

October 31st

Urban Design 102

An Illustrated Primer of Urban Design Details

(Previous) September 19th

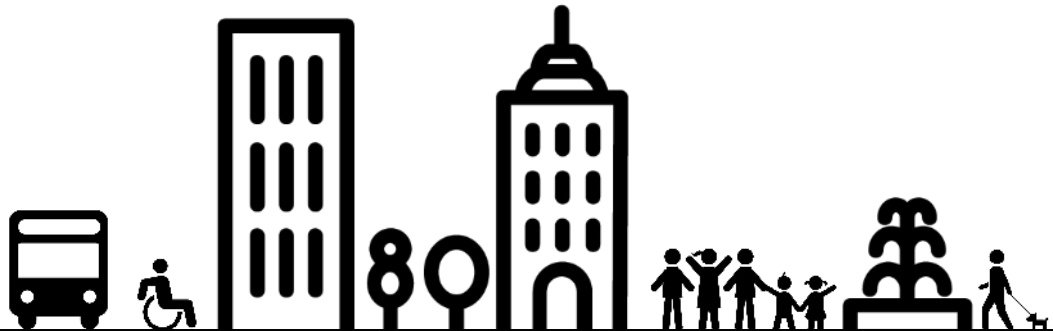
Urban Design 101

An Illustrated Primer of Urban Design Principles

TBD 2020

Urban Design 103

Urban Design Field Work



Meet the Presenters



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Masters of Landscape Architecture from the University of Tennessee

Urban Design 102 Overview



Presentation Outline

- Recap of Major Principles
 - Site Planning
 - Public Space
 - Built Form

Learning Outcomes

Review principles of urban design
Understand planning at a range of scales
See the devil in the details

References

Multi-Family Design Guidelines

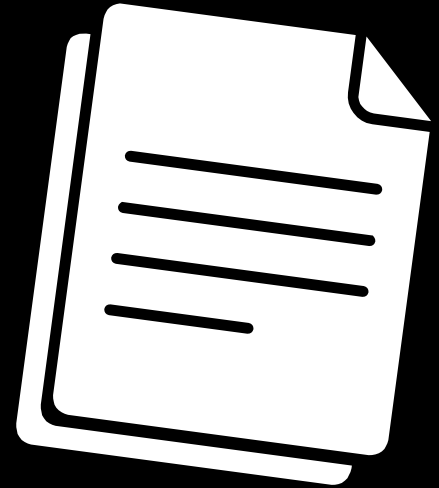
LEED for Neighborhood Development (ND)

HUD Design Considerations Checklist

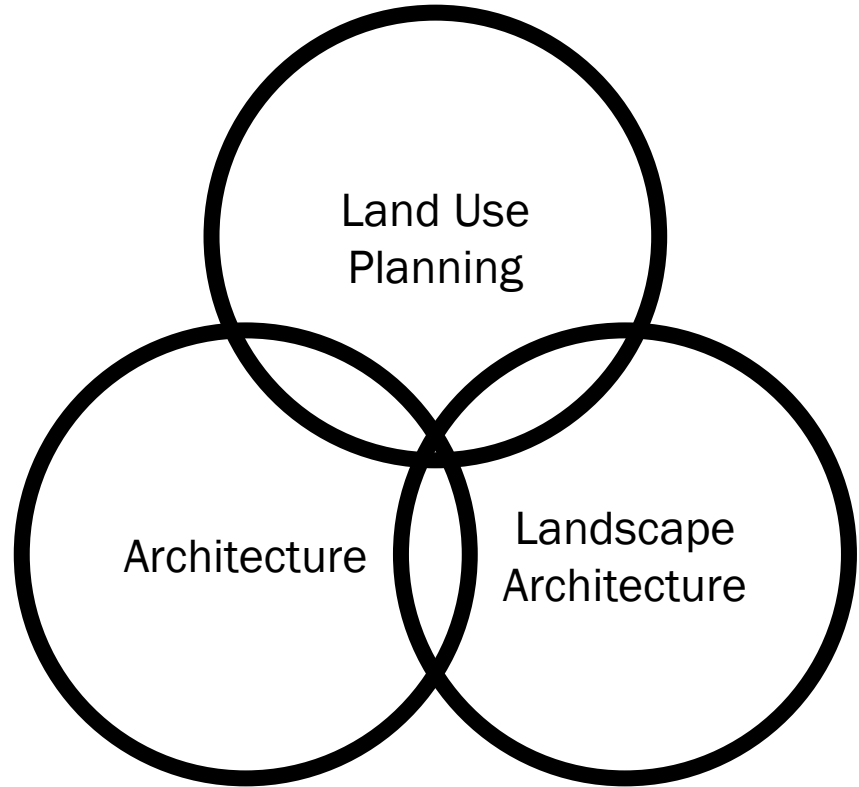
Congress for New Urbanism (CNU)

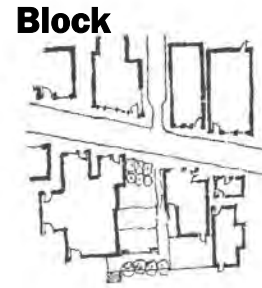
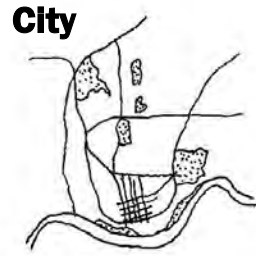
Google Earth

Your own instincts



What is Urban Design?





Urban design

Landscape architecture

Planning

Architecture

What is Urban Design?



City Hall Plaza - Boston, MA 7



Pedestrian Street - Bad Salzufen, Germany

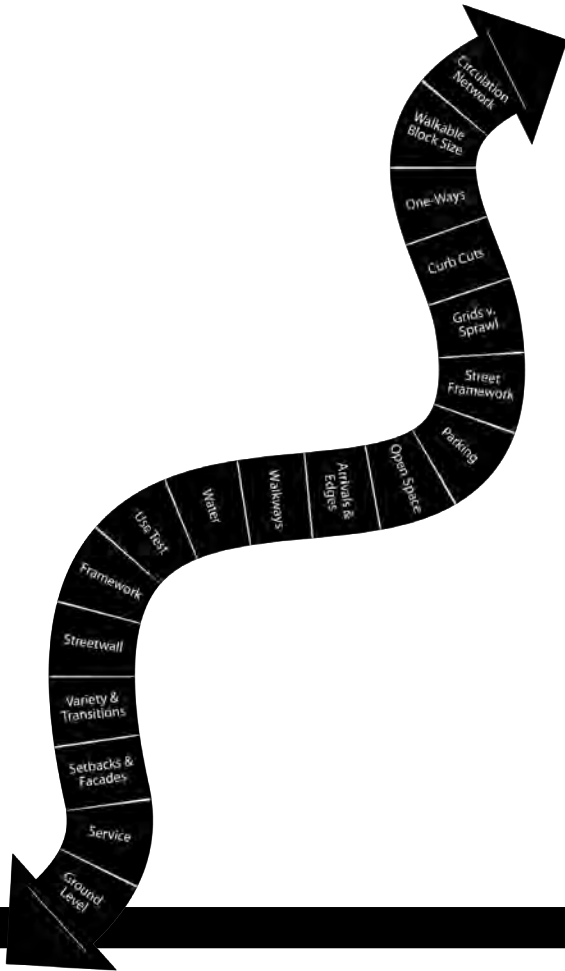


Kirkpatrick Park – Nashville, TN

Affordability & Equity

- Supply & demand of good design
- We can have it all – housing supply, preservation, beauty, walkability, sustainability...
- Better design \neq more man hours
- Are we willing to put up with just okay for 50-100 years?

Realms of Urban Design



1. Site Planning

Enhancing connections to one's surroundings, promoting walkability, and ensuring effective access and circulation.

2. Public Space

Providing places for social interaction and a sense of community.

3. Built Form

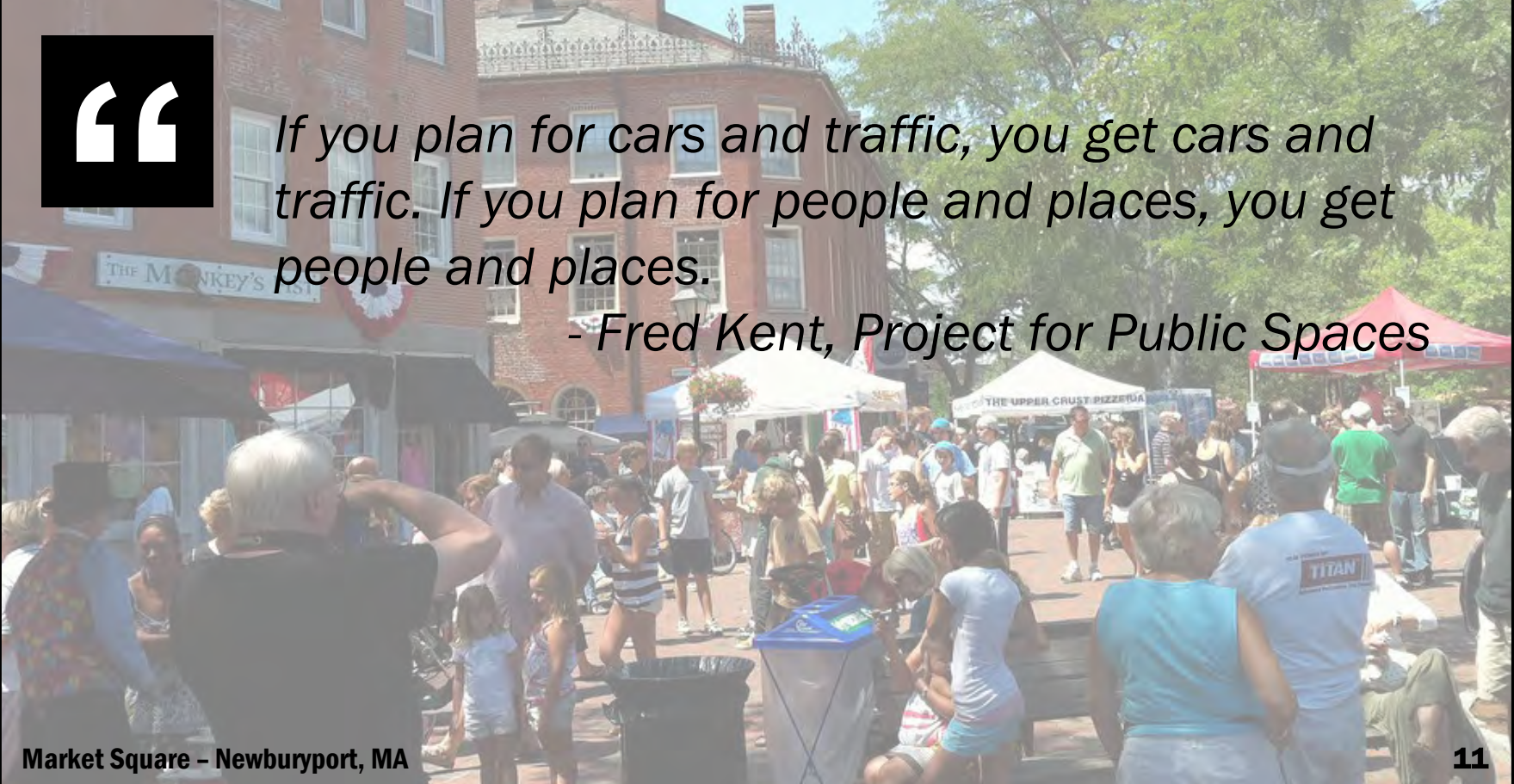
Creating visual interest, character, and identity while maintaining relationship to the human scale and natural environment.



“

If you plan for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places.

- Fred Kent, Project for Public Spaces

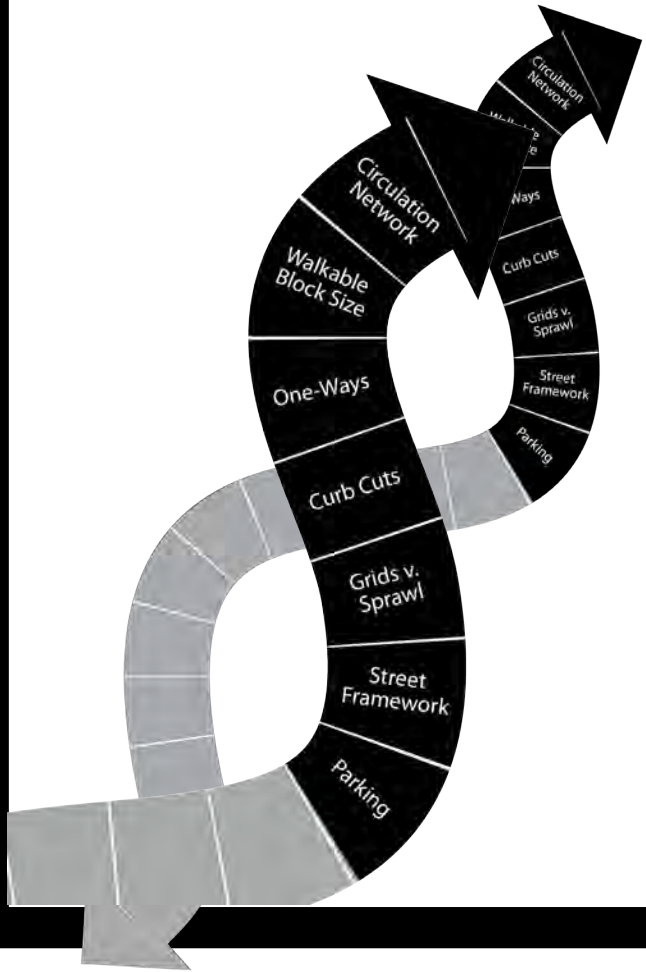


Market Square - Newburyport, MA

11

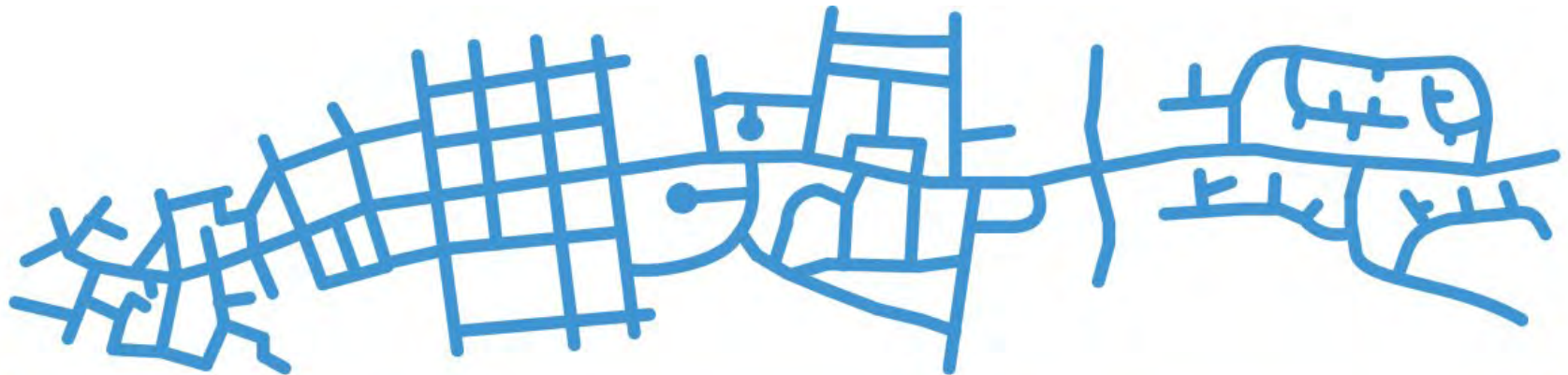
1. Site Planning

Realm of Urban Design



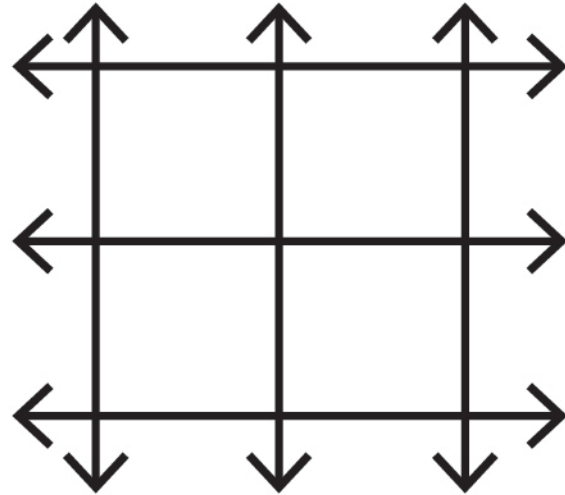


Ancient Roman Road



Circulation Network

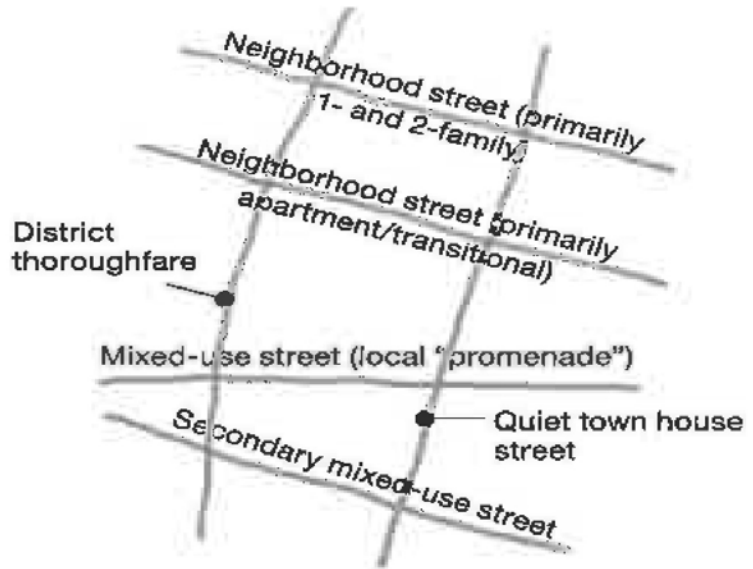
- Start by laying out the grid



Design Streets, Not Blocks



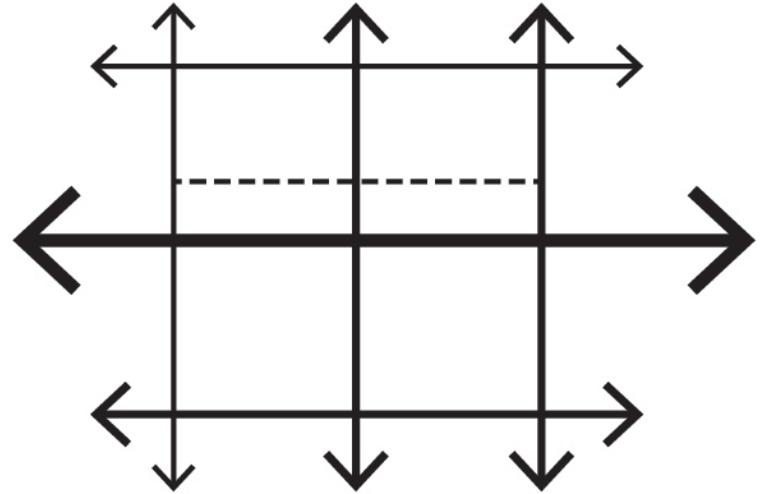
Block prioritization



Street prioritization

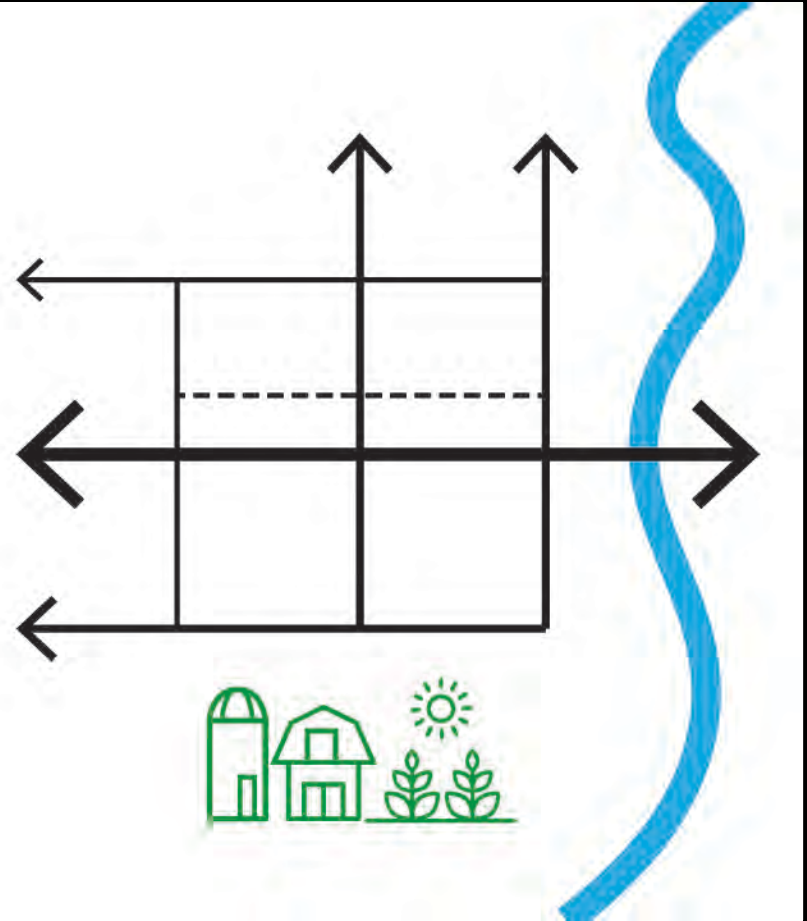
Circulation Network

- Alter the street hierarchy to suit your intentions



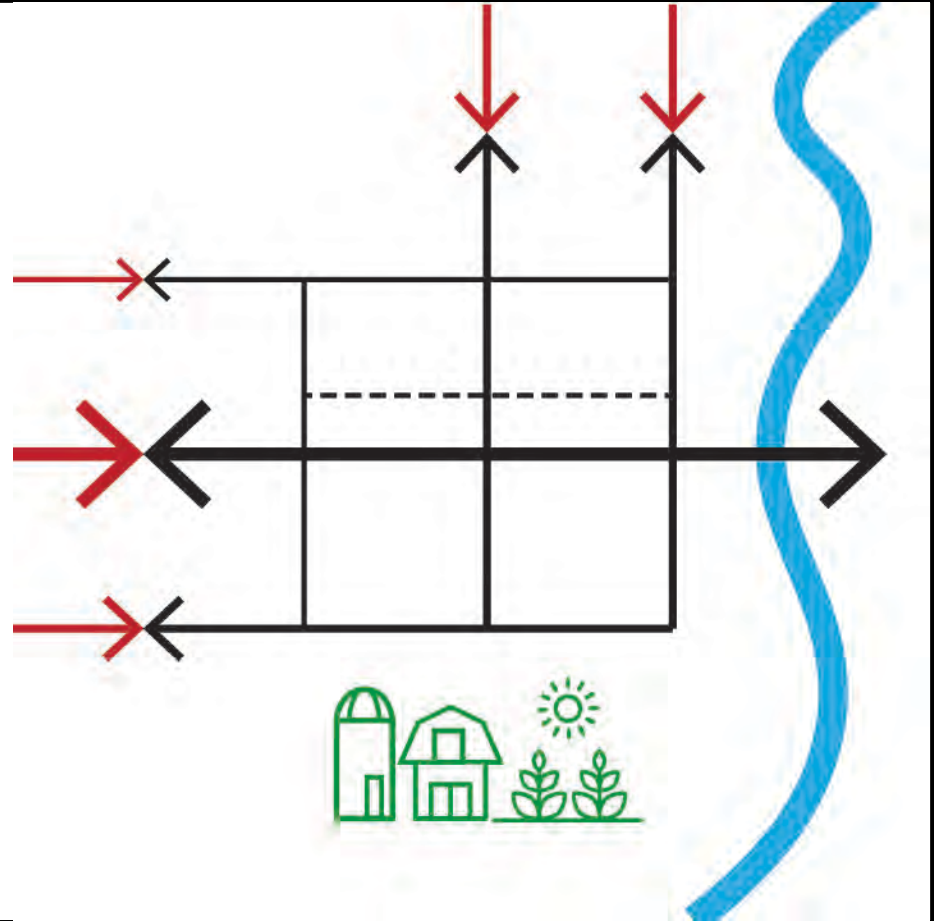
Circulation Network

- Adjust based on external factors (e.g. neighboring property constraints, physical features, etc.)



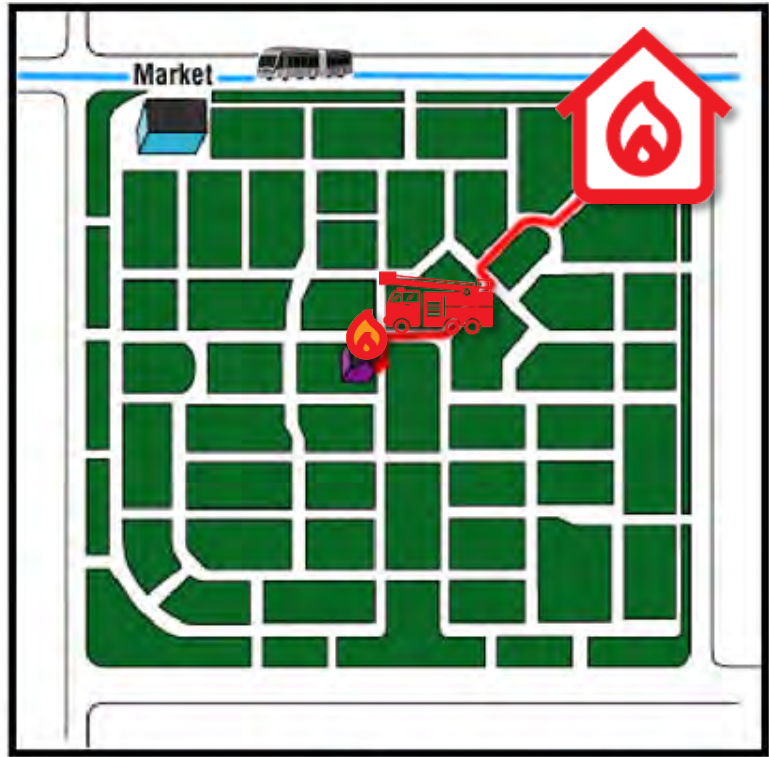
Circulation Network

- Tie into existing streets when possible



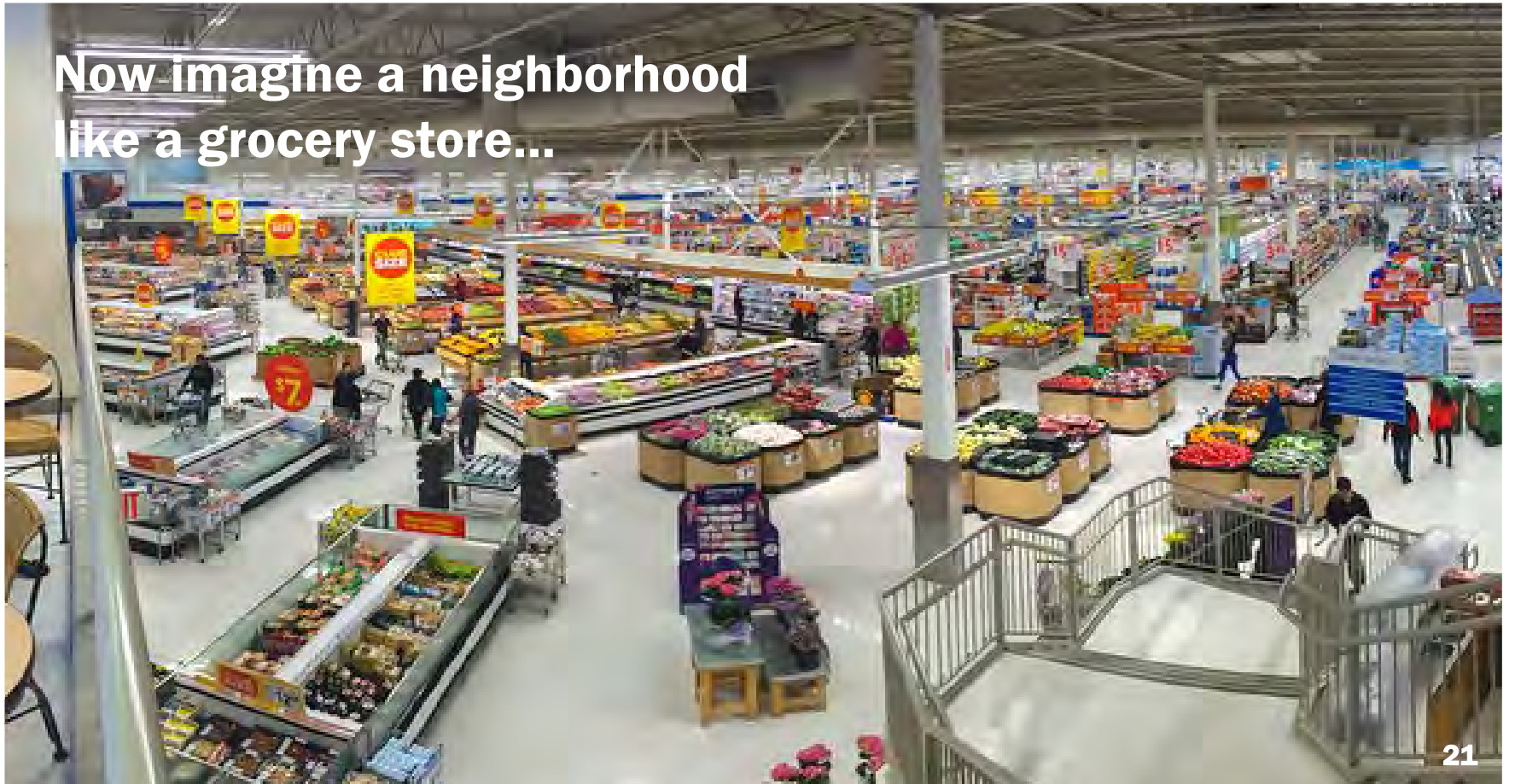


Driving-only transportation pattern



Walkable connected transportation network

Now imagine a neighborhood
like a grocery store...



Tates Creek Road Connected Streets



18.5 miles connected streets
30% of total mileage

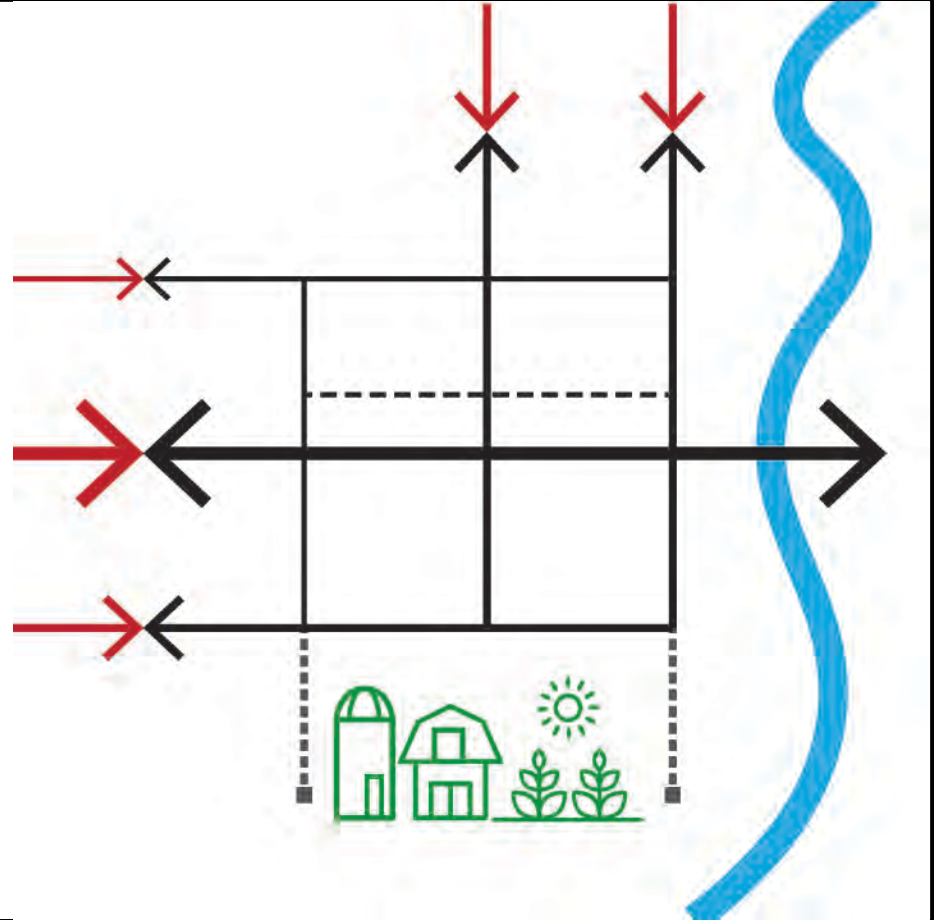
Richmond Road Connected Streets



48.9 miles connected streets
94% of total mileage

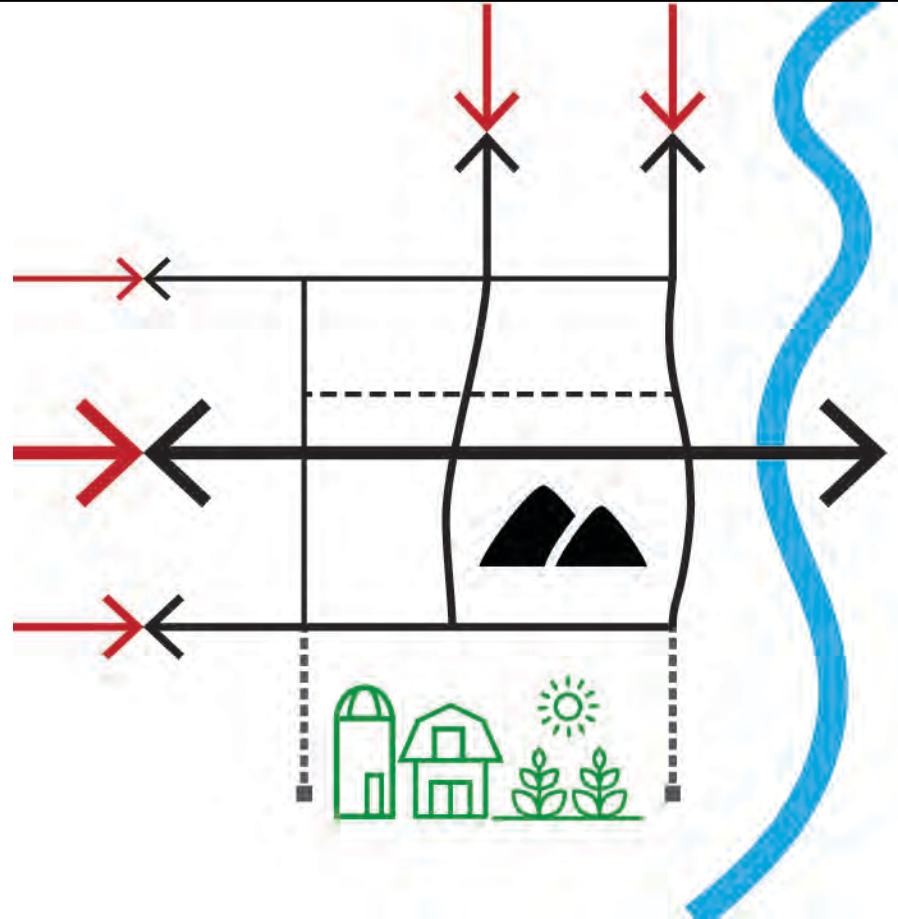
Circulation Network

- Include stub streets for future connections



Circulation Network

- Account for topography





Circulation Network

- Single-loaded streets

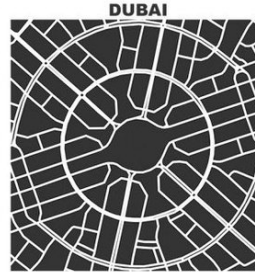
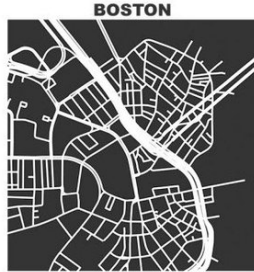
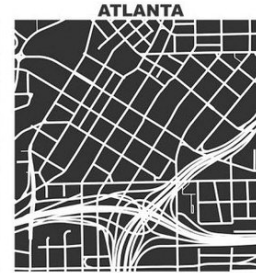
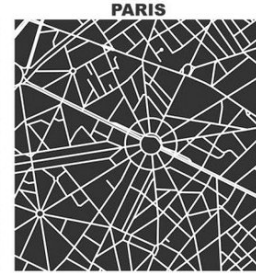
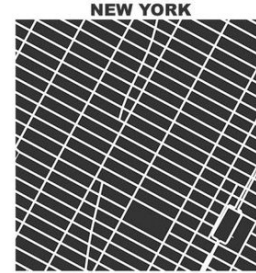


Walkable Block Size



250'-600' block length

- Long block faces discourage walkability
- Higher density makes smaller block sizes possible



Walkable Block Size

- More blocks means more corners
- Retail loves a corner



The Square – Lexington, KY 28

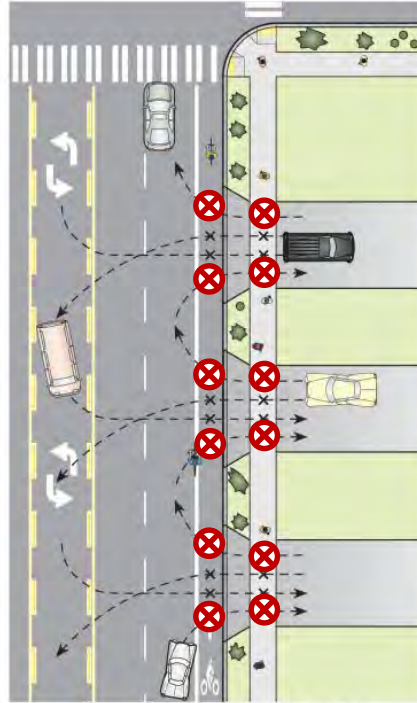
Avoid One-Ways

- Increased speeds
- Increases circuitous trips to destination
- Perpendicular businesses don't get seen
- Success based on peak commutes and side of street

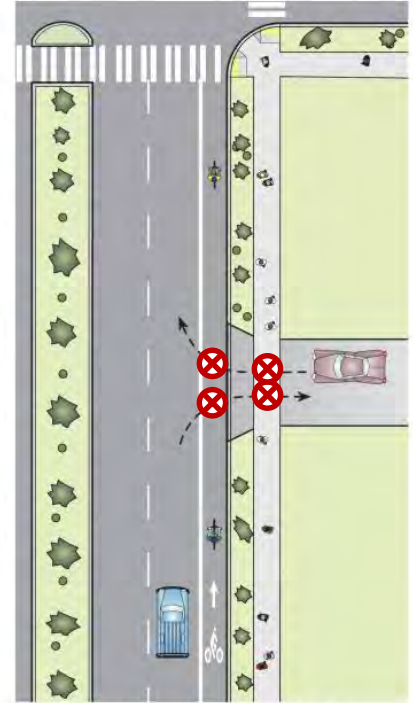


Limit Curb Cuts

- ✓ Great for auto-centric retailers
- ✗ Bad for pedestrians
- ✗ Bad for legibility
- ✗ Bad for traffic



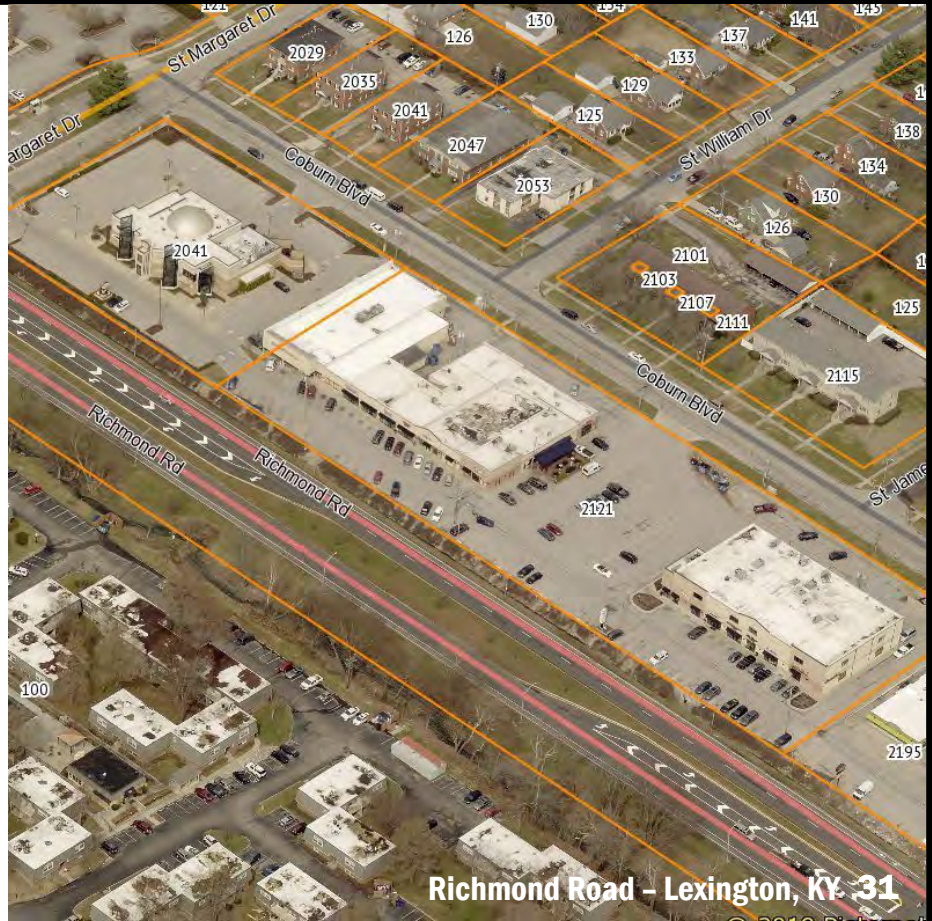
Uncontrolled accesses create 8 potential conflict points at every driveway.



A raised median and consolidating driveways reduce conflict points.

Limit Curb Cuts

Use inter-parcel connectivity
where possible



Grids v. Sprawl

Cul-de-Sac

Collector

Arterial

Highway

Why suburban patterns of development?

- Reduces number of intersections – which means less accidents
- Requires less infrastructure



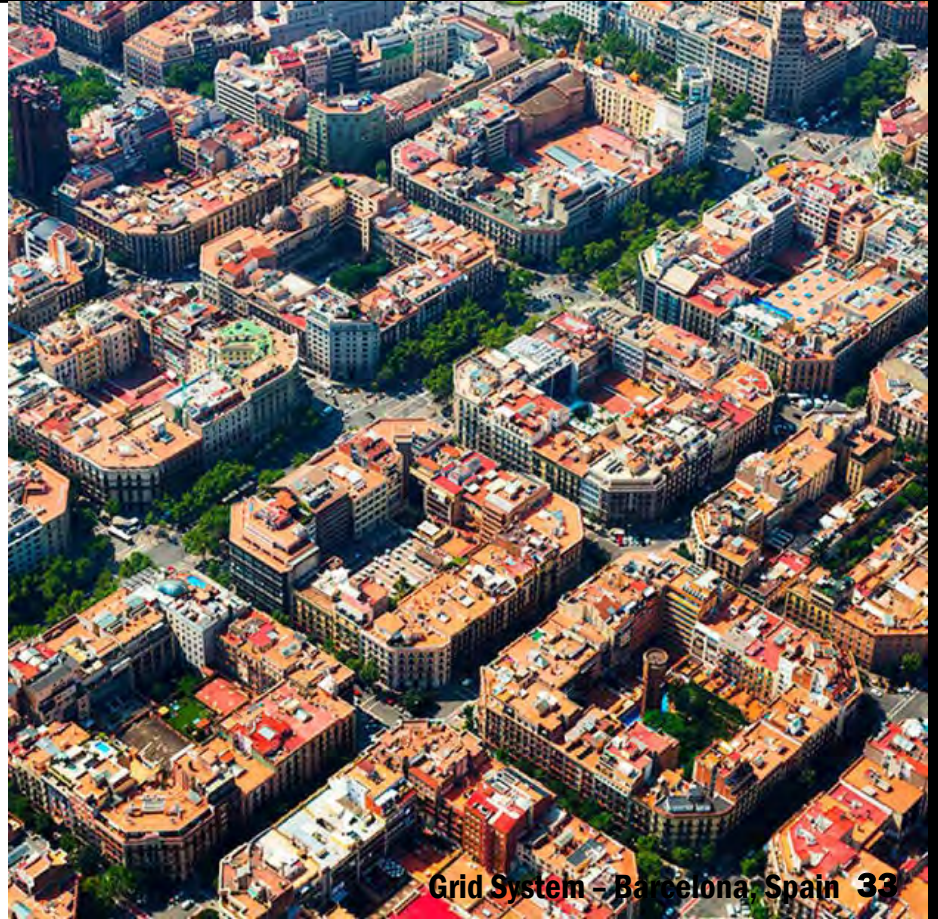
In actuality:

- Speeds increased with fewer intersections
- Fatalities rose by 270%
- Less walking lead to more obesity
- Less neighborhood social capital

Grids v. Sprawl

Why a grid?

- Allows for many options of travel
- Increases variety in the every day
- Establishes flexibility for changes over time



Grid System - Barcelona Spain 33

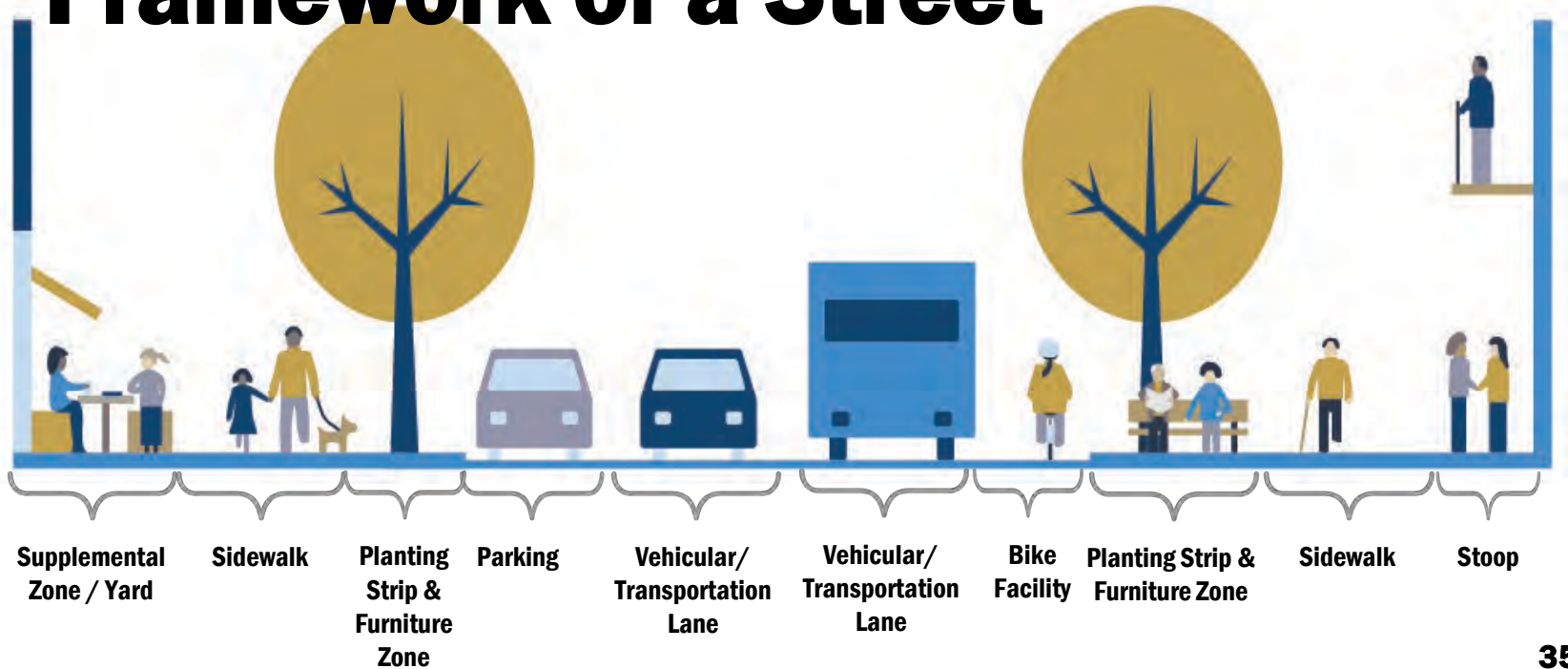


Grids v. Sprawl

What if there is no other option?

What if it is already built?

Framework of a Street



Buildings

- Hold the street edge



Minimum preferred
enclosure 1:2.5



Supplemental Zones / Yards

- Adds safety
- Landscape potential
- Help to activate the street
- Opportunities for building variation



Sidewalks



Minimum 5' wide

- Increase width in more urban/active areas
- Minimize mid-block crossings
- Provide enhanced crosswalks in very active areas



Pedestrian Network

- Continuous
- Both sides of the street
- Accessible



Planting Strip



Minimum 4'-8' wide
Street trees spaced 50' apart

- ✓ Protect sidewalks
- ✓ Reduce crashes
- ✓ Shape space
- ✓ Absorb stormwater
- ✓ Reduce heat island effect
- ✓ Improve property value
- ✓ Improve retail viability
- ✓ Improve public health



Catalpa Street - Lexington, KY 40

Furniture Zone

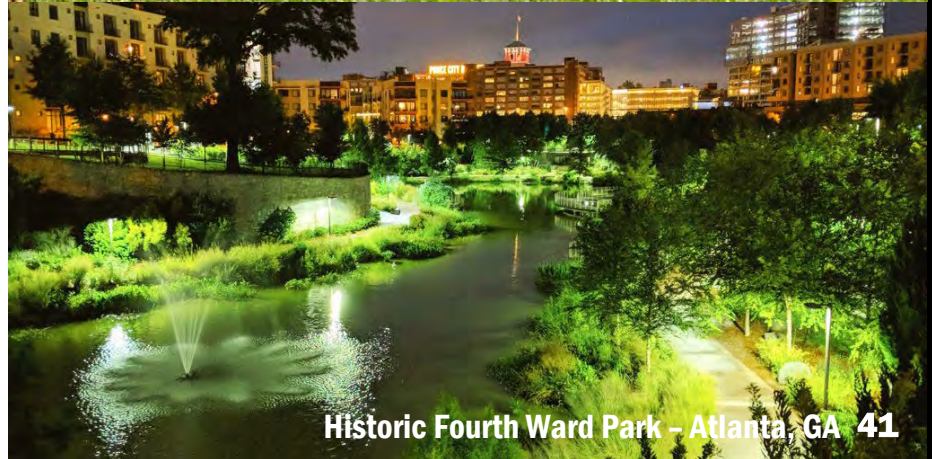
- Place benches, trash cans, water fountains, etc. where they make sense
- Consider movable furniture



UK Campus - Lexington, KY

Lighting

- Difference between pedestrian and roadway lighting
- Should be in direct relation to street type



Historic Fourth Ward Park - Atlanta, GA 41

On-Street Parking



Typically 8' wide

- Great for traffic calming
- Decreases need for off-street parking
- Consider turning some spaces over to ride share



"An essential barrier of steel that protects the sidewalk from moving vehicles."

— Jeff Sp...

Bicycle Facilities



**Bicycle paths minimum 4'-5'
wide each direction**

Multi-use paths 10'-20' wide

- Plan for a continuous network
- Forecast future modes



Seattle Urban Cycle Track - WA



Pennsylvania Ave. - DC 43

Vehicles

Four different types of flow:

- speed flow for highways
- free flow for busy streets
- slow flow for less busy streets
- yield flow for quiet residential streets



10' maximum width for urban settings widely accepted

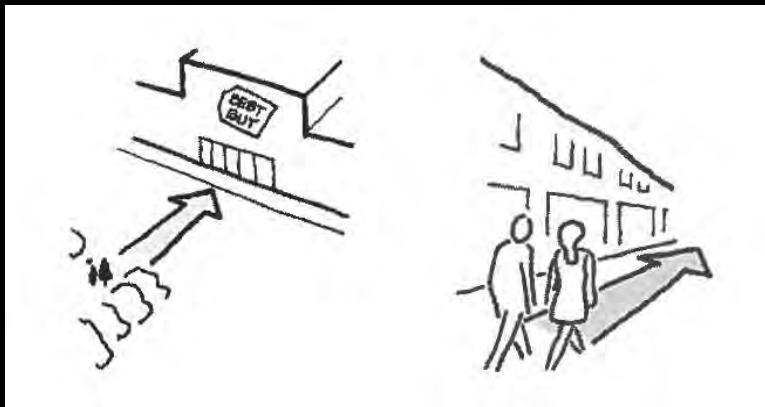
- Consider traffic calming per design speed



Sidewalk Cafe - Asheville, NC 44

Parking

Encourage a “park once” mentality.



Parking Lots

Place parking to rear or side.



Highland Avenue - Atlanta, GA 46

Parking Lots

- Break parking lots into smaller lots for safety and accessibility
- Soften with trees and reduce heat island effect



Parking Lots

- Well-lit
- Conscious of night-sky issues
- Mitigating glare into surrounding buildings



Parking Lots

Assume other forms of mobility



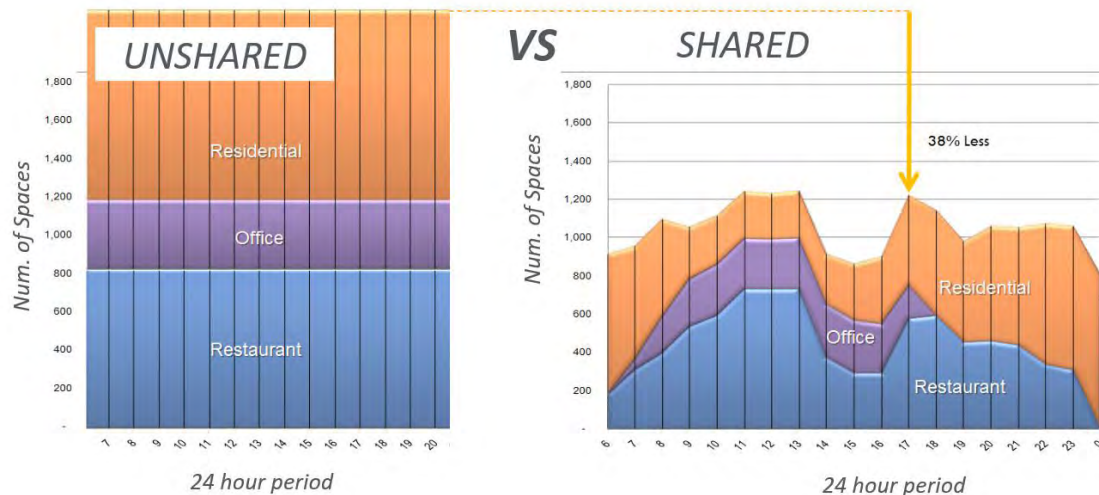
Parking Lots

Assume other lives for a parking lot



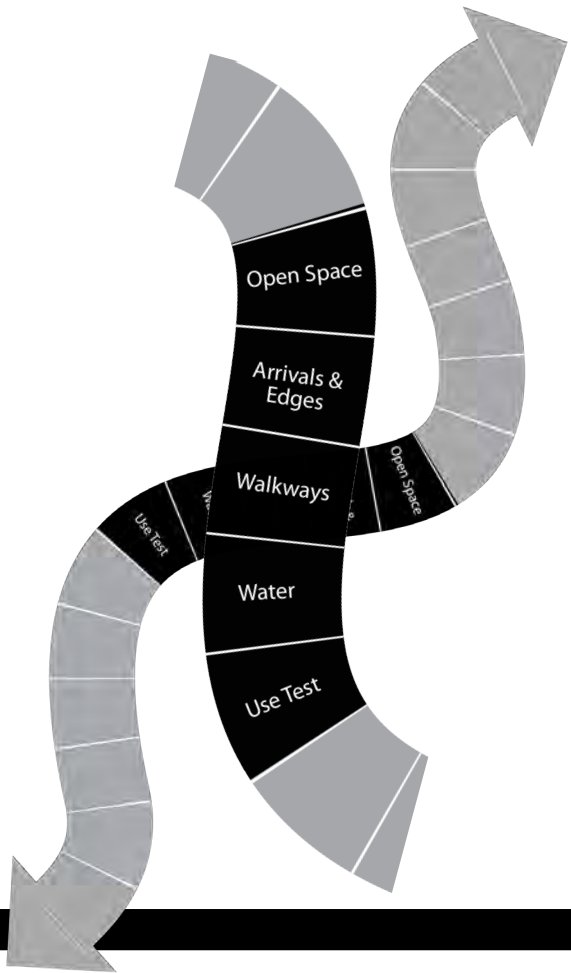
Shared Parking

- Works best in multi-block, urban areas
- Works best with different hours/days of operation



2. Public Space

Realm of Urban Design



Open Space

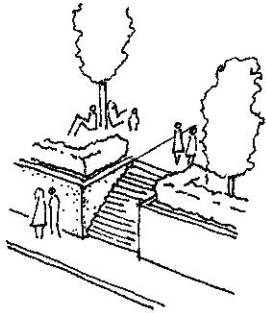
All residents should be no more than 5 minutes from a recreational opportunity:

- Creates a sense of place
- Fosters civic pride
- Establishes social connections and shared experience
- Encourages health

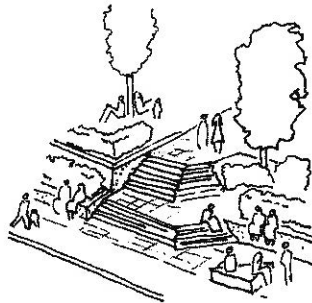


Entry/Arrival

- Sense of entry / gateway
- Definition of spaces
- Incremental opportunities to engage the space



One is either in the park or not in the park.



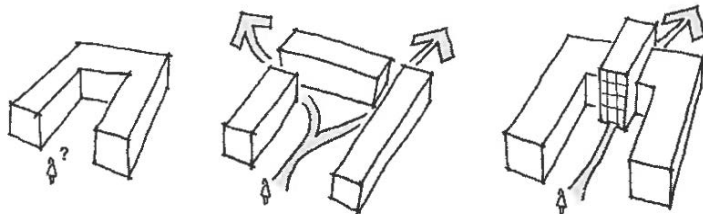
One may choose degree of engagement with the park.



Spanish Steps - Rome, Italy 54

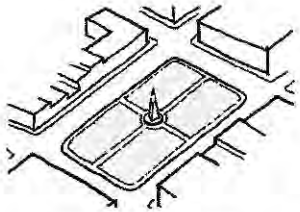
Edges

- Strong edges
- Porosity
- Exits

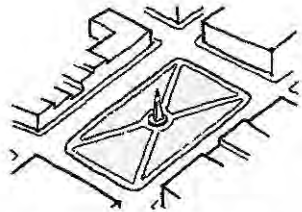


Walkways

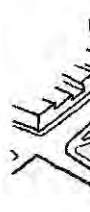
- Orthogonal paths are rigid / unforgiving
- Desire lines are clear markers of how people use a space



Orthogonal paths compel pedestrians to uncomfortably enter and leave the park at mid-block.



Diagonal paths connect park circulation to the street intersections, the natural access point for pedestrians.



Paths provide a natural access point for pedestrians.



Harvard Yard - Cambridge, MA 56

Water

- People love water
- Can that love be combined with stormwater management?



Cheonggyecheon - Seoul, Korea 57

“

Urbanism works when it creates a journey as desirable as the destination.

- Paul Goldberger, Vanity Fair Architectural Critic

Biltmore Avenue – Asheville, NC

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Public Space Use Test

✓ Timeline Test



Public Space Use Test

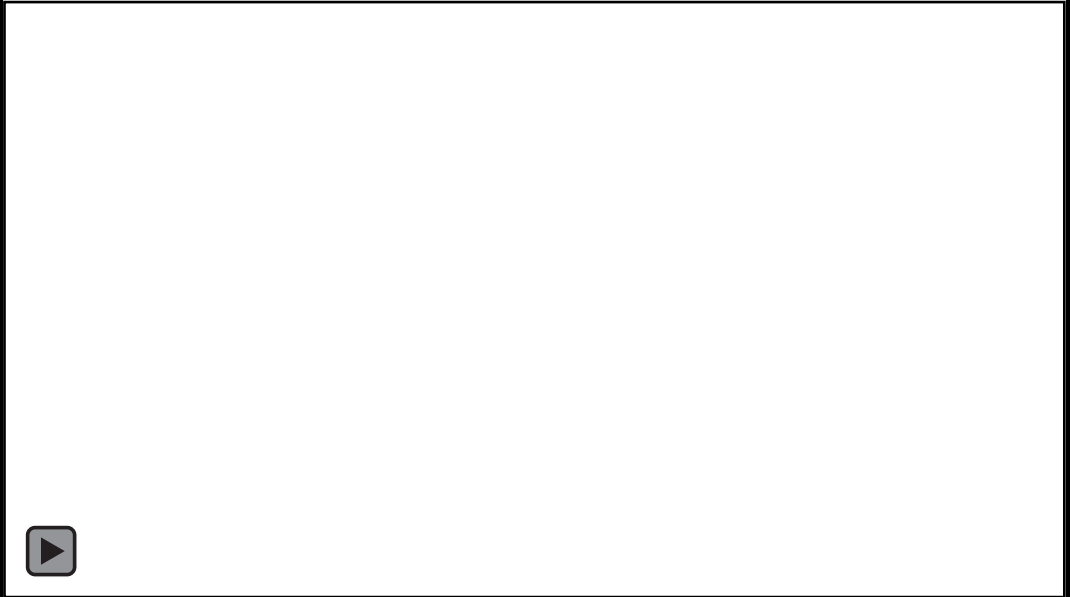
- ✓ Timeline Test
- ✓ Age Test



Outdoor Scrabble Game 60

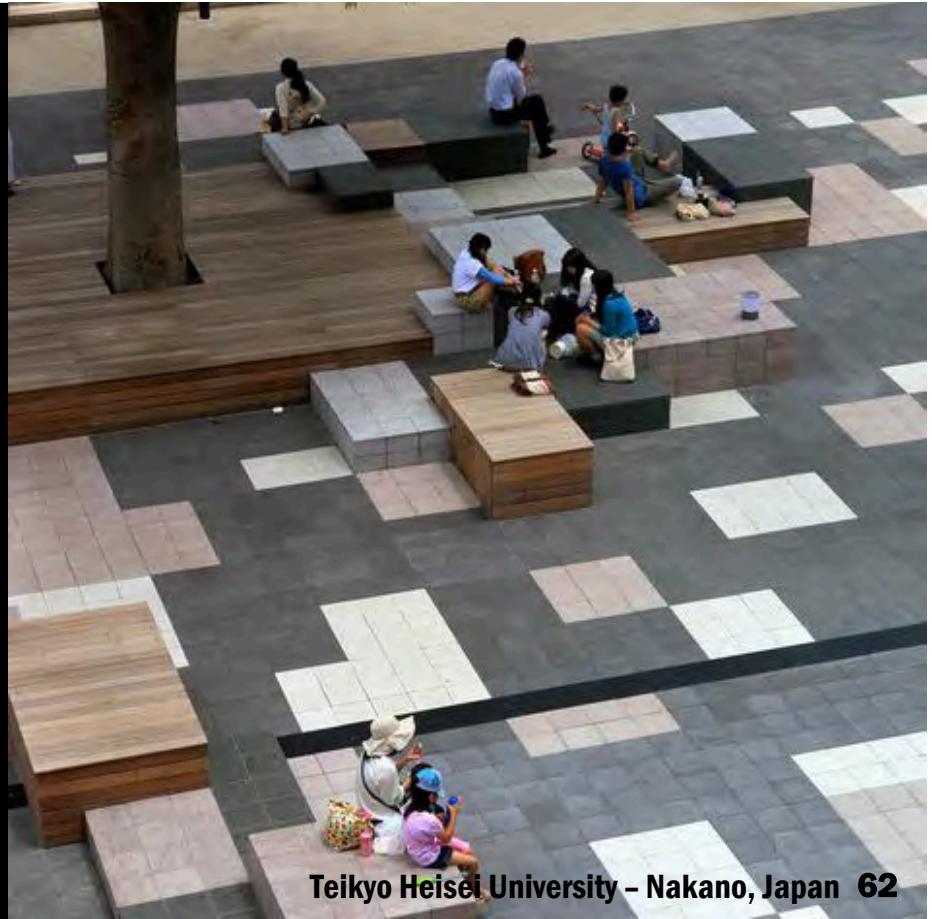
Public Space Use Test

- ✓ Timeline Test
- ✓ Age Test
- ✓ Native-Visitor Test
- ✓ Path-Destination Test



Public Space Use Test

- ✓ Timeline Test
- ✓ Age Test
- ✓ Native-Visitor Test
- ✓ Path-Destination Test
- ✓ Sit-Stand-Lean Test



Public Space Use Test

- ✓ Timeline Test
- ✓ Age Test
- ✓ Native-Visitor Test
- ✓ Path-Destination Test
- ✓ Sit-Stand-Lean Test
- ✓ Sun-Shade Test



Plaza Dali - Madrid, Spain 63

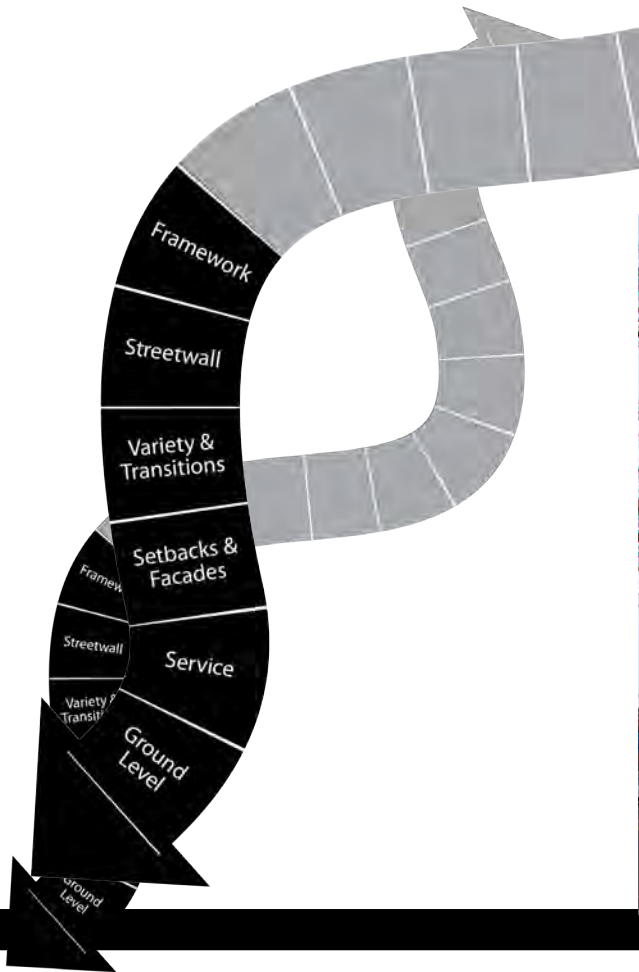
Public Space Use Test

- ✓ Timeline Test
- ✓ Age Test
- ✓ Native-Visitor Test
- ✓ Path-Destination Test
- ✓ Sit-Stand-Lean Test
- ✓ Sun-Shade Test
- ✓ Nosy Neighbor Test



3. Built Form

Realm of Urban Design

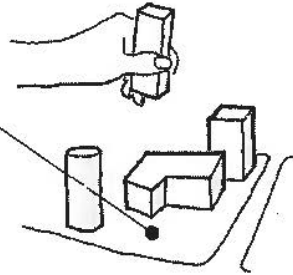


15th and Pearl - Boulder, CO 65

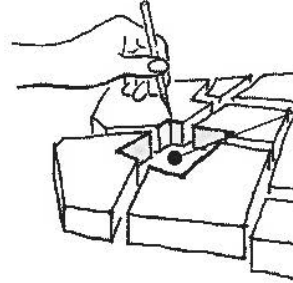
Setting a Framework

Negative space

- leftover, unshaped
- bleeds or oozes
- promotes movement
- imparts civic detachment



Object prioritization



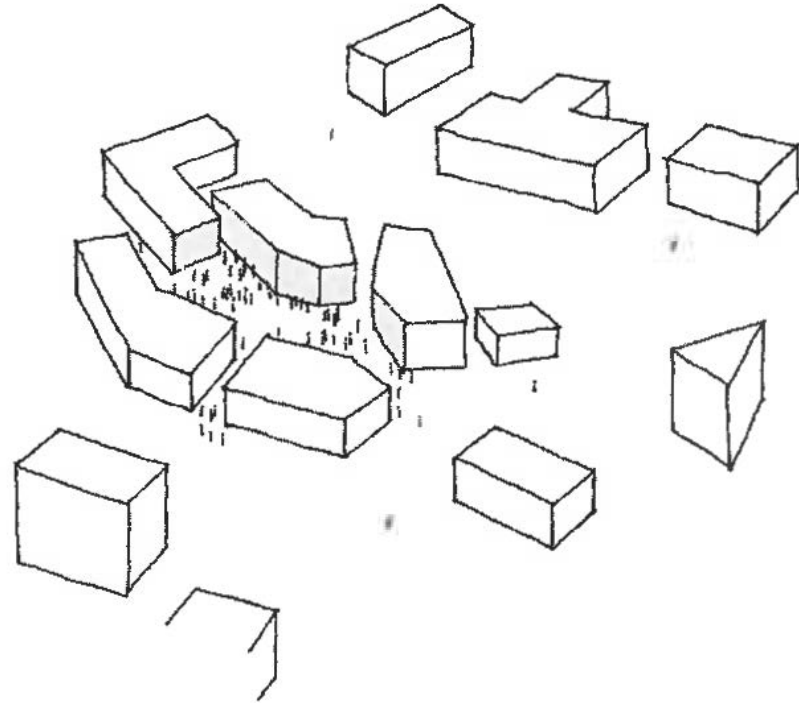
Positive space

- clear shape
- mostly enclosed
- promotes lingering
- facilitates civic engagement

Space prioritization

Setting a Framework

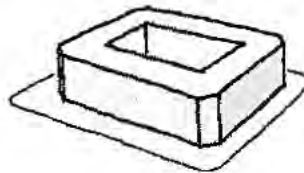
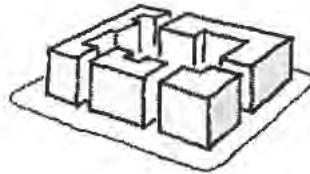
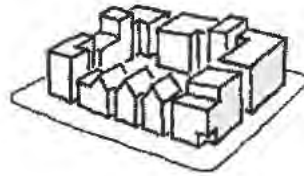
Create a sense of enclosure



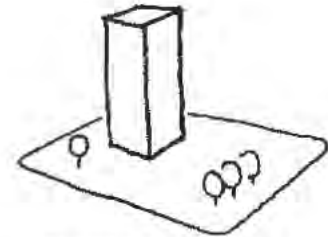
Honor the Streetwall



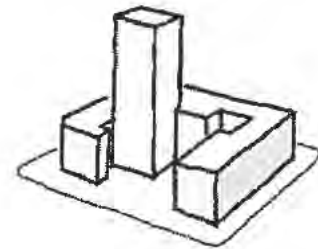
“Streetwall” should comprise 50-100% of a comfortable, walkable block



Streetwall blocks



Object-in-space block



Hybrid block



Historic Courthouse – Lexington, KY 69



If every building is special...

University of Cincinnati - Cincinnati, OH 70

Variety

Promote
housing/building variety

- ✓ Massing
- ✓ Form
- ✓ Roof Shapes



King Street- Charleston, SC 71



NoLi CDC, York Street Housing – Lexington, KY

Transitions

- Transition to adjacent uses
- Relate to the neighborhood
 - ✓ Height
 - ✓ Size
 - ✓ Character



Townhomes – San Diego, CA

Setbacks

- Consistent setbacks
- Fronts facing the street or open space

Facades

Articulate the façade

- ✓ Roof shapes
- ✓ Materials
- ✓ Windows
- ✓ Colors
- ✓ Heights
- ✓ Landscaping

Don't forget side and rear facades



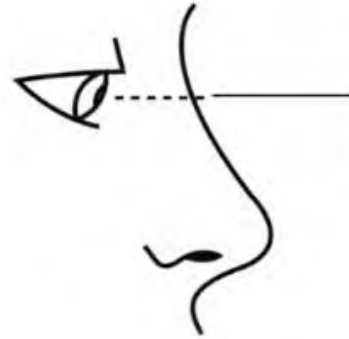
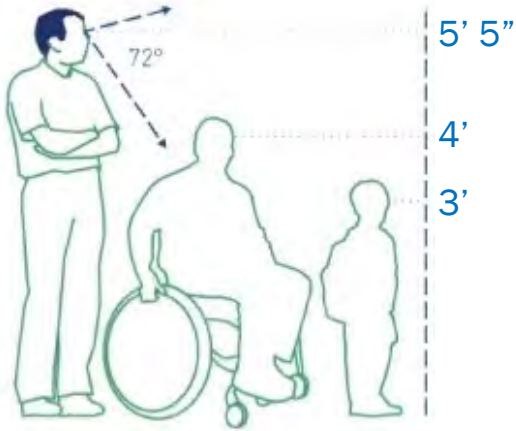
Service

(ie. trash, deliveries, service bays, etc.) are

- Necessary evils of all buildings
- Buffer or screen service areas



- Quality public realms are designed for the human dimension and create enjoyable experiences.



Ground Level Activation

- Design for 3mph
- Think about both sides of the street
- Utilize a horizontal datum



Newbury Street - Boston, MA 77

Ground Level Entries

- Prominent and visible
- Functional and accessible from the street



Average 75' maximum between functional entries



King Street - Charleston, SC 78



Greenhouse Noble Cider – Asheville, NC

Avoid Blank Walls



50' maximum stretch of blank wall

- Public art is a fix, but doesn't replace people's desire to see into other's worlds

Fenestration

AKA Windows



**Clear glass for minimum
60% of the facade**



Between 3'-8' most crucial

- Should remain unshuttered at night





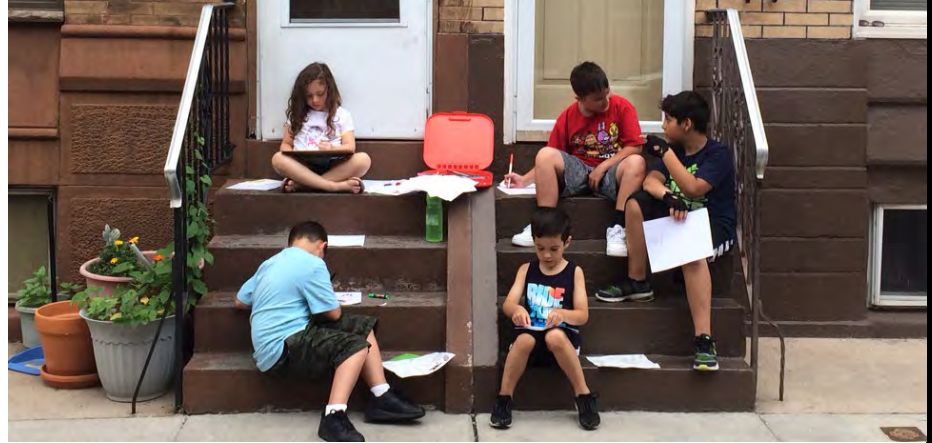
Ground Level Activation

- Stoops and Porches

**Public
Open
Space**

**Private
Open
Space**

Patios, porches,
decks, balconies,
stoops, etc.

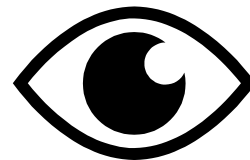


Garage Entries

- Limited sidewalk intrusions = stronger ped/bike safety
- Create an uninviting atmosphere
- Separate residents from street life



Let's review the three measures



1. Mobility

Does it enable safe, easy access and free mobility for everyone?

2. Prosperity

Does it enable property owners and inhabitants to prosper and make changes over time?

3. Inclusivity

Does it accommodate different people and different uses?

Thank you.

