

*Form-Based Codes
&
Sustainable Urbanism*
Rethinking Development Regulations

Columbia, Missouri
May 19, 2011

Mary Madden, AICP

FERRELL MADDEN LEWIS LLC

♦ urban design, town planning, and form-based coding ♦

Do We Have the Right Tools?

*Do We Build Places Worth
Sustaining?*

In the news...

PickensPlan

we can solve the climate crisis.



Look familiar?



In the news...

In the Car for Life

*"You have
no choice"
but to drive.*

*Katy Joseph
of Crofton,
who commutes
45 miles round
trip to work*

ffic Isn't Headed for the Office

SHAVER
ff Writer

nd her husband, Bill,
miles round trip be-
e in Crofton and their
on, spending much of
ke thousands of driv-
haust-spewing traffic
edly help create.

Josephs' daily drive
st interests planners
the region's traffic
ie real culprit, traffic
he rest of the driving
igate a busy life—
grocery store, the
mall and church, and
ree children to birth-
: movies, the roller
rink, soccer practice, cheerleading
competitions and friends' houses.

"I hate the commuting," said Katy

Joseph, 39, a legal secretary. "But
when you look at the whole picture, it
doesn't seem that bad. . . . I think I'm
home [from work] for four minutes
and then it's off in the car."

In short, Joseph said, "driving is
my life."

In fact, traffic experts said, the Jo-
sephs are right in sync with American
trends. Non-work trips for shopping,
driving children to activities and run-
ning errands account for 85 percent
of all trips people make, up from 80
percent in 1990, according to a re-
cently released national travel survey
conducted by the U.S. Department of
Transportation.

Even during peak morning and
late-afternoon rush hours, more peo-
ple are driving to and from grocery
stores, schools, restaurants and other

See TRIPS, C8, Col. 1

Thirteen trips a day

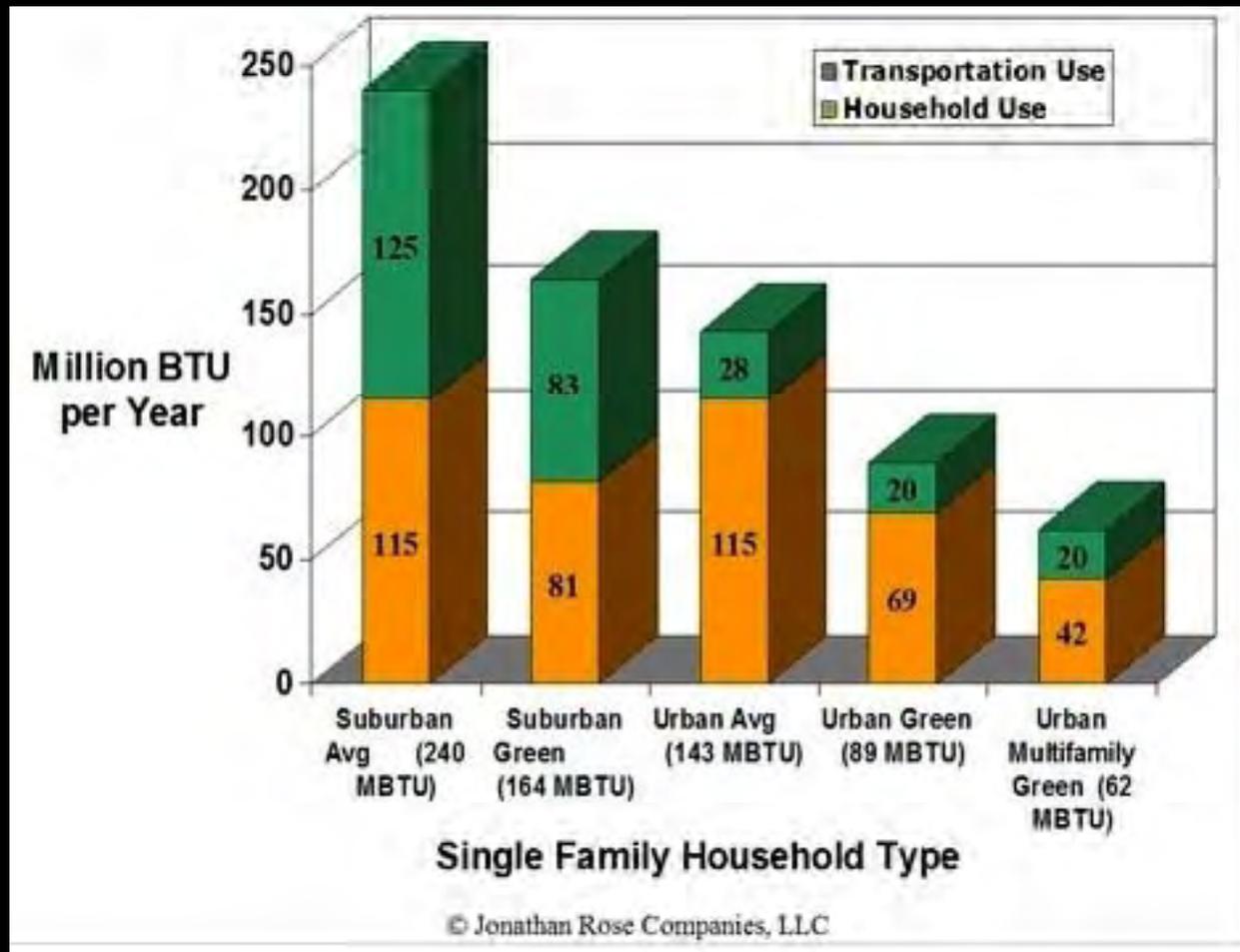


Wasteful Consumption of Land, Time, and Energy

True Sustainability

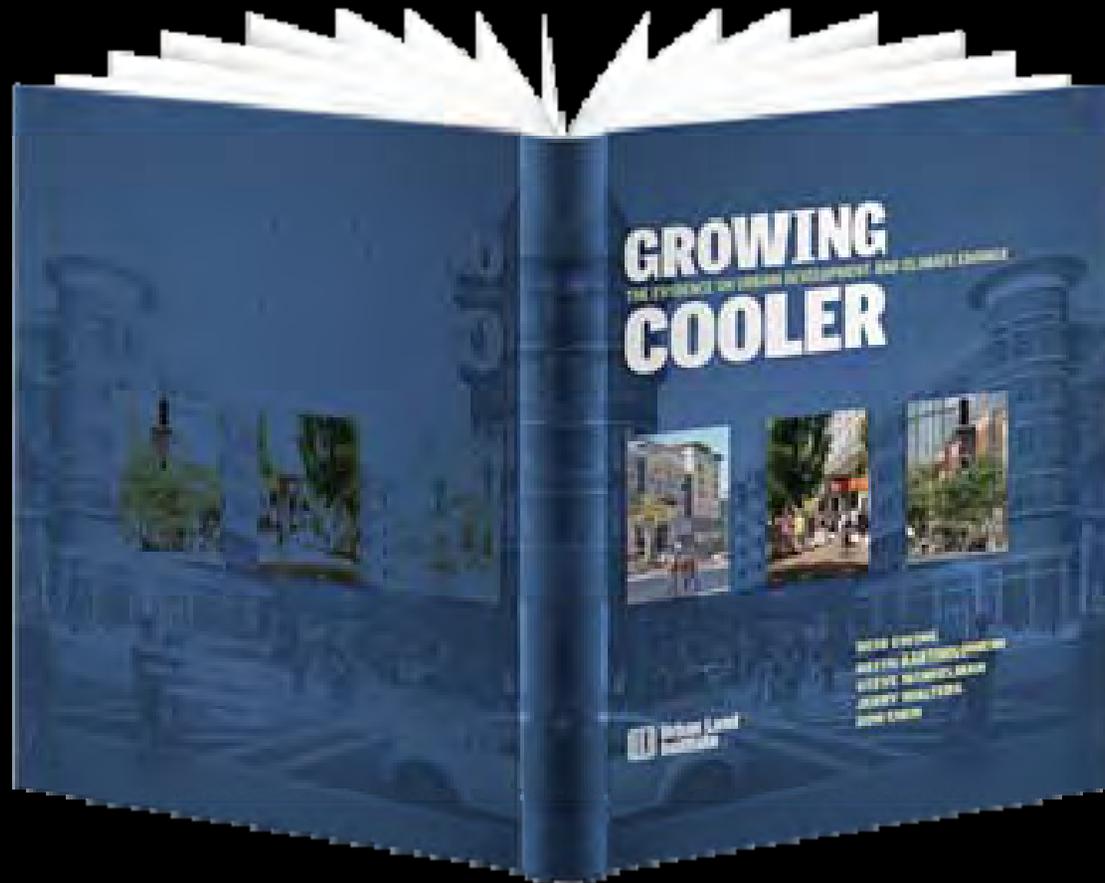
Report from *Environmental Building News*: For an office building built to modern energy codes (ASHRAE 90.1-2004), **more than twice as much energy is used by commuters than by the building.**

What about residential?



Greenhouse Gas Emissions:

1. Much of the rise in vehicle emissions can be curbed by growing in a way that allows us to drive less
2. Reducing automobile dependency is a LAND-USE PLANNING problem!



“Mix of land uses to pedestrian-friendly design, compact development reduces driving from 20 to 40 percent.”

“Smart growth could, by itself, reduce total transportation-related CO2 emissions from current trends by 7 to 10 percent in 2050.”

Which direction will we choose?

“Reduce congestion”

...by building more roads & parking lots,
which will enable further sprawl?



“Reduce automobile dependency”

...by building walkable communities”
in regionally sensible locations?

What's wrong with our Current System?

Why do we build this way?

Common “new development” patterns



Built for cars...not people

Common “new development” patterns



The Sub-Urban House can *Crowd* – without connecting to Neighbors





...nor country



What happened?

Why don't we build great
places anymore?

Early 20th Century, Chicago



Looking west along Chicago River from an Illinois Central Elevator, 1908.

Separation of Uses



Cities and towns are...

...physical places

...for people

...diverse – provide a variety of choices

...change over time

...not abstract statistics

...not just an agglomeration of land uses

*Where do we go
from here?*

What does it take
to make a good place?

1. A Vital Center



Build Upon the Positive Qualities Already There

2. Real Neighborhoods



Identifiable, Walkable, Connected, Compact Neighborhoods

3. Walkable Streets



3a. Avoid the Auto-Oriented Strip



(Build any new stuff out there in a better pattern, too)

4. Unique Community Character



Infill in a Close-knit Pattern to Support Community & Character

5. Natural Features & Cultural Heritage



*Aren't the Usual Tools
Good Enough?*

Prince William County: A Vision for the Future

The 1998 Comprehensive Plan “contains a clear strategy for **responsible, fiscally sound growth to produce a vibrant, prosperous, stable, ‘livable’ community.**”

*(from the first paragraph of
The 1998 Comprehensive Plan)*

LEGEND

URBAN AREA

-  Regional Employment Center (REC)
-  Regional Commercial Center (RCC)
-  General Commercial (GC)

SUBURBAN AREA

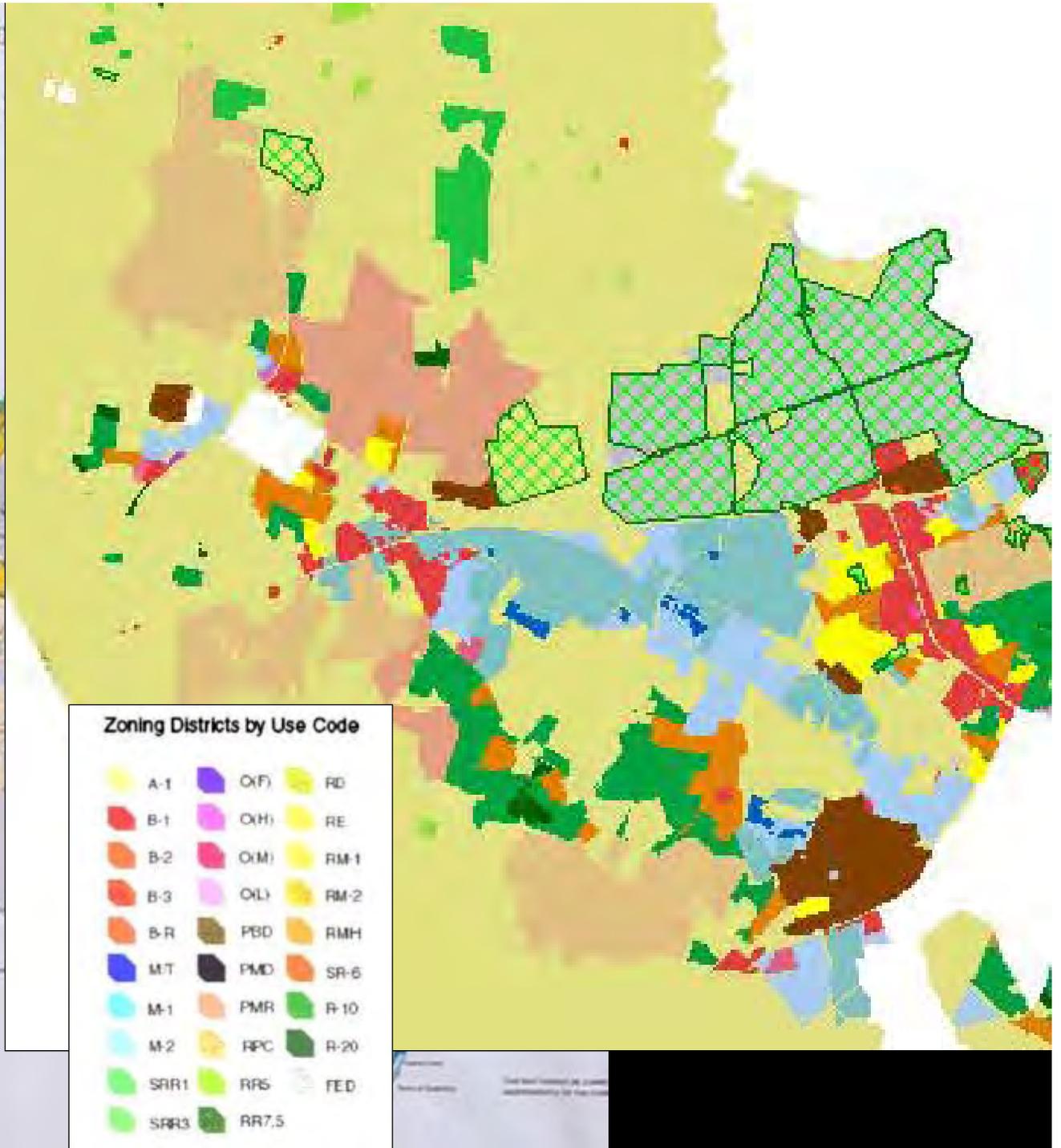
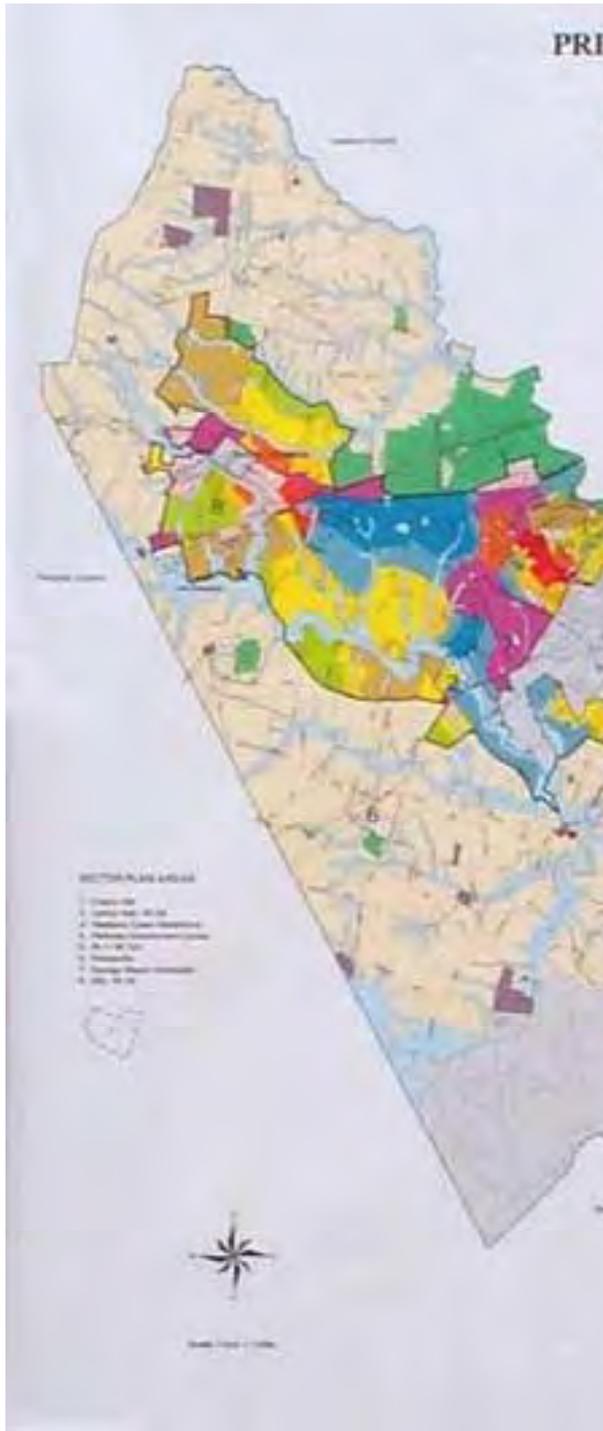
-  Flexible Employment Center (FEC)
-  Industrial Employment (IE)
-  General Commercial (GC)
-  Community Employment Center (CEC)
-  Office (O)
-  Neighborhood Commercial (NC)
-  Semi-Rural Residential (SRR) 1 Dwelling Unit per 1-5 Acres
-  Suburban Residential High (SRH) 10-15 Dwelling Units per Acre
-  Suburban Residential Medium (SRM) 4-6 Dwelling Units per Acre
-  Suburban Residential Low (SRL) 1-4 Dwelling Units per Acre
-  Residential Planned Community (RPC)

RURAL AREA

-  Agricultural or Estate (AE) 1 Dwelling Unit per 10 Acres or greater
-  Convenience Retail (CR)

COUNTY WIDE

-  Environmental Resources (ER) Chesapeake Bay EPA and 100 year floodplain
Specific boundary will be determined during development review through ground truthing
-  Designated Cultural Resource (DCR)
-  Public Land (PL)
-  Parks & Open Space (POS)
-  City/Town





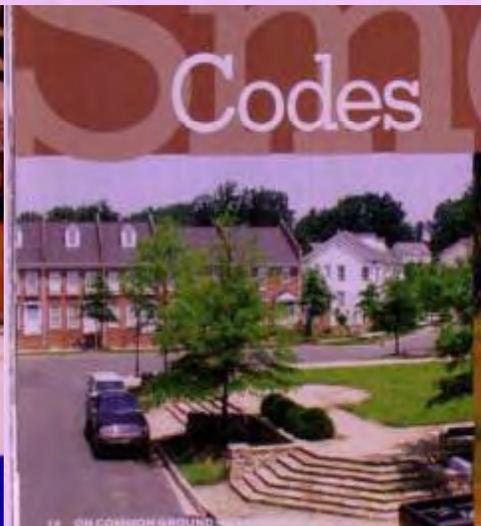
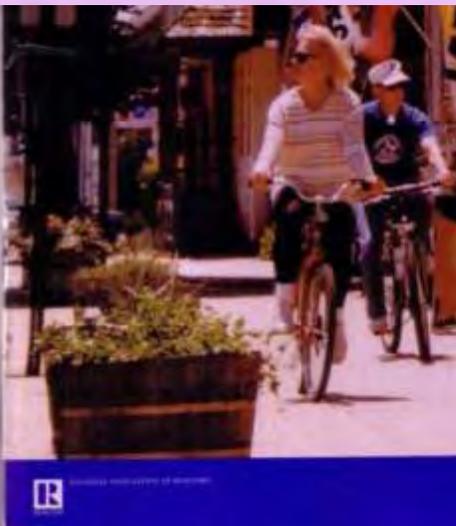


Columbia Pike Revitalization Organization, whose office is located on the Pike. "We saw bank branches with drive-through lanes, fast food franchises with drive-through lanes—and that's been about it. We also saw long-time businesses either close or move to other parts of the county. There are pizza stores, check-cashing stores, laundromats, dry cleaners, dollar stores—these are all services people use, but you can't buy a men's suit, women's clothing, a pair of shoes, or even a bank on Columbia Pike."

enhance the richness of their community, while ensuring none of the long-time local businesses would be replaced.

To tap the potential of this diamond in the rough, the Columbia Pike community developed a comprehensive Columbia Pike Revitalization Plan, which included adoption of a form-based (as opposed to a conventional use-based) zoning code. The code is a legal document that regulates land development by setting careful and clear controls on building form to create good streets.

Everybody hates sprawl, but the builders aren't violating rules; they're building exactly what the codes call for.



Policy Goals
versus
Regulatory Instruments

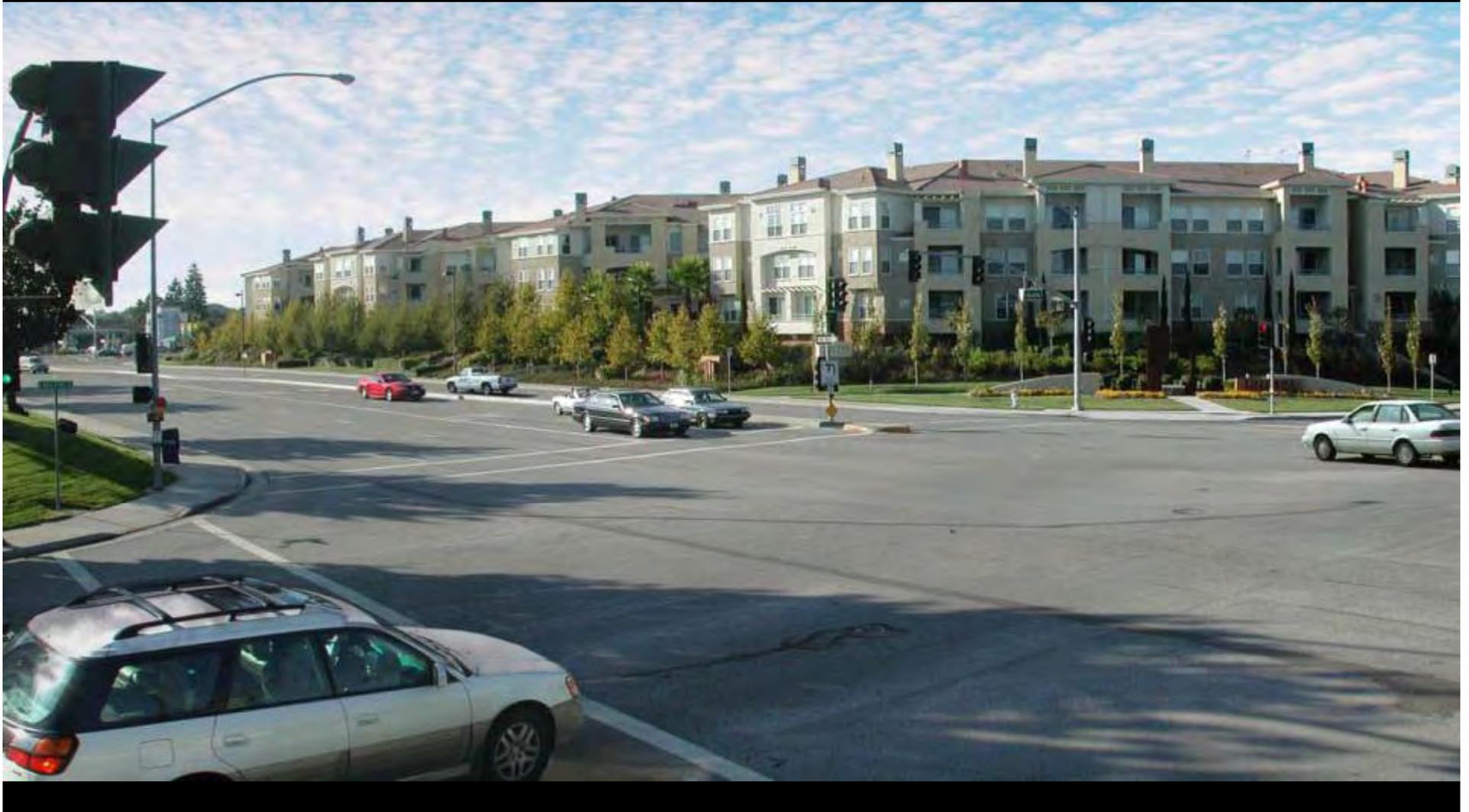
Goals: Comprehensive Plan

Regulations: Zoning
Ordinance

Well-intentioned policy statement: Infill and develop in existing urbanized areas. Build affordable multi-family housing near transportation corridors.



Well-intentioned policy statement: Infill and develop in existing urbanized areas. Build affordable multi-family housing near transportation corridors.



Well-intentioned policy statement: Infill and develop in existing urbanized areas. Build affordable multi-family housing near transportation corridors.



This is “red” on the zoning map.



Dover Kohl and Partners

Strip Shopping Center, Fort Myers Beach

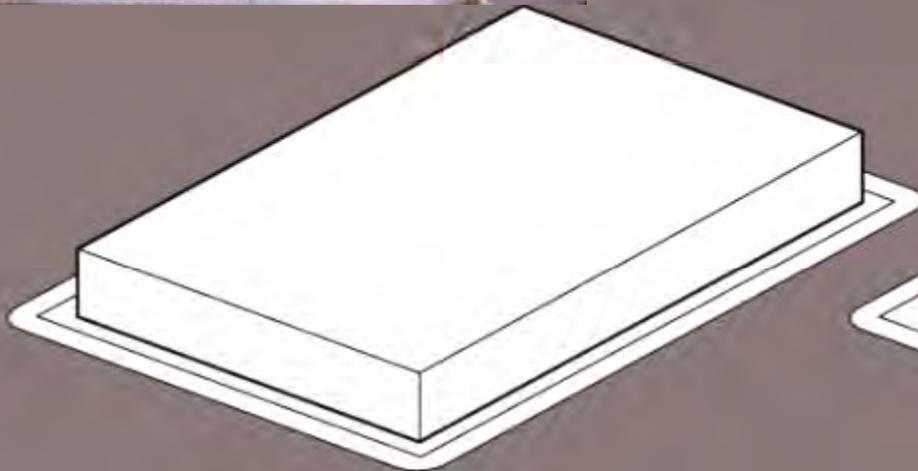
This is “red” on the map too.



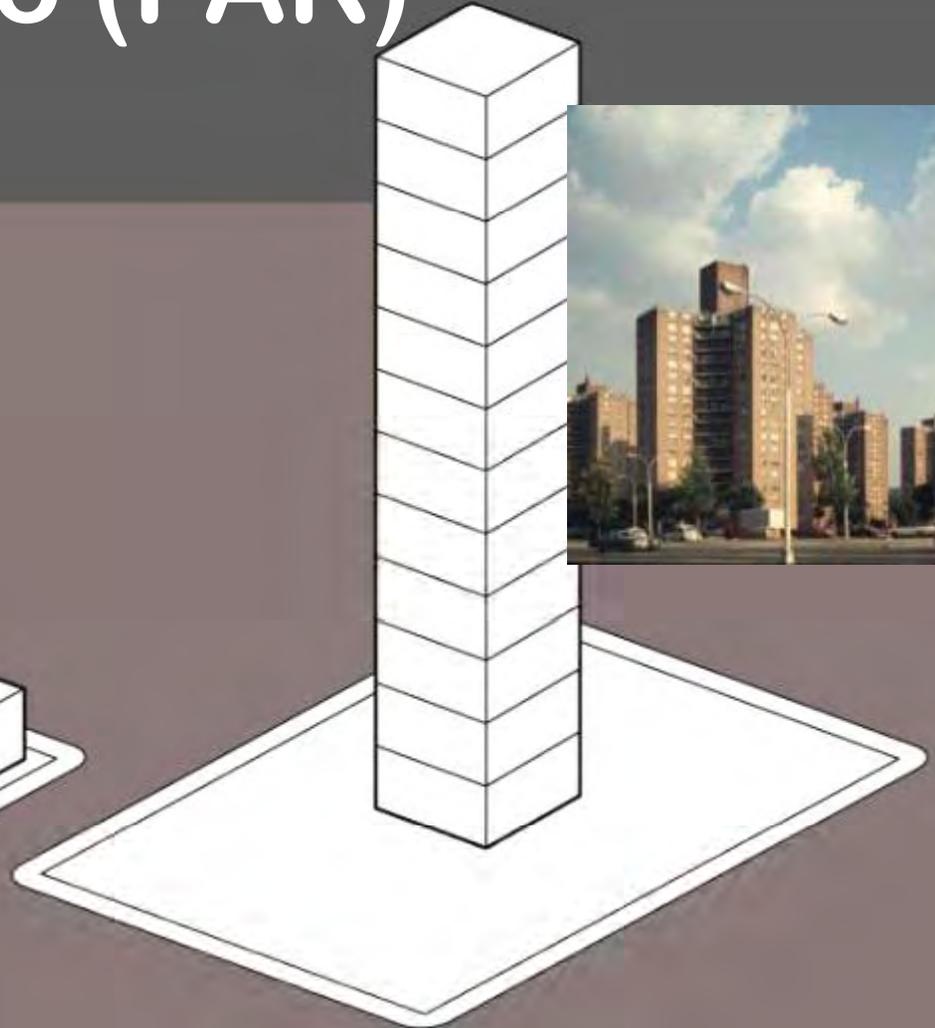
Dover Kohl and Partners

Park Avenue, Winter Park

Regulating Mechanism: Floor Area Ratio (FAR)



FAR 1.0



FAR 1.0

The Limits of Aesthetic Design *Guidelines*





Development Regulation Today:

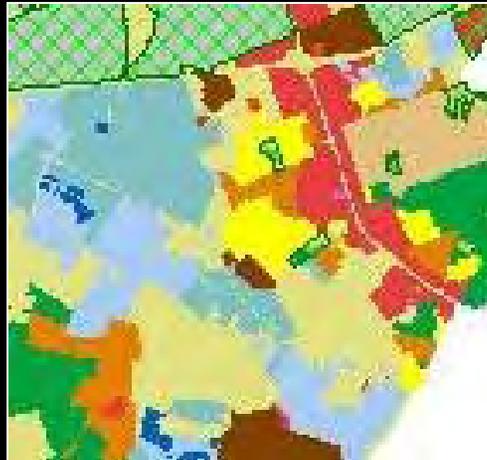
Out of Balance

Regulating Mechanism: Balancing Place-Related Concerns

Form



Use/Density



Management



Regulating Mechanism: Today: Euclidean Zoning

Use/Density

Management

Form

Regulating Mechanism: Balance -- Form-Based Codes



Form

Management

Use

Form vs. Use

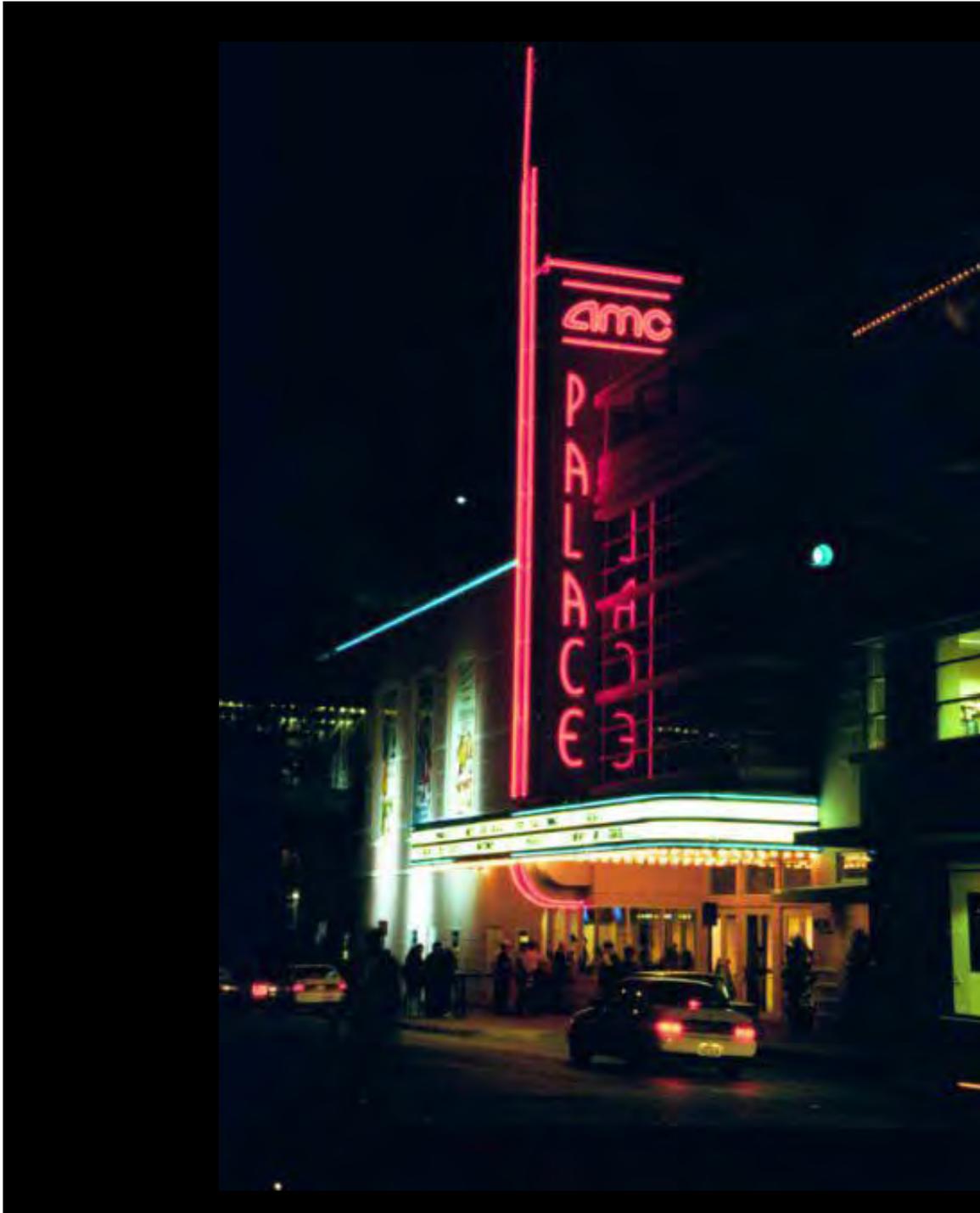
Form vs. Use



Form vs. Use



Form vs. Use



Form vs. Use



Form vs. Use



Mixed-Use 'Medium' Density Transportation Corridor



Mixed-Use 'Medium' Density Transportation Corridor



Recognized National Trend: Form-Based Codes

Codifying New Urbanism How to Reform Municipal Land Development



Congress for the New Urbanism

APA American Planning Association
PAS Planning Advisory Service
Report Number 52a

Congress
for the
New
Urbanism

Urban Land

REPRINTED FROM JUNE 2003

Developments

New Planning Tool Adopted

Arlington County located in northern Virginia just across the Potomac from Washington, D.C., joined a small group of cities that have adopted a new type of community design plan—form-based codes, that has the potential to revitalize key community areas. Arlington plans to apply form-based codes to revitalize the 3.3-mile Columbia Pike corridor of residential, office, and retail space that has seen little growth in 40 years, representing one of the first times the tool will be used for an older suburban commercial strip rather than a more typical urban grid.

Instead of focusing on what is undesirable, form-based code concentrates on the community's design vision through basic rules that specify a range of acceptable building types and welcome mixed-use development. Mixed regulations specify minimum and maximum heights to discourage creation of eyesores of walls, and require that structures be built out to the sidewalk to create a sense of place. Adoption of form-based code provides an alternative for developers to the normal site planning process, creating a fast-track environmental review development by expediting the approval process. Developers and community stakeholders know in advance the operational parameters within which development can occur, and approval can be obtained in as little as 60 days—as contrasted with the traditional site

plan approval process, which is unpredictable and costly, and can take up to one year to complete.

Once considered a potential route for the Washington Metropolitan Area Transit Authority's subway, Columbia Pike was the focus of land speculation in the 1960s. But when the area was bypassed, developers' attention shifted to the Rosslyn-Ballston and Jefferson Davis Highway subway corridors. Forty years later, the form-based code is seen as a means to encourage responsible commercial development of the district. The code has been designed to support pedestrian-oriented development that will foster a vibrant street scene through a lively mix of shops, restaurants, cafes, and other commercial uses at street level, bounded by canopy sidewalks and upper-story residences and offices.

The Columbia Pike revitalization process began in 1996 when Arlington County civic and community leaders recognized the need to encourage growth in the area, created the Columbia Pike Initiative. A plan for Columbia Pike slowly evolved with their leadership, community involvement, and nearly 8,300 meetings attended by Columbia Pike residents, business owners, artists, and government of-



The first mixed-use development project in the corridor of Arlington, Virginia, is more than 80 years old. Form-based codes help revitalize the older suburban

side. The resulting long plan. As an economic, commercial revitalization, urban design, transit, parking and public safety and recreational needs.

The first project to fall under the code will include five-story residential tower above retail shops. This tower design office, residential, and retail projects this year, says U.S. director of the Columbia Organization.—Karen Ne-

Open Spaces: a public safety commission report at Arlington Economic Development.



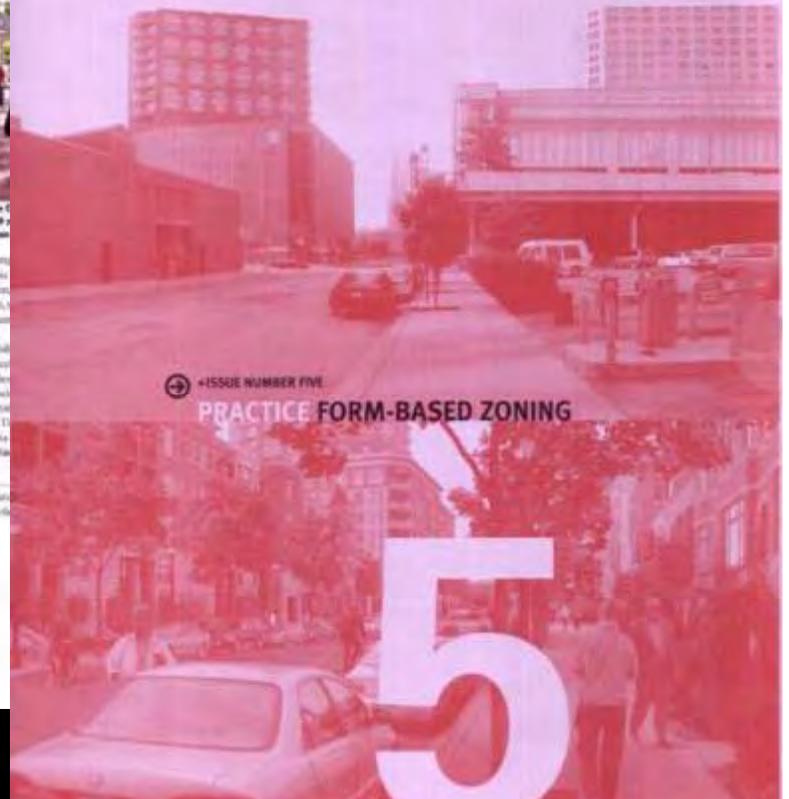
Arlington Economic Development
700 N. Glebe Road, Suite 1050
Arlington, VA 22201
Phone: 703-228-0838 • Fax: 703-228-0854
Web site: <http://www.arlingtonva.org/economic>

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ZONING PRACTICE

May 2004

AMERICAN PLANNING ASSOCIATION



ISSUE NUMBER FIVE

PRACTICE FORM-BASED ZONING

What is a form-based code?

- First and foremost – a tool
- A method of regulating development to achieve a specific urban form.
- *Form-Based Codes foster predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code. They are regulations, not mere guidelines. They are adopted into city or county law. Form-Based Codes are an alternative to conventional zoning.*

-- from the Form-Based Codes Institute

**What are
Form-Based Codes Really?**

*Based on the essentials
of good place making.*

Remember...

Cities and towns are physical places for people...

...not abstract statistics!

What is the place we want the city or town to be?

Will our rules allow it?

*What does it take to create a great
place?*

That people care about?

That is worth sustaining?

good form



*Pioneer
Square*

R
RadioShack

Little
Caesars
pizza!pizza!

T-Mobile

Little Caesars
SUBWAY
LAWSON













Great Place Basics:

Street Types

Not all streets are the same...



Not all streets are the same...



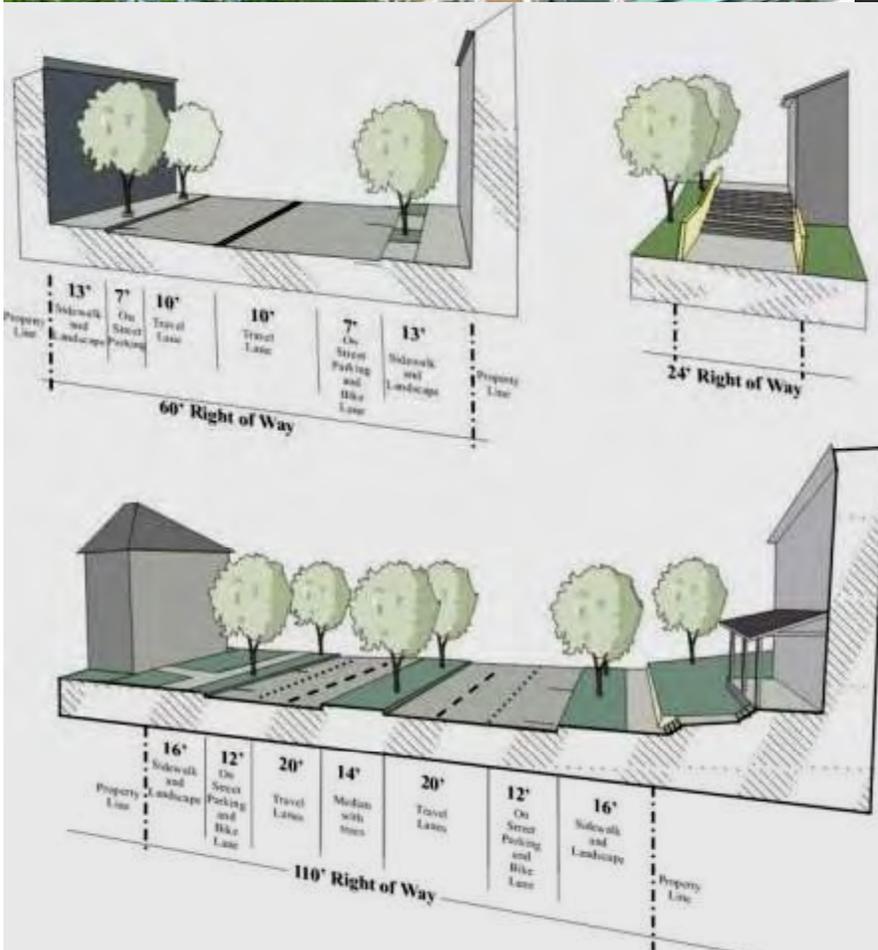
Variety of Users



New York Avenue lined with farrows of trees and streetcar tracks in the center, c. 1945



Great Place Basics: Street Types



Street Trees

*Given a limited budget,
the most effective
expenditure of funds to
improve a street would
probably be on trees...*

...trees can transform a street more easily than any other physical improvement.

-- Allan Jacobs in Great Streets

Street Trees



Street Trees



Street Trees



Street Trees



Street Trees



Street Trees



Street Trees



Street Trees



...but trees can only do so much...

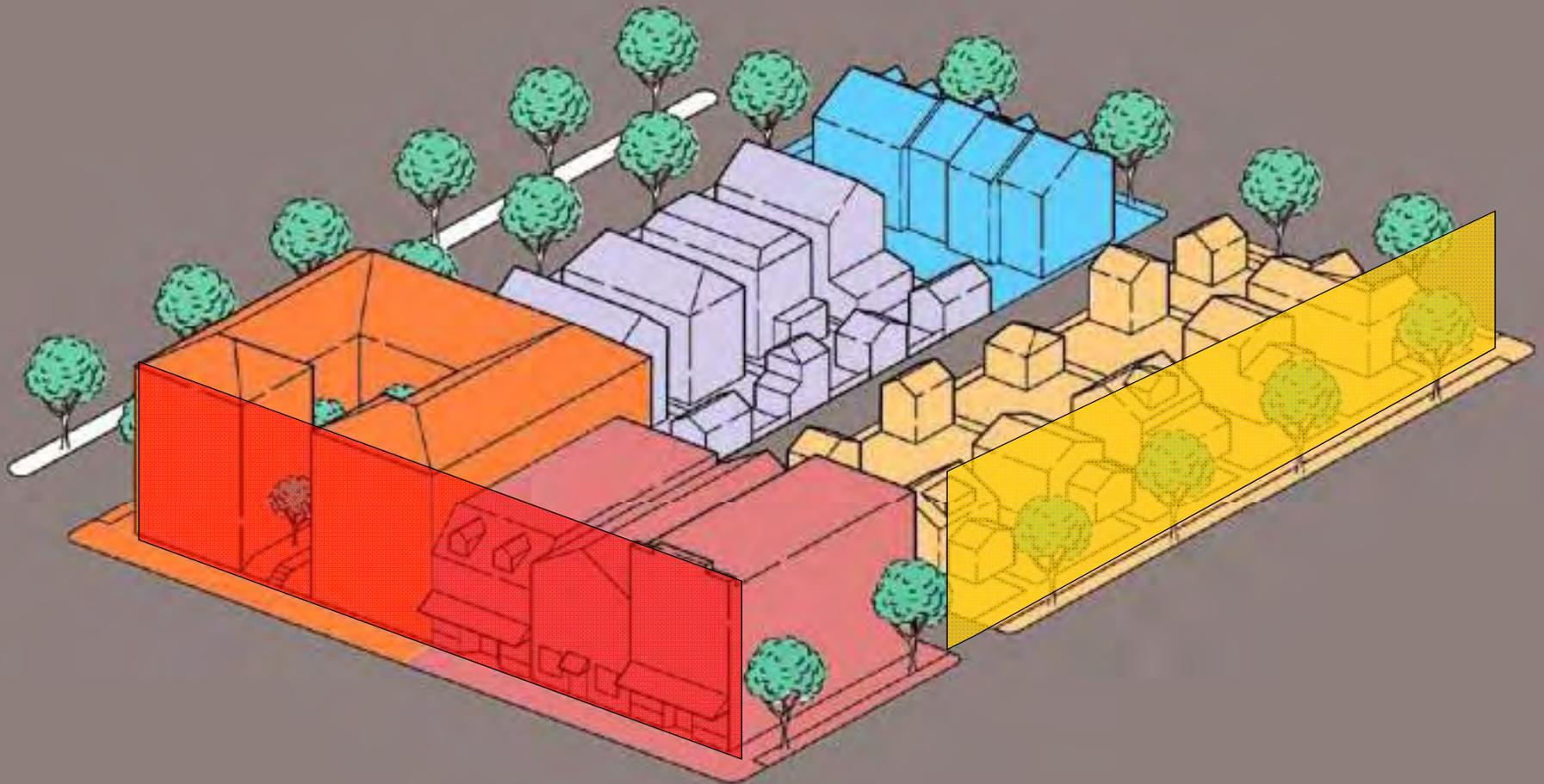


Great Place Basics:

The BLOCK



Great Place Basics: Diversity and Urban Form



Great Place Basics: Diversity and the Block





Diverse Civic or Public Spaces

...not just open space...















streets as public space



people places



ability to walk vs. walkability

Design for people....

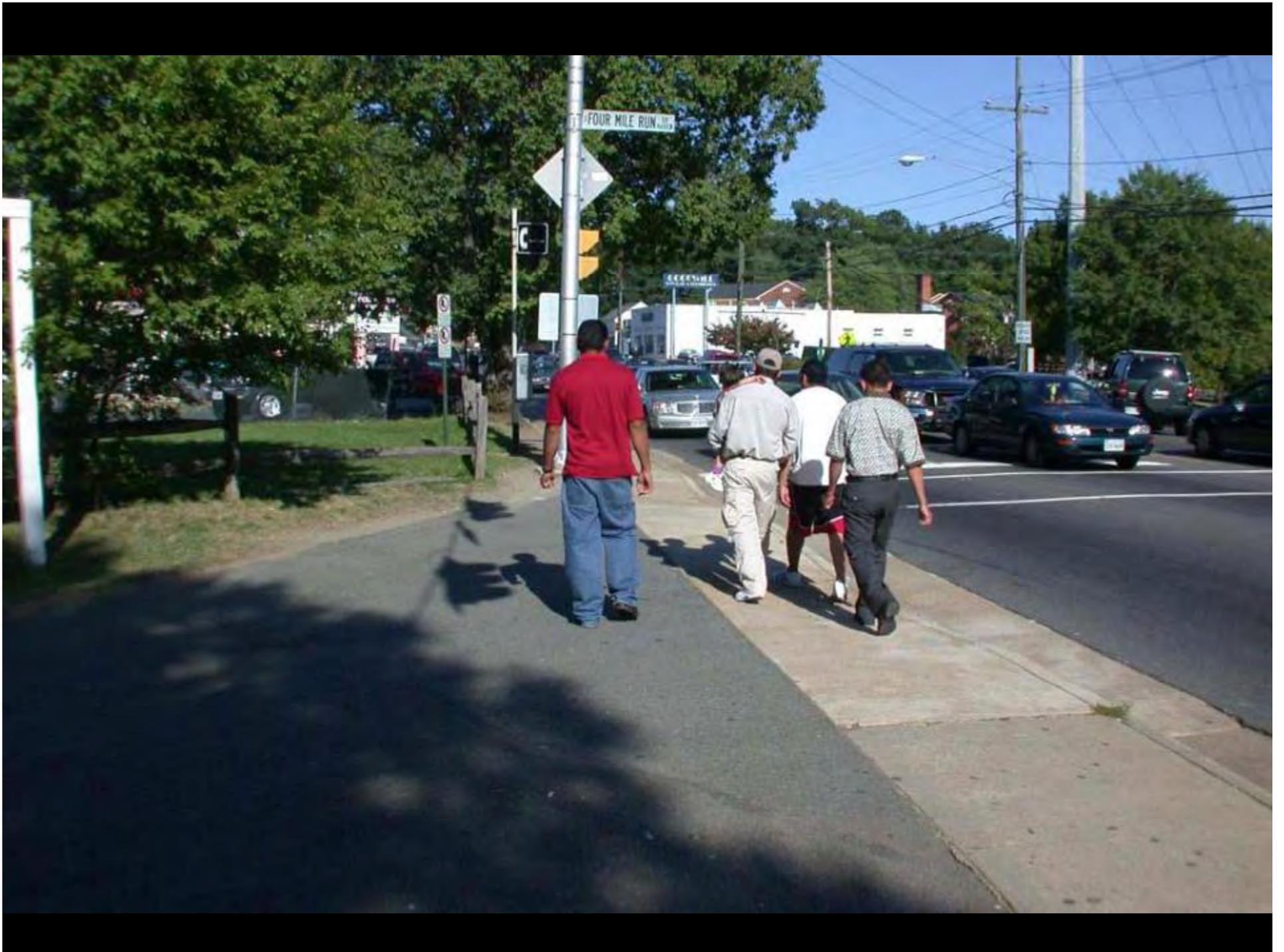
...accommodate cars.





ability to walk vs. walkability

- *Easy*
- *Interesting*
- *Somewhere to go*
- *Something to see*
- *Efficient*
- *Safe*





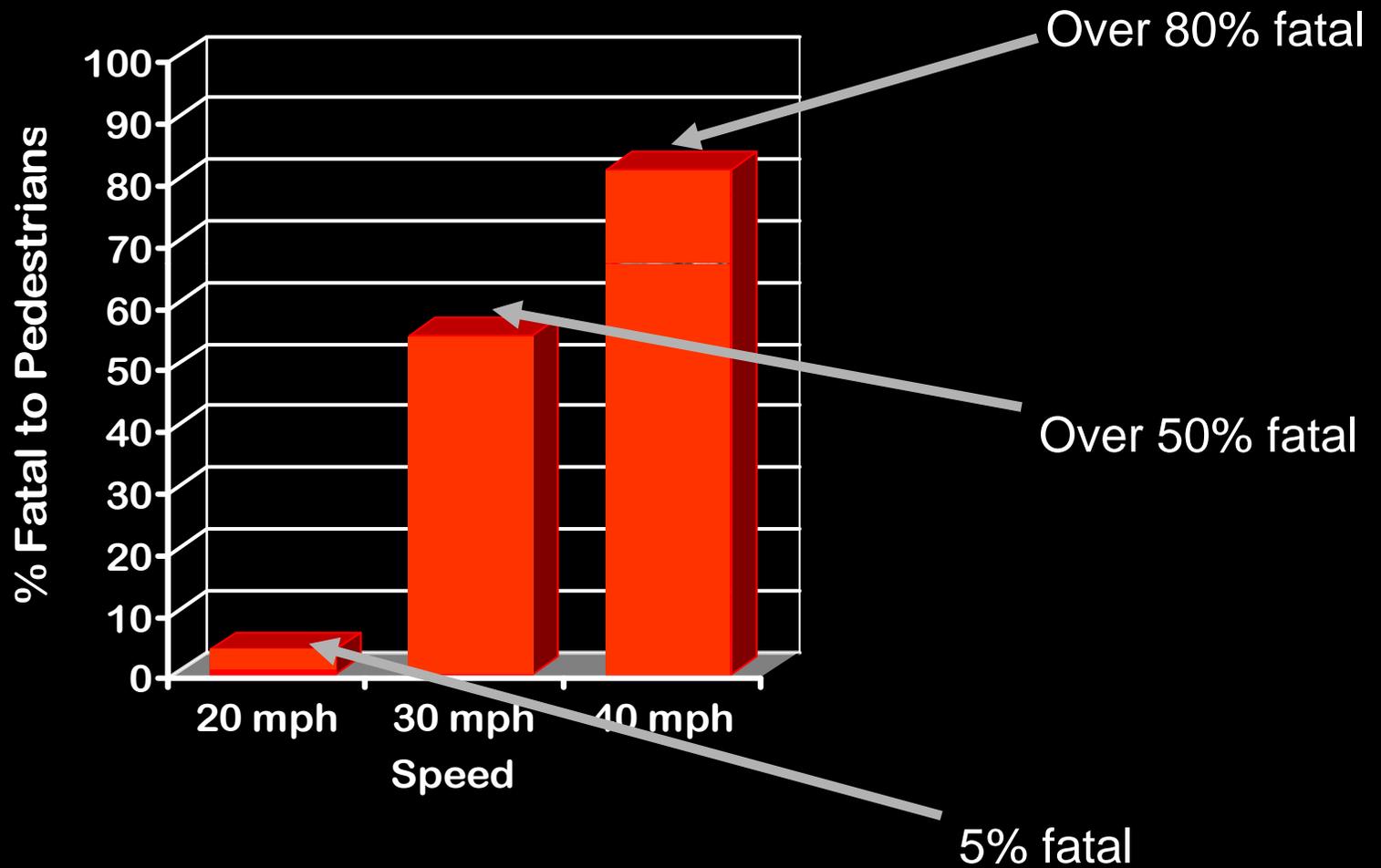




SPEED
LIMIT
40

THRU
TRAFFIC
KEEP
RIGHT

pedestrian fatalities & speed



physics of stopping distance

courtesy of HPE

walkability



10. Narrow Streets
9. Street Trees
8. Traffic Volumes
7. Sidewalks
6. Interconnected Streets
5. On-Street Parking
4. Lower Traffic Speeds
3. Mixed Land Use
2. Buildings Fronting a Street
1. Small Block Size

Even in the 21st Century?



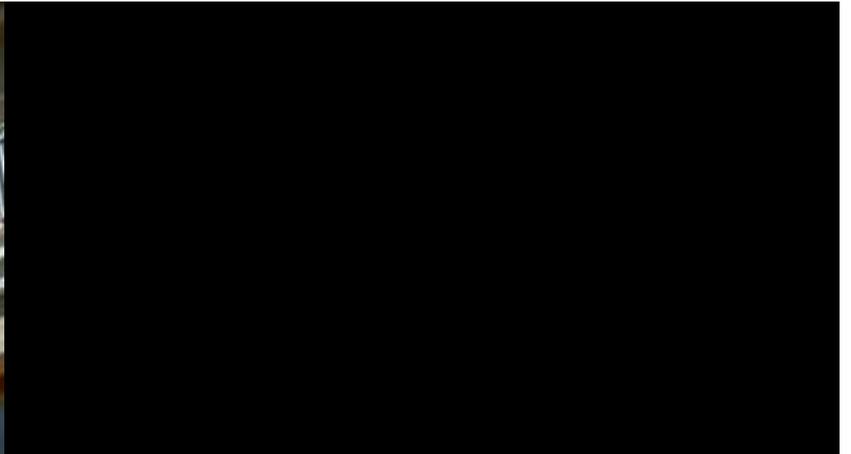
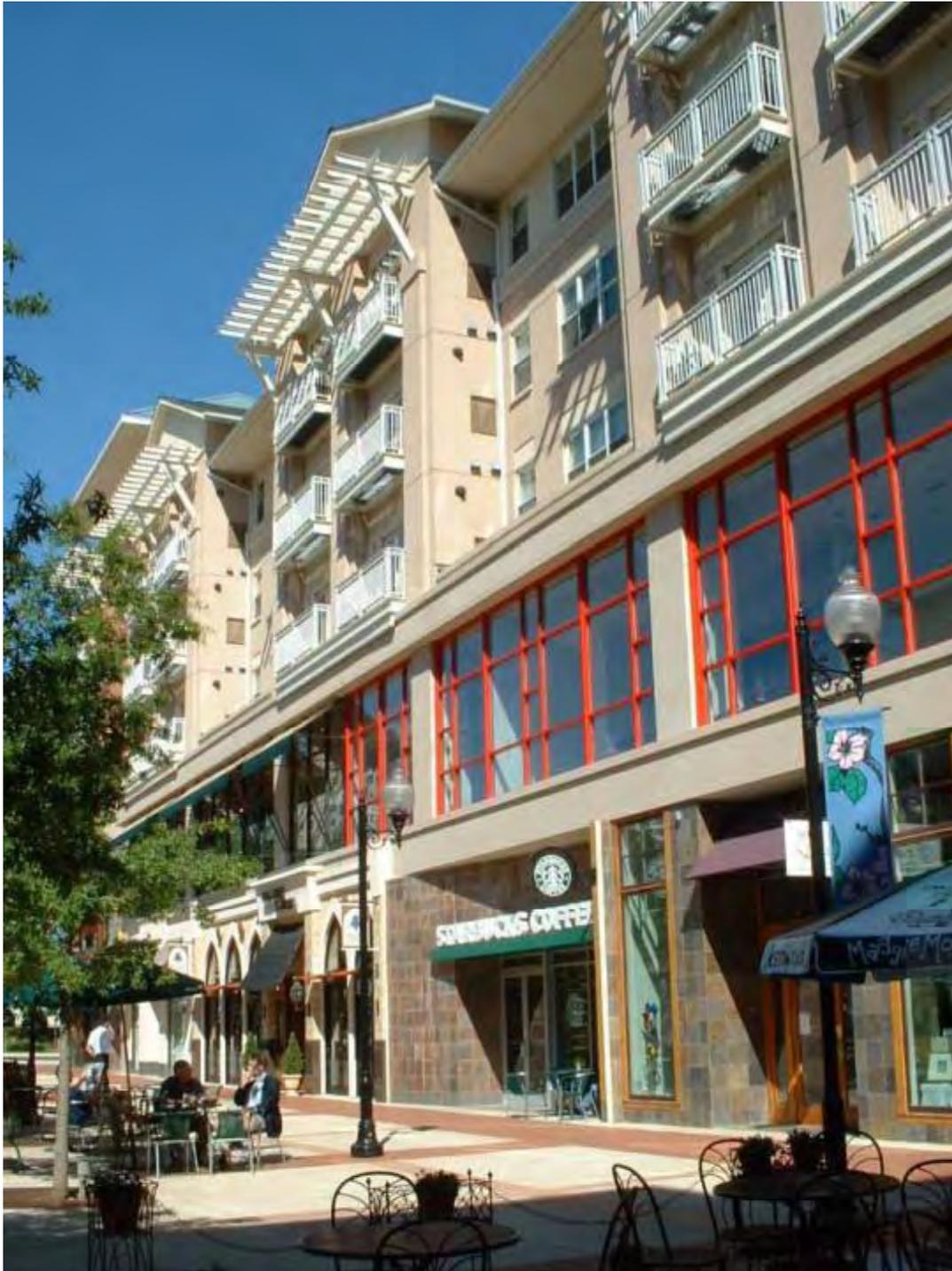


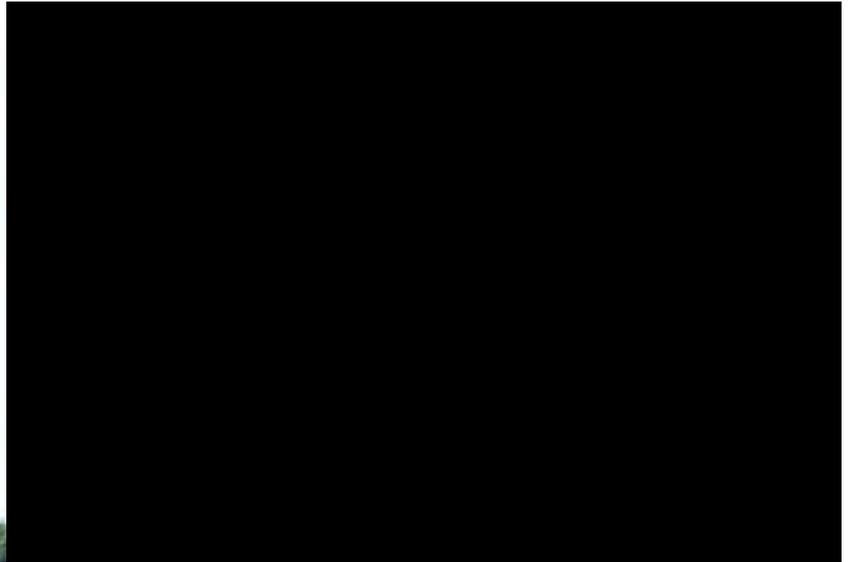
Livability and Housing Choices

How do the pieces fit together?

Connectivity











What are Form-Based Codes Really?

*Based on the essentials
of good place making.*

Great Place Basics: height



Height

Special Condition:
Within 100 feet of Columbus Pike:
Block A, MAX 7 St.
Block B, MAX 4 St.

MAX 6 St

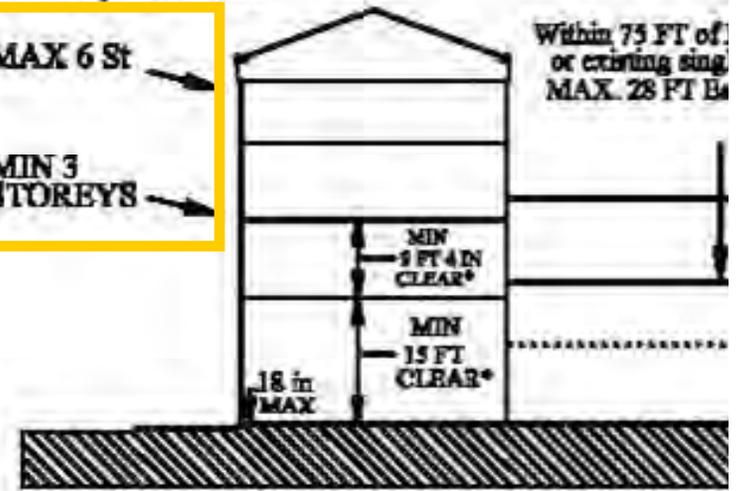
MIN 3
STOREYS

Within 75 FT of
or existing sing.
MAX. 28 FT Ba

MIN
9 FT 4 IN
CLEAR*

MIN
15 FT
CLEAR*

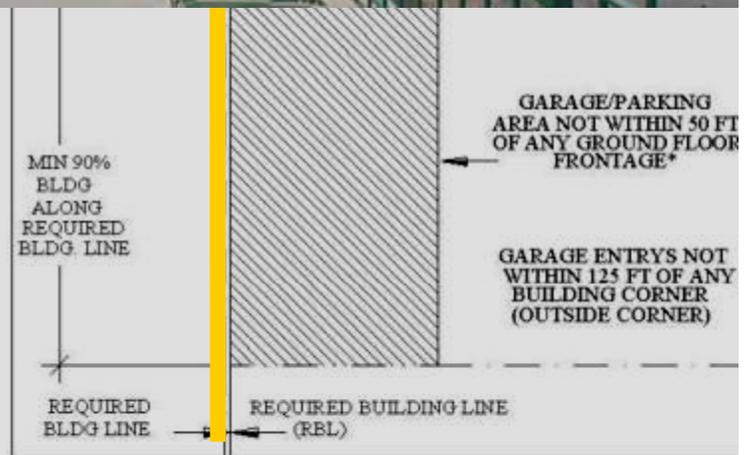
18 in
MAX



Great Place Basics: siting: *build-to* line vs. *setback* line



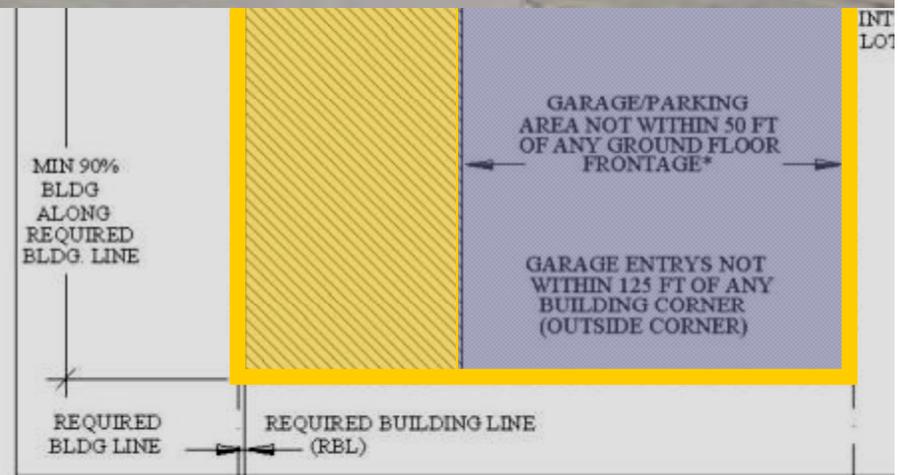
Siting



Great Place Basics: siting: lot coverage / parking



Siting



Great Place Basics: elements: windows, balconies, etc.

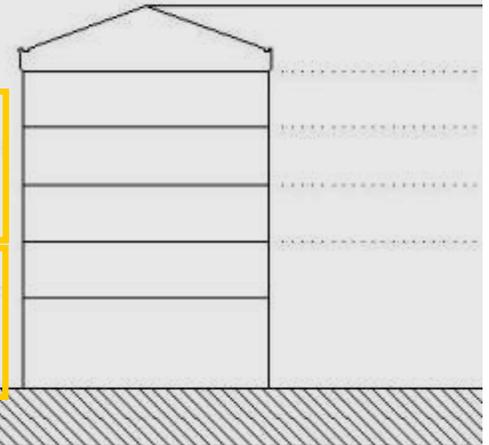


Elements

Encouraged

Upper Storeys
FENESTRATION
MIN 30%
MAX 70%

Ground Storey
FENESTRATION
MIN 60%
MAX 90%



Great Place Basics: elements: windows, stoops, doors

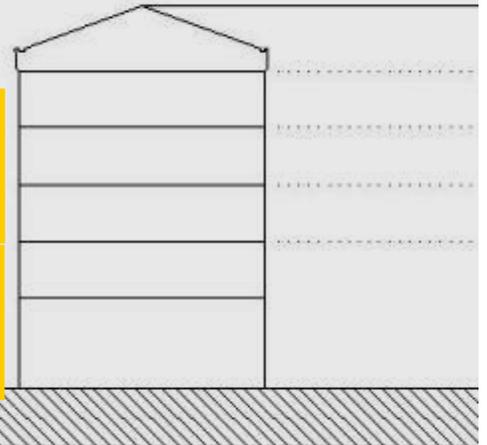


Elements

Awnings,
Overhangs
Encouraged

Upper Storeys
FENESTRATION
MIN 30%
MAX 70%

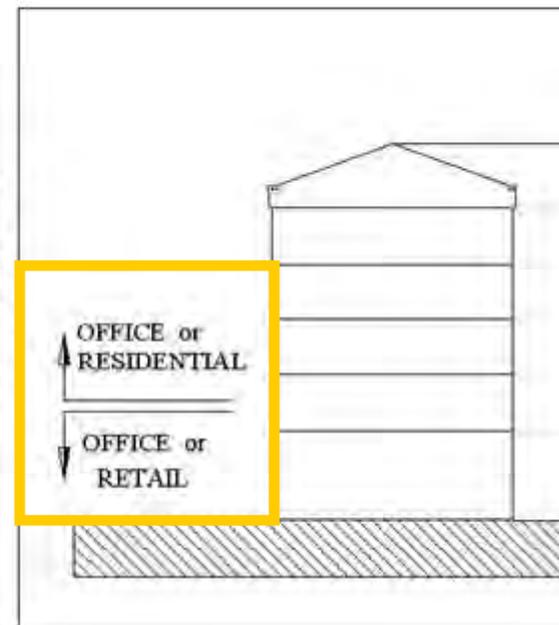
Ground Storey
FENESTRATION
MIN 60%
MAX 90%



Great Place Basics: Uses

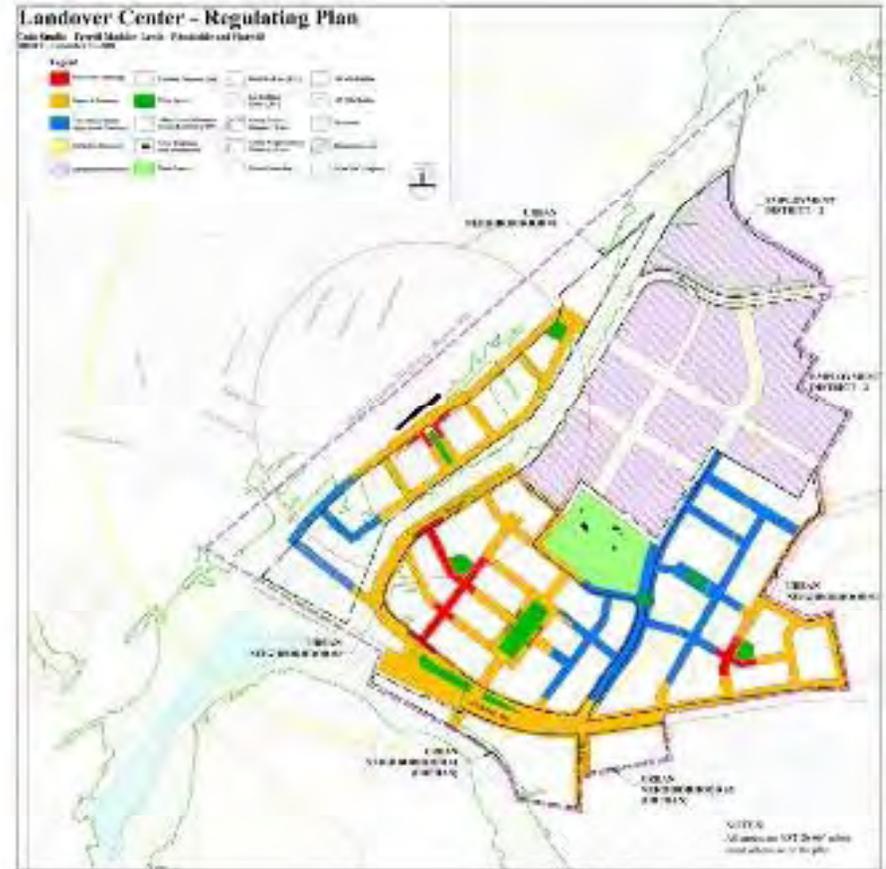
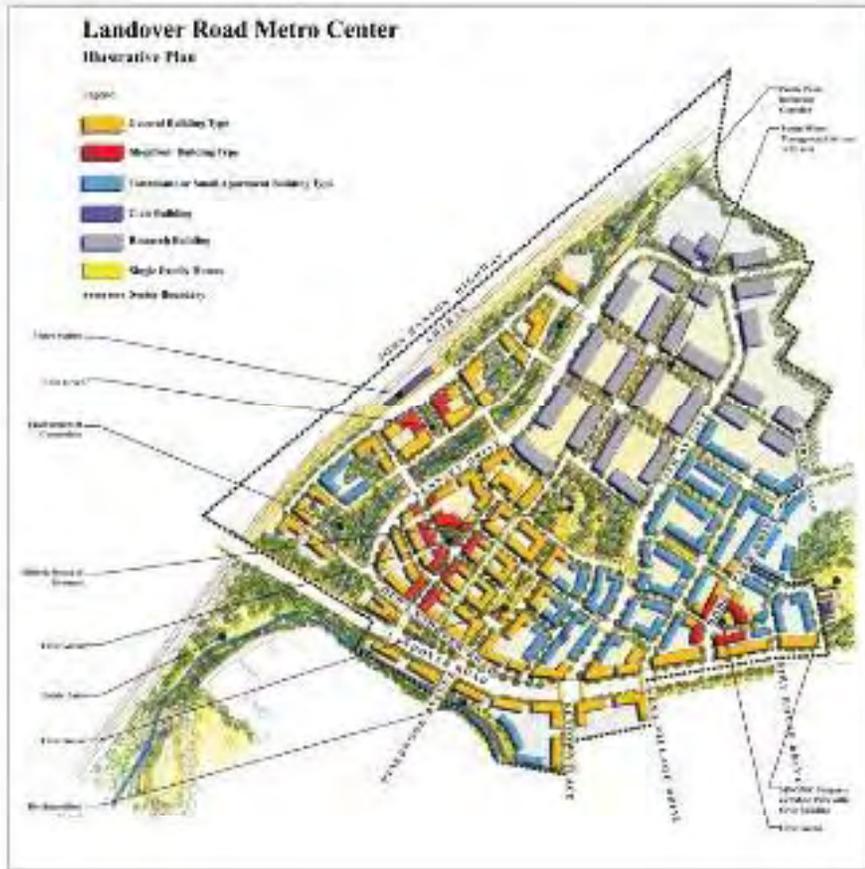


Uses



Changing the code doesn't remove the necessity to *PLAN*

- What is the place you want to create?
- What are the standards that will bring that place to reality?
- How do the pieces fit together? Where do the transitions occur?
- “Place-making” codes move from abstract policies and statistics to creating real places



*How to use a
Form-Based Code*

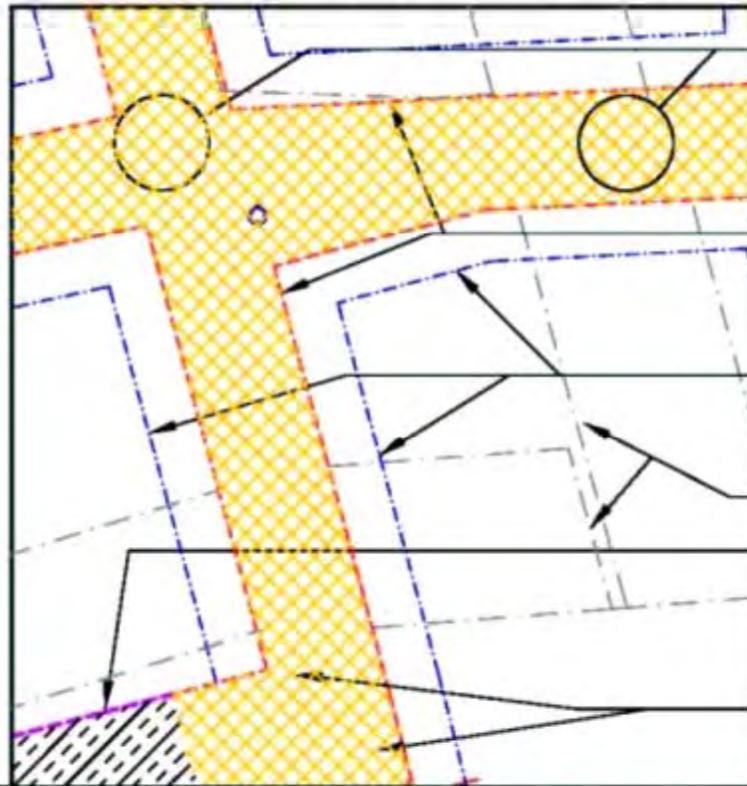
3 Easy Pieces:

1. Regulating Plan
2. Building Form Standards
3. Architectural Standards

3 Easy Pieces:

1. **Regulating Plan**
2. **Building Form Standards**
3. **Architectural Standards**

UNDERSTANDING THE REGULATING PLAN



BUILDING ENVELOPE STANDARD DESIGNATION HATCH (see below)
This indicates the relevant Building Envelope Standard (BES) rules governing your site.

REQUIRED BUILDING LINE (RBL)
The red line indicates the RBL for your site. The Building shall be BUILT-TO the RBL.

PARKING SETBACK LINE
Vehicle Parking (Above Ground) not allowed forward of this line.

PROPERTY LINES

BOUNDARY LINE
Property Boundary — Not an RBL
(Street Wall Req'd — not Bldg Frontage)

STREET TREE ALIGNMENT LINE

Building Envelope Standards by Street Frontage

 Station Area Shopfront Colonnade Frontage

 Station Area General Frontage

 Station Area Local Frontage

 I-35 — Special Frontage

 Alley Common Access Easement

 Civic Buildings and Monuments



ROSSFORD

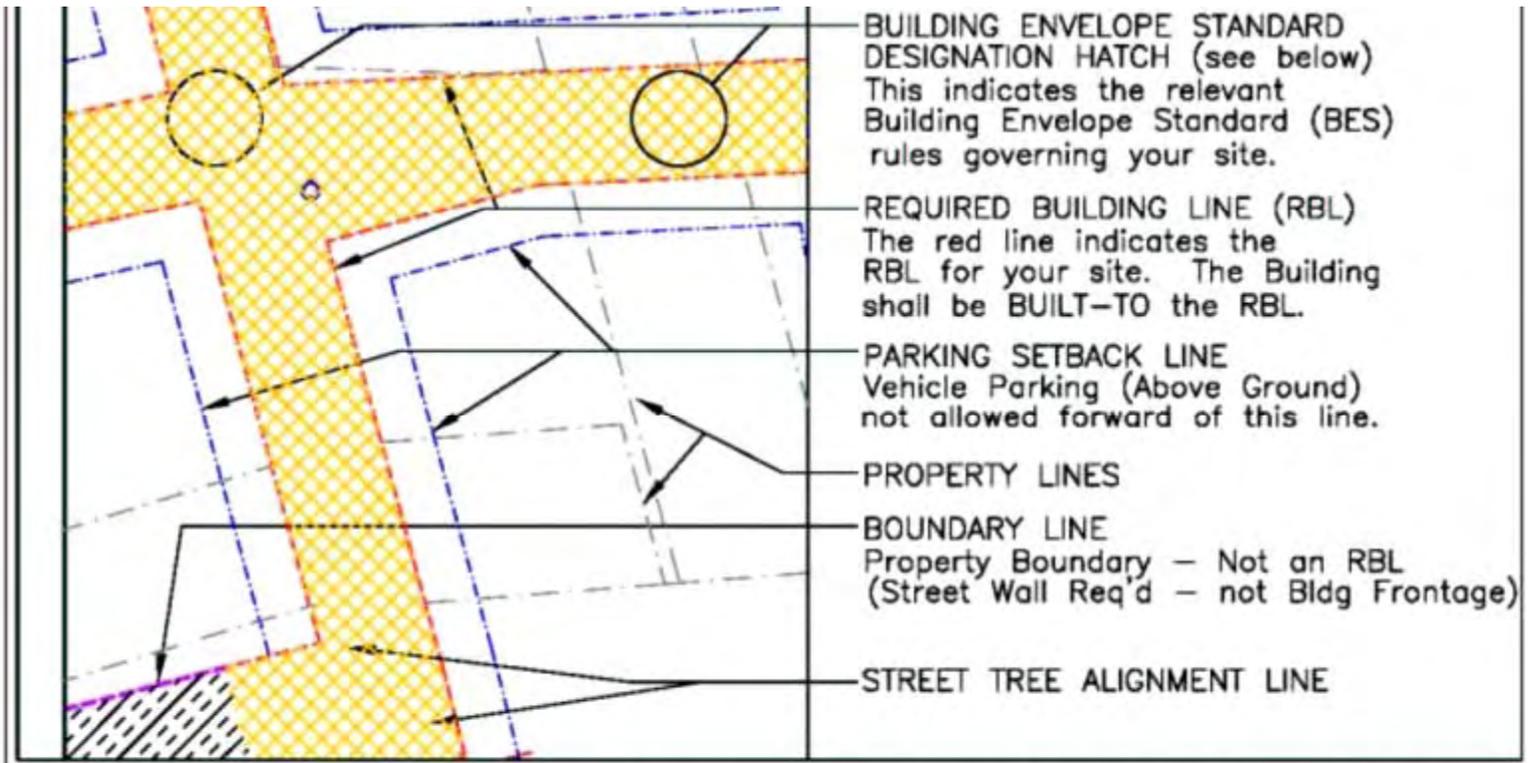
58

BEE ST.

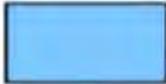
66 PIKE ST.

3 Easy Pieces:

1. Regulating Plan
2. Building Form Standards
3. Architectural Standards



Building Envelope Standards by Street Frontage

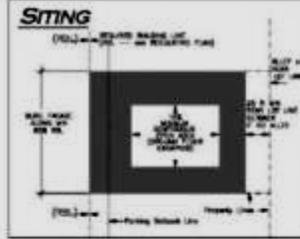
	Station Area Shopfront Colonnade Frontage		Station Area General Frontage
	Station Area Local Frontage		I-35 – Special Frontage
	Alley Common Access Easement		Civic Buildings and Monuments

BUILDING ENVELOPE STANDARDS: GENERAL SITES



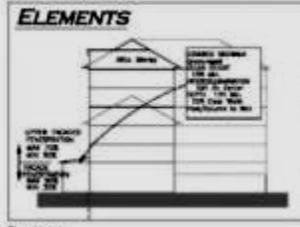
Building Height

1. The height of the principal building is measured in stories.
2. Each principal building shall be at least four (4) stories in height, but no greater than five (5) stories in height, except as otherwise provided in the building envelope standards or on the regulated plan.



Street Fronts

1. On each lot the building facade shall be built to the RL, RL or at least eight (8) feet percent (8%) of the RL, length.
2. The building facade shall be built to the RL within thirty (30) feet of a block corner.
3. These portions of the building facade (the required minimum) shall not include sign of any nature that is higher (10) inches in depth except as otherwise provided to allow an



Facade Elements

1. Signs, height of wall exceeding twenty (20) inches feet are prohibited on all facades.
2. Protrusions on the upper story facades shall comprise at least fifty percent (50%) but not more than twenty percent (20%) of the facade area situated between feet (2) and ten (10) feet above the adjacent public sidewalk or street; the



Use

Other uses that require compliance or residential uses. See height specifications above for specific requirements unique to each use.

Parking Structure Height

Height of structures that are not covered by the lot or street width of any principal building (built after 2004) located within 40 feet of the parking structure, regardless of whether the principal building is located on the same lot or an adjacent lot.

GROUND STORY HEIGHT: COMMERCIAL

1. The second story finished floor elevation shall be equal to, or greater than the exterior sidewalk elevation in front of the building, to a maximum finished floor elevation of eighteen (18) inches above the sidewalk.
2. The second story shall have at least fifteen (15) feet of clear interior height (floor to ceiling) contiguous to the sidewalk for at least one-half (1/2) of its area.
3. The maximum story height for the second story is twenty-five (25) feet.

GROUND STORY HEIGHT: RESIDENTIAL UNITS

1. The finished floor elevation shall be no less than thirty (30) inches and no more than sixty (60) inches above the exterior sidewalk elevation in front of the building.
2. The first story shall have an interior clear height (floor to ceiling) of at least nine (9) feet and a maximum story width of sixteen (16) feet.

Upper STORY Height

1. The maximum floor-to-floor story height for stories other

than the second is thirty-four (34) feet.

2. At least eighty percent (80%) of each upper story shall have an interior clear height (floor to ceiling) of at least nine (9) feet.

Measurements

Measurements having a floor area greater than one-half (1/2) of the floor area of the story in which the measurement is required shall be counted as full stories.

STREET WALL HEIGHT

1. A street wall that is less than six (6) feet in height or greater than eighteen (18) feet in height shall be required along any RL, frontage that is not otherwise occupied by the principal building on the lot.
2. The height of the street wall shall be measured from the adjacent public sidewalk or, when not adjacent to a sidewalk, from the ground elevation once construction is complete.

Other

Other uses that require compliance or residential uses. See height specifications above for specific requirements unique to each use.

Facade Protrusions

1. Protrusions, balconies, and signs shall not project closer than five (5) feet to sidewalk (RL).
2. No part of any building, except overhanging eaves, awnings, balconies, or signs shall occupy the remaining lot area.

Signage and Parking

1. Signs, balconies, or parking area entrances shall be located at least twenty-five (25) feet away from any side setback or another setback on the same lot, unless otherwise designated on the regulated plan.
2. Signs shall not have a clear height of greater than sixteen (16) feet nor a clear width exceeding twenty-four (24) feet.
3. Designated setback devices and signs shall be the sole means of vehicular access to a lot.
4. Designated signs may be setback up to a maximum of twenty-four (24) inches behind the surrounding facade.
5. Vehicle parking areas on private property shall be located behind the facade setback line, except where parking is provided below grade.
6. These requirements are not applicable to on-street parking.

Access

There is no required setback from alley easements. On lots having no alley access, there shall be a minimum setback of twenty-five (25) feet from the rear lot line.

Corner Lots

Corner lots shall satisfy the code requirements for all RL, frontages - unless otherwise specified in this code. There are no special exemptions for side streets or secondary street frontages. Street setbacks shall be considered to include all RL.

Default RL and minimum use Treatment

A street wall shall be required along any RL, frontage that is not otherwise occupied by a building on the lot. The street wall shall be located not more than eight (8) inches behind the RL.

Frontage signs

Frontage signs may be constructed along that portion of a facade that is not otherwise occupied by a building.

Corner Setbacks

Corner setbacks are encouraged, but not required, where provided. Corner setbacks shall:

1. Have a minimum interior clear height of fourteen (14) feet except as otherwise provided for signs, street lighting and similar applications.
2. Have a minimum of ten (10) feet clear width between the facade and the support posts or columns of the sidewalk cover structure.
3. Have posts or columns spaced fifteen (15) feet on center.
4. Provide for a continuous public access easement (if needed) of at least four (4) feet wide running adjacent and parallel to the sidewalk cover columns/posts and joists.
5. Have columns/posts with no single horizontal dimension greater than twenty-two (22) inches or less than six (6) inches.
6. Have columns/posts located at least twenty-four (24) inches behind the back of curb.

Street Walls

A vehicle entry gate no wider than eighteen (18) feet or a pedestrian entry gate no wider than six (6) feet shall be provided within any required street wall.

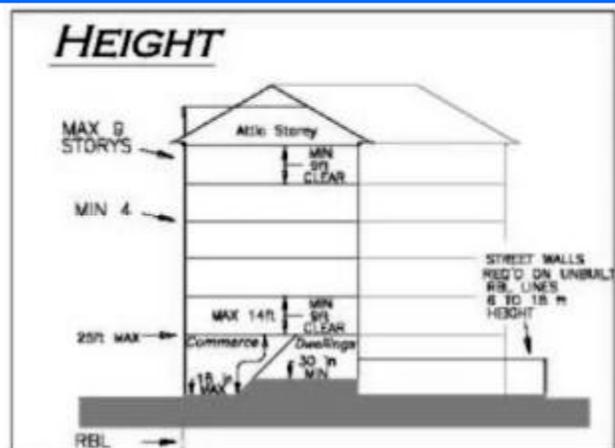
Other

Other uses that require compliance or residential uses. See height specifications above for specific requirements unique to each use.

- building form
- building envelope
- urban standards

BUILDING ENVELOPE STANDARDS: GENERAL SITES

HEIGHT



Building Height

1. The height of the principal building is measured in stories.
2. Each principal building shall be at least four (4) stories in height, but no greater than nine (9) stories in height, except as otherwise provided in the BUILDING ENVELOPE STANDARDS OF ON THE REGULATING PLAN.

Parking Structure Height

Parking structures shall not exceed the EAVE OF PARAPET HEIGHT of any principal building (built after 2004) located within 40 feet of the parking structure, regardless of whether the principal building is located on the same lot or on a separate lot.

GROUND STORY Height: COMMERCE

1. The ground story finished floor elevation shall be equal to, or greater than the exterior sidewalk elevation in front of the building to a maximum finished floor elevation of eighteen (18) inches above the sidewalk.
2. The ground story shall have at least fifteen (15) feet of clear interior height (floor to ceiling) contiguous to the REBL frontage for at least one-half (½) of its area.
3. The maximum STORY HEIGHT for the GROUND STORY is twenty-five (25) feet.

GROUND STORY Height: Residential Units

1. The finished floor elevation shall be no less than thirty (30) inches and no more than sixty (60) inches above the exterior sidewalk elevation in front of the building.
2. The first story shall have an interior clear height (floor to ceiling) of at least nine (9) feet and a maximum story height of sixteen (16) feet.

Upper STORY Height

1. The maximum floor-to-floor STORY HEIGHT for STORIES OTHER

than the GROUND is fourteen (14) feet.

2. At least eighty percent (80%) of each upper story shall have an interior clear height (floor to ceiling) of at least nine (9) feet.

Mezzanines

Mezzanines having a floor area greater than one-half (½) of the floor area of the story in which the mezzanine is situated shall be counted as full stories.

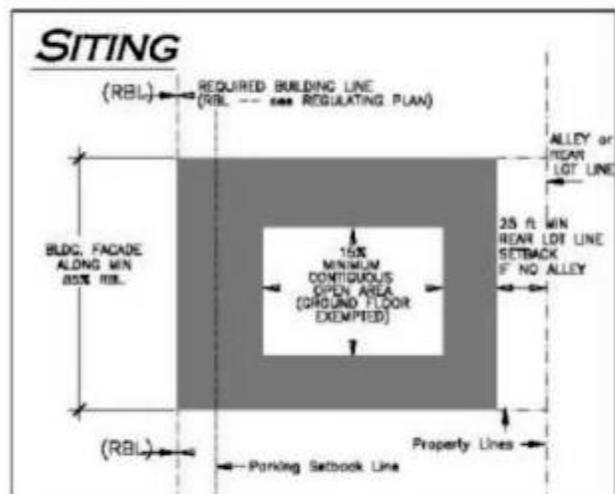
STREET WALL Height

1. A STREET WALL not less than six (6) feet in height or greater than eighteen (18) feet in height shall be required along any REBL frontage that is not otherwise occupied by the principal building on the lot.
2. The height of the STREET WALL shall be measured from the adjacent public sidewalk or, when not adjacent to a sidewalk, from the ground elevation once construction is complete.

Other

Where a GENERAL SITE is located within forty (40) feet of an existing single-family residential zoning district, the maximum EAVE OF PARAPET HEIGHT for that portion of the GENERAL SITE shall be thirty-two (32) feet. This requirement shall supersede the minimum story height requirement.

SITING



STREET FACADE

1. On each lot the building facade shall be built to the REBL for at

WINDOWS, and BALCONIES.

BUILDABLE AREA

1. Buildings may occupy any portion of the lot behind the REBL, exclusive of any setbacks required by this Code.
2. A contiguous open area equal to at least fifteen percent (15%) of the total BUILDABLE AREA shall be preserved on every lot. Such contiguous open area may be located anywhere behind the parking setback, either at grade or at the second or third story.
3. No part of any building, except overhanging eaves, AWNINGS, BALCONIES, or STOPS shall occupy the remaining lot area.

Side Lot Setbacks

There are no required side lot setbacks except where a side lot line is shared with a property located in a single-family residential zoning district. On a lot where a side lot line is shared with a property located within a single-family residential zoning district, the principal building shall be setback at least ten (10) feet from the shared lot line.

Garage and Parking

1. GARAGE ENTRIES or parking area entrances shall be

twenty-four (24) feet.

3. Designated GARAGE ENTRIES and ALLEYS shall be the sole means of vehicular access to a lot.
4. GARAGE ENTRIES may be setback up to a maximum of twenty-four (24) inches behind the surrounding FACADE.
5. Vehicle parking areas on private property shall be located behind the PARKING SETBACK LINE, except where parking is provided below grade.
6. These requirements are not applicable to on-street parking.

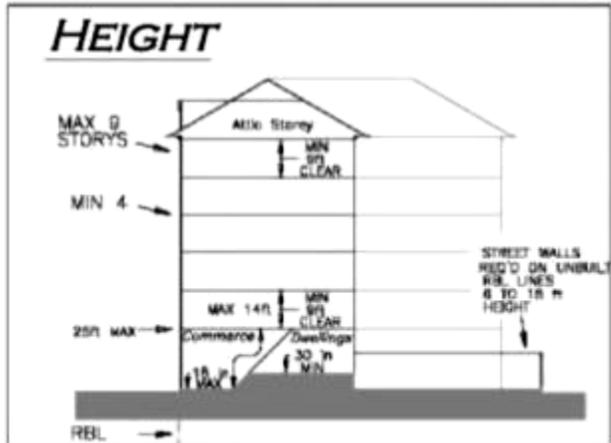
ALLEYS

There is no required setback from alley easements. On lots having no alley access, there shall be a minimum setback of twenty-five (25) feet from the rear lot line.

Corner Lots

Corner lots shall satisfy the code requirements for all REBL frontages - unless otherwise specified in this code, there are no special exemptions for side streets or secondary street frontages. STREET FRONTAGE shall be considered to include all REBL.

HEIGHT



Building Height

1. The height of the principal building is measured in stories.
2. Each principal building shall be at least four (4) stories in height, but no greater than nine (9) stories in height, except as otherwise provided in the BUILDING ENVELOPE STANDARDS OF ON THE REGULATING PLAN.

Parking Structure Height

Parking structures shall not exceed the EAVE OF PARAPET HEIGHT of any principal building (built after 2004) located within 40 feet of the parking structure, regardless of whether the principal building is located on the same lot or on a separate lot.

GROUND STORY Height: COMMERCE

1. The ground story finished floor elevation shall be equal to, or greater than the exterior sidewalk elevation in front of the building, to a maximum finished floor elevation of eighteen (18) inches above the sidewalk.
2. The ground story shall have at least fifteen (15) feet of clear interior height (floor to ceiling) contiguous to the RBL frontage for at least one-half (½) of its area.
3. The maximum story height for the ground story is twenty-five (25) feet.

GROUND STORY Height: Residential Units

1. The finished floor elevation shall be no less than thirty (30) inches and no more than sixty (60) inches above the exterior sidewalk elevation in front of the building.
2. The first story shall have an interior clear height (floor to ceiling) of at least nine (9) feet and a maximum story height of sixteen (16) feet.

Upper STORY Height

1. The maximum floor-to-floor story height for stories other

than the ground is fourteen (14) feet.

2. At least eighty percent (80%) of each upper story shall have an interior clear height (floor to ceiling) of at least nine (9) feet.

Mezzanines

Mezzanines having a floor area greater than one-half (½) of the floor area of the story in which the mezzanine is situated shall be counted as full stories.

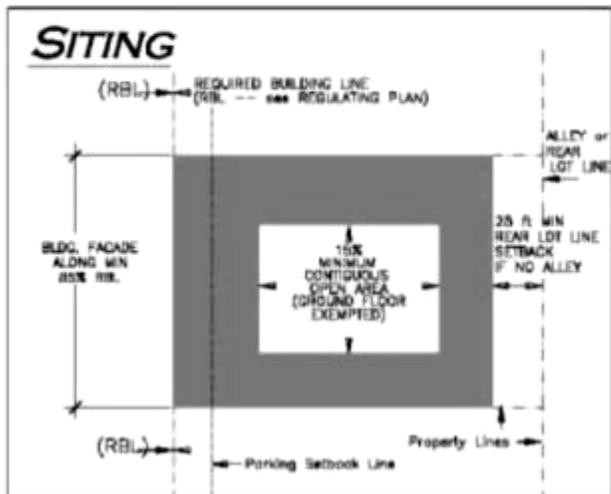
STREET WALL Height

1. A STREET WALL not less than six (6) feet in height or greater than eighteen (18) feet in height shall be required along any RBL frontage that is not otherwise occupied by the principal building on the lot.
2. The height of the STREET WALL shall be measured from the adjacent public sidewalk or, when not adjacent to a sidewalk, from the ground elevation once construction is complete.

Other

Where a GENERAL SITE is located within forty (40) feet of an existing single-family residential zoning district, the maximum EAVE OF PARAPET HEIGHT for that portion of the GENERAL SITE shall be thirty-two (32) feet. This requirement shall supersede the minimum story height requirement.

SITING



STREET FAÇADE

1. On each lot the building FAÇADE shall be built to the RBL for at least eighty-five percent (85%) of the RBL length.
2. The building FAÇADE shall be built to the RBL within thirty (30) feet of a BLOCK CORNER.
3. These portions of the building FAÇADE (the required minimum build to) may include jogs of not more than eighteen (18) inches in depth except as otherwise provided to allow bay

WINDOWS, and BALCONIES.

BUILDABLE AREA

1. Buildings may occupy any portion of the lot behind the RBL, exclusive of any setbacks required by this Code.
2. A contiguous open area equal to at least fifteen percent (15%) of the total BUILDABLE AREA shall be preserved on every lot. Such contiguous open area may be located anywhere behind the parking setback, either at grade or at the second or third story.
3. No part of any building, except overhanging eaves, AWNINGS, BALCONIES, or STOPS shall occupy the remaining lot area.

Side Lot Setbacks

There are no required side lot setbacks except where a side lot line is shared with a property located in a single-family residential zoning district. On a lot where a side lot line is shared with a property located within a single-family residential zoning district, the principal building shall be setback at least ten (10) feet from the shared lot line.

Garage and Parking

1. GARAGE ENTRIES or parking area entrances shall be located at least seventy-five (75) feet away from any BLOCK CORNER or another GARAGE ENTRY on the same BLOCK, unless otherwise designated on the REGULATING PLAN.
2. GARAGE ENTRIES shall not have a clear height of greater than sixteen (16) feet nor a clear width exceeding

twenty-four (24) feet.

3. Designated GARAGE ENTRIES and ALLEYS shall be the sole means of vehicular access to a lot.
4. GARAGE ENTRIES may be setback up to a maximum of twenty-four (24) inches behind the surrounding FAÇADE.
5. Vehicle parking areas on private property shall be located behind the PARKING SETBACK LINE, except where parking is provided below grade.
6. These requirements are not applicable to on-street parking.

ALLEYS

There is no required setback from alley easements. On lots having no alley access, there shall be a minimum setback of twenty-five (25) feet from the rear lot line.

Corner Lots

Corner lots shall satisfy the code requirements for all RBL frontages - unless otherwise specified in this code, there are no special exemptions for side streets or secondary street frontages. STREET FRONTAGE shall be considered to include all RBLs.

Unbuilt RBL and COMMON LOT LINE Treatment

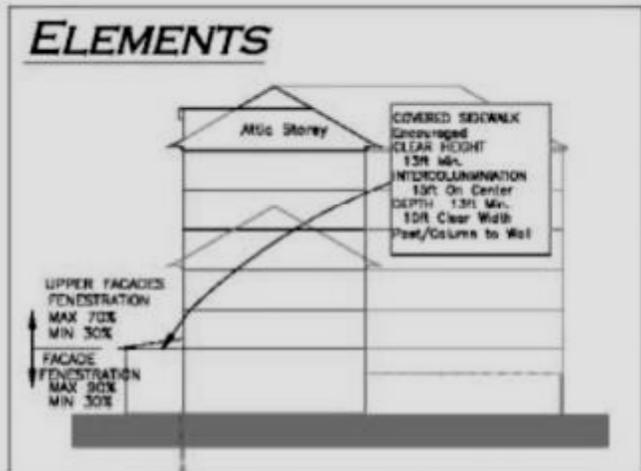
A STREET WALL shall be required along any RBL frontage that is not otherwise occupied by a building on the lot. The STREET WALL shall be located not more than eight (8) inches behind the RBL.

PRIVACY FENCES may be constructed along that portion of a COMMON LOT LINE not otherwise occupied by a building.

- least eighty-five percent (85%) of the RBL length
- 2. The building FAÇADE shall be built to the RBL within thirty (30) feet of a BLOCK CORNER.
- 3. These portions of the building FAÇADE (the required minimum build to) may include jogs of not more than eighteen (18) inches in depth except as otherwise provided to allow BAY

- located at least seventy-five (75) feet away from any BLOCK CORNER or another GARAGE ENTRY on the same BLOCK, unless otherwise designated on the REGULATING PLAN.
- 2. GARAGE ENTRIES shall not have a clear height of greater than sixteen (16) feet nor a clear width exceeding

STREET WALLS AND COMMON LOT LINE ENCROACHMENTS
 A STREET WALL shall be required along any RBL frontage that is not otherwise occupied by a building on the lot. The STREET WALL shall be located not more than eight (8) inches behind the RBL.
PRIVACY FENCES may be constructed along that portion of a COMMON LOT LINE not otherwise occupied by a building.



- FENESTRATION**
- 1. Blank lengths of wall exceeding twenty (20) linear feet are prohibited on all RBLs
 - 2. FENESTRATION on the GROUND STORY FAÇADES shall comprise at least fifty percent (50%), but not more than ninety percent (90%) of the FAÇADE area situated between two (2) and ten (10) feet above the adjacent public sidewalk on which the

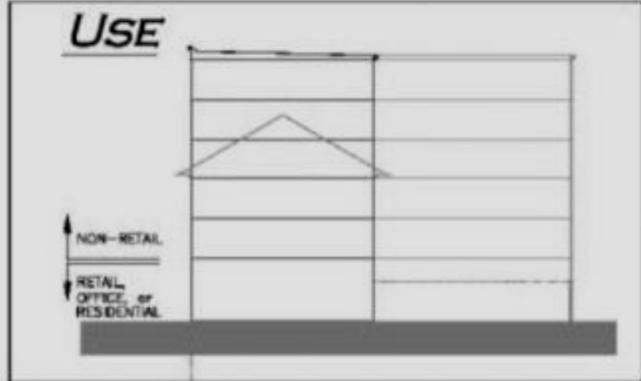
- FAÇADE FRONTS
- 3. FENESTRATION on the upper story FAÇADES shall comprise at least thirty percent (30%) but no more than seventy percent (70%) of the FAÇADE area per story (measured as a percentage of the FAÇADE between floor levels).

- Building Projections**
- 1. AWNINGS, BALCONIES, and STOOPS shall not project closer than five (5) feet to a COMMON LOT LINE.
 - 2. No part of any building, except overhanging eaves, AWNINGS, BALCONIES, BAY WINDOWS, STOOPS, and shop fronts as otherwise permitted by the Code, shall encroach the STREET beyond the RBL.
 - 3. BAY WINDOWS shall not project more than thirty-six (36) inches beyond the RBL, maintain an interior clear width of at least four (4) feet, and be constructed such that the walls and windows are between ninety (90) degrees (i.e., perpendicular) and zero (0) degrees (i.e., parallel) to the primary wall from which they project.
 - 4. AWNINGS that project over the sidewalk portion of a STREET shall maintain a clear height of at least ten (10) feet.

Doors/Entries
 Functioning entry door(s) shall be provided along GROUND STORY FAÇADES at intervals not greater than seventy-five (75) linear feet.

- COVERED SIDEWALKS**
 COVERED SIDEWALKS are encouraged, but not required. Where provided, COVERED SIDEWALKS shall:
- 1. Have a minimum interior clear height of thirteen (13) feet except as otherwise provided for signs, street lighting and similar appurtenances
 - 2. Have a minimum of ten (10) feet clear width between the FAÇADE and the support posts or columns of the sidewalk cover structure.
 - 3. Have posts or columns spaced fifteen (15) feet on centers.
 - 4. Provide for a continuous public access easement (if needed) at least four (4) feet wide running adjacent and parallel to the sidewalk cover columns/posts
 - 5. Have columns/posts with no single horizontal dimension greater than twenty-two (22) inches or less than six (6) inches
 - 6. Have columns/posts located at least twenty-four (24) inches behind the back of curb.

STREET WALLS
 A vehicle entry gate no wider than eighteen (18) feet or a pedestrian entry gate no wider than six (6) feet shall be permitted within any required STREET WALL.



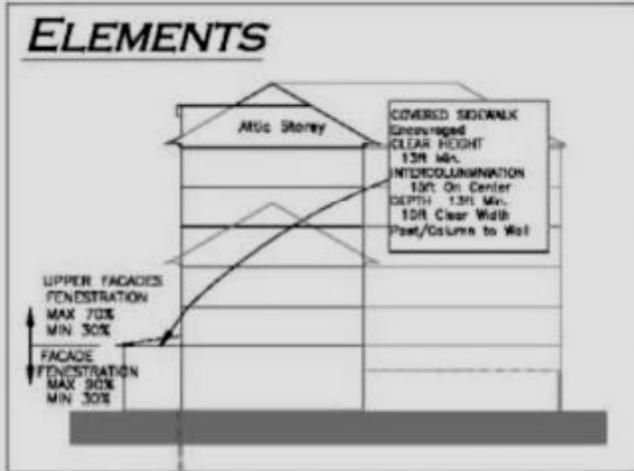
GROUND STORY
 The GROUND STORY shall house COMMERCE or residential uses. See Height specifications above for specific requirements unique to each use.

Upper Stories
 RETAIL TRADE uses are not permitted on the upper STORIES (except those that are second story extensions of the GROUND STORY USE having direct RBL FRONTAGE).

- least eighty-five percent (85%) of the RBL length
- 2. The building FAÇADE shall be built to the RBL within thirty (30) feet of a BLOCK CORNER.
- 3. These portions of the building FAÇADE (the required minimum build to) may include jogs of not more than eighteen (18) inches in depth except as otherwise provided to allow BAY

- 2. GARAGE ENTRIES shall not have a clear height of greater than sixteen (16) feet nor a clear width exceeding

STREET WALLS AND COMMON LOT LINE ENCROACHMENTS
 A STREET WALL shall be required along any RBL frontage that is not otherwise occupied by a building on the lot. The STREET WALL shall be located not more than eight (8) inches behind the RBL.
PRIVACY FENCES may be constructed along that portion of a COMMON LOT LINE not otherwise occupied by a building.



FENESTRATION

- 1. Blank lengths of wall exceeding twenty (20) linear feet are prohibited on all RBLs
- 2. FENESTRATION on the GROUND STORY FAÇADES shall comprise at least fifty percent (50%), but not more than ninety percent (90%) of the FAÇADE area situated between two (2) and ten (10) feet above the adjacent public sidewalk on which the

FAÇADE FRONTS

- 3. FENESTRATION on the upper story FAÇADES shall comprise at least thirty percent (30%) but no more than seventy percent (70%) of the FAÇADE area per story (measured as a percentage of the FAÇADE between floor levels).

Building Projections

- 1. AWNINGS, BALCONIES, and STOOPS shall not project closer than five (5) feet to a COMMON LOT LINE.
- 2. No part of any building, except overhanging eaves, AWNINGS, BALCONIES, BAY WINDOWS, STOOPS, and shop fronts as otherwise permitted by the Code, shall encroach the STREET beyond the RBL.
- 3. BAY WINDOWS shall not project more than thirty-six (36) inches beyond the RBL, maintain an interior clear width of at least four (4) feet, and be constructed such that the walls and windows are between ninety (90) degrees (i.e., perpendicular) and zero (0) degrees (i.e., parallel) to the primary wall from which they project.
- 4. AWNINGS that project over the sidewalk portion of a STREET shall maintain a clear height of at least ten (10) feet.

Doors/Entries

Functioning entry door(s) shall be provided along GROUND STORY FAÇADES at intervals not greater than seventy-five (75) linear feet.

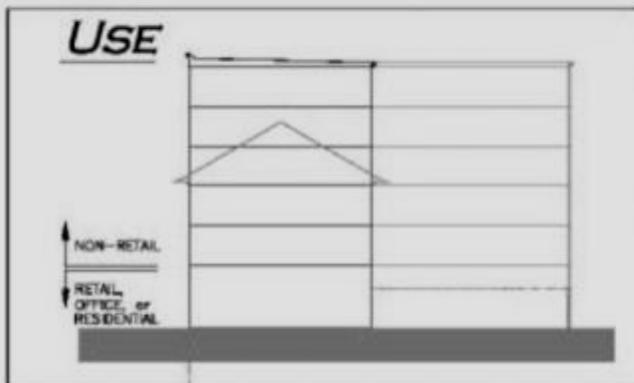
COVERED SIDEWALKS

COVERED SIDEWALKS are encouraged, but not required. Where provided, COVERED SIDEWALKS shall:

- 1. Have a minimum interior clear height of thirteen (13) feet except as otherwise provided for signs, street lighting and similar appurtenances
- 2. Have a minimum of ten (10) feet clear width between the FAÇADE and the support posts or columns of the sidewalk cover structure.
- 3. Have posts or columns spaced fifteen (15) feet on centers.
- 4. Provide for a continuous public access easement (if needed) at least four (4) feet wide running adjacent and parallel to the sidewalk cover columns/posts
- 5. Have columns/posts with no single horizontal dimension greater than twenty-two (22) inches or less than six (6) inches
- 6. Have columns/posts located at least twenty-four (24) inches behind the back of curb.

STREET WALLS

A vehicle entry gate no wider than eighteen (18) feet or a pedestrian entry gate no wider than six (6) feet shall be permitted within any required STREET WALL.



GROUND STORY

The GROUND STORY shall house COMMERCE or residential uses. See Height specifications above for specific requirements unique to each use.

Upper Stories

RETAIL TRADE uses are not permitted on the upper STORIES (except those that are second story extensions of the GROUND STORY USE having direct RBL FRONTAGE).

3 Easy Pieces:

1. Regulating Plan
2. Building Form Standards
3. Architectural Standards

Architectural Standards

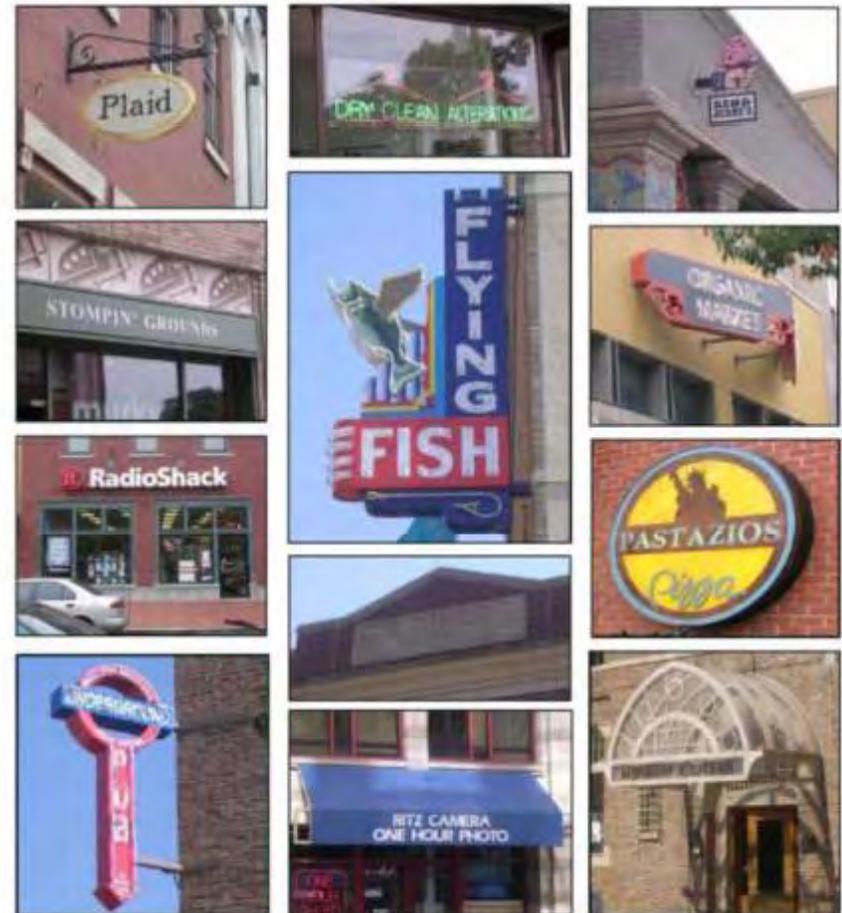
parameters & palettes for:

- building materials
- windows & doors
- roofs
- walls & fences
- signs
- lighting & mechanical

8.8.8 Signage

A. Intent and Guiding Illustrations

Signs along commercial frontages should be clear, informative to the public and should weather well. Signage is desirable for advertising from district shops and offices, and as decoration. Signs should be scaled to the nature of the district: mixed-use, pedestrian-oriented, with slow-moving automobile traffic. Signage that is glaring or too large creates distraction, intrudes into and lessens the district experience, and creates visual clutter. The illustrations and statements on this page are advisory only. Refer to the standards on the following page for the specific requirements.



Recap:

1. Regulating Plan
2. Building Form Standards
3. Architectural Standards

Conventional *Land-Use & Density-Based* Coding



land use and density are highly regulated

Form-Based Coding (Urban Form through Public Policy)



the *form* of the building is regulated

Form-Based Coding (Urban Form through Public Policy)



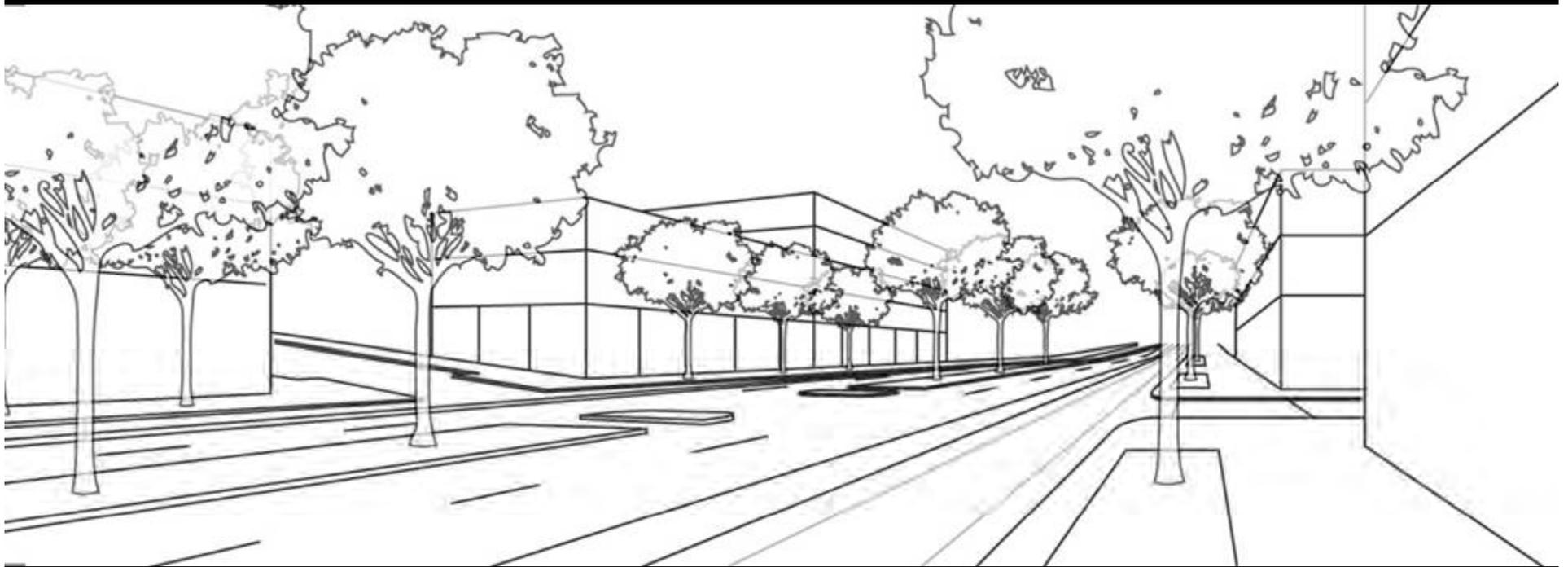
the *form* of the building is regulated

Urban Form without Architecture



the private buildings form the public space

Urban Form without Architecture



the public sector sets the rules

Urban Form *with* Architecture



Steve Price

the private sector builds

Land-Use & Density-Based Zoning



extensive regulation – disappointing results

Remember...

Cities and towns are physical places for people...

...not abstract statistics!

*What is the place we want the city to
be?*

Will our rules allow it?

Different Types of Human Habit Need Different Rules!

Form-Based Zones/Context

Low-carbon zones

Lower parking requirements
(More walking, access to transit)

Public realm = public space

Blended density (variety of types)

Uses more flexible based on
operational characteristics

Special Districts/Auto Dependent

High-carbon zones

Higher parking requirements
(less walking and access to transit)

Larger public and private open
space required due to isolation

“Podded” densities and uses

Specific uses allowed

The most inherently sustainable places are those that:

- are compact – mixed use & walkable
- can change uses over time
- people care about

(reduce, reuse, recycle)

www.formbasedcodes.org

www.ferrellmaddenlewis.com

Thank You

www.formbasedcodes.org

www.ferrellmaddenlewis.com