form-based codes

to enable urbanism
the public realm
the public realm?
it's red on maps
this is **red** on maps, too
typical zoning:

- Land Use
- Density / F.A.R.
- Setbacks
- Parking
form-based codes:

categories for design
relation of building / lot to street
build-to-lines
street standards
...municipal development regulations that go beyond the conventional zoning controls of segregating and regulating land use types and defining building envelopes by setback requirements and height limits. Form-based codes instead address the details of relationships between buildings and the public realm of the street, the form and mass of buildings in relation to one another, and the scale and type of streets and blocks. Form-based codes are based on specific urban design outcomes desired by the community, that may be identified through an inclusive, design-focused public participation process. The regulations in form-based codes are applied to property through "regulating plans" that map the community with geographic designations that are based on the scale, character, intensity, and form of development rather than differences in land uses.

(Crawford)
form-based codes are

...Form-based codes... address the details of relationships between buildings and the public realm of the street... map the form of development rather than differences in land uses.

(Crawford)
form-based codes are

...a type of development regulation whose intent is to create a predictable public realm through the physical definition of urban form.

(Duany)

...A technique for regulating development to achieve a specific urban form. Form-based codes create a predictable public realm by regulation of physical form primarily (and land use secondarily) according to the timeless principles of traditional urbanism.

(Ferrell, Parolek, Price, Dover et al)
La CIUDAD de SANTIAGO de los CABALLEROS de GUATEMALA

ANTIGUA GUATEMALA

1543-1773
precedent: Savannah
precedent: Alexandria
precedent: Alexandria
precedent: Battery Park City, NYC
typical zoning:
form-based codes:

LAND
USE

DESIGN
enabling, illustrating

C. Colonnades / Arcades:

Depth = 10 ft minimum from the build-to line to the inside column face.
Height = 10 ft minimum clear.
Length = 75-100% of Building Front.

Open multi-story verandas, awnings, balconies, and enclosed useable space shall be permitted above the colonnade.

Colonnades shall only be constructed where the minimum depth can be obtained. Colonnades shall occur forward of the Build-to Line and may encroach within the right-of-way, but shall not extend past the curb line.

On corners, colonnades may wrap around the side of the building facing the side street.

D. Front Porches:

Depth = 8 ft minimum.
Length = 25% to 100% of Building Front.

Front Porches may have multi-story verandas and/or balconies above.

Front Porches shall occur forward of the Build-to Line. Porches shall not extend into the right-of-way.

Front Porches are required to be open, un-airconditioned parts of the buildings. More than 25% of the floor area of a porch shall not be screened if the porch extends forward of the Build-to Line.
Type B: Courtyard

**III. Height**

- The height must not exceed an average height of 25' height as established in the Local Coastal Plan.
- The finished floor at the ground floor shall be raised at least 6' above the courtyard level.
- The height of window sills on the ground floor shall be 3'-6" min.
- No less than 80% of all floors shall have at least 3'-6" clear ceiling height.

**IV. Parking Placement**

- Driveways shall be 11' wide max. Maximum of one drive per 180' of street frontage.
- Parking shall be at least 20' from the BTI and screened with programmed space (except for completely underground parking).
- Passage from parking area to courtyard area is required on lots greater than 70' in width.
- Multibay Drive is recommended.
- Bicycle parking shall be provided in a secure area that is not visible from the street.
- Parking areas can be shared between adjacent properties.
- Parking may be provided off-site.
- Parking requirements:
  - 2 spaces per 3 bedroom (plus 1.5 spaces for every additional 2 bedrooms)
  - 1.5 spaces per 2 bedroom apartment
  - 1.0 spaces per 1 bedroom apartment
  - 0.5 spaces per studio apartment

---

[Re]Vision Isla Vista: Master Plan Building Type Codes
Type IIa: Townhouse

Key

- Parking
- Right of Way (ROW)
- Build-to Line (BTL)
- Building Footprint

**Building Placement**

**Setbacks (to BTL)**

| Front | 0' min., 30' max., 16' max. with front porch |
| Rear | 4' max. |
| Side | 0' |
| Street Side, Corner Lot | 6' min., 8' max. |

**Lot Width**

| Minimum | 20' |
| Maximum | 24' |
| Corner Lot | 30' |

**Lot Depth**

| Minimum | None |
| Maximum | 100' |

**Lot Size**

Typical: 24' x 100'

**Notes**

Townhouse within one block of single-family houses must be no more than 4 units wide.

10' min. distance between main body of house and garage.

12' min. backyard width.

Corner Lots

Facade edge of garage and main body of house must be aligned along the corner elevation.
Woodford County, KY
specific districts

Woodford County, Kentucky
DESIGN FOR TOMORROW

Dover Kohl and Partners with Ferrell Rutherford Associates

The New
Woodford County Urban Code

Regulating Plans
Building Placement Standards
Architectural Standards
Streetscape Standards
Approval Process

Governin Construction within the Cities, Towns, and Villages of Woodford County
www.formbasedcodes.org
form-based code reform: applications

**bug fixes**: setbacks, mixed use, parking

**CC&Rs**: greenfield / infill neighborhoods

**splices**: overlays, special area plans

**citywide**: SmartCode etc
revival of form-based codes

South Miami is emerging from cocoon

Developments, future plans changing city

By CHARLES RABIN
Herald Staff Writer

City officials in South Miami peek out their windows and see the Art Deco renaissance of South Beach, the international flair of Coral Gables and tourist-happy Coconut Grove.

Millions of dollars a year pour into those communities from companies that have relocated their headquarters and tourists and locals willing to drive just a few miles to dance and dine.

Now it’s our turn, say administrators in the small town of 11,500 that straddles traffic-infested South Dixie Highway roughly between Coral Gables...
revival of form-based codes
components

1. regulating plan(s)
2. urban standards
3. architectural standards (usually)
4. street standards
Port Royal, South Carolina
the official map
organizing: variations

- a. coding by building type
- b. coding by street type
- c. coding by transect zone
- d. combinations of the above
coding by building type
Genetic Code for Growing the Town: Port Royal, SC
Genetic Code for Growing the Town: Port Royal, SC

“playbook”

1. Build-To Line
2. Property Line
3. Primary Building
4. Accessory Building
5. Alley
coding by building type

**Building Types**

For: The Town of Port Royal, South Carolina

### HOUSE

A house is a single residential unit with yard on all four sides, suited to small and medium sized lots.

**Building Placement:**

- Lot Widths: 30 ft minimum
- 75 ft maximum

- Build-to-Line locations: Center lots
  - 5 ft - 15 ft from front Property Line
  - 5 ft - 15 ft from side street Prop/Lin
  - Interior Lots
  - 10 ft to 20 ft from front Property Line

- Side Setback: 5 ft for primary structure
  - 0 ft for accessory structure

- Building Frontage 30% to 70% of lot frontage
- Building Coverage 50% maximum

**Height**

- Maximum Height: 48 ft above grade
- 1st Floor Elevation: 2 ft above grade, minimum

**Note:**

1. Appurtenances may extend beyond the height limit.
2. Buildings are required to have either a front or side porch (unless waived by the Supervising Planning Team). A scoop may be substituted for a front porch if approved by the Supervising Planning Team.

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Genetic Code for Growing the Town: Port Royal, SC
coding by building type

Genetic Code for Growing the Town: Port Royal, SC
coding by building type
coding by building type
coding by **street type**

Winter Springs Town Center

Dover, Kohl & Partners & Gibbs Planning Group
categorized by type of public space:

- streets,
- parks,
- squares

Town Center, Winter Springs
2. Magnolia Square

Magnolia Square is the formal gathering space in the town center. A focal fountain terminates the main streets into the square. Angled parking on the north and south sides of the square supports retail uses.

a. Lot Configuration:
   - Lot Widths: 10 ft. minimum, 100 ft. maximum
   - Lot Depths: 100 ft. minimum, 200 ft. maximum

b. Building Placement:
   - Build-to-line location: 0 ft. from property line
   - Side or rear setback: none required

c. Building Volume:
   - Building Frontage: 100% of lot frontage
   - Height: 2 stories minimum, 4 stories maximum, 50 ft. maximum

d. Notes:
1. Appurtenances may extend beyond the height limit.
2. Building fronts are required to provide shelter to the sidewalk by means of at least one of the following: arcade, colonnade, marquee, awning, or 2nd floor balcony.
3. All permitted uses are allowed on all floors.
Columbia Pike, Arlington
Columbia Pike, Arlington

Columbia Pike Urban Design Charrette

September 6th, 7th & 12th
Sheraton National Hotel
900 S. Orme Street
involveing people

The “pin-up” review at the end of the hands-on session
Columbia Pike, Arlington
Columbia Pike, Arlington
Columbia Pike, Arlington
Columbia Pike, Arlington
Columbia Pike, Arlington
The
Columbia Pike
Special Revitalization District
Form Based Code

Proposed Section 20 (Appendix A) of the Zoning Ordinance,
“CP-FBC” Columbia Pike - Form Based Code Districts

Principles and Regulations
Regulating Plans
Building Envelope Standards
Streetscape Standards
Architectural Standards

February 18, 2003
Columbia Pike

3.5 Mile Corridor
Columbia Pike Revitalization
Building Envelope Standards
Main-Street Sites

Height

The building shall be between 3 and 6 stories in height, except where otherwise noted here or on the site plan.
Any parking structure with the slant shall not exceed the east height of any building built after 2002 with 50 feet.
Any vertical alley or common lot line from side shall have a street wall built along it, between 6 feet and 15 feet in height.
The ground floor story shall be between 6 inches and 18 inches above the street sidewalk elevation.
No less than 10 percent of the roof shall have at least 15 feet clear height.
No less than 80 percent of the upper stories shall each have at least 5 feet 4 inches clear height.

Siting

The street facade shall be built to the required building line with 30 feet of any building corner, and Gal-10 not less than 75 percent of the overall BL.
There are no required side lot line setbacks unless shared with an existing single-family house where a 10 percent is required.
Any unbuilt ril and common lot line shall have a street wall built along it, between 5 feet and 10 feet in height.
Garages/parking entrances shall be no closer than 50 feet from any building ril or 100 feet from any public common (except where otherwise designated on the regulating plan).

Elements

The ground floor facade shall have between 50-70% fenestration (measured between 2 and 4 feet above the street sidewalk). Awnings and overhangs are encouraged (except where otherwise designated on the regulating plan).
Upper stories facades shall have between 30-50% fenestration (measured for each story between 3 and 6 feet above the finished floor).
Arcades are permitted on some streets. If designed and constructed in a noncompliant street furniture of at least 20 feet or any complete ril, for a single use or common use, consult the definitions.

Uses

The ground floor shall house only retail or office uses (also lobby and access for upper-story uses).
Retail uses are not permitted on the upper stories (except those of less than 900 sq ft) and any second story shall be an extension of the ground floor store with a clear Columbia Pike frontage.
Second-story restaurants do not violate this rule.

There shall be a functioning entry door(s) along the required facade at intervals not greater than 60 feet.
Any garage (parking for vehicles, etc.) shall be set back a minimum of 25 feet from any ril, (except for common garages). Except where otherwise designated on the regulating plan.
+$300 Million Projects in the works or already approved

1. Georgelas
2. Ethiopian Community Development Corporation (ECDC)
3. Adams Square
4. Safeway
5. Capstone
6. George Mason/Columbia Pike

Outside the District – F-BC used at citizen initiative
7. Alcova Row townhouses
8. Monterey Apts & Condominiums
Putting Main St. On the Map

Arlington Sharpens Its Focus To Revitalize Columbia Pike

By Daniela Deane
Washington Post Staff Writer

People ambling down wide sidewalks, window-shopping, stopping to dine at outdoor restaurants. Streets lined with stores—big chains as well as mom-and-pop shops—with apartments and offices upstairs. Outdoor plazas where neighbors bump into each other.

Urban Land

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 planning tool, form-based code, that has the potential to revitalize key community areas. Arlington plans to apply form-based code to revitalize the 3.5-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.

The first mixed-use development project in the Columbia Pike corridor of Arlington, Virginia, in more than 40 years will use form-based code to help revitalize the older suburban commercial strip.
infill development
infill development

Mixed-use / Townhouses
coding by neighborhood sub-area or transect zone

The variety of conditions within the neighborhood
core, center, general, edge
neighborhoods
street network
taming the tower
taming the tower
taming the tower
starting with a physical vision

“Dadeland Regional Activity Center”…
starting with a physical vision
embedding the physical vision

colonaded or tree-lined streets with wide sidewalks and well-proportioned squares, equitably serving the needs of the pedestrian, the bicycle, public transit and the automobile, with design emphasis given to the pedestrian.

Street frontages will be activated with habitable space such as storefronts, lobbies, courtyard entries, porches, stoops and the like, to promote pedestrian amenity.

Frequently spaced doors and windows facing the street will encourage activity and continue public safety.

Private buildings will form a disciplined edge for public space, spatially delineating street and park space and the private block interior.

A high density of use, mixing retail, commercial and residential activities in close proximity, will be interspersed throughout the area to promote the use of transit.

The housing stock will be inclusive, serving a range of income and age groups. The workplace stock will be inclusive, providing

Downtown Kendall Code: 2

DRAFT May 24, 1999
Old Zoning

smarter regulations
smarter regulations
Metropolis

With its pre-construction sales going strong, Metropolis at Dadeland has been buzzing with activity in the weeks leading up to 2003 and groundbreaking ceremonies for the development, says a company executive.

More than 97 percent of the condominium residences of Metropolis One are reserved and developer Terra Archiplan is set to close on a $41-million construction tower with a later this month.

“We are excited and in preparat Metropolis One is a big event,” ADL, which is the.

“The novelty of living in a one,”

Metropolis’

Resident and their guests will also be able to use an expansive recreational area with views of the city. The facility will have amenities such as a swimming pool, sun deck, state-of-the-art fitness center, spa and meditation garden.

Plans for the project are on schedule and groundbreaking on Metropolis One is set for the spring of 2003.

Residents and their guests will also be able to use an expansive recreational area with views of the city. The facility will have amenities such as a swimming pool, sun deck, state-of-the-art fitness center, spa and meditation garden.

Plans for the project are on schedule and groundbreaking on Metropolis One is set for the spring of 2003.

Residents and their guests will also be able to use an expansive recreational area with views of the city. The facility will have amenities such as a swimming pool, sun deck, state-of-the-art fitness center, spa and meditation garden.

Plans for the project are on schedule and groundbreaking on Metropolis One is set for the spring of 2003.

Residents and their guests will also be able to use an expansive recreational area with views of the city. The facility will have amenities such as a swimming pool, sun deck, state-of-the-art fitness center, spa and meditation garden.

Plans for the project are on schedule and groundbreaking on Metropolis One is set for the spring of 2003.
Metropolis Two to be launched on January

The developer of Metropolis, the first high-rise condominium tower in Dadeland, will follow up the project’s initial sales success by launching a second tower on Friday, Jan. 17.

Metropolis One and Metropolis Two will each rise 25 stories. Metropolis will feature an expansive recreation area, which will have a fully-equipped fitness center, a clubroom, a business center, a pool and a clubhouse.

Introduced this summer, Metropolis One quickly sold its lofts, one- and two-bedroom units, and penthouses to an eclectic mix of buyers, including empty nesters and young professionals, says a company spokesperson.

In two months of sales, more than 70 residences were purchased.

According to developer Pedro L. Terra-Archiplan, the extraordinary pace and high demand led to the accelerated launch of Metropolis Two.

“The incredible pricing of our condominiums and the project’s proximity to Miami’s work and play zones have contributed to our success. We’re a fresh, novel investment because there’s nothing like us in the market,” Terra-Archiplan said.
parking structures
parking structures
parking structures

The “Liner” Building
scale comparisons
Urban Design Associates: pattern book
Architectural Styles

Research of Louisville neighborhoods identified three architectural styles as being appropriate for Park DuValle’s Phase Two development: Old Louisville Victorian, Colonial Revival, and Louisville Craftsman.

The character of each address will be determined in part by the mix and range of architectural styles along it. For example, the area along Main Street Parkway is a mix of all three architectural styles, which is similar to other Parkway addresses in the city. On the other hand, some of the smaller-scale neighborhood streets offer opportunities to create a unique environment of all Victorian houses, all Craftsman houses, or all Colonial Revival Houses.

In this way, each address will have a different character. The combination of different architectural styles and different building types is intended to create design diversity which provides the mix of scale, density, walkability, and character typical of traditional neighborhoods.

Architectural Styles Key

- Total Mix: Colonial Revival, Craftsman, and Victorian
- Total Mix: Mostly Colonial Revival
- Total Mix: Mostly Craftsman
- Total Mix: Mostly Colonial Revival and Victorian
- Mostly Victorian with some Craftsman

Distribution of Architectural Styles
Louisville Craftsman

This style evolved during the 1920s as the Craftsman style gained popularity in California and became a national style in house design, available both in pattern book housing for builders, and as custom design offered by architects. The Craftsman style was thus adapted to more modest housing as well as the high end of urban markets at the time. The style often displays deep eaves, grouped windows and fanciful trim on windows, doors and porches. The interiors were often distinguished by inventive built-in cabinetry, panelled doors and walls, interior columns and room dividers and the feel of the house as a piece of furniture.

In Louisville, many of the traditional Colonial Revival house bodies were reworked with Craftsman detailing.

**Essential Characteristics**

1. Deep eaves, often with exposed, molded rafter ends and ornamental brackets
2. Grouped windows in pairs or in threes with upper sashes of divided light patterns
3. Deep porches with ornamental half-timbering, wood columns that are often tapered or on brick piers, and solid railings
4. Simple, straight-forward volume with low slope gable or hipped roof
5. Continuous horizontal trim band or belt course, at the second floor window sill line

© 1997 UDA Architects PC
1. Four Lane Avenue

The Four Lane Avenue is designed for locations where the movement of larger volumes of traffic is desired. Wide sidewalks, on-street parking and doors and windows facing the street make this high traffic street pedestrian friendly as well.

A. Building Placement
Build line location: 0 to 100' from (Typical) R.O.W. line.

Space Between Buildings: 80 ft. maximum.

B. Building Volume:
Bldg. Width: 36 ft. minimum
160 ft. maximum
Bldg. Depth: 125 ft. maximum
Bldg. Height: 2 stories minimum
4 stories maximum
85 ft. Maximum
The 1st floor shall be a minimum of twelve (12) feet in height.

C. Notes:
1. Appurtenances may extend beyond the height limit.
2. All permitted uses are allowed on all floors.
3. Tree spacing shall be optimized for the species used, in consultation with the City Arborist.
4. The alignment of floor-to-floor heights of abutting buildings is encouraged to allow for shared use of elevators.

2. Two Lane Avenue

A wide median and plentiful street trees make the Two Lane Avenue a quiet address especially well suited to residential and office uses.

A. Building Placement
Build line location: 0 to 100’ from (Typical) R.O.W. line.

Space Between Buildings: 20 ft. maximum.

B. Building Volume:
Bldg. Width: 36 ft. minimum
160 ft. maximum
Bldg. Depth: 125 ft. maximum
Bldg. Height: 2 stories minimum
4 stories maximum
85 ft. Maximum
The 1st floor shall be a minimum of twelve (12) feet in height.

C. Notes:
1. Appurtenances may extend beyond the height limit.
2. All permitted uses are allowed on all floors.
3. Tree spacing shall be optimized for the species used, in consultation with the City Arborist.
4. The alignment of floor-to-floor heights of abutting buildings is encouraged to allow for shared use of elevators.
pre-approved street designs
## Summary Table

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<th>URBAN CONTEXT ZONES</th>
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### Additional Notes

- **Block Size**: see section 6.12
- **Lot Area**: see section 6.15
- **Lot Geomtery**: see section 6.16
- **Site Plan**: see section 6.17
- **Building Size**: see section 6.18
- **Building Design**: see section 6.19

### Exceptional Cases

- **Permitted within a Special Development Zone**: see section 6.20
- **Prohibited**: see section 6.21
- **Permitted**: see section 6.22

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**SmartCode**
form-based codes let you emulate the places you admire and avoid replicating the ones you don’t.
formbasedcodes.org
doverkohl.com
geoffreyferrell.com
dpz.com
eekarchitects.com
opticosdesign.com
spikowski.com