

# **FOOTPATHS & FRONT PORCHES**

Reimagining the Neighborhood for the Pedestrian

Undergraduate Senior Project Virginia Polytechnic Institute and State University Landscape Architecture 2024 Ava June Knuth

This senior project is submitted in partial fulfillment of the requirements for the Bachelor of Landscape Architecture Degree in the College of Architecture, Arts, and Design at Virginia Polytechnic Institute and State University. Klem Clement

**Terry Clements** 

Senior Project Coordinator & Program Chairperson

**Shaun Rosier** 

Senior Project Advisor

#### **ACKNOWLEDGEMENTS**

To Nick, I cannot thank you enough for how you've loved and supported me through this senior project. Thank you for being a shoulder to lean on in the midst of stress.

To my family, thank you for your love and support these past five years and for encouraging me to follow my dreams.

To Shaun, I am so grateful for your guidance this past year. Your encouragement and motivation pushed me to strive for excellence in my design.

To my professors, thank you for all the knowledge you imparted on me. Your individual persepectives and experiences have greatly shaped my educational experience for the better.

To Billy Almond and Andy Britton, thank you for your mentorship throughout my project; it has benefitted greatly from your industry perspectives. I am so grateful for the time you both spent meeting with me.

To the wonderful folks at Cite Design, I would not be interested in housing if it were not for my well-rounded internship experience. Thank you for allowing me to find my place in landscape architecture.

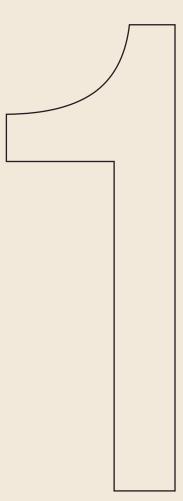
To my studio cohort, I'm grateful for the many years we had together. We survived Surge Studio and lived to tell about it. I wish you all the best of luck!

## **TABLE OF CONTENTS**

1. INTRODUCTION	6-15
abstract	
project diagram	
the problem	
2. SITE	16-27
site context	
site history	
site analysis	
3. RESEARCH	28-51
housing density	
design principles	
case studies	
4. PROCESS	52-55
iterations	
reflections	
5. DESIGN	56-67
conceptual framework	
masterplan	
technical mapping	
6. DESIGN ANALYSIS	68-89
residents	
social analysis	
reflections	

"Nobody enjoys sitting on a stoop or looking out a window at an empty street."

Jane Jacobs The Death and Life of Great American Cities, 1961



INTRODUCTION

## **ABSTRACT**

Footpaths and Front Porches is a neighborhood design project located in Richmond, Virginia's northside neighborhood of Ginter Park. This project dives into household demographics, housing market, and their changes. With the shrinking household size, social dynamics change as well. The project aims to address the social changes, household changes, and market changes simultaneously with a socially diverse, smaller unit, attainable housing project. The neighborhood design takes the research of safety, privacy, and expsure in relation to building and landscape formation and combines it with the site and context analysis. The result is strategically placed buildings, amenities, and landscapes designed to provide a range of public, private, and semi-private outdoor spaces for a social neighborhood.

# **RESEARCH QUESTION**

How can landscape architecture balance the public and the private in neighborhood design so that the result simultaneously fosters community and preserves individuality?

#### **GOALS & OBJECTIVES**

Address the changing trends in housing in America, and specifically Richmond, and the need for alternative housing options to meet the housing demand

By researching housing data trends in Richmond and infer the type of housing needed

By researching housing typologies that can better meet market demand, like medium density housing

By conducting research on correlations between densities and sociability in housing and finding a middle ground between the two

Design a housing development that uses building and landscape formation to invite dynamic social interactions in public spaces, intimate moments in semi-public spaces, and individual use in private spaces.

By researching how transitioning from public to private spaces through clear demarcation and transition spaces creates a better experience for people

By implementing research on how building arrangements influence an individual's experience of territory and privacy, sense of enclosure, and safety in a space

By using research from Gehl, Jacobs, and Sim to design for the human scale

## Create walking paths to encourage social encounters

By programming the site with multiple destinations throughout the site to encourage walking

By creating sidewalks that are wide enough for multiple people and uses By limiting vehicular circulation to merely essential while still adhering to fire codes and parking requirements

### **INTEREST IN MISSING MIDDLE HOUSING**

# CASE STUDIES

Vrijburcht
Lindenstrasse
Bo01
Nightingale
Mehr Als Wohnen

#### **RESEARCH QUESTION**

How can landscape architecture balance public and private interests in neighborhood planning so that the design simultaneously fosters community and promotes individuality?

#### RESEARCH LITERATURE

The Death and Life of Great American Cities (Jacobs) Soft City (Sim)

Missing Middle Housing (Parolek)

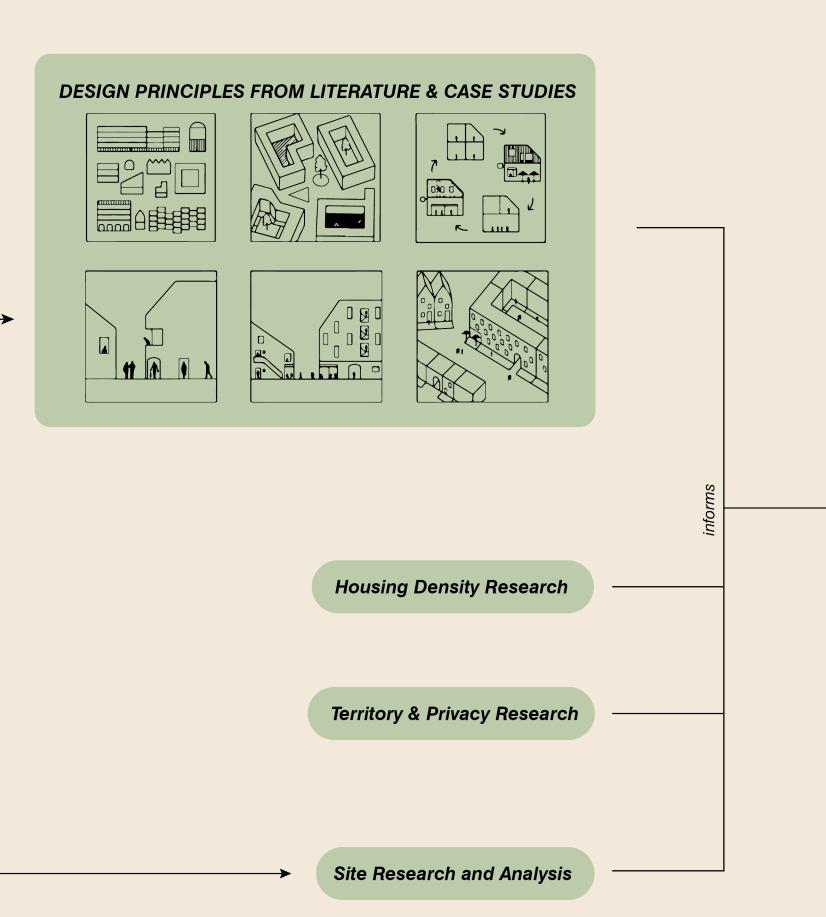
Strong Towns (Marohn)

The Housing Design Handbook (Levitt and McCafferty)

Life Between Buildings (Gehl)

INTEREST IN RICHMOND, VIRGINIA

Richmond, VA Housing Research



DESIGN SOLUTION:
MEDIUM DENSITY, MIXED-USE,
MISSING MIDDLE AFFORDABLE
HOUSING DEVELOPMENT THAT
PROMOTES SOCIABILITY
WHILE PRESERVING PRIVACY

# **The Problem**







# The Household Demographic is Changing.

Child-free couples and persons living alone continue to make up most new households in the Richmond metro area. Only 1/4 of new households in the past year were families with children.

More people are living alone and not having children.



## Housing Prices are Unaffordable.

The Northside neighborhood had an average rent of \$1,045 in 2022.

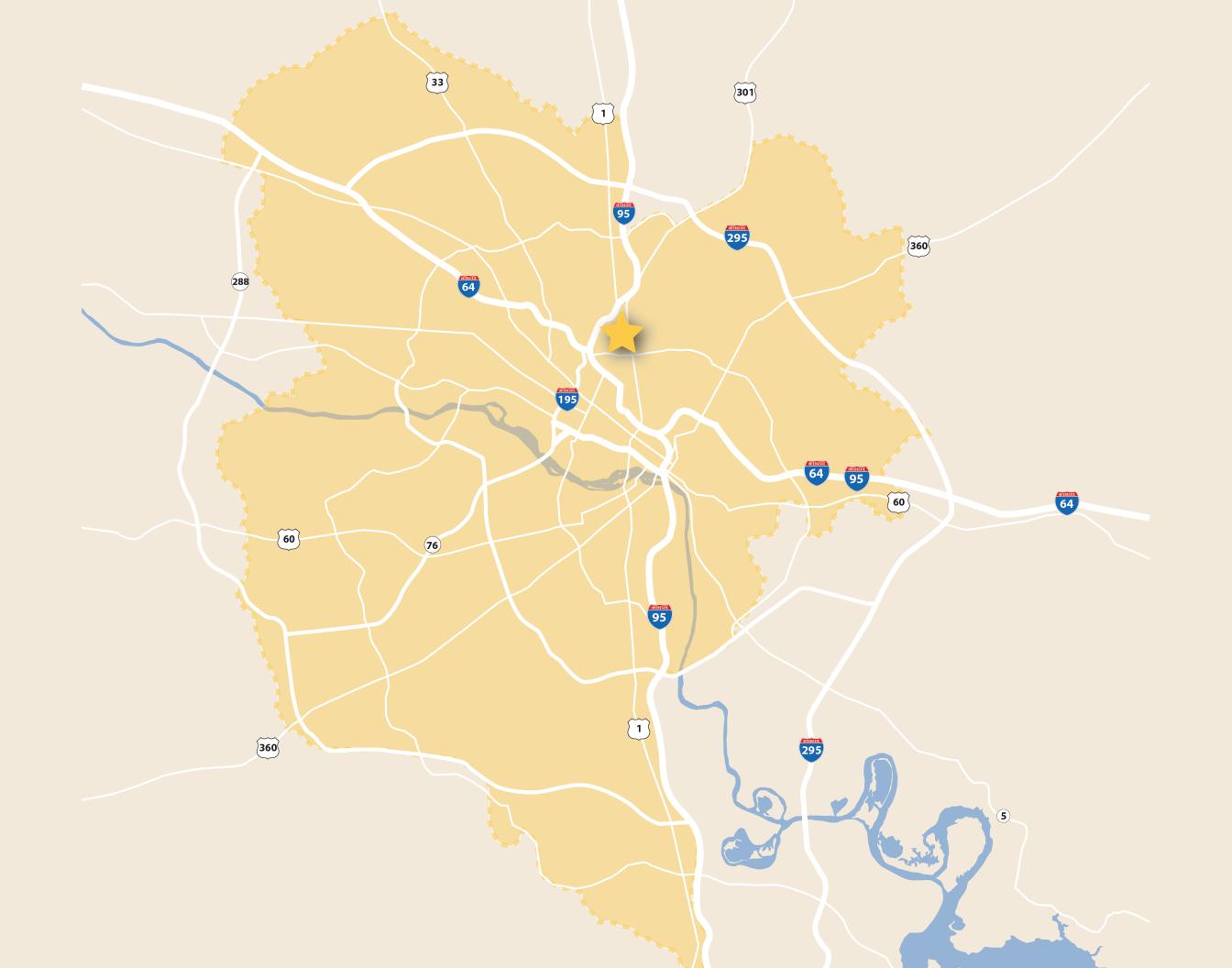
This was a 28% increase since 2020, the highest increase in the City of Richmond.

Living costs for the Richmond area has outpaced the entire state of Virginia, including markets like Northern Virginia and Washington, D.C.



4,300 affordable apartments were built in Richmond metro since January 2020.

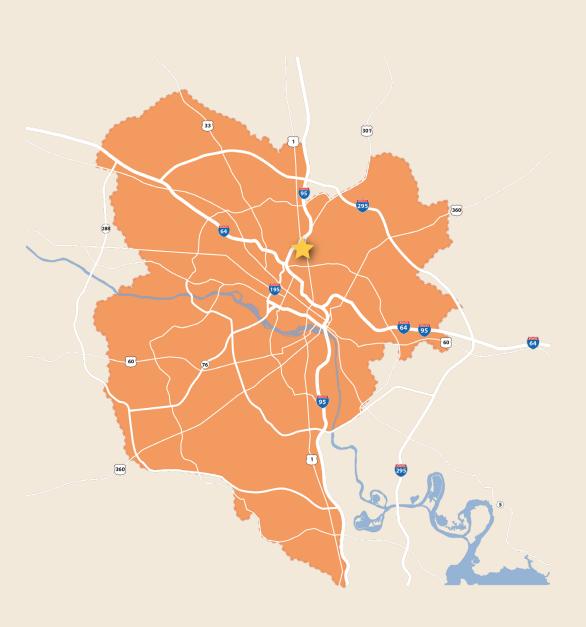
It would take an additional 39,000 affordable homes to meet the housing needs in Richmond.

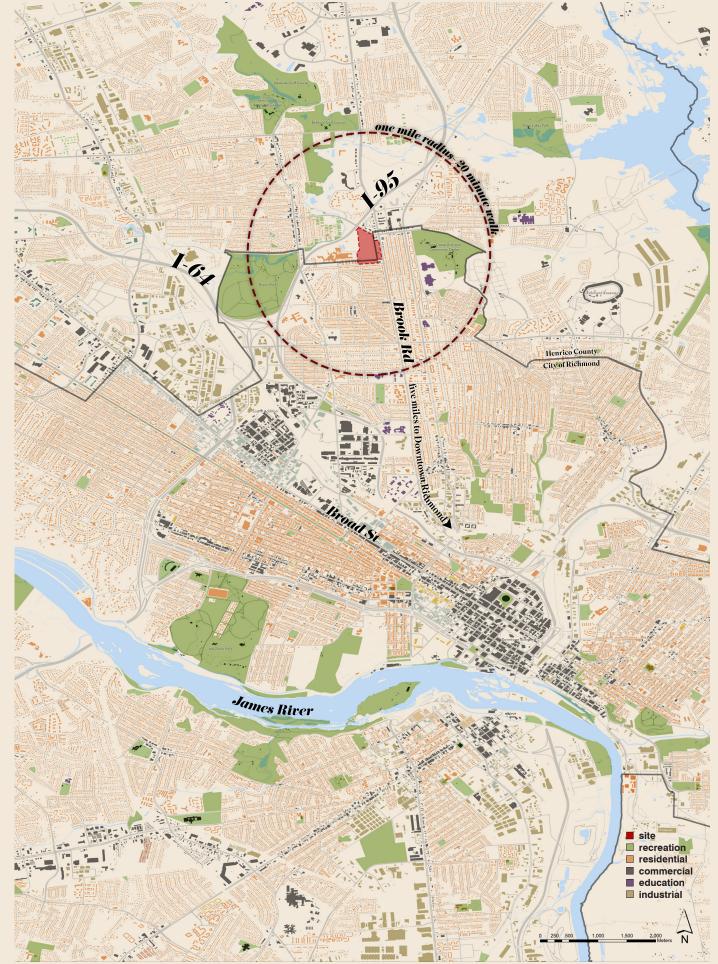


"Greater choice and opportunity can be delivered to more people in everyday life if public spaces (streets, squares, and parks) and private spaces (gardens and courtyards) exist in close proximity."

> David Sim Soft City, 2019











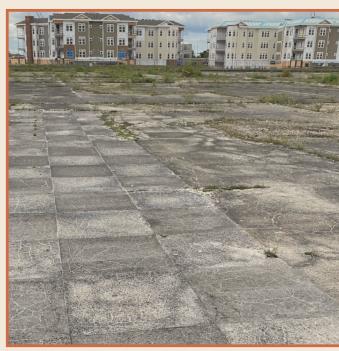


# **SITE PHOTOS**





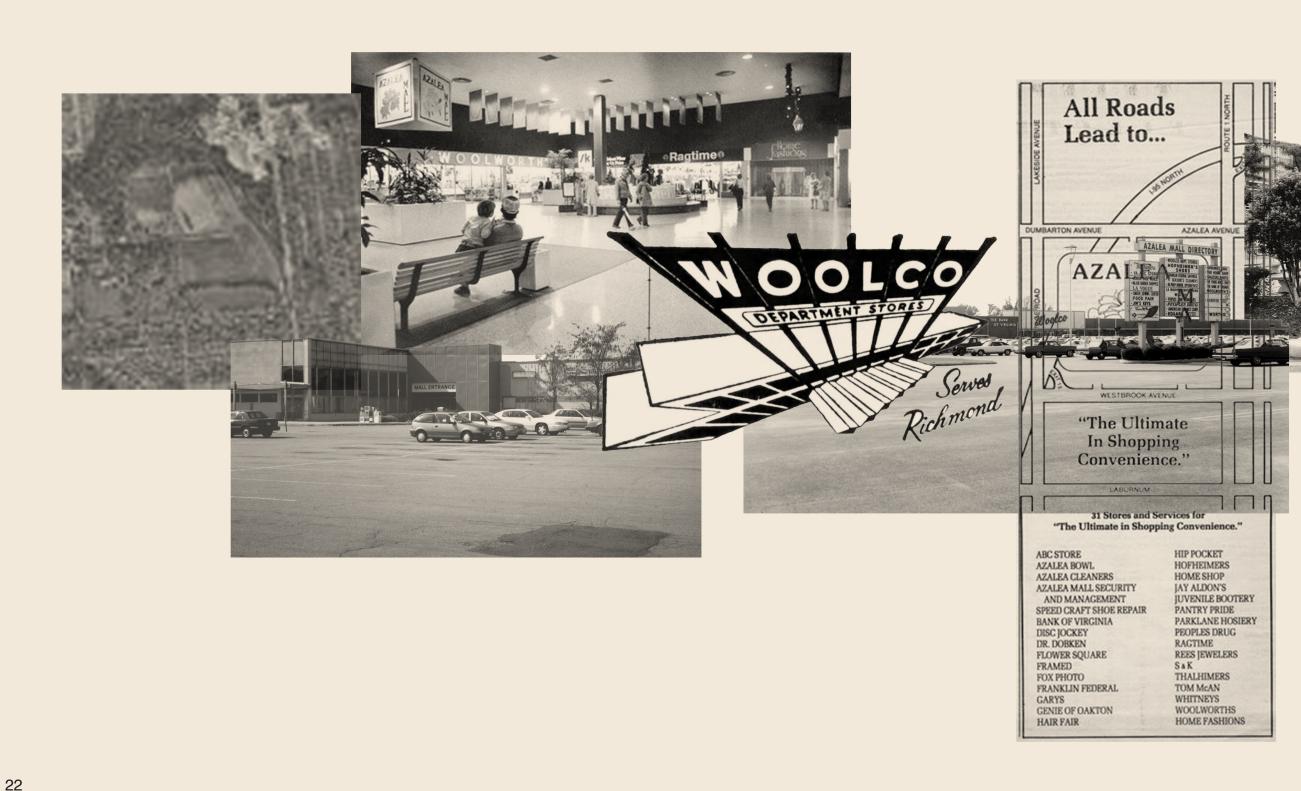


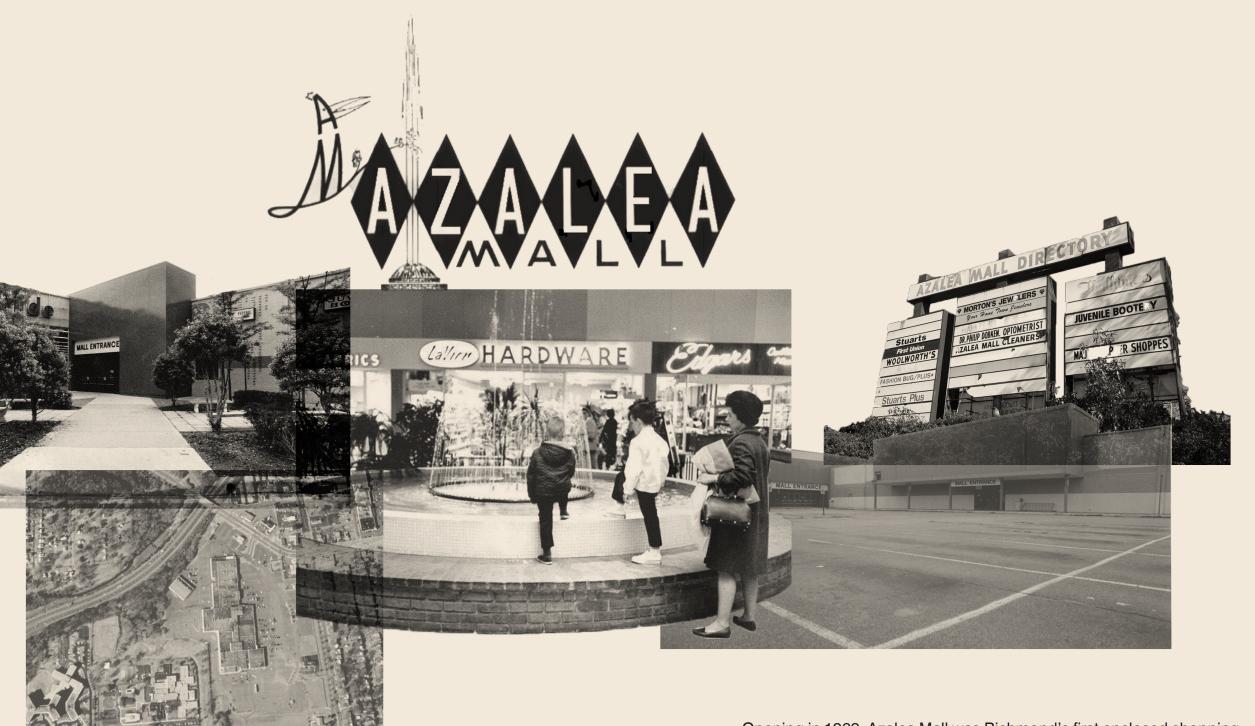






#### SITE HISTORY

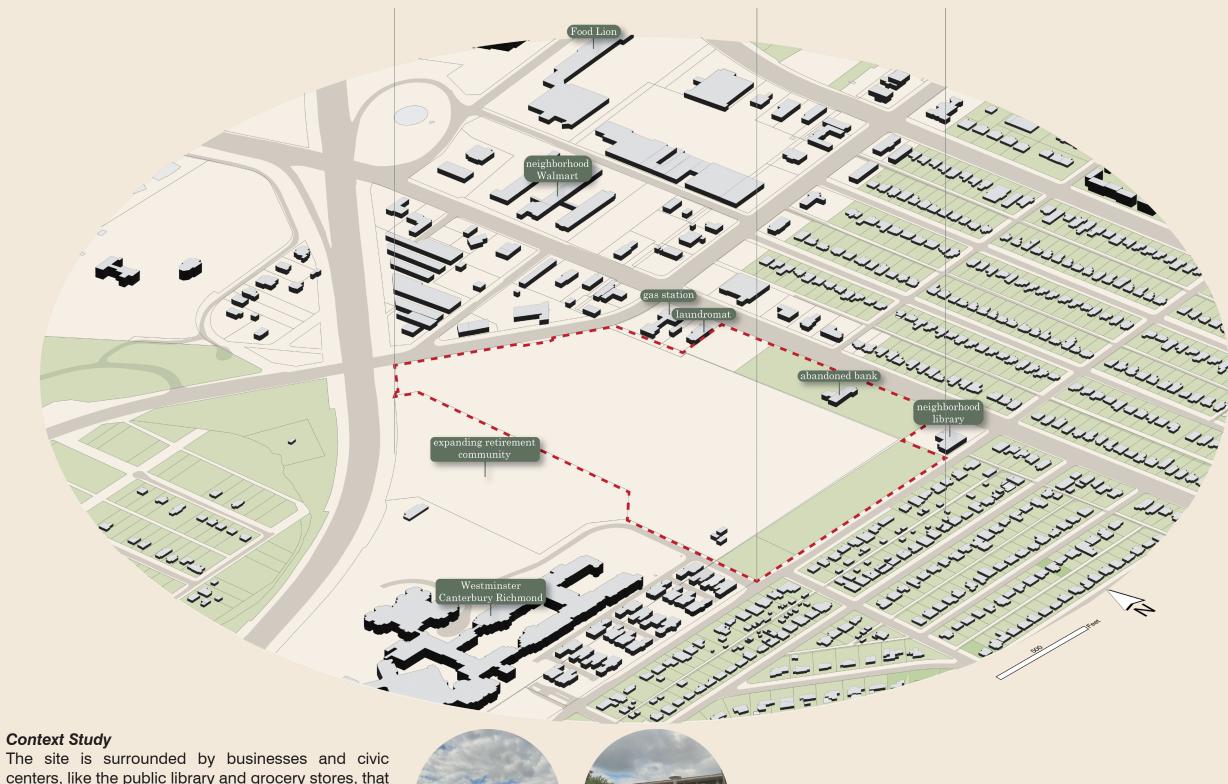




Opening in 1962, Azalea Mall was Richmond's first enclosed shopping mall. It was not a very large mall- only 200,000 S.F. Because of it's small size, it was more a large neighborhood center and never had much of a regional pull. The original anchors in the mall were Thalhimer's and Woolcos. Some other original tenants included Food Fair, Woolworths, Peoples Drug, The Home Shop, and Wards TV.

The mall closed 1995; it is the first and only Richmond mall to be completely demolished. Since its demolish 28 years ago, the landscape consists of nothing more than a loitering spot.

# SITE ANALYSIS



# **Context Study**

centers, like the public library and grocery stores, that can attract people into the neighborhood.







### Transit Study

Many bus stops border the site in the surrounding residential and commercial neighborhoods. Bike lanes run along Brook Road that extend all the way to downtown.





### Landscape Context Study

Trumpet Branch, a stream that ends up in the Chickahominy River system, sits on the other side of I-95. This stream of water is surrounded by a landscape buffer (dark green).



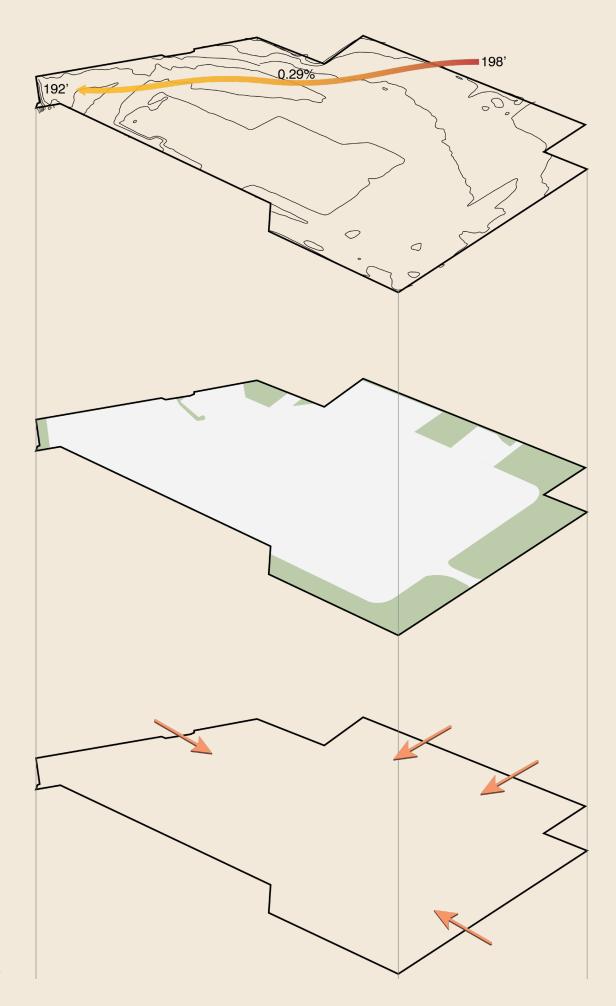


## **Zoning Study**

Most of the zoning immediately surrounding the site is single family residential; however, a large senior living facility shares an edge with the site. There are fast food restaurants, a Neighborhood Walmart, and a Food Lion in the commerical bubble north of the site.







# Slope Study

The site sits on a previously flattened parcel where a mall once stood making the overall slope only 0.29% and a grade change of 6 feet over 2064 feet





## **Surface Study**

The majority of the site is a paved over impervious parking lot and the original interior mall flooring. The existing grass is arranged toward the residential homes adjacent to the site





## Circulation Study

The old mall site contains four existing entrances to the mall from Dumbarton Rd, Brook Rd, and Westbrook Ave.





# **OBSERVATIONS**

## STRENGTHS AND OPPORTUNITIES

Paved parking lot and demolished building, already cleared site Literal blank slate

Good amount of space for a self-contained community (40 acres) Residential houses surrounding are in need of a neighborhood park Residential houses surrounding could benefit from a walkable vegetation difficult shopping area

Richmond area easy

The site is in a transitional location to bridge the low density residential, the high density residential, and the commercial

## **WEAKNESSES AND THREATS**

Lots of concrete and asphalt as existing conditions

Working with very little elevation change makes stormwater management possibly difficult

Soil below pavement is likely to be poor quality, making planting

Site borders large senior living complex with tall buildings. Project Existing bike lanes and bus routes make connection to the greater will have to consider screening tall buildings to keep the scale small/ human on my site

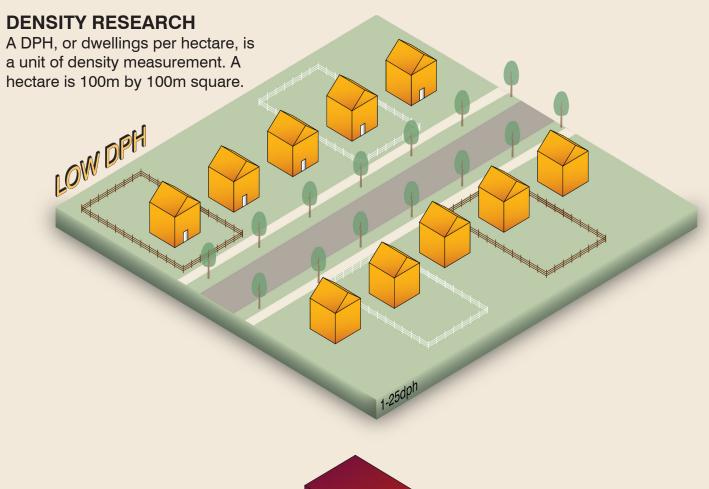
> Site is catty corner to some run down local businesses and fast food chains

"There must be eyes on the street, eyes belonging to those we might call the natural proprietors of the street. The buildings on a street equipped to handle strangers and to ensure the safety of both residents and strangers, must be oriented to the street. They cannot turn their backs or blank sides on it and leave it blind."

Jane Jacobs The Death and Life of Great American Cities, 1961



RESEARCH



# LOW DWELLINGS PER HOW DOES IT MAKE YOU FEEL? HECTARE

1-25 dph

Often located on the peripheries of towns and cities, low density developments have cul-de-sac planning that creates dead ends, creating less circulation and opportunity for interactions and "bumping into people"

Low dph neighborhoods emphasize privacy and individuality over walkability and sociability. You may have your own backyard, but you are at the mercy of your car if you want to leave your house.

High Sense of Privacy



# HIGH DWELLINGS PER HECTARE

75+dph

At a high dph, programmed courtyards can become more of a landscaped circulation. Courtyards down on the ground floor aren't good because people don't like other people looking down at them. People on the ground are exposed to everyone above.

## HOW DOES IT MAKE YOU FEEL?

The exclusive nature of the entrance to your home and the high level of servicing required at the ground floor can present a less active public realm. It creates no incentive to go the ground floor, some nine floors below you.

There is no range in private and public space. The entire ground is public and only balconies are available for privacy.

High Sense of Exposure



## MEDIUM DWELLINGS PER HECTARE

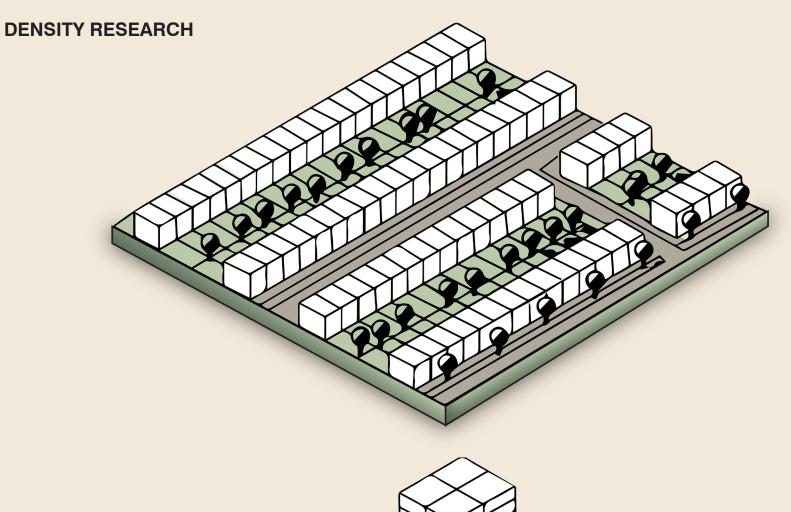
25-75dph

Medium density typically feature houses, duplexes, triplexes, and townhouses, ranging from one to six floors. The higher the dph, the more limited the scope for individual becomes.

#### PER HOW DOES IT MAKE YOU FEEL?

Medium density can help establish more cohesive and balanced communities by providing a good range of larger and smaller homes in a variety of typologies, accommodate a range of tenures and occupants, and provide uncomplicated access to private and shared amenities and open space.

**Equal Privacy and Exposure** 

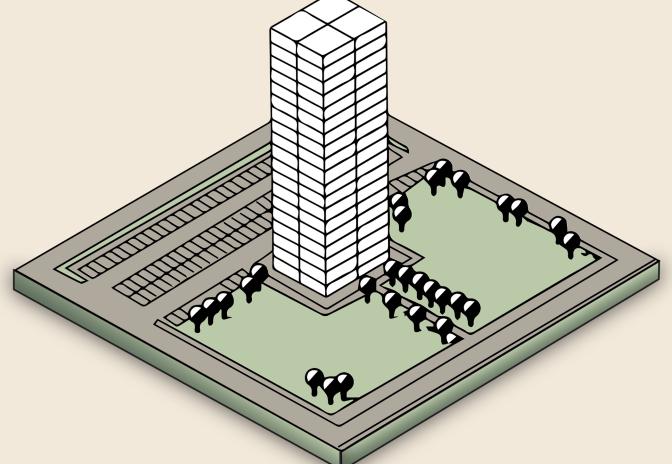


#### LOW RISE

High coverage 75 dph

Does it create a social atmosphere?

Low rise developments consist of a private outdoor space for every dwelling, like a backyard. This makes individuality and privacy more important than sociability and walk-ability. These developments are vehicle centered and hinder social interactions.

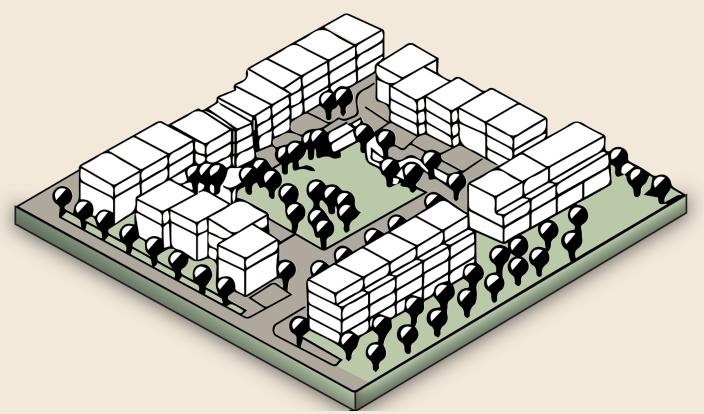


#### **HIGH RISE**

Low coverage 75 dph

Does it create a social atmosphere?

Living on the 10th floor, you have little to no connection with the ground or outdoors. You are not inclined to go outside, and you have no personal outdoor space, except maybe a balcony. Because of this, you cannot meet neighbors and socialize, recreate, or enjoy outdoor spaces.



#### **MEDIUM RISE**

Medium coverage 75 dph

Does it create a social atmosphere?

A medium land coverage has an equal amount of building and open space. That means it is walkable and consists of one, two, and three story buildings, staying within the human scale. Because of the building and open space arrangement at this density, with a mixture of private and public open space, social interactions with neighbors are frequent and positive.

# **DWELLINGS PER HECTARE COMPARISON IN RICHMOND**

The diagram on the right shows the distribution of densities throughout the Richmond metro area surrounding the site.

The observations gained through this exercise show how the higher housing densities are localized in the downtown areas while the lower density single-family neighborhoods cluster at the periphery of the city.

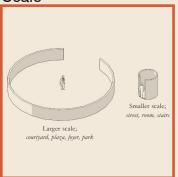
My site sits at an opportune junction of low, medium, and high densities.



#### **DEFINING TERRITORY & PRIVACY**

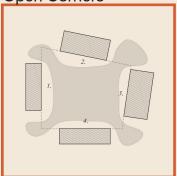
This diagrammatic analysis explores how people experience territory and privacy and how scale, proportion, and openings influence user experience in a space. This work comes from the Master's Thesis of Oliver Syme at the School of Architecture and Design, Victoria University of Wellington, Patterns of Consolidation.

#### Scale



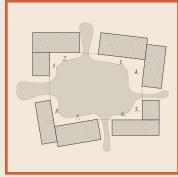
large areas create a grand feeling; confined spaces create sense of enclosure

#### **Open Corners**



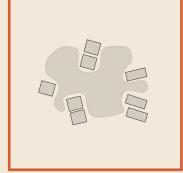
appear and feel less enclosed

#### **Closed Corners**



create a sense of enclosure

#### Low Enclosure



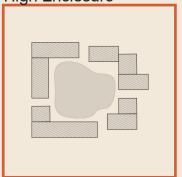
space is less identifiable when opened up

#### Mild Enclosure



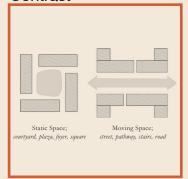
user can understand certain limitations set in place

#### **High Enclosure**



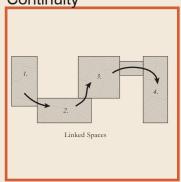
typically in well-defined streets and courtyards; this improves user's sense of location

#### Contrast



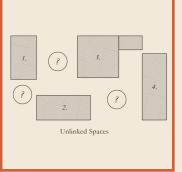
courtyard is a static space; longer space encourages movement

#### Continuity



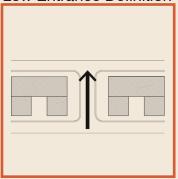
spaces naturally lead to the next one; encourage movement

## Unlinked Spaces



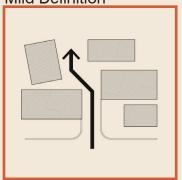
lack of continuity and contrast; can become isolated separated by parking

#### Low Entrance Definition



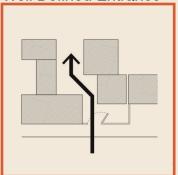
encourage use and access by public

#### Mild Definition



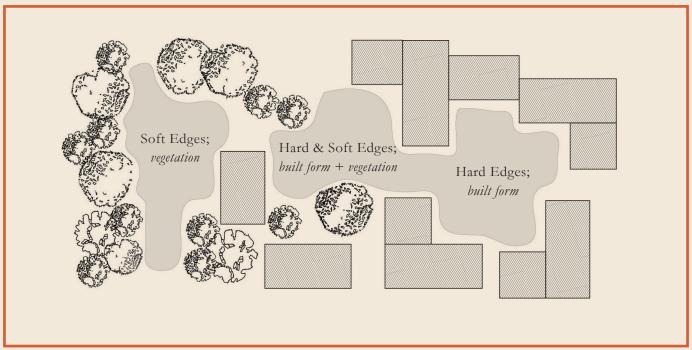
defines and limits people entering

## Well Defined Entrance

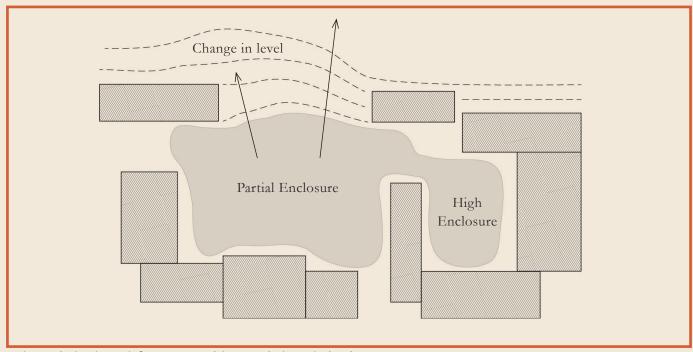


clearly defined boundaries between public and private

## Hard and Soft Edges



both hard and soft edges together create visual variety while preserving spatial definition



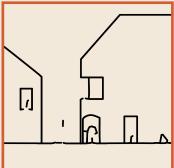
a change in level can define a space without entirely enclosing it

#### Diversity of Built Form



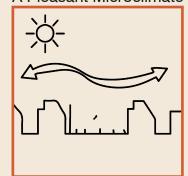
buildings should be organizationally independent

#### Human Scale



rooted in the human senses and behavior, experience at the eye level, dimensions relate to body

#### A Pleasant Microclimate



allow people to spend more time outdoors protected from strong winds

## Diversity of Outdoor



public and private spaces should exist in close proximity

#### Walkability



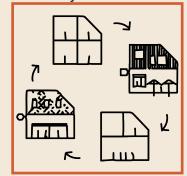
walking should be comfortable and most convenient option

### Smaller Carbon



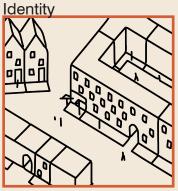
use fewer resources in construction and operation

#### Flexibility



buildings and spaces should be flexible

#### Sense of Control and



offer better control over spaces to people while fostering sense of identity

#### **Greater Biodiversity**



layout, size, and shape should accommodate natural life

## **DESIGN PRINCIPLES**

From David Sim's Soft City (2019)

# CLEAR DEMARCATION BETWEEN PUBLIC AND PRIVATE

Public fronts. Private backs. Fronts face fronts. Backs face backs. "My front door looks out onto an energetic park and my back door is quiet and serene."

#### **DIVERSITY OF BUILT FORM**

Dwelling, working, learning, and recreating in proximity allows us to live locally.

"My children can safely walk to their school; I can walk to work; and we can all play at the park in walking distance. With all this commuting time saved, we have more time with each other."

#### **SECURITY**

The experience of getting from the street to front door should never been worrisome.

Safe places are well connected with active streets and busy public spaces. "I can stay here late because my walk home is bright, lively, and safe."

#### **HUMAN SCALE**

Dimensions rooted in human senses and behaviors Smaller built components and lower heights

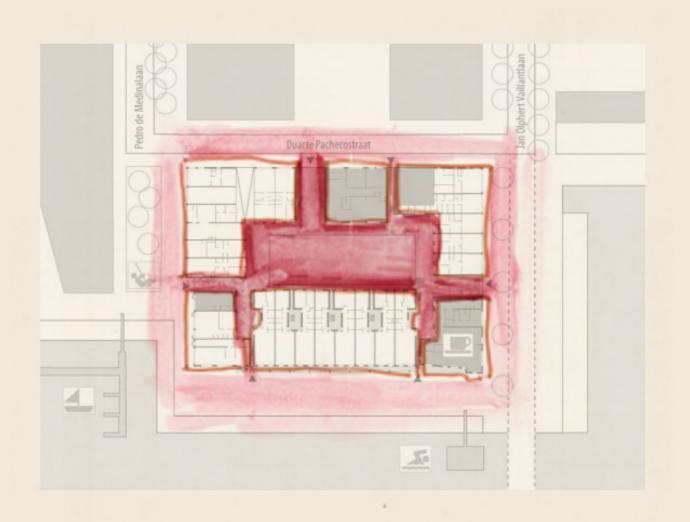
Experience at eye level

"I am not be towered over by skyscrapers. I do not feel like an ant. I feel like I belong here."

## CASE STUDY 01: Vrijburcht

The following five case studies explore a range in medium density housing developments that respond to public and private, sociabilty, and enclosure in different ways.





## Vrijburcht

Amsterdam, Netherlands Designed by CASA Architechten 60dph

#### **FINDINGS**

Clear boundaries of public and private.

Courtyard typology of semi-public outdoor space.

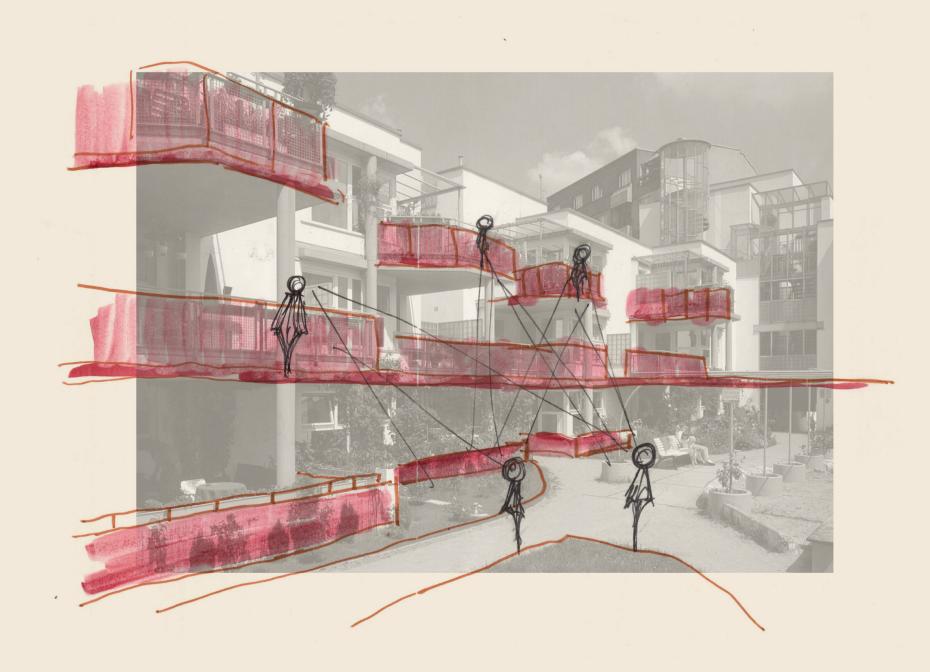
The units are designed around a central courtyard with the intention that this will provide opportunities for interaction. Furthermore, entrances to each dwelling are within the courtyard, forcing residents into the common area before entering their private dwelling.

Hierarchy of entrances organized by surrounding needs for access to inner courtyard.

#### **DESIGN PRINCIPLES**

Public and commercial buildings fronting road for best access, semi-private courtyard offering residents outdoor space with neighbors but not the greater public

## CASE STUDY 02: Lindenstrasse / Markgrafenstrasse Housing





## Lindenstrasse / Markgrafenstrasse Housing

Berlin, Germany Designed by Herman Hertzberger 48dph

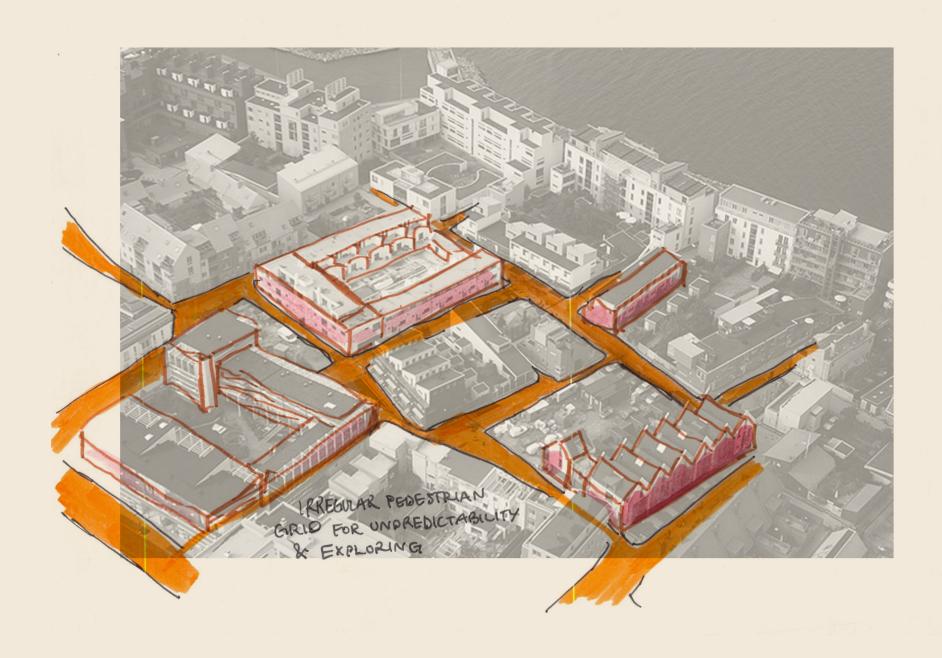
#### **FINDINGS**

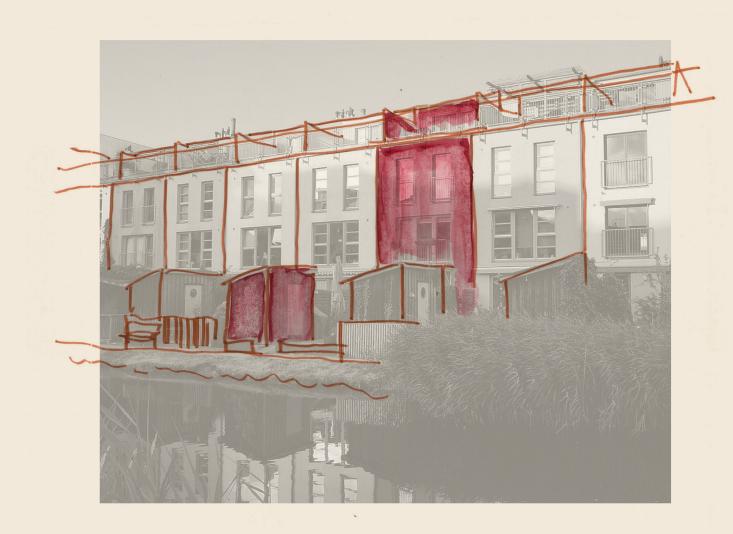
Three stories tall apartments that all face an inner courtyard. The levels of balconies invite "eyes on the street" to the children's play area below which allows for collective babysitting in a way.

Half walls delineate private and public on the ground floor. Residents are inconvenienced by traffic noise Courtyard is proportional to the buildings for an intimate garden area and a safe children's play area.

#### **DESIGN PRINCIPLES**

Intimate courtyard creates a mutal sense of security and safety with three levels of balconies watching down below





## **BO01**

Malmö, Sweden Designed by Klas Tham 65dph

#### **FINDINGS**

The housing is arranged with a tight network of streets, in character much like a medieval town.

Grouping of houses in pods creates courtyards and **personal backyards allows for individuality.** Clearly delineated space with the use of fences tells the public that they are not allowed in.

#### **DESIGN PRINCIPLES**

Sense of identity and control, clear public and private boundaries, set backs on buildings to increase public space

## CASE STUDY 04: Nightingale Anstey - Station





## **NIGHTINGALE ANSTEY - STATION**

Melbourne, Australia Designed by Breathe Architecture 68dph

#### **FINDINGS**

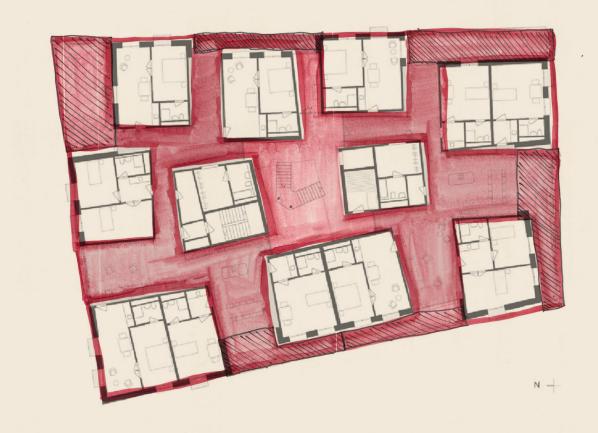
The building is set back off of the street to widen the bike path. Public access on ground floor of building. Residents above. Clear separation between semi-private and public outdoor space with a roof over semi-private that cascades down in an arch, similar to a window without glass. Soft edges for private and semi-private outdoor space. Buffers and privacy gradients

#### **DESIGN PRINCIPLES**

Safety and security, privacy, commercial/ public on ground floor

## CASE STUDY 05: Mehr Als Wohnen





### Mehr Als Wohnen

Zurich, Switzerland Designed by Futurafrosch, Duplex Architekten, Müller Sigrist, Miroslav Šik, Pool Architekten, Müller Illien Landscape Architects 40dph

#### **FINDINGS**

The design is a modern interpretation of communal living, achieved by arranging smaller, self-contained private units around generously sized common spaces.

This organization provides residents with varying degrees of privacy and autonomy, and the potential for socialization or retreat.

Buildings are linked through green spaces, walkways, and public areas.

#### **DESIGN PRINCIPLES**

Open space is proportional to building height, ground floor seating off of restaurant for social interactions. Public plaza surrounded by residents invites the public in with the outdoor space and commercial on ground floor CLEAR DEMARCATION BETWEEN PUBLIC & PRIVATE

FENCES

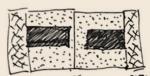
TYPES OF HOUSES.

TOWNHOUSE/ROW

HOUSE

DUPLEX

PUBLIC FRONTS, PRIVATEBACKS FRONTS FACE FRONTS, BACKS FACE BACKS



RIGHE FROM PRIVATE RACKS PUBLIC FRONT SECURITY THE EXPERIENCE OF GETTING FROM THE STREET TO FRUNT DOOR PLACES ARE WELL WANTECTED TO THEIR SURROUMINGS WITH ACTIVE STREETS & BUSY PUBLIC SPACES



"I CAN STAY HOLE LATE BETAUSE MY WALK HOME IS BRIGHT, LIVELY, & SAFE"

LANDSCAPING THAT ALLOWS VIEWS DATO THE STREET, LOW HEDGES TOR SCREEN WE & PRIVACY

USE TOPOGRAPHY TO IMPROVE PRIVACY

CAN'T SEE STRAGHT INTO PRONT PORCH WAY FROM PUBLIC SIDEWALK

PLAY

HUMAN SCALE DIMENSION'S ROOTED IN HUMAN SENSES & BEHAVIORS SMALLER BUILT COMPENENTS SLOWER HEIGHTS EXPERIENCE AT EVE LEVEL



"I AM NOT BEING TOWERED OVER BY BUILDINGS"



"I CAN VALLE TO THE GROCERY STORE .. OF BIKE ... OR BIKE TO LORK.

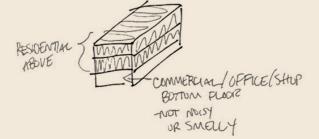
DIVERSITY OF BUILT FURM

VS TO LIVE LOCALLY

WORK

DWELLING, WORKING, LEARNING & RECREANING IN PROXIMITY ALLOWS

SCHOOL



GARAGES & VEHICLE MOUTHENT

HOUSES W/ FRONT ENTRY VEHICLES NEED LOT DEPTHS OF AT LEAST 65' Houses w/ VEHICLE ACESS FROM A BACK LANE NEED LOT DEPTHS OF AT LEAST 100'



GARAGES SHOULDN'T DOMINATE VISUALLY NAPROW BOTTLENEUR DRIVEWAY HIDES VISUAL IMPACT OF LARS & PAVEMENT

LIVING STREETS

WHITHLY WANTECTED STREET NEIWOLK THAT AVOIDS WINDE SACS STREET TREES DOOTDATHS ATTRACTIVE STREET UGHTING ON- STREET PARKING PUBLIC OPEN SPACE SHOULD HAVE

HOUSES FRONTING ONTO IT

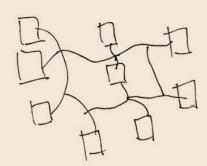
PARX BALL YARDS DO NOT FACE OTHER THEY FACE OTHER GLID GGG BULYNEDS OF BUFPERS

FACE

HOUSES

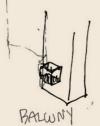
"ALLAYS EXPLUEING, NEVER ENDING NO DEAD ENDS.

WALKABILITY EASY ACCESSIBILITY & CONNECTEDNESS



"HESE ARE LEASONABLE UNKING DISTANCES ANAY"

PRIVATE OUTDOOR SPACE CAN LOOK LIKE MANY DIPPERENT THINGS



BACKYARD WT

GRASS

79 MH FACING HOUSES

"MORE SUNLIGHT IN THE UVING ROOM" BALL WADING VEHICLES (MOES (ARS) PRIVATE YARD BUNT YARD ENTRANCE TO HOUSE THROUGH SIDEWALK (WALKING) & PARAME PARENCE ((AR VISITORS)

SENSE OF CUNTROLS LOENTITY INDIVIDUALS & GIZOUPS HAVE CONTROL OVER THE SPACES ARBUND THEM

STREET

ALD ORIENTATION & NAVIGATION IN PRIVATE OUTDOOR SPACE & PUBLIC SPACE

novalou tabres Ge chers

- CAN MOVE THIS CHATE TO MAKE IT MINE 4

COURTYARD "PATTO"

The combination of design principles from David Sim, Jane Jacobs, Oliver Syme, and case studies is interpreted in the design work. The design follows the ideas of enclosure for privacy, openness with multiple access points for public spaces, and designing semi-private zones as transition spaces between public and private.

The design is keeping in mind the social implications of these zones. Public spaces are meant to be located and designed for engagement with others.

Private spaces, typically personal backyards or patios, are for personal use or invited guest use.

This project began with a dive into household demographics, housing market, and their changes. With the shrinking household size, social dynamics change as well. This project aims to address the social changes, household changes, and market changes simultaneously with a socially diverse, smaller unit, attainable housing project.

"Dwelling, working, learning, and recreating in close proximity allows us to live more locally."

David Sim Soft City, 2019



PROCESS

#### **PROCESS & ITERATIONS**

This project involved iterations of masterplan work that ultimately led to the final design. Ideas of circulation, flow, and placemaking all made its way into the design at some point.









"We have reached an interesting time when the drivers of sustainable cities are the same as the drivers of livable cities, namely, mixed use, connectivity, high-quality public realm, local character, and adaptability. When these characteristics come together..., they provide an alchemy of sustainability, social benefit, and economic vitality. These cities reduce their need for car travel, reduce energy consumption and emissions, use local materials, support local businesses and create identifiable communities."

Rob Adam Transforming Australian Cities, 200

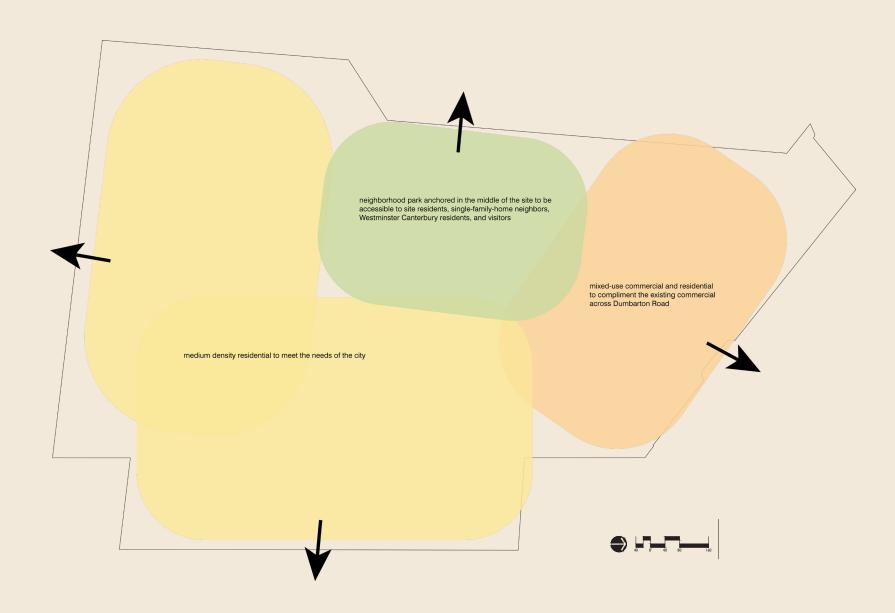


DESIGN

#### INITIAL CONCEPTUAL FRAMEWORK

This diagram shows an initial design organization based on the site and context analysis.

- The townhome residents are organized on the southern and eastern areas of the site to provide a pleasant frontage to the existing single-family homes across Westbrook Ave and Brook Rd.
- The mixed-use, higher density buildings that will attract more outside user groups are localized on the northern portion of the site, closest to the existing commercial across Dumbarton Rd.
- The neighborhood park is centrally located to be accessible from all areas of the neighborhood, both internally and externally. It is closest to Westminster Canterbury for senior residents's use.



#### REFINED CONCEPTUAL FRAMEWORK

The diagram below shows how the final design reflects the initial conceptual framework for building and landscape organization.



#### **MASTERPLAN**



This masterplan takes the research of building and landscape formation evoking feelings of safety, privacy, or exposure and combines it with the site and context analysis. The result is strategically placed buildings, amenities, and landscapes designed to provide a range of public, private, and semi-private outdoor spaces.

The neighborhood design is a mixed-use medium density housing development with multiple types of housing proposed to maximize the housing which maximizes resident diversity

The programming has been arranged to encourage walking, chance social encounters, and engagement with the larger Ginter Park Neighborhood.

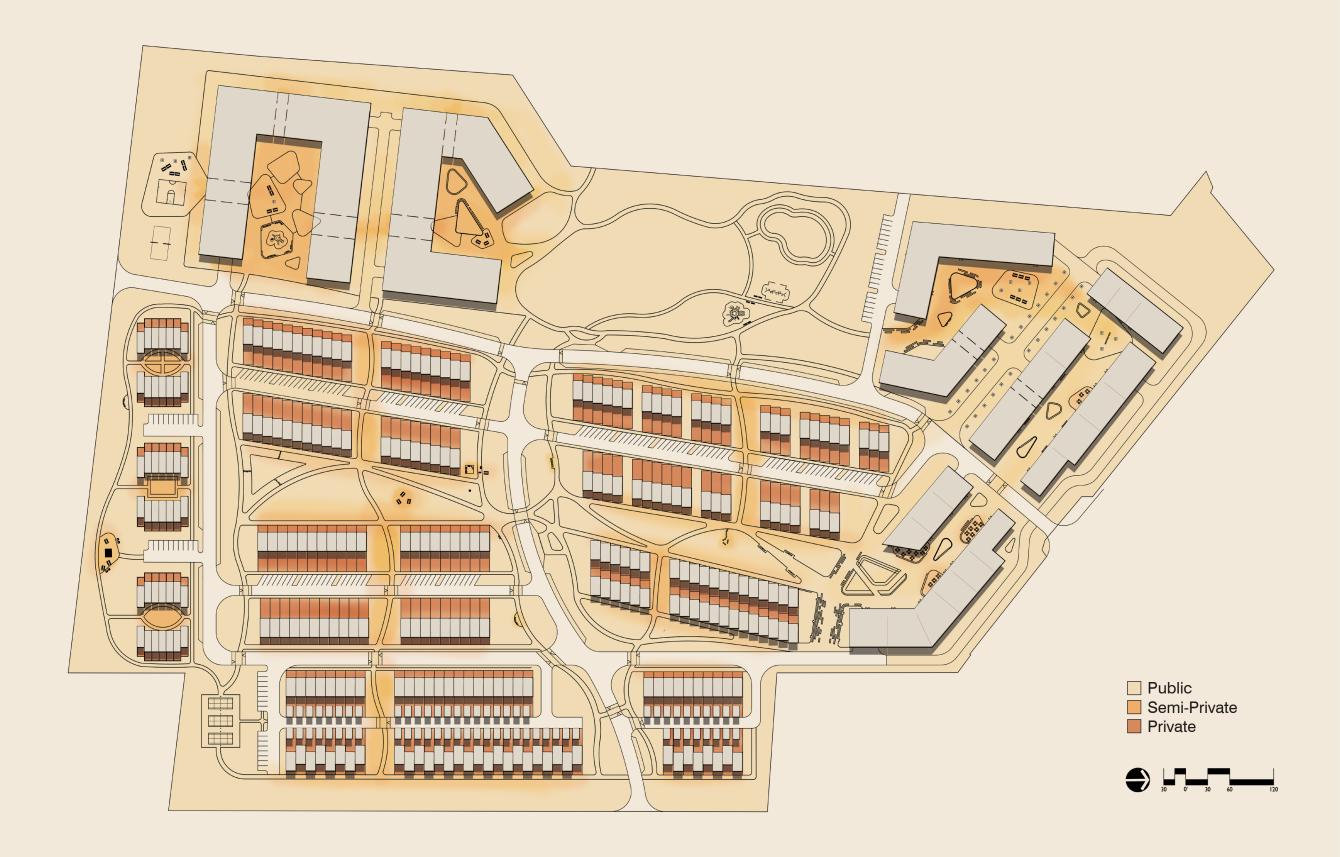
TOWNHOUSES TOTAL:	250
with garages:	67
courtyard:	21
with large yard and alley parking:	124
with small yard and no parking:	38
APARTMENTS TOTAL:	406
apartment building:	300
mixed-use building:	106
COMMERCIAL TOTAL:	81,120 sq
DWELLINGS TOTAL:	656
HECTARES TOTAL:	19.4
DWELLINGS PER HECTARE:	33.8

19.6% of site is building footprints

80.4% is open space, roads, parking

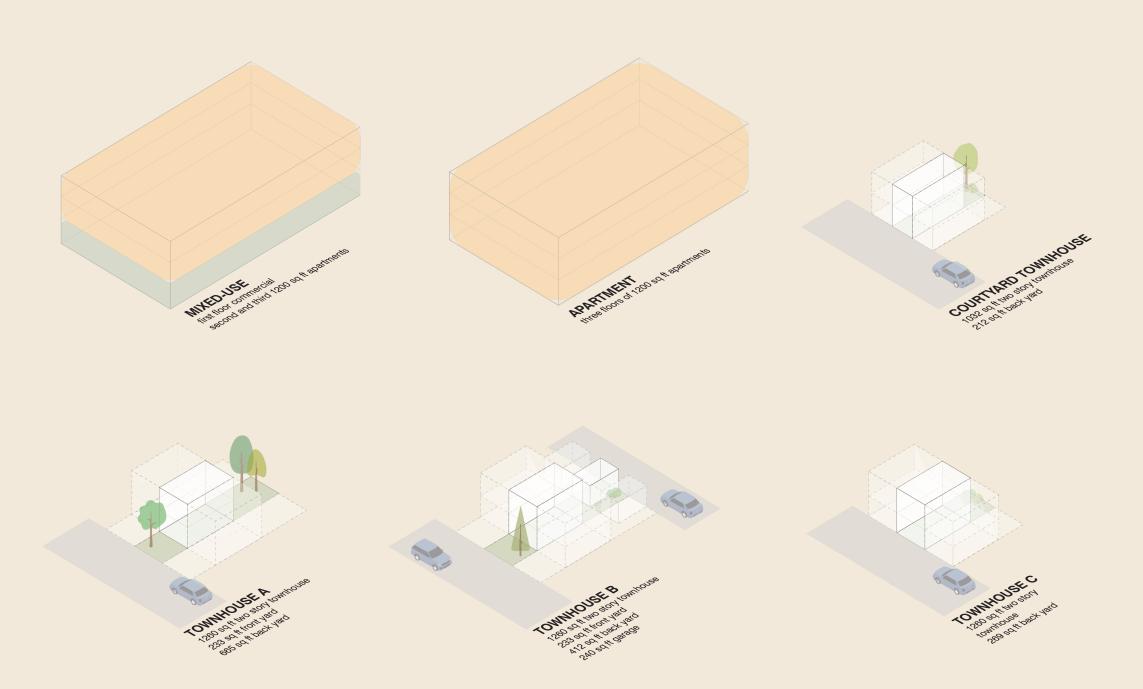
## **PUBLIC, SEMI-PRIVATE, PRIVATE**

This diagram shows the distribution of public, private, and semi-private outdoor zones. The public areas are resident, guest, and visitor accessible. The semi-private zones are typically for a moment of transition between public and private, like residents are welcome, but only residents of a specific area. For example, the courtyard townhouse lawns are meant for those residents only, making it a semi-private area. The private locations are front and back yards, areas only for given residents to tresspass in.



## PROPOSED BUILDING TYPES

These diagrams show the six proposed building types in the neighborhood.



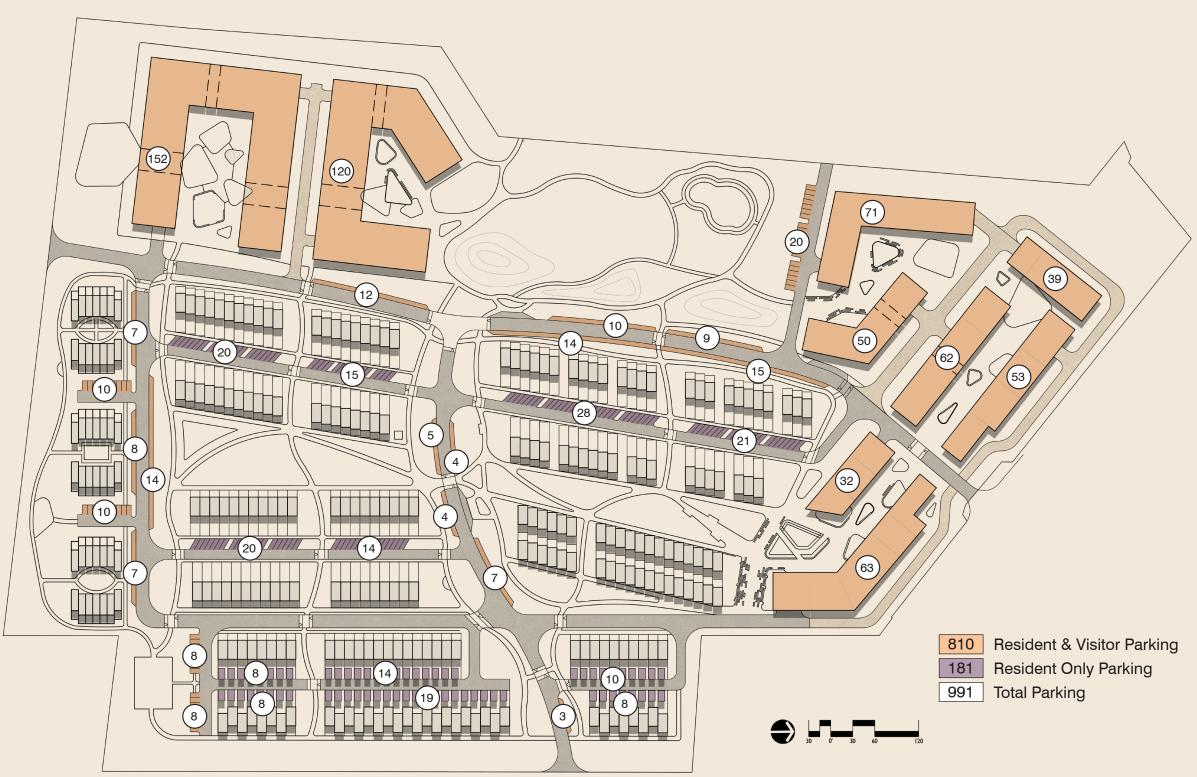
#### **BUILDING ARRANGEMENT**

This diagram shows the location of each proposed building type.



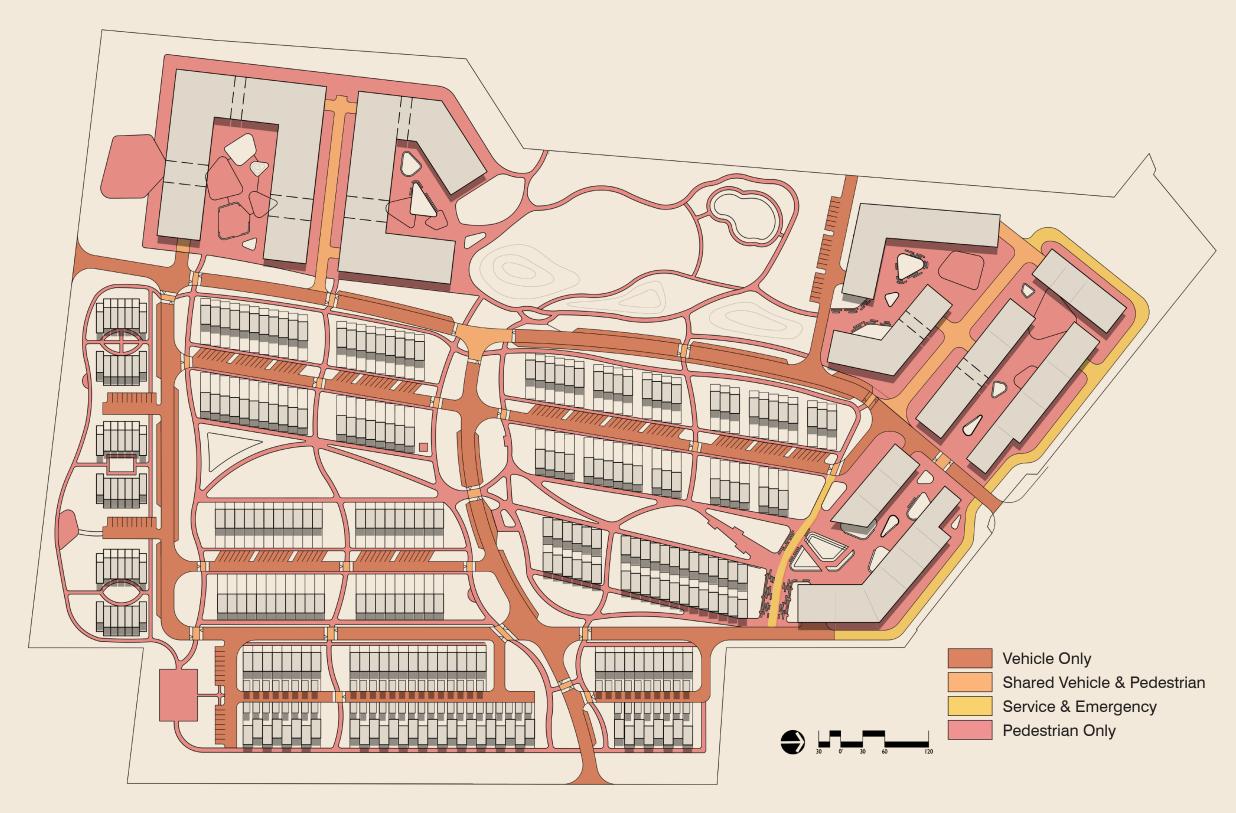
#### **PARKING**

This diagram shows the functionality of the neighborhood in relation to parking for residents, guests, and visitors. Each apartment and mixed-use building houses indoor parking at the basement level.



#### **VEHICULAR & PEDESTRIAN CIRCULATION**

This diagram shows the breakdown of user groups for each paved portion of the site.



"Acceptable walking distance is a highly subjective matter. The quality of a route is just as important as its actual length."

> Jan Gehl Life Between Buildings, 2011



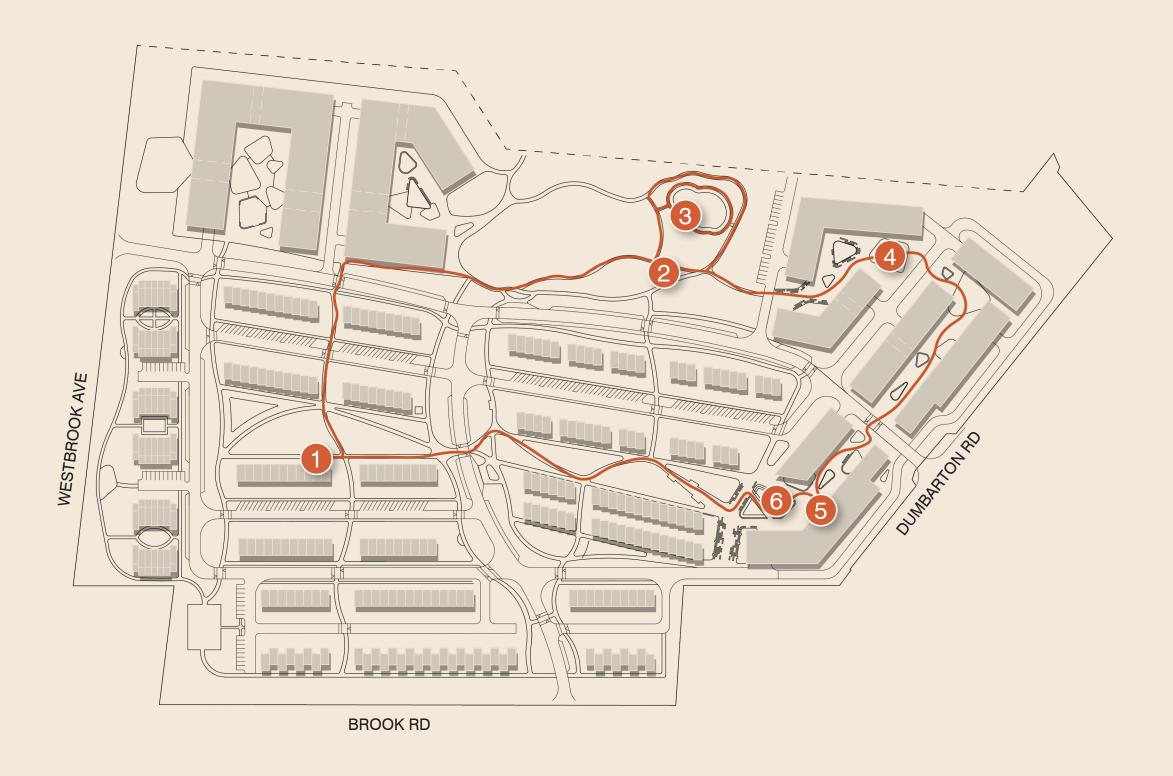
DESIGN ANALYSIS

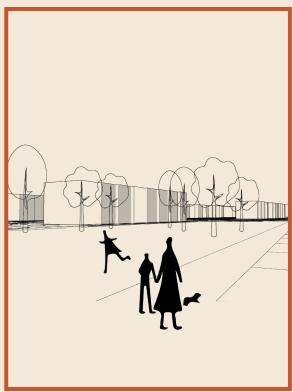
#### WHO IS THE NEIGHBORHOOD FOR?

This neighborhood masterplan falls within a medium dwellings per hectare density range and is intended for small household sizes, whether that's a young mother and children, aging in place seniors, or a young couple. The proposed outdoor programming and amenity spaces are designed to encourage social interactions outside of the home. The proposed amenities include active and passive recreation for young and old. The connection to Westminster Canterbury Senior Living is to create a symbiotic relationship between the two developments. The centrally located neighborhood park is to encourage visitors from all surrounding areas in the Ginter Park neighborhood. All people of all ages can enjoy the neighborhood.

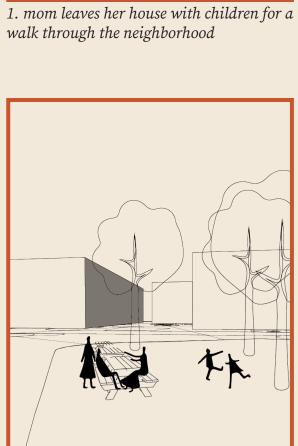


## **Scenario A: Parent and Children**





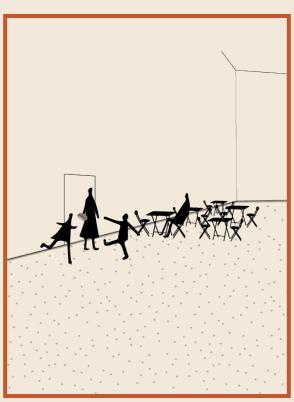
walk through the neighborhood



4. after the pond they walk through some apartments and say hi to the neighbors



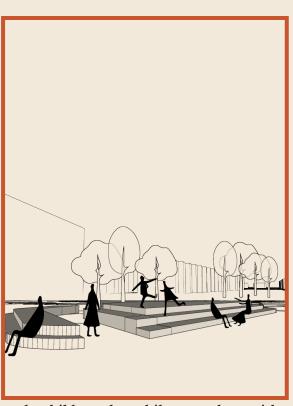
2. along the walk the group stops at the playground for a few minutes



5. mom remembers they're low on bread, so she stops in the store



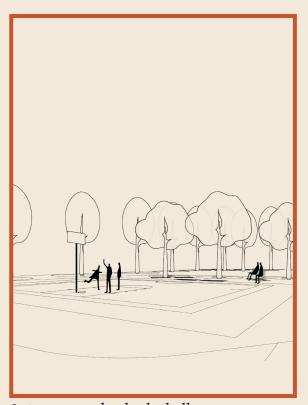
3. they do a loop around the pond to see what little animals they can find



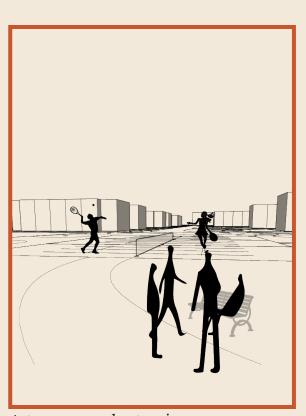
6. the children play while mom chats with a friend she bumped into

# **Scenario B: Teenagers**





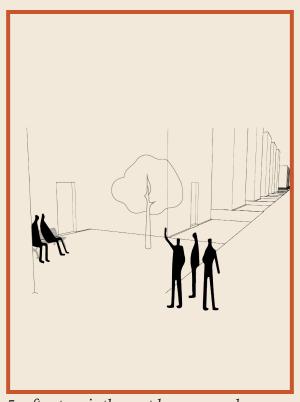
1. teenagers play basketball



4. teeneragers play tennis



2. on their way home from basketball they run into friends and tag along with their plans to play tennis



5. after tennis they get hungry, and on their way to food they bump into another friend

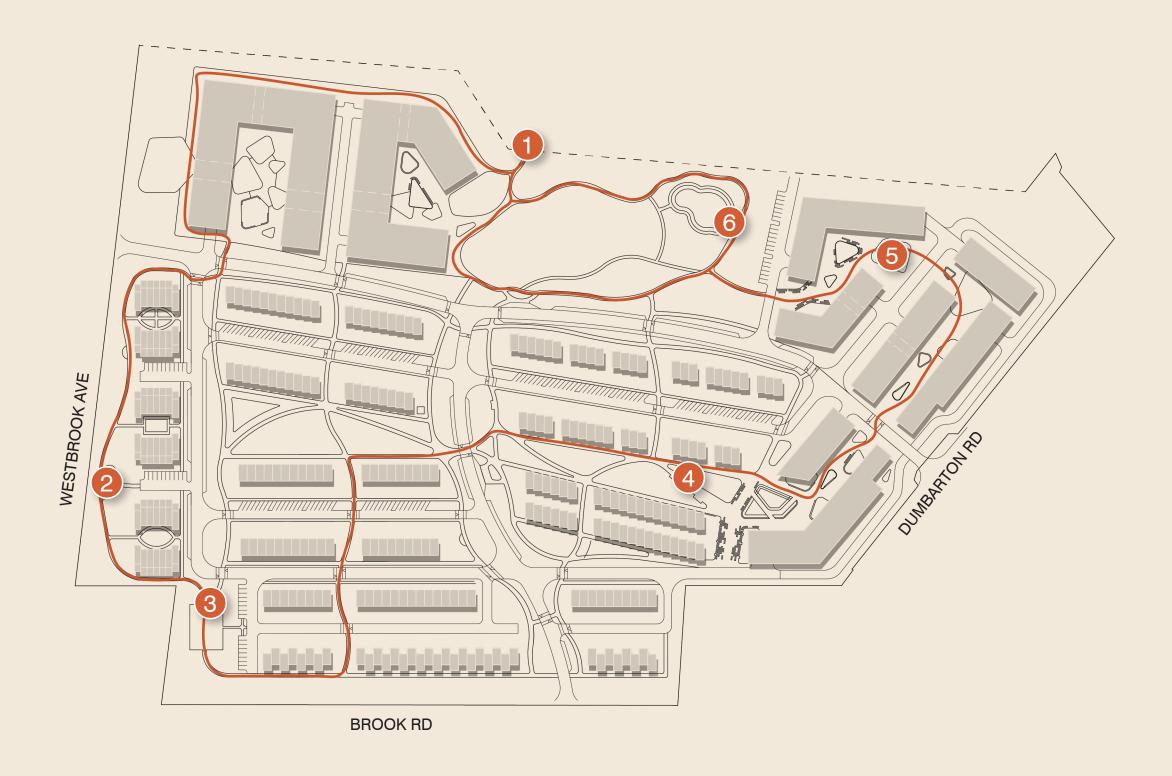


3. they pick up another friend along the way to the tennis courts



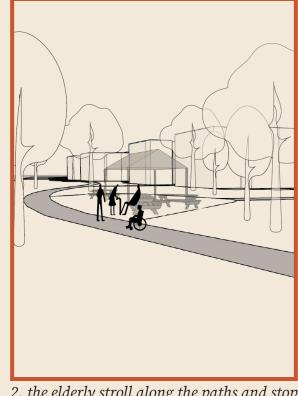
6. teenagers eat after lots of recreation

# **Scenario C: Westminster Canterbury Senior Residents**

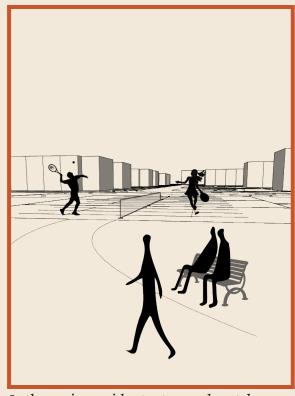




1. westminster canterbury senior residents enter the neighborhood to go on a walk



2. the elderly stroll along the paths and stop at a picnic area



3. the senior residents stop and watch a tennis game



4. the elderly stop at sit on a bench



5. the couple stops to grab a coffee



6. before heading back to westminster canterbury, the seniors stop at the pond

## **NEIGHBORHOOD PARK**





Figure 1.



Figure 2.



## **MIXED-USE PLAZA**

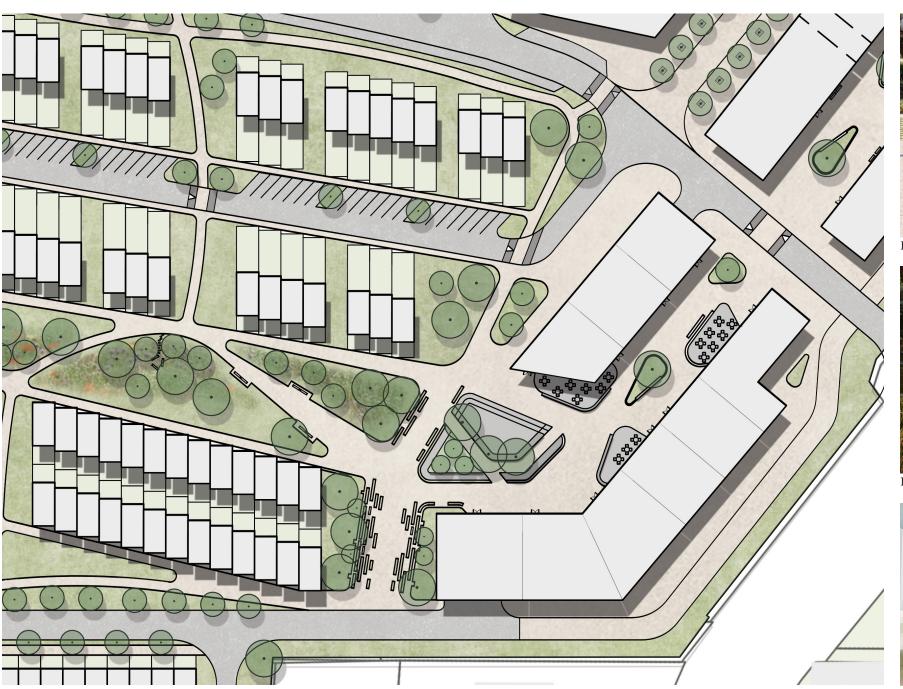




Figure 3.



Figure 4.



# COURTYARD HOMES, WALKING TRAILS, COMMUNITY GARDEN



## **COURTYARD APARTMENTS**

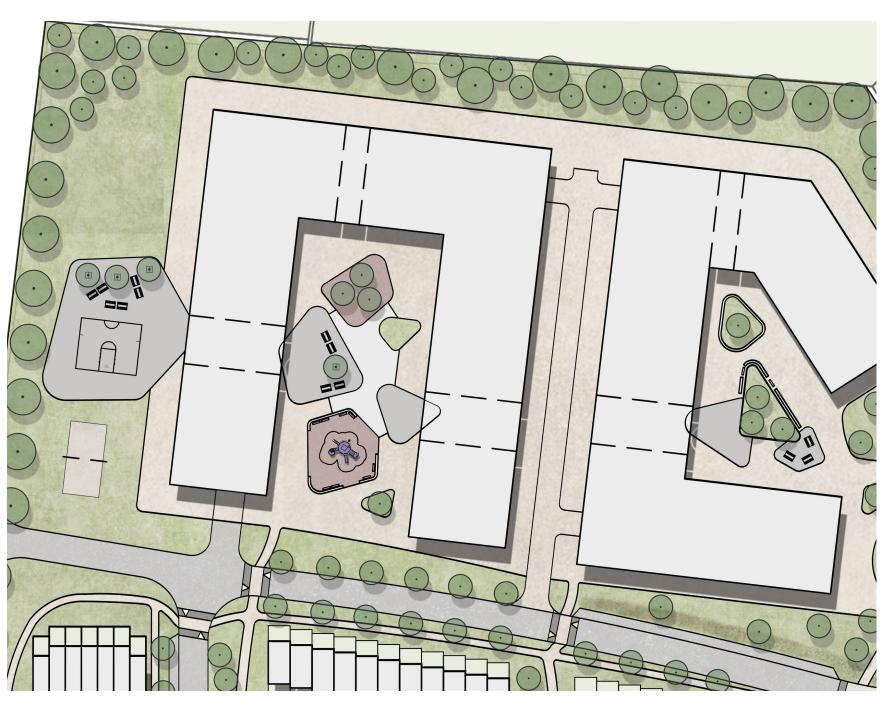




Figure 6

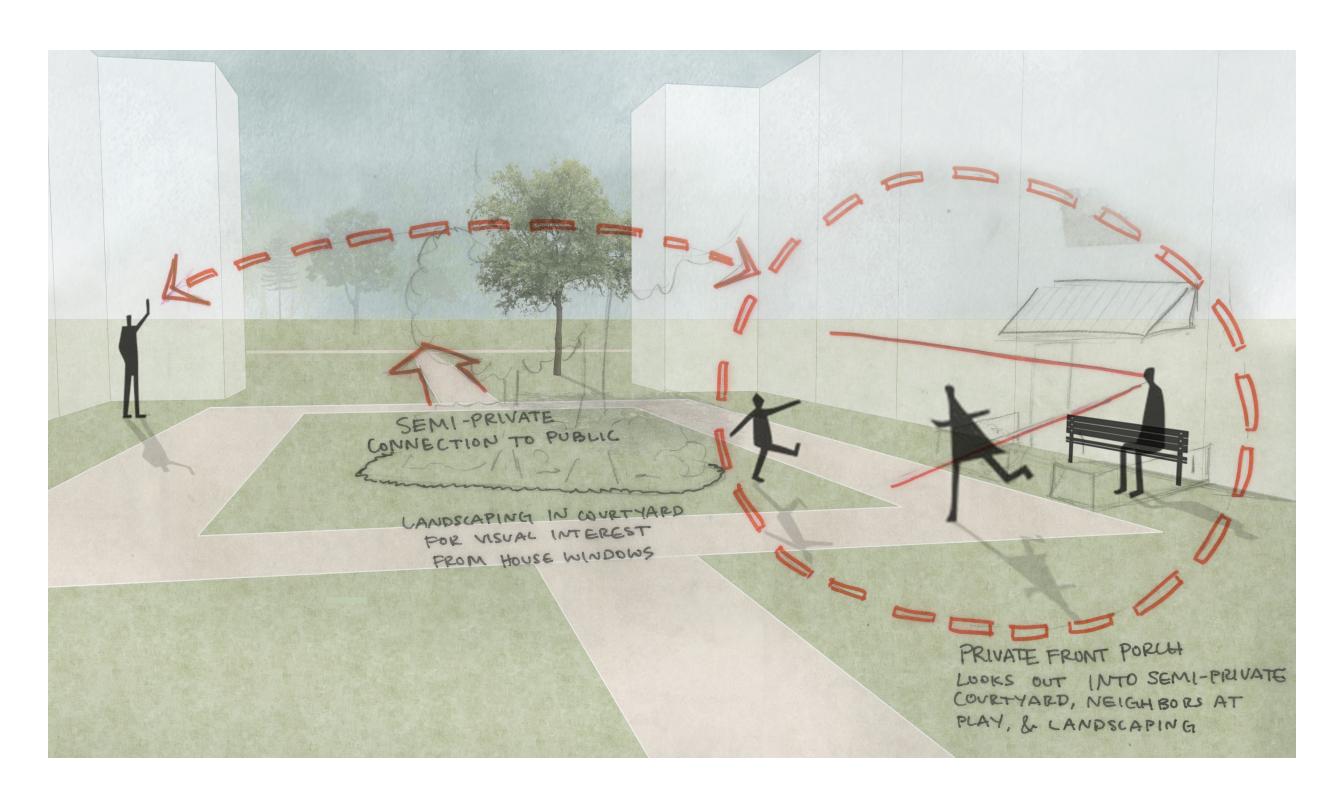


Figure 7.

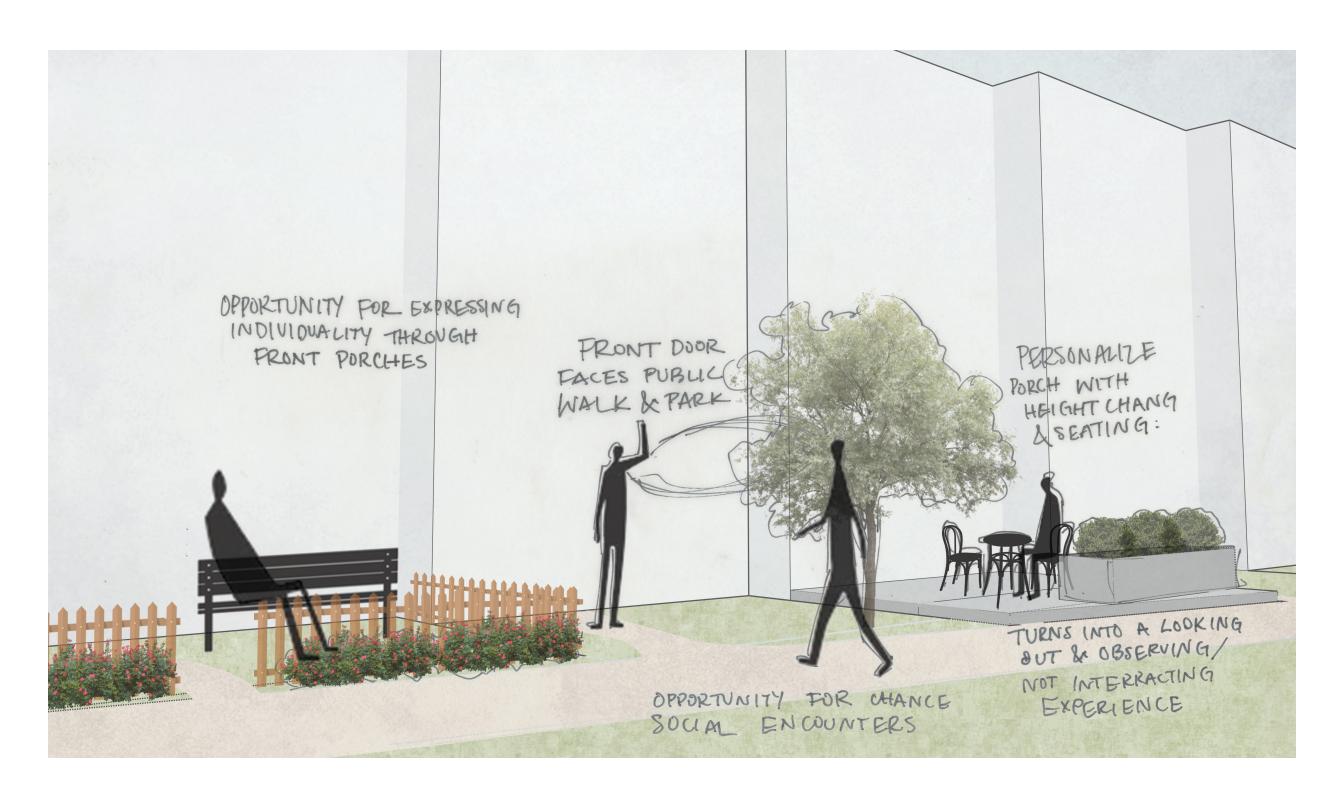


Figure 8.

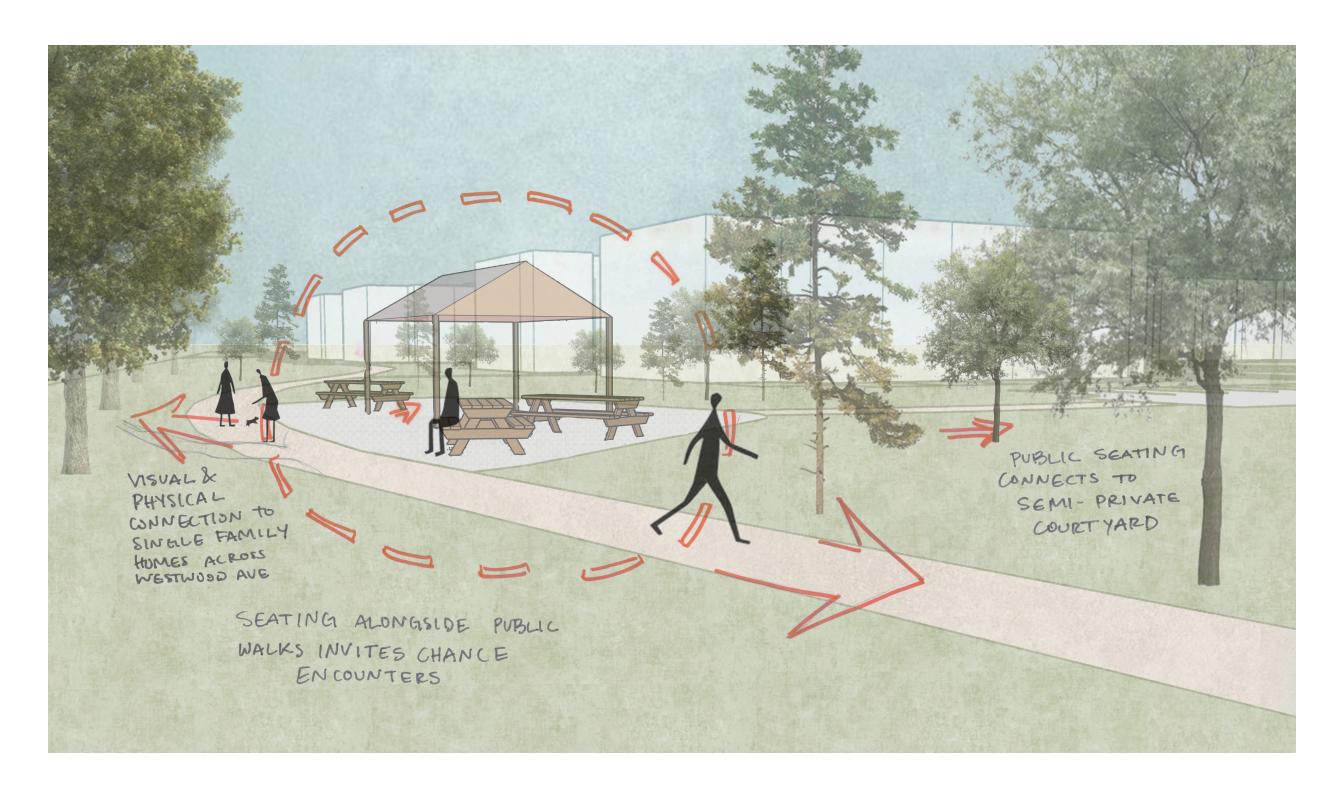
### **COURTYARD SPATIAL & SOCIAL ANALYSIS**



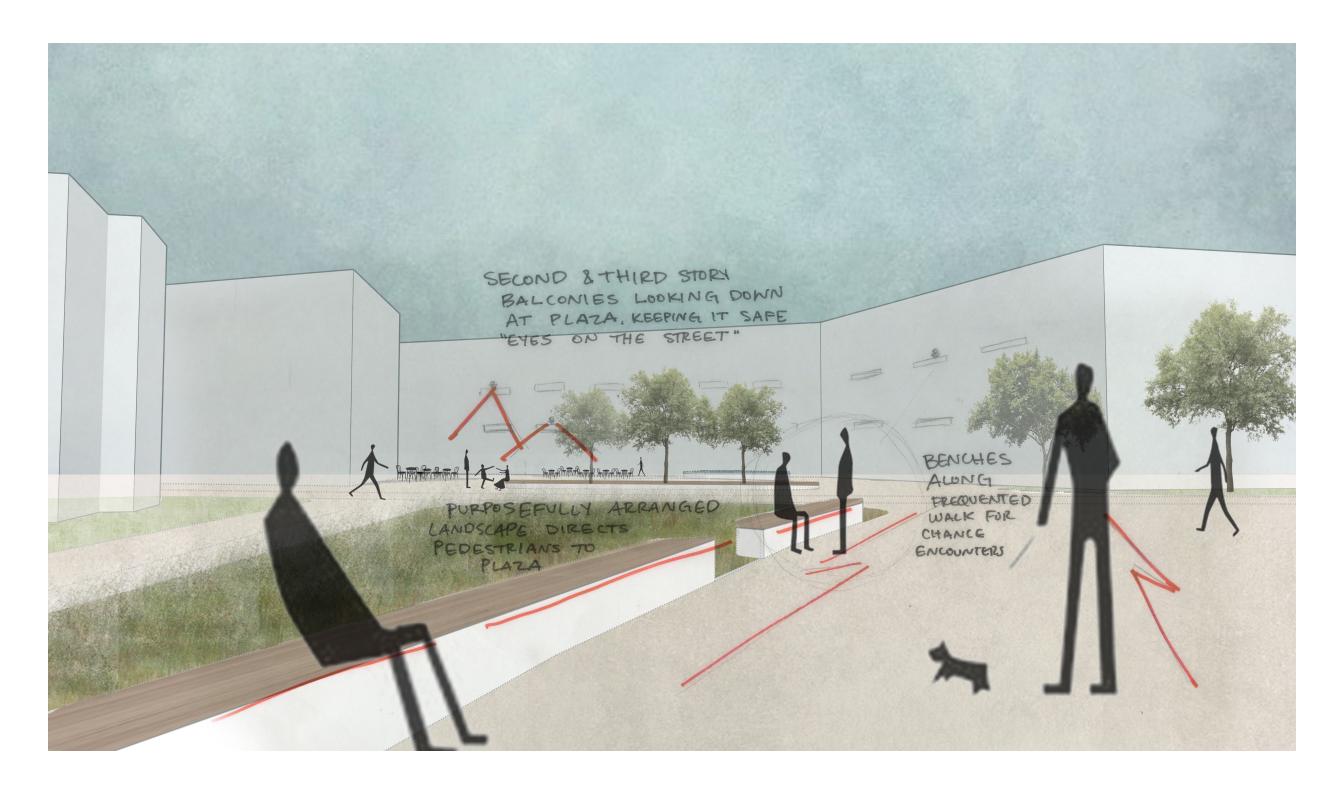
### FRONT PORCH SPATIAL & SOCIAL ANALYSIS

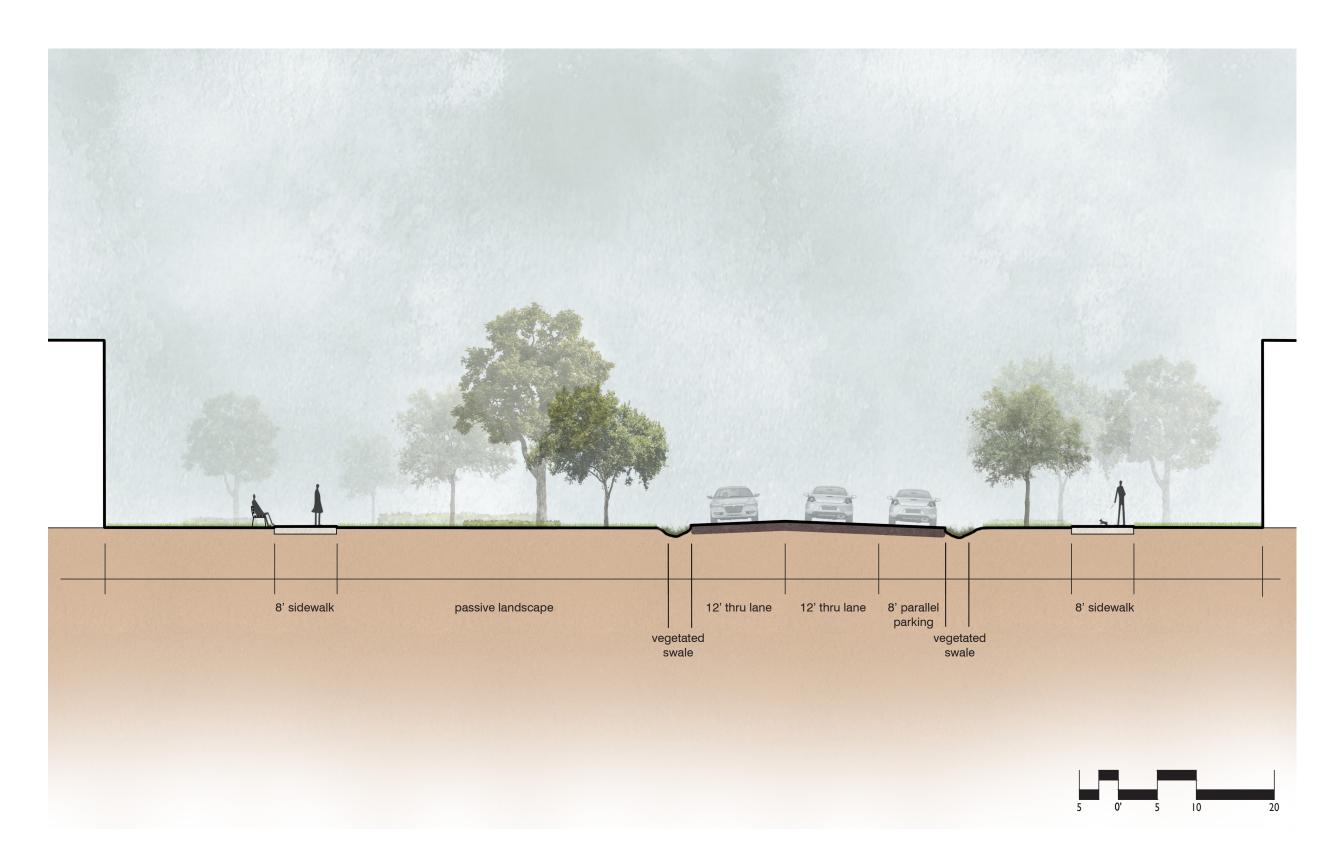


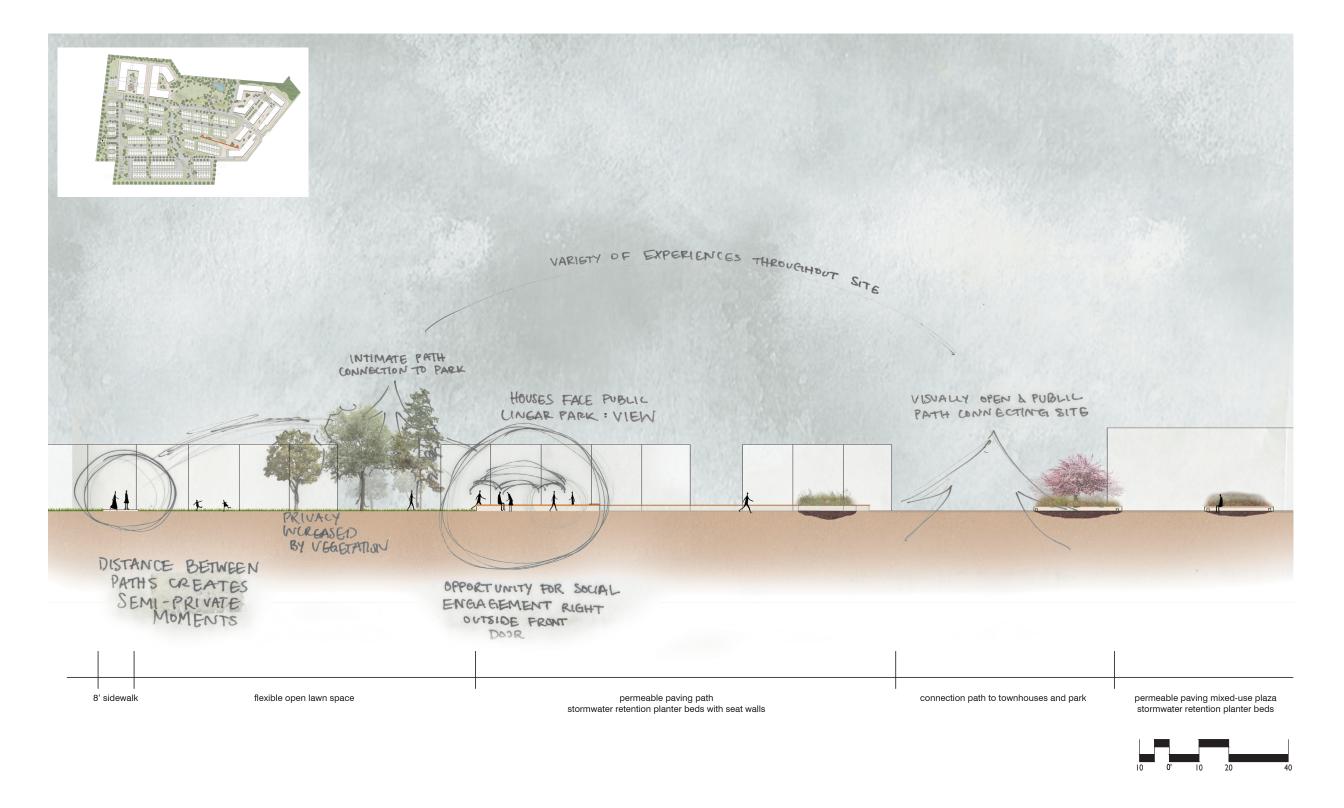
### WALKING PATHS & PAVILION SPATIAL & SOCIAL ANALYSIS



### LINEAR PARK TRANSITION TO MIXED-USE PLAZA SPATIAL & SOCIAL ANALYSIS







#### PROJECT CONCLUSION

The final design for Footpaths and Front Porches accurately meets the goals for density while preserving social outdoor spaces. The neighborhood offers a range in amenities and programming for a diversity of user groups, both residents and visitors. Six building typologies are proposed to meet the needs of more age groups and stages of life. Additionally, the smaller unit square footage allows for attainably priced rents. The trail network that circumnavigates the homes creates a variety of walking experiences and routes throughout the site. Even with the abundant neighborhood programming, privacy and semi-private spaces are still preserved through personal yards, patios, and courtyards.

I believe this type of project is needed in Richmond, and the old Azalea Mall site would be an ideal location for medium-density housing. Its accessibility to downtown and the highway makes it a great location. The Azalea Mall site needs new life, and this is the solution.

If you are a developer and are interested in making this project a reality, please let me know.

Thank you.

#### **REFERENCES**

Cook, A. (2022). Urban Housing & Community (thesis).

Fraser, A. (2014). Landscape Sub(Vert.) Urbanity (thesis).

Gehl, J. (2011). Life between buildings: Using public space. Island Press.

Jacobs, J. (1964). The Death and Life of Great American Cities.

Levitt, D., & McCafferty, J. (2019). *The Housing Design Handbook: A Guide to Good Practice*. Routledge.

Marohn, C. L. (2020). Strong towns: A bottom-up revolution to rebuild American Prosperity. John Wiley & Sons, Inc.

McLean, G. (2022). Co-fill (thesis).

Parolek, D. G., & Nelson, A. C. (2020). Missing Middle Housing: Thinking big and building small to respond to today's housing crisis. Island Press.

Richmond Association of REALTORS, (2023). *Housing Market Statistics & Reports*. https://rarealtors.com/housingreports/

Sim, D., & Gehl, J. (2019). Soft City building density for everyday life. Island press.

Sison, J. E. (2018). Spatial Ambiguity Rethinking and Intensifying Social Space (thesis).

Syme, O. (2017). Patterns of Consolidation in a divided landscape (thesis).

Whyte, O. (2020). It Takes a Village: A Collective Approach to NZ Housing (thesis).

#### **IMAGE REFERENCES**

All images by author except as noted.

**Figure 1.** Rathkopf, J. (n.d.). Prospect Park. Prospect Park Alliance. photograph. Retrieved 2024, from https://www.prospectpark.org/learn-more/what-we-do/sustaining-the-environment/be-a-park-champion/.

**Figure 2.** Jeegin Colley, E. (n.d.). A Lively Prospect Park. 6sqft New York City. photograph. Retrieved 2024, from https://www.6sqft.com/10-things-you-never-knew-about-prospect-park/.

Figures 3 & 8. Vermeylen, E. (n.d.). Rainbow Square, Waregem. photograph, Landezine. Retrieved 2024, from https://landezine.com/rainbow-square-waregem-by-sweco-belgium/.

Figure 4. Hobhouse, J. (n.d.). Lady Sitting on Bench. Glassfields by BD Landscape Architects. photograph, Landezine . Retrieved 2024, from https://landezine.com/glassfields-by-bd-landscape-architects/.

**Figure 5.** Hobhouse, J. (n.d.). Ladies Sitting at Table. Glassfields by BD Landscape Architects. photograph, Landezine . Retrieved 2024, from https://landezine.com/glassfields-by-bd-landscape-architects/.

**Figure 6.** Bobert, A. (n.d.). Kungsängen Square. photograph, White. Retrieved 2024, from https://whitearkitekter.com/project/kungsangen-square/.

Figure 7. VEGA landskab. (n.d.). Courtyard. Nørrebrohus. photograph, Landezine. Retrieved 2024, from https://landezine.com/norrebrohus-by-vega-landskab/.