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## A PRIMER ON FORM-BASED CODES

“A form-based code is one that is based primarily on “form”—urban form, including the relationship of buildings to each other, to streets and to open space, rather than based primarily on land use. “

A Form-Based Code is a development code that provides the developer/applicant greater flexibility in permitted land uses in exchange for more stringent regulations controlling urban form. These types of codes support mixed-use, pedestrian-friendly and mixed housing development more effectively than conventional codes do because they provide greater guidance on how buildings are expected to face the street, adjacent residential neighborhoods and open spaces. Form-Based Codes are becoming increasingly attractive to municipalities that want greater control over how buildings look and feel. Cities that have adopted Form-Based Codes include Bend and Portland in Oregon; Petaluma, Pleasant Hill, Palo Alto and Hercules in California.

### A BRIEF COMPARISON OF CONVENTIONAL CODES AND FORM-BASED CODES

#### URBAN FORM GENERATING CHARACTERISTICS

CONVENTIONAL CODES	FORM-BASED CODES
<ul style="list-style-type: none"> <li>• Include extensive lists of permitted, prohibited and conditional uses by zone. Many land uses in conventional codes lists are outdated and do not reflect the nature of contemporary employment models or dwelling types</li> <li>• Often disallow a mix of uses</li> <li>• Prohibit adaptability of buildings to other uses over time</li> <li>• On zoning maps, land use designations typically begin and end at the center of the street or Right of Way</li> </ul>	<ul style="list-style-type: none"> <li>• Consider the building “walls” that frame the Right of Way (often referred to as the “public realm”) as one of the primary determinants of form</li> <li>• Regulating plan zone designations typically transition at the back of the lot</li> <li>• The same or similar development standards typically apply to both sides of the street</li> <li>• Land uses allow a much broader range of uses within a zone or subarea; also allow a greater mix of uses</li> <li>• Many uses are allowed if they meet performance standards</li> </ul>

## GRAPHICS AND PROCESS CHARACTERISTICS

CONVENTIONAL CODES	FORM-BASED CODES
<ul style="list-style-type: none"><li>• Development standards are not illustrated and in many conventional codes the built result of the development standards is not fully understood and/or has never been tested or modeled</li><li>• Abstract, hard to understand development standards such as FAR (Floor Area Ratio) are used to measure development capacity on site but do not provide a very clear picture of development that results</li><li>• Zoning map, land use designations and development standards are the primary tools of the conventional code</li></ul>	<ul style="list-style-type: none"><li>• Greater use of graphics to explain community goals and desired urban form to applicants, neighborhood groups and administrators</li><li>• A Regulating Plan replaces the conventional code zoning map and land use designations; development standards are keyed to the Regulating Plan</li><li>• Development standards and expected building form is illustrated in plans, sections, 3-D models and/or axonometrics, and photos</li><li>• Other innovative tools are used by some form-based codes such as Building Types, which codify historic and/or desirable building types. Codes that use this tool include NorthWest Crossing in Bend, Oregon and City of Ventura, California</li></ul>

### What are the advantages of Form-Based Codes?

- Form-based codes are better at illustrating community plans and vision
- Building and street design is coordinated
- Urban form is more predictable
- A more gradual transition between adjacent areas with different development intensities is easier to achieve
- Can specify the tapering of height, bulk, massing and lot coverage of buildings toward residential and/or natural edges
- High density development is more carefully designed, attractive and compatible

### What are the pitfalls of Form-Based Codes?

- Cities must consider what approving bodies will administer the code and whether current review processes and review bodies will be adequate; rarely is a form-based code able to be administered without some modification
- Some cities have legal restrictions against using illustrations to set development standards; in these cases the illustrations are used to augment text and numerical standards but are not legally binding

### What is a Hybrid Code?

- One that incorporates the form-based code approach toward form, but uses the provisions, processes and standards from the current code
- Often take the form of a chapter within the code, similar to a special district or an overlay
- Hybrid codes cross reference other sections of the existing code for development standards such as parking dimensions or landscaping standards

- Hybrid codes are more integrated—not stand alone codes. Some “pure” form-based codes that have been adopted are stand alone codes and because of unresolved administration issues, they are optional for applicants; not mandatory

### **What are some Form-Based and Hybrid Code fatal flaws?**

- When allowed land uses are too complex and don’t allow a mix of uses
- When there is an unresolvable difference between the development capacity allowed by existing zoning and future urban form goals. This is a particular problem with form-based and hybrid codes applied to infill areas
- When there is an unresolvable difference between the existing development standards and future urban form goals
- The vision and plan process must precede the making of a form-based or hybrid code

### **A BRIEF SUMMARY OF FORM-BASED CODE TYPES**

In a form-based code, the development standards that dictate urban form are linked to a Regulating Plan. A Regulating Plan is similar to a zoning map, but with less emphasis on land uses and more emphasis on the building shape, street type and neighborhood character in each zone. Development standards define and shape the public realm by providing pre-set dimensions for every aspect of the site and building.

Form-based codes can take several forms:

- **Street-based** The Regulating Plan locates private realm development standards by street type; that is, the development standards for all site and building characteristics is governed by the site’s relationship to pre-defined street types. In addition to setting the private realm standards, the Regulating Plan defines elements within the public realm (e.g. sidewalks, travel lanes, on-street parking, street trees, street furniture, etc.). This type of form-based code can be useful for areas where streets have not yet been platted.
- **Frontage-based** The Regulating Plan locates private realm design standards by frontage type; that is, the development standards for all site and building characteristics is defined by the edge condition where it meets the primary street (frontage). Frontage-based FBCs may also define street type, but the development standards are not (or not always) tied to street type. This type of form-based code can be useful for areas where streets are already designed and/or built.
- **Street-Frontage Hybrid** Development standards are tied to specific frontage/street combinations.
- **Building Type-based** The Regulating Plan controls the locations of pre-defined building types. The development standards define the configurations, features, and functions of buildings.
- **Transect-based** The Regulating Plan articulates a cross section of street types, frontage types and/or building types along an urban/rural continuum to understand where different uses or building types fit or are inappropriate. The “pure” transect-based FBC uses the SmartCode transect with clearly defined zones from T1 to T6 This system was first created by DPZ (Duany Plater Zyberk).
- **Modified Transect** The concept of the transect is modified to correlate with the existing or zoned local urban to suburban characteristics.

## IMPLEMENTATION OPTIONS

Form-based codes replace existing zoning codes and can be either mandatory or optional. There are several options for implementation

- **Integrated** A form-based code can be integrated into the existing code, applied as a “by right” designation to selected zones, and cross-referenced to existing code provisions, such as administrative procedures and/or land uses.
- **Optional parallel** Alternatively, it can take the form of an optional parallel code system--a self-contained special chapter with unique provisions, not cross-referenced to other parts of the code, available as an option in designated zones.
- **Floating zone** Finally, an FBC take the form of a floating zone (either integrated or optional/parallel) which is triggered by an application to rezone a property.

Form-based codes are often confused with design guidelines, however they are not discretionary. While they offer flexibility like design guidelines do, they do so by offering choices between objective standards, rather than by offering multiple ways of meeting an aspirational guideline.



## **FORM-BASED CODE EXAMPLES FOR SAN JOSE**

### **NorthWest Crossing Prototype Catalogue, Bend, Oregon**

This integrated, mandatory building-type-based code (adopted in 2002) has been used to build out an award-winning 500-acre mixed-use, mixed housing neighborhood on the west side of Bend.

Link:

[http://www.northwestcrossing.com/Bend\\_Oregon\\_Real\\_Estate/Building\\_Guides/Prototype\\_Handbook/](http://www.northwestcrossing.com/Bend_Oregon_Real_Estate/Building_Guides/Prototype_Handbook/)

### **Hercules, California**

This integrated, mandatory street-based code (created in 2001) has been used to build out a new town in this California Bay Area town.

Link: <http://www.formbasedcodes.org/images/CentralHerculesFBC.pdf>

### **Columbia Pike Form-Based Code, Arlington County, Virginia**

This integrated, mandatory street-based code (adopted about 2003) has been used to transform 3.5 miles of auto-oriented, region-serving highway to transit-oriented, pedestrian-friendly commercial mixed-use.

Link:

<http://www.arlingtonva.us/Departments/CPHD/Forums/columbia/current/CPHDForumsColumbiaCurrentCurrentStatus.aspx>

### **Loma Rica Ranch Specific Plan**

This developer-driven form-based code, created in 2007, is a good example of how to use a form-based code to identify distinct, complementary neighborhoods. It includes an Architectural Standards section and a well-developed Open Space and Conservation section.

Link: [http://www.cityofgrassvalley.com/services/departments/cdd/SDA\\_LomaRicaRanch.php](http://www.cityofgrassvalley.com/services/departments/cdd/SDA_LomaRicaRanch.php)

### **Santa Ana Renaissance Specific Plan, Santa Ana, California**

This draft Form-Based Code provides a comprehensive example of form-based code approaches, including standards for open space network, streetscapes, building types and architecture.

Link: [http://www.santa-ana.org/news/0710\\_renaissance.asp](http://www.santa-ana.org/news/0710_renaissance.asp)

## **OTHER RESOURCES**

Form-Based Codes Institute (FBCI)

<http://www.formbasedcodes.org/>