**Types of Zoning Codes**

*This article excerpted from the New Philadelphia Zoning Code: Best Practices Report, by the Zoning Code Commission's Clarion/Duncan consulting team.*

New approaches to zoning matters are always emerging and evolving. What follows is a brief description of some basic types of zoning codes: Euclidean, Form-Based, Smart Zoning, Incentive and Performance.  Information is also included on alternative forms of zoning codes: Modular and Web-based.

[**Euclidean Zoning**](http://zoningmatters.org/glossary/term/20)

The most common and most traditional approach to zoning is called [Euclidean zoning](http://zoningmatters.org/glossary/term/20). It is named after the town of Euclid, Ohio. A landowner in Euclid, Ohio challenged the city's zoning code. The case wound its way up to the U.S. Supreme Court which upheld the municipality's ordinance. The case was decided in 1926, and the term "[Euclidean zoning](http://zoningmatters.org/glossary/term/20)" emerged and influenced the content and design of zoning codes across the country for decades.

[Euclidean zoning](http://zoningmatters.org/glossary/term/20) regulates development through land use classifications and dimensional standards. Typical land use classifications are single-family residential, multi-family residential, commercial, institutional, industrial and recreational. Each land use must comply with dimensional standards that regulate the height, bulk and area of structures. These dimensional standards typically take the form of setbacks, sideyards, height limits, minimum lot sizes, and lot coverage limits.

The traditional planning goals associated with [Euclidean zoning](http://zoningmatters.org/glossary/term/20) are providing for orderly growth, preventing overcrowding of land and people, alleviating congestion, and separating incompatible uses (such as insuring that a noisy factory cannot be built near a residential neighborhood).

[Euclidean zoning](http://zoningmatters.org/glossary/term/20) has come under scrutiny and criticism due to its lack of flexibility and somewhat outdated planning theory. Philadelphia's zoning code is a Euclidean code.

[**Form-Based Codes**](http://zoningmatters.org/glossary/term/21)

A form-based code places more emphasis on regulating the form and scale of buildings and their placement along and within public spaces (such as sidewalks, street trees, street furniture). Some of the urban planning goals of [form-based codes](http://zoningmatters.org/glossary/term/21) include curbing urban sprawl, promoting pedestrian safety, and preserving the fabric of historic neighborhoods.

The following description appears on the [Form-Based Codes](http://zoningmatters.org/glossary/term/21) Institute website:

*“*[*Form-based codes*](http://zoningmatters.org/glossary/term/21) *address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks. The regulations and standards in* [*form-based codes*](http://zoningmatters.org/glossary/term/21)*, presented in both diagrams and words, are keyed to a regulating plan that designates the appropriate form and scale (and therefore, character) of development rather than only distinctions in land-use types.”*

The City of Miami has a "floating-zone" form-based zoning code, and Denver is moving in this direction. [Form-based codes](http://zoningmatters.org/glossary/term/21) are very new, and have not been utilized yet in any large, old industrial city. Depending upon the quality of the code and its diagrams, [form-based codes](http://zoningmatters.org/glossary/term/21) can be difficult to interpret and administer.

To learn more about [form-based codes](http://zoningmatters.org/glossary/term/21), go to:

* <http://www.formbasedcodes.org/index.html>
* <http://en.wikipedia.org/wiki/Form-based_codes>

**Smart zoning**

* Smart zoning (or smart coding) is an alternative to Euclidian zoning. There are a number of different techniques to accomplish smart zoning. Floating zones, cluster zoning, and planned unit development (PUDs) are possible even as the conventional Euclidean code exists, or the conventional code may be completely replaced by a smart code, as the City of Miami is proposing. The following techniques may be used to accomplish either conventional separation of uses or more environmentally responsible Traditional Neighborhood Development (TND), depending on how the codes are written. For serious reform of Euclidean zoning, TND ordinances such as [form-based codes](http://en.wikipedia.org/wiki/Form-based_codes) or the [SmartCode](http://en.wikipedia.org/wiki/SmartCode) are usually necessary.
* Cluster zoning permits residential uses to be clustered more closely together than normally allowed thereby leaving substantial land area to be devoted to open space.
* Planned unit development is cluster zoning but allows for mixed uses including some commercial and light industrial uses in order to blend together a traditional downtown environment but with at a suburban scale.

[**Incentive Zoning**](http://zoningmatters.org/glossary/term/22)

[Incentive zoning](http://zoningmatters.org/glossary/term/22), as its name implies, offers a reward (usually in the form of increased density) to a developer who does something "extra" that is in the community's interest (such as more open space) or promotes a public goal (such as affordable housing).

The [Smart Growth](http://zoningmatters.org/glossary/term/14) Resource Library defines [incentive zoning](http://zoningmatters.org/glossary/term/22) as follows:

*“*[*Incentive zoning*](http://zoningmatters.org/glossary/term/22) *allows a developer to build a larger, higher-density project than would be permitted under existing zoning. In exchange, the developer provides something that is in the community's interest that would not otherwise be required (e.g., open space, plazas, arcades, etc.). The common types of community benefits or amenities for which state and local governments have devised incentive programs are urban design, human services (including affordable housing), and transit access. “*

[Incentive zoning](http://zoningmatters.org/glossary/term/22) has its origins in New York City and Chicago. It has become increasingly common over the past 20 years. The terms "density bonuses" or "community benefits" are related terms and are often used when discussing [incentive zoning](http://zoningmatters.org/glossary/term/22).

[Incentive zoning](http://zoningmatters.org/glossary/term/22) allows for a high degree of flexibility, but it can be complex to administer.

[**Performance Zoning**](http://zoningmatters.org/glossary/term/23)

A key goal of zoning codes is to limit conflicting and incompatible uses. Traditional [Euclidean zoning](http://zoningmatters.org/glossary/term/20) does this by regulating land use and bulk. [Performance zoning](http://zoningmatters.org/glossary/term/23), however, regulates the effects or impact of land uses through performance standards. Performance standards usually concern traffic flow, density, noise and access to light and air. Developers can build almost any building that meets the performance standards for that district. Therefore, [performance zoning](http://zoningmatters.org/glossary/term/23) allows for a great deal of flexibility. This level of flexibility makes it a very useful tool, but also makes it difficult to administer.

Currently, no large city has a zoning code based completely on [performance zoning](http://zoningmatters.org/glossary/term/23). Chicago has used a hybrid approach for its manufacturing districts, using performance standards in addition to [Euclidean zoning](http://zoningmatters.org/glossary/term/20).

More information about Chicago's manufacturing districts can be found in the publication Revise, Recreate, Rezone: A Neighborhood Guide to Zoning prepared by the Metropolitan Planning Council. Go to <http://www.metroplanning.org/zoningGuide/index.html>

[**Modular Zoning**](http://zoningmatters.org/glossary/term/27)

One reason that the number of zoning districts in major U.S. cities tends to expand over time is that new development proposals and redevelopment plans seem to need "a zone district that is almost like C‐2 (or R‐3, or M‐1), but a little different." In other words, new zone districts are sometimes only modest variations of older districts. In some cases, they involve a slightly different list of uses, in others they allow slightly larger (or smaller) buildings, and in yet others they vary only in the amount of parking required or the size of signs permitted. This has led some cities to move toward "[modular zoning](http://zoningmatters.org/glossary/term/27)".  In concept, [modular zoning](http://zoningmatters.org/glossary/term/27) "breaks‐up" the idea of a zone district into its fundamental building blocks - permitted uses, dimensional standards (i.e., height, bulk, and setbacks, or form), and development standards (i.e., parking, signs, landscaping) - and allows those components to be combined in different ways. For example, a theoretical [modular zoning](http://zoningmatters.org/glossary/term/27) district might be R‐3‐B: The first module (R) indicates a set of uses available to the owner; the second module (3) might indicate the maximum height of buildings in stories; and the third module (B) might indicate a package of parking requirements and design requirements.

[Modular zoning](http://zoningmatters.org/glossary/term/27)'s proponents generally come from two groups with different visions of why it is a good idea. The first support this technique as a way to encourage flexibility. A property owner who wants to build a larger building can request a zoning amendment to the second module - for example, from R‐3‐B to R‐4‐B. In theory, a modular rezoning request could be simpler and less controversial, since the owner could agree in advance that he or she was not asking for any change in permitted uses or parking requirements. The only debate would be over building size.

The second group of proponents supports [modular zoning](http://zoningmatters.org/glossary/term/27) as a way to more closely tailor zoning regulations to specific neighborhood character. For example, a typical R‐3 district might allow one set of residential uses and buildings of a certain size, while the R‐4 district allows a few more permitted uses and larger buildings. But if R‐3 limits buildings to be smaller than those in the existing neighborhood and R‐4 allows uses not currently permitted in the area, the city may face a difficult choice in how to zone the area. [Modular zoning](http://zoningmatters.org/glossary/term/27) seems to offer the opportunity to combine a use module that perfectly matches the character of the area with a size module that matches that same character. In this case, however, the goal is not to insert flexibility to change zoning but to create more predictability for neighbors, and the expectation is that this closely tailored zoning will probably not change much over time.

The major argument against [modular zoning](http://zoningmatters.org/glossary/term/27) is that it adds complexity to the zoning code. It takes time to do the research to determine what dimensions or development standards should be grouped together in different modules. The more module combinations, the more time it takes. While individual zoning modules can be simple, the number of combinations can be very large, which may require more staff training and more explanations to citizens about how the system works. When a wide variety of use and dimensional modules are allowed to be combined, the chances of unintended consequences increase - some combinations that work on paper may be impossible in practice.

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[**Web-based Code**](http://zoningmatters.org/glossary/term/29)

The future of zoning is web‐based codes, for a variety of reasons. One important advantage is the cost of keeping codes current. When book‐based codes are used, amendments need to be printed and manually inserted in the document, and many cities can only afford to consolidate amendments, send them to the publisher, and mail out updates to known code users every three or six or twelve months. As a result, zoning book readers always need to check with zoning staff to ensure that there are no new amendments that modify the text they are reading. In contrast, web‐based codes can be updated (often by city staff without the use of an intermediary codification firm) on an almost real‐time basis - often on the same date that the amendment becomes effective. If the planning director makes an interpretation of an ambiguous provision, that can be uploaded as well, so that other property owners can rely on the same interpretation. Residents, property owners, and potential investors save substantial time and energy - and avoid costly mistakes - simply by being able to rely on the accuracy of the web‐based code.

In addition, web‐based codes can offer several features that promote user‐friendliness and understandability to the general public. In addition to standard text, they can include far more illustrations and graphics because uploading them to the web is very inexpensive relative to printing costs. They can also include unofficial commentary and links to comprehensive plan or area plan policies that are helpful to property owners and landowners interested in understanding the objective behind a specific zoning provision. Links between zoning text and defined terms can be instantaneous, and "flipping back and forth" between different provisions of the code can be done by the click of a mouse. Perhaps most importantly, zoning code portals can be programmed to answer common technical questions ("Where can I build a fence? How tall can it be?") based on a specific property address, while book‐based codes often require readers to integrate several sections together to get the same answer.