer buildings have higher fenestration, varying between neighborhoods. Average fenestration is below 50%

Roofline

- Mostly gable roofs.



R-5/R-4: DETACHED HOUSES

Example 3: Detached Houses (Washington Park)

Building Frontage

Frontage Components

- It almost always includes a porch or a stoop encroaching on the front yard.
- Average porch depth of 5-6 ft.

Frontage Elevation

- Houses are raised from street level by 2-3 ft
- Two-story houses with a porch can be raised further by 4-5ft

Front Yard Landscaping

- Landscaped front yards with and rare presence of fences.

Setbacks

Front Setback: Around 20-30 ft, with exceptions under 20 ft

Side Setbacks:

- Occasional narrow side yards, especially in lots with substandard widths

Corner condition

- Principal buildings in corner lots tend to have only one principal facade with a landscaped side street yard.
- Some houses might have a secondary entrance.

Character

Ground and Upper Floors Fenestration

- Newer buildings have higher fenestration, varying between neighborhoods. Average fenestration is below 50%

Roofline

- Mostly gable roofs, with examples of shed and hip roofs.



Washington Park

R-6/R-7/R-63: GENERAL COMMERCIAL

A multi-story mix-used building with active ground floor. Even when located in residential areas, these buildings tend not to follow the contextual setbacks and are placed right at the sidewalk instead.

Building Frontage

Frontage Components

- Shopfront frontage

Frontage Elevation

- Building is normally raised from the street by just 1-2 steps

Setbacks

Front Setback:

- General commercial buildings sit right at the front lot line, without any yard.
- Some examples might match the neighboring setback

Side Setbacks:

- Buildings are placed close to or right at the side lot lines

Corner condition

- Principal buildings in corner lots tend to have shopfront frontages facing both streets, with only once serving as main entrance

Character

Ground and Upper Floors Fenestration

- Ground floors have high fenestration.
- Upper floors have average split between solid walls and windows.

Roofline

- Most of these buildings have flat or shed-style roofs

