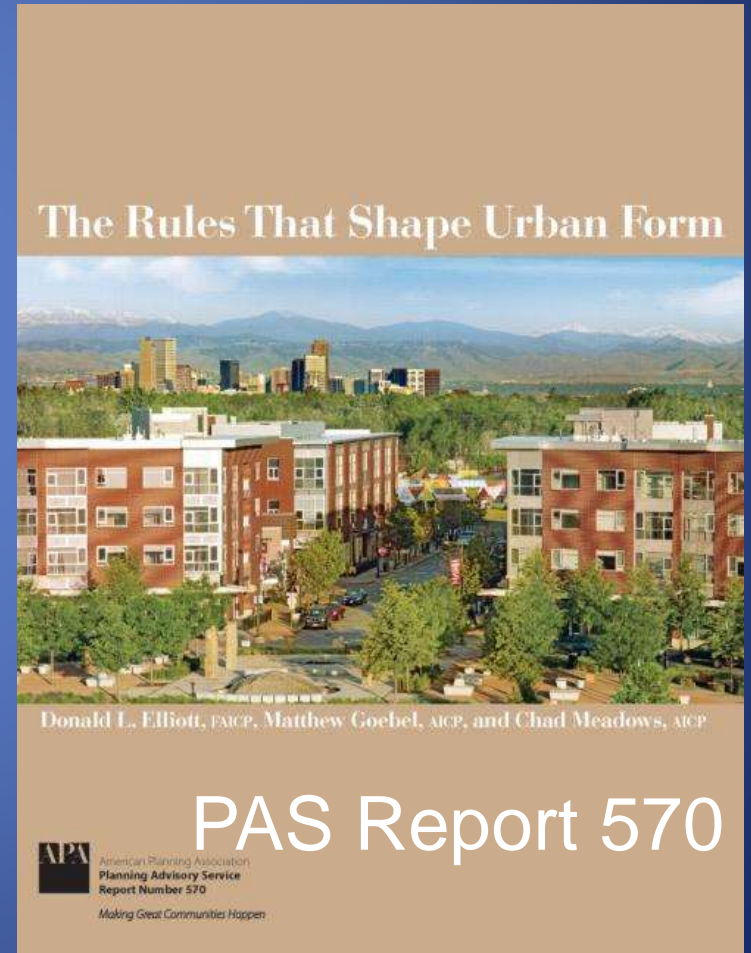


Form-based Zoning Grows Up

Rocky Mountain
Land Use Institute
Denver, CO
March 14, 2014

Don Elliott, FAICP
Clarion Associates, Denver, CO

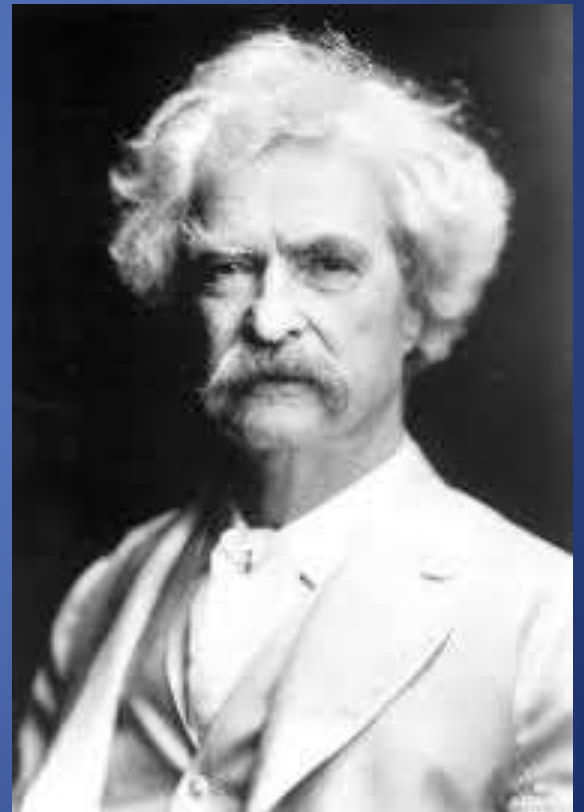


Form-based Zoning Grows Up

What is it?

How is it being used?

What are we learning?



Form-based Zoning Grows Up

First . . .

There were nuisances

- From WAY back

Then there was zoning

- Remember Euclid

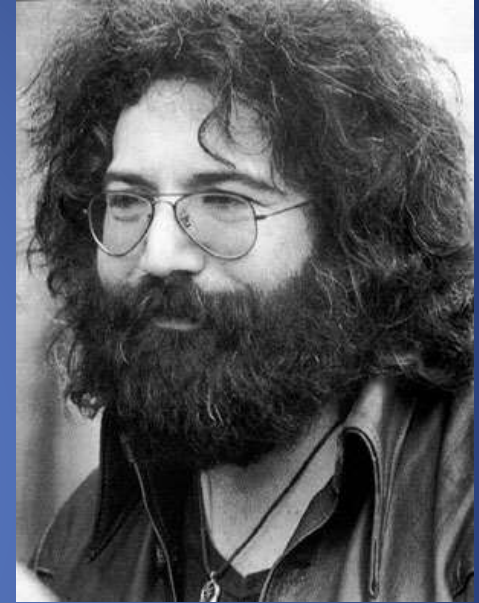
Then zoning got too rigid

- Too many districts and uses

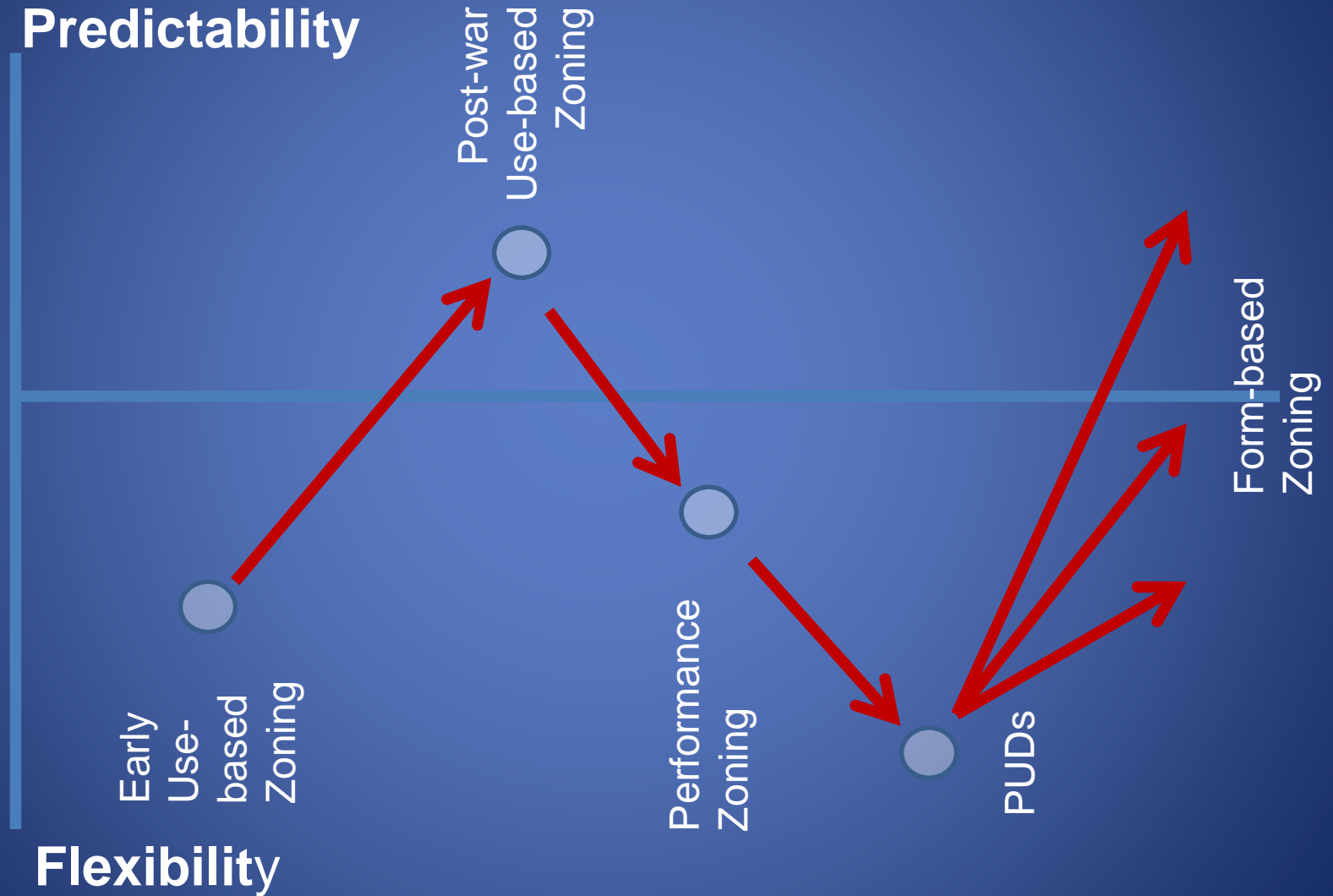
Then zoning got too flexible

- PUDs and performance zoning reduce predictability

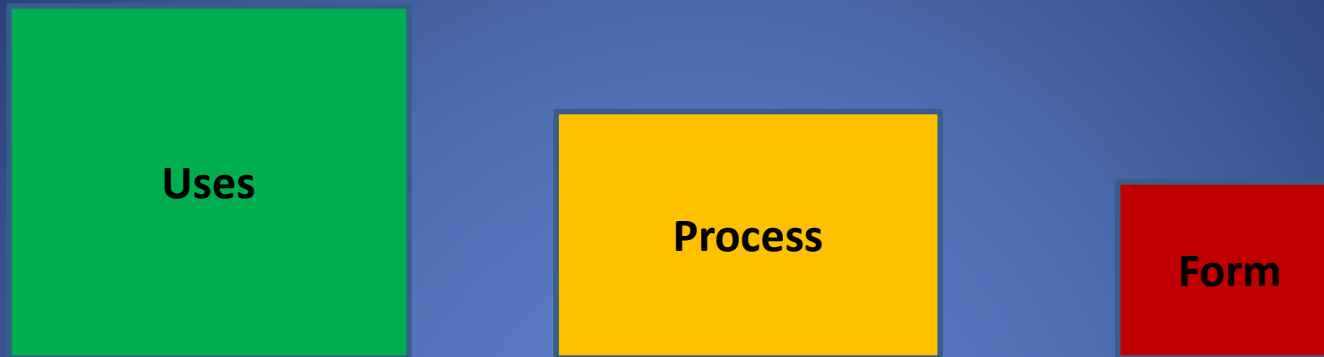
Then zoning got form-based



The Path of Zoning Evolution

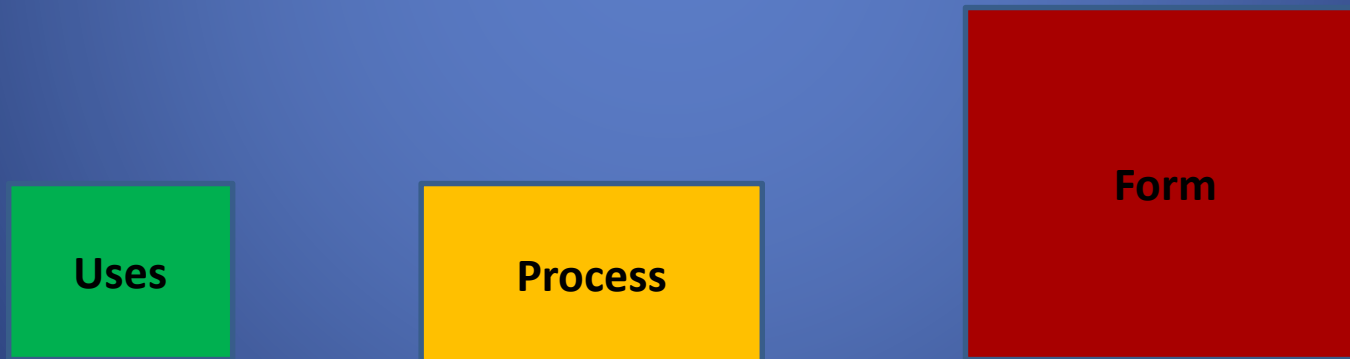


What is Form-based Zoning?



Myth 1: Traditional zoning is based on use separation.

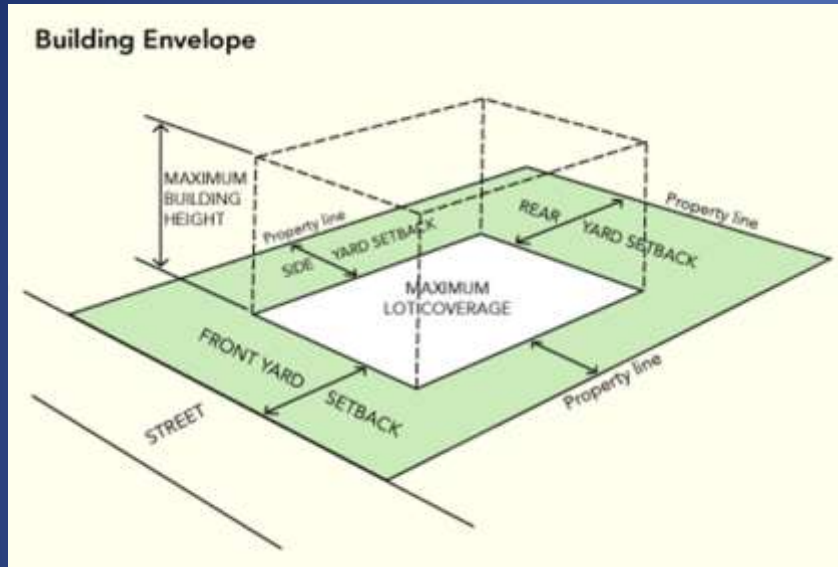
False: It is based on use regulation – but mixes are always allowed



Myth 2: Form-based zoning ignores uses – anything goes anywhere

False: Uses are regulated – just more lightly – and secondarily

What is Form-based Zoning?

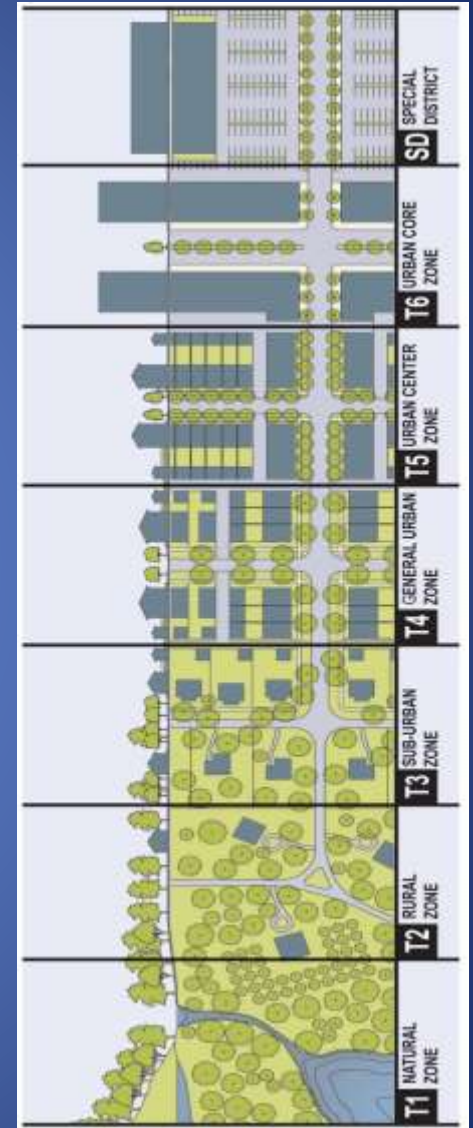


Downtown Building

What is Form-based Zoning?

FBCI Core Elements List

- Building Form Standards
- Building Type Standards
- Frontage Type Standards
- Public Space Standards
- Block and Subdivision Standards
- Regulating Plan



What is Form-based Zoning?

Building Forms & Types



Downtown Building



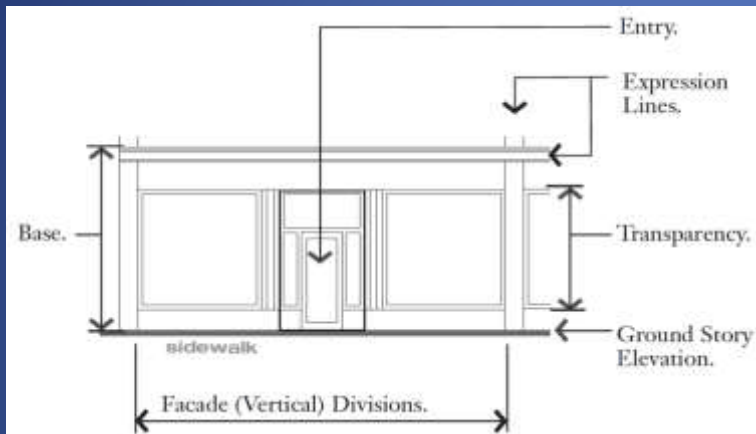
Building Types by Districts							
		Districts					
		MS-1 (Main Street)	MS-2 (B Street)	MS-3 (Transitions)	DT-1 (High Street)	DT-2 (Support)	DT-3 (East High)
Building Types	Storefront Building	●		●	●	●	●
	General Stoop Building		●	●		●	●
	Cottage Commercial	●	○	●			●
	Civic Building		●	●	●	●	●
	Row Building		●			●	
	Parking Structure					◐	

● = Permitted within district
 ○ = Permitted only on corner parcels
 ◐ = Permitted on secondary street only

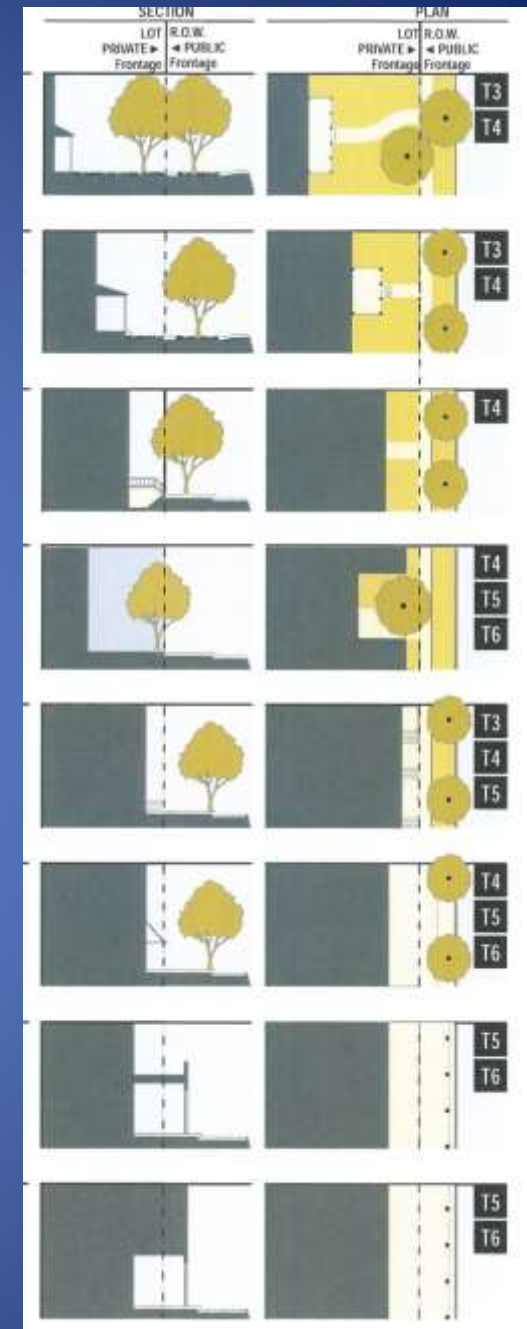
Table 1129.40 (1). Permitted Building Types by District.

What is Form-based Zoning?

Frontage Types

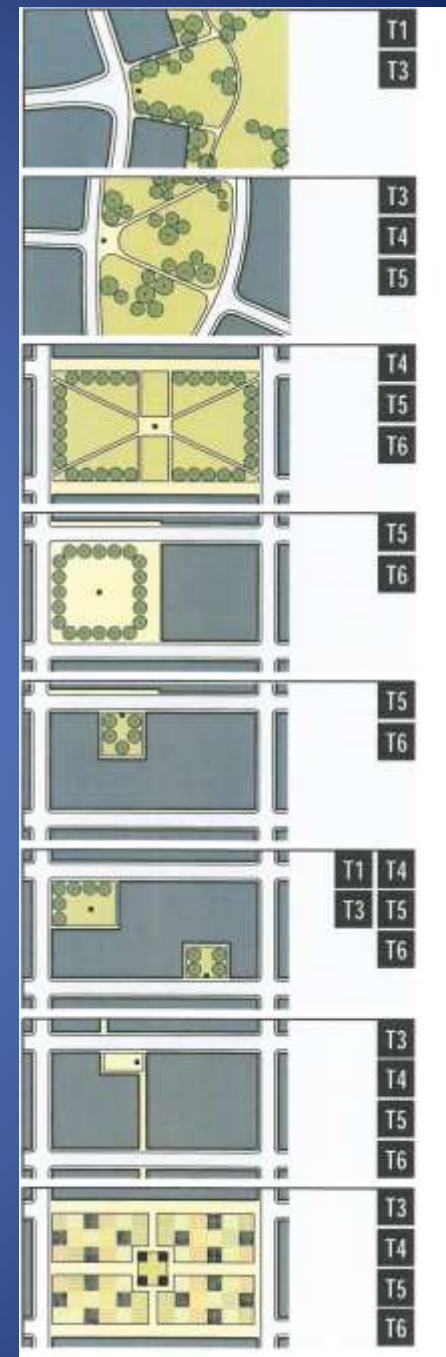


Storefront Frontage



What is Form-based Zoning?

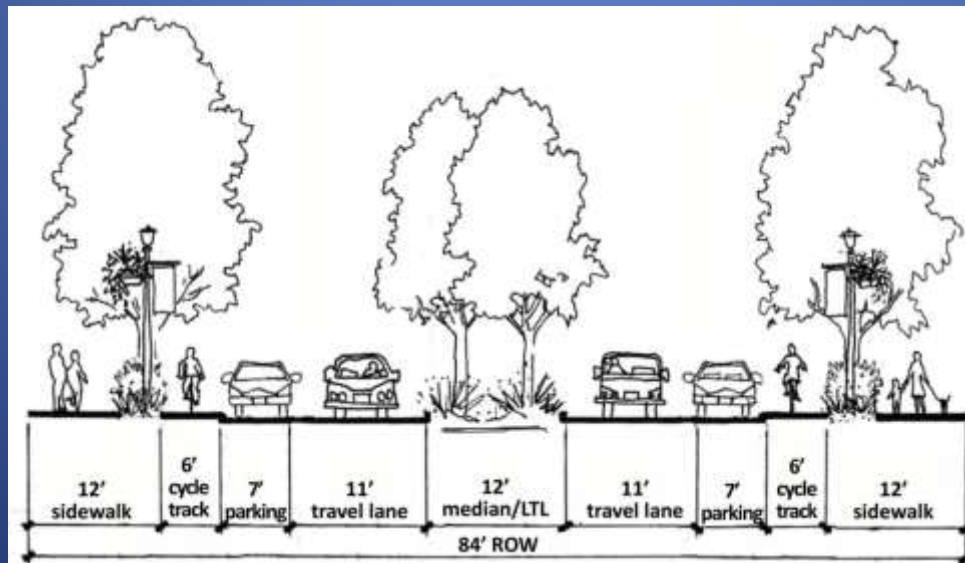
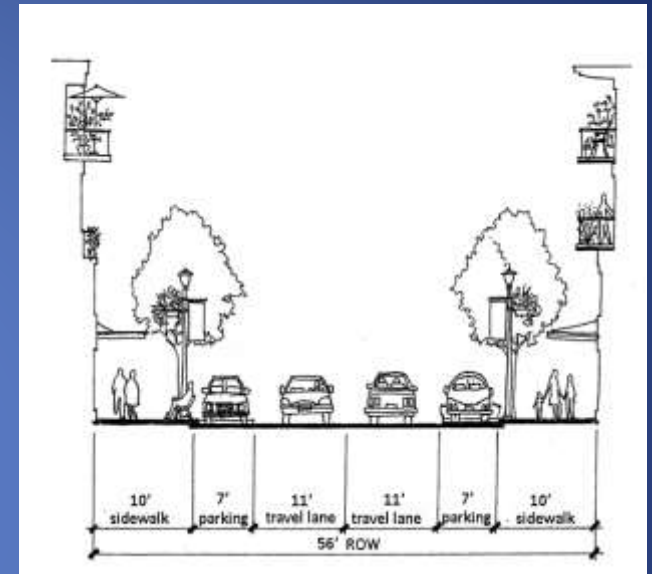
Public Space Standards



What is Form-based Zoning?

Public Space Standards

Sometimes Include Thoroughfare Standards



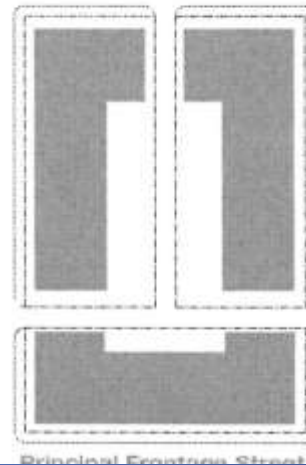
What is Form-based Zoning?

Block and Subdivision Standards

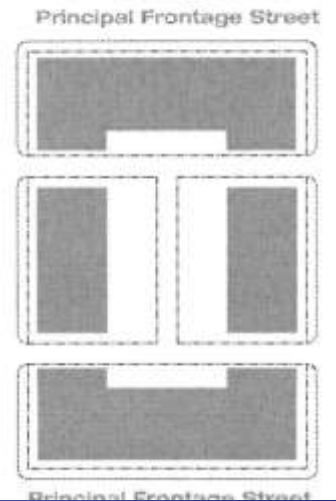
Table 153.060-A. Maximum Block Dimensions

MAXIMUM BLOCK DIMENSIONS		
BSC DISTRICTS	LENGTH (FT)	PERIMETER (FT)
Residential	425	1,450
Office Residential	500	1,750
Office	500	1,750
Commercial	500	1,750
Historic Residential	200	800
Historic Core	200	800

"T" Configuration

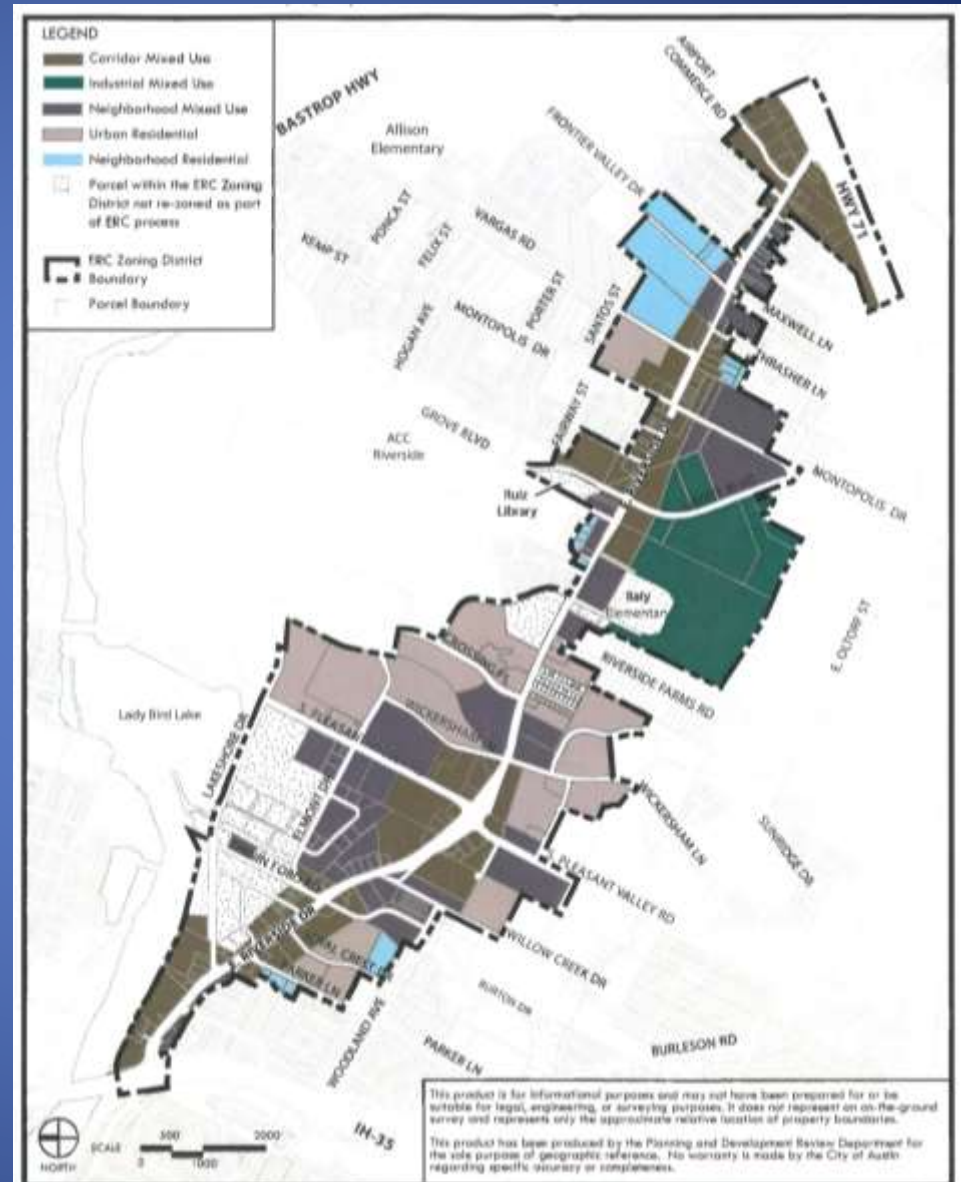


"H" Configuration



What is Form-based Zoning?

Regulating Plan



What is Form-based Zoning?

Regulating Plan



What is Form-based Zoning ?

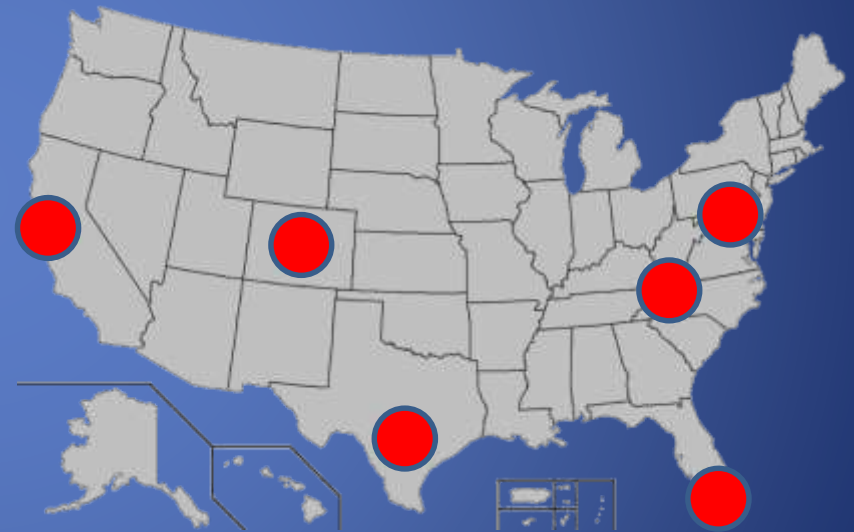
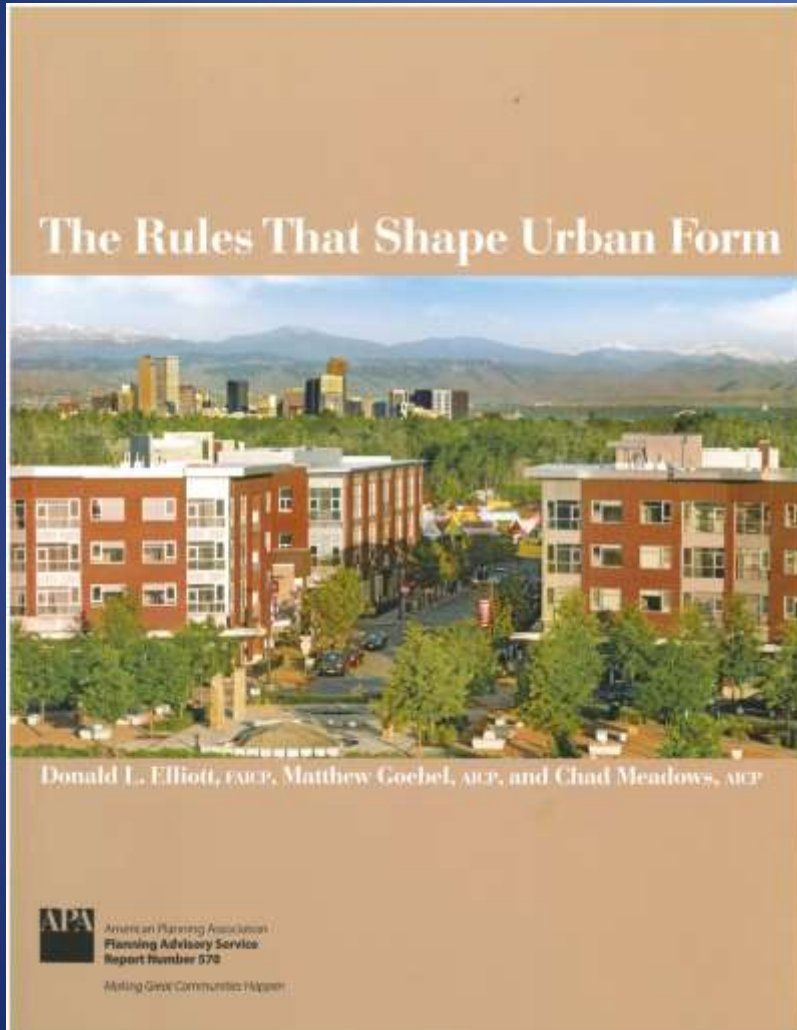
By-right Development?



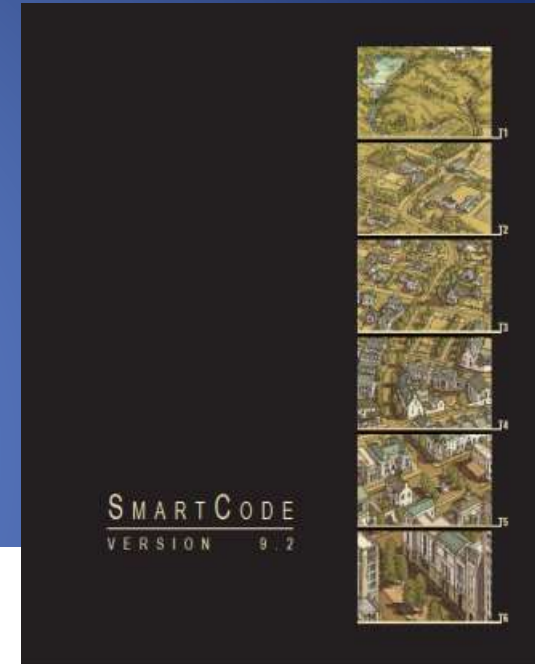
Not Really – All New Codes Try to Do That

- All code reforms simplify uses
- Most code reforms try to define permitted shapes, forms, or types development to avoid site plan hearings whenever possible
- Form-based controls are a good way to sell use simplification

The Rules That Shape Urban Form



The Rules That Shape Urban Form



Austin

Mooreville

Denver

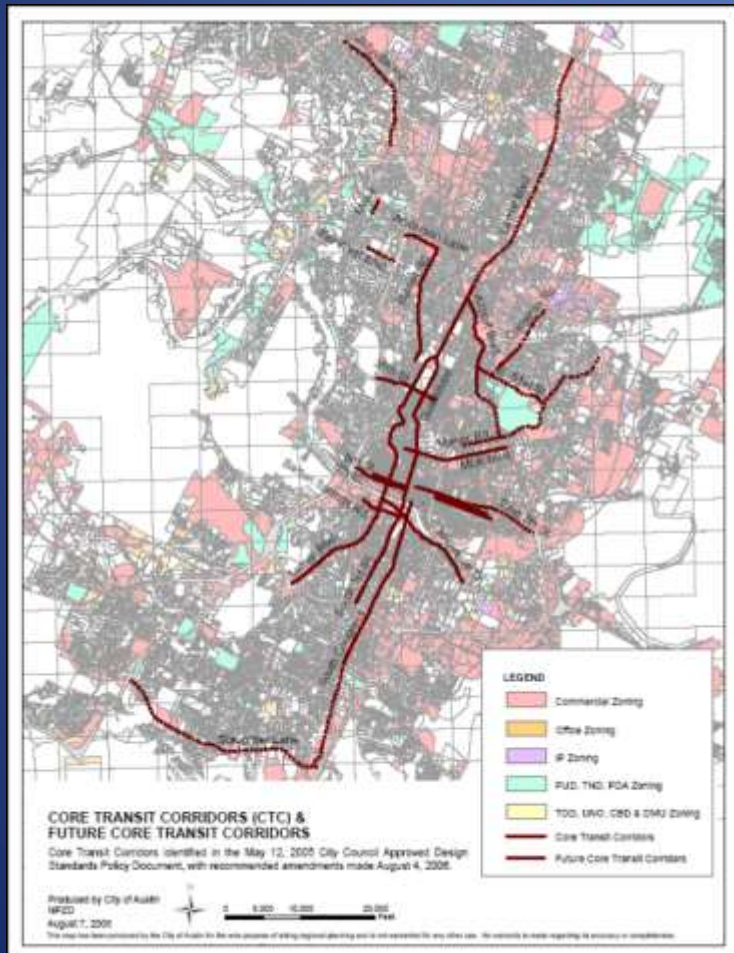
**Arlington
County**

Livermore

Miami

The Rules That Shape Urban Form

Austin TX



1-POINT OPTIONS
Achieve City of Austin Green Building Program 1-star rating.
Provide for liner stores in building façade.
Provide façade articulation meeting specified standards.
Provide primary entrance design meeting specified standards.
Provide roof design meeting specified standards.
Provide building materials meeting specified standards.
2-POINT OPTIONS
Achieve City of Austin Green Building Program 2-star rating.
75% of façade facing principal street consists of storefronts with at least 2 separate entrances facing principal street.
Provide sustainable roof meeting specified standards.
Integrate solar power generation into building design.
3-POINT OPTIONS
Develop VMU building.

The Rules That Shape Urban Form

Mooreville NC

TABLE 5.1.4: TABLE OF ALLOWED USES [1]

ALLOWABLE BUILDING FORMS																														
DH = DETACHED HOUSE MA = MANSION APARTMENT				AR = ATTACHED RESIDENTIAL NA = NOT APPLICABLE				CV = CIVIC SF = SHOPFRONT				WP = WORKPLACE CR = COMMERCIAL/RETAIL				FX = FLEX/INDUSTRIAL LR = LARGE RETAIL														
USE CATEGORY	USE TYPE [2]	R-2		R-3		R-5		RMX		RMX-MH		TND-C		NMX		CMX		HB		VC		TC		GI		EI		PC-C		ADDITIONAL REQUIREMENTS
		USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	
Restaurant	Restaurant without Drive-Through Service							C	SF			C	SF	P	SF WR	P	SF WP CR	P	SF WP CR	C	CV SF WP	P	CV SF WP					P	CV SF WP	5.3.3 (7)
	Restaurant with Drive-Through Service													C	SF WP	P	SF WP CR	P	SF WP CR					C	WP CR			C	CV SF WP	5.3.3 (7)
Retail Sales and Services	Bar, Nightclub, or Similar Establishment											C	SF			C	CV SF	P	SF WP CR	C	SF WP	C	SF WP	C	WP CR					5.3.3 (8) (A)
	Crematory																	C	CV WP					C	WP	C	CR WP			
	Retail/Service Use with Gasoline Sales											P	SF WP	C	SF CR	P	SF CR	P	SF CR	C	CV SF WP	C	CV SF WP	C	WP CR			C	WP CR	5.3.3 (8) (B)
	Type I Retail Use							C	DH AR SF	C	DH AR SF	P	DH AR SF WP	P	DH AR CV SF	P	DH AR CV SF WP	P	DH AR CV SF WP CR	P	DH AR CV SF	P	DH AR CV SF	C	SF WP			P	SF WP	5.3.3 (8) (D)

The Rules That Shape Urban Form

Mooreville NC



Commercial/Retail



Workplace

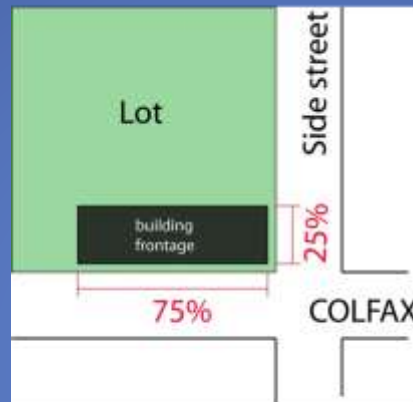
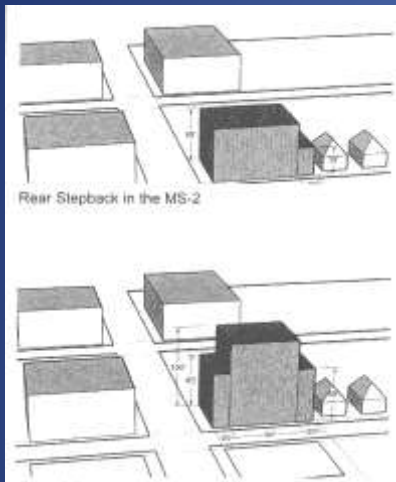


Shopfront

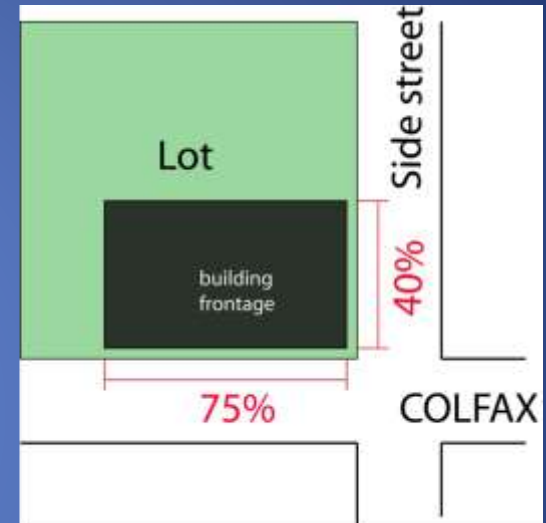
TABLE 5.1.4: TABLE OF ALLOWED USE																	
ALLOWABLE BUILDING FORMS																	
DH = DETACHED HOUSE				AR = ATTACHED RESIDENTIAL								CV = CIVIC					
MA = MANSION APARTMENT				NA = NOT APPLICABLE								SF = SHOPFRONT					
USE CATEGORY	USE TYPE [2]	R-2		R-3		R-5		RMX		RMX-MH		TND-C		NMX		CMX	
		USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM
Restaurant	Restaurant without Drive-Through Service							C	SF			C	SF	P	SF WP	P	SF WP CR
	Restaurant with Drive-Through Service													C	SF WP	P	SF WP CR
Retail Sales and Services	Bar, Nightclub, or Similar Establishment											C	SF			C	CV SF
	Crematory																
	Retail/Service Use with Gasoline Sales											P	SF WP	C	SF CR	P	SF CR
	Type I Retail Use							C	DH AR SF	C	DH AR SF	P	DH AR SF WP	P	DH AR CV SF	P	DH AR CV SF WP

The Rules That Shape Urban Form

Denver Main Street



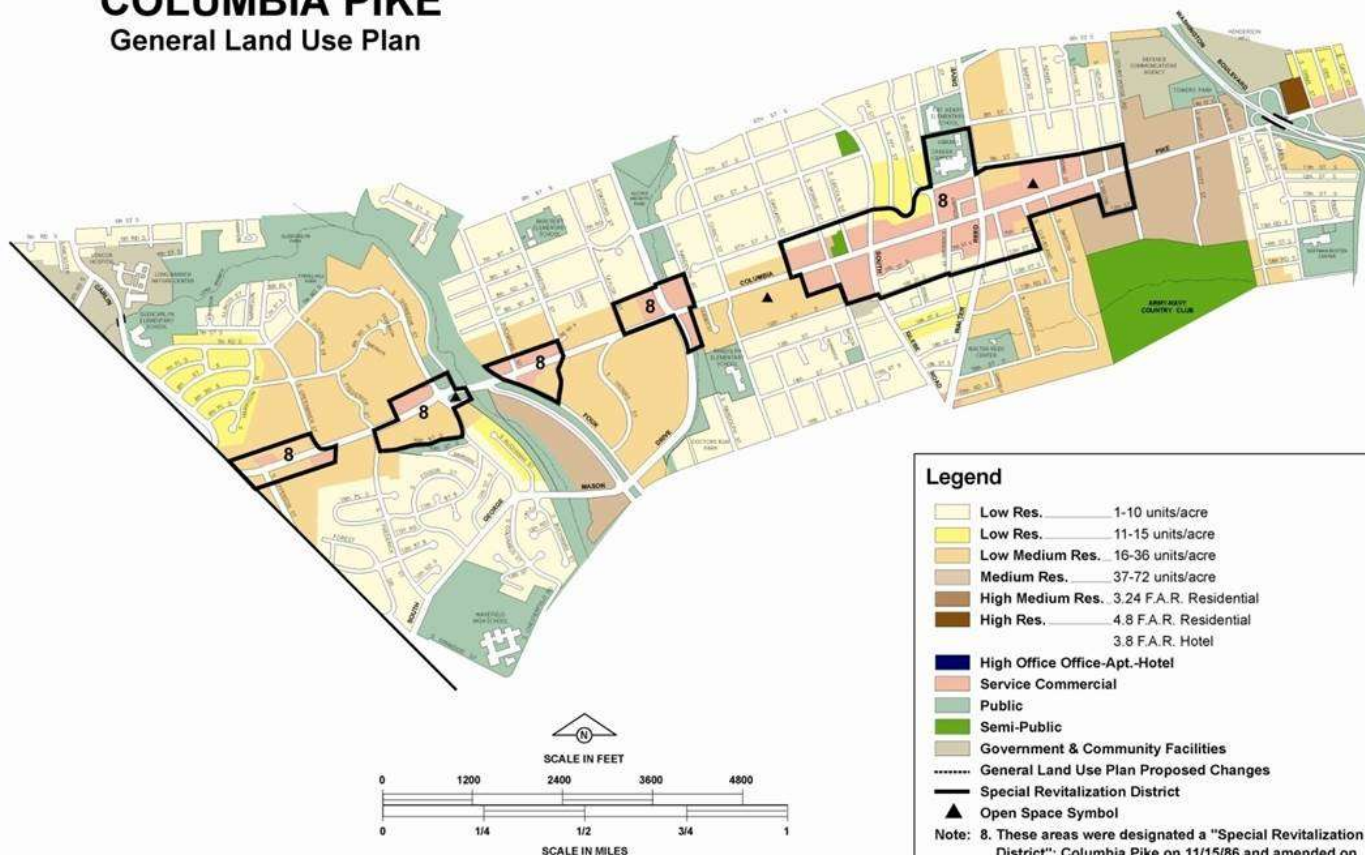
MS-1 & MS-2



The Rules That Shape Urban Form

Arlington County VA Columbia Pike

COLUMBIA PIKE General Land Use Plan



The Rules That Shape Urban Form

Arlington County VA Columbia Pike

Very Detailed Standards

- Blocks and Alleys,
- Streetscape,
- Parking,
- Retail,
- Historic Preservation,
- Public Improvements, and
- Buildings



- Height,
- Use Requirements,
- Building Placement,
- Building Elements,
- Architecture



- Building
- Walls
- Roofs and Parapets
- Street Wall Required
- Windows and Doors
- Lighting
- Signage
- Mechanical Equipment



The Rules That Shape Urban Form

Livermore CA Hybrid Code

Smart Code Structure for
Entire Mandatory Code

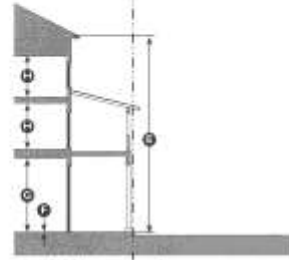
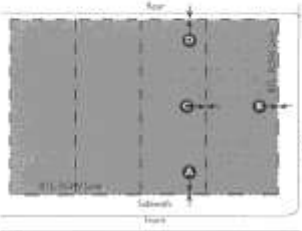
Form controls only for T3
and T4 areas

Form controls apply to
<5% of land

Remainder left in
traditional /PUD zoning

3.02.110
T4 Main Street (T4MS) Standards

Transect Zones



Key

- RDW / Property Line
- Built-to Line (BTL)
- Building Area

C. Building Placement

Build-to Line (Distance from RDW / Property Line)	
Front ^{1,2}	0'
BTL defined by facade	100% min.
Side Street ^{1,2}	0'
BTL defined by facade	30% or 50' min. for buildings deeper than 50'

Setback (Distance from RDW / Property Line)

Side	0' min.
Rear	0' min.

¹ On cross-slope lots the BTL may be set 12' back from property line when using a Terrace Shopfront frontage.

² BTL set 12' back from property line when using a Gallery frontage.

Miscellaneous

- Street facades must be built to BTL along first 30' from every intersection, except for chamfered corners up to 10' in width and depth.
- Entire BTL must be defined by a building or a 20" to 36" high decorative fence or stucco or masonry wall, except for entry ways, driveways and walkways.
- Distance between
Main Buildings on same lot
0' or 8' min.

D. Building Form

Lot Size	
See Part 5 (Building Types).	

Height

Main Building ¹	3 stories max. up to 35' to eave/parapet ²
Ground Floor Finish Level	6" max. above sidewalk ³
Ground Floor Ceiling	14' min. clear ⁴
Upper Floor(s) Ceiling	8' min. clear ⁴

¹ Does not apply to accessory structures. See 4.02.010 (Accessory Structures).

Footprints

Ground-floor Commercial/Residential space along primary street frontage shall have a minimum depth of 40', including vertical circulation and parking.

Miscellaneous

- 50' max. distance between ground floor stories.
- All floors must have a primary entrance along the front facade or to a courtyard.
- No glazing strip allowed between sidewalk and building.
- Boarded roof forms are not allowed.

The Rules That Shape Urban Form

Miami 21

R U R A L							
T1 T2 T3 T4 T5 T6-7 T8-9							
LOT DECOMPOSITION							
a. Lot Area			1,300 s.f. min.	1,400 s.f. - 20,000 s.f. **	1,200 s.f. - 40,000 s.f. **	5,000 s.f. min. 40,000 s.f. max. **	5,000 s.f. min. 70,000 s.f. max. **
b. Lot Width			50 ft. min.	16 ft. min. / 30 ft. min. **	16 ft. min. / 50 ft. min. **	50 ft. min.	50 ft. min.
c. Lot Coverage			30% max. 1st Floor 30% max. 2nd Floor for T3 ft. & T3, only	60% max.	60% max.	80% max. **	80% max. **
d. Floor Lot Ratio (FLR)						8	8
e. Percentage of Front Setback				50% min.	60% min.	70% min.	70% min.
f. Green / Open Space Requirements			25% Lot Area min.	10% Lot Area min.	10% Lot Area min.	10% Lot Area min.	10% Lot Area min.
g. Density			8-18 du/acre max. **	36 du/acre max.	60 du/acre max.	150 du/acre *	150 du/acre *
BUILDING SETBACK							
a. Principal Front			30 ft. min.	10 ft. min.	10 ft. min.	10 ft. min.	10 ft. min.
b. Secondary Front			10 ft. min.	10 ft. min.	10 ft. min.	10 ft. min.	10 ft. min.
c. Side			5 ft. min. **	5 ft. min. / 5 ft. min. **	0 ft. min. **	5 ft. min. **	5 ft. min. **
d. Rear			20 ft. min.	20 ft. min.	0 ft. min. **	0 ft. min. **	0 ft. min. **
OUTBUILDING SETBACK							
a. Principal Front			30 ft. min. (T3 L only)	30 ft. min.			
b. Secondary Front			10 ft. min. (T3 L only)	10 ft. min.			
c. Side			5 ft. min. (T3 L only)	0 ft. min. / 5 ft. min.			
d. Rear			5 ft. min. (T3 L only)	5 ft. min.			
RESIDENT FRONTAGES							
a. Common Lawn			permitted	permitted	prohibited	prohibited	prohibited
b. Porch & Awning			permitted	permitted	prohibited	prohibited	prohibited
c. Terrace on L.C.			prohibited	permitted	prohibited	prohibited	prohibited
d. Fences			prohibited	permitted	permitted	permitted	permitted
e. Sign			prohibited	permitted	permitted	permitted	permitted
f. Driveway			prohibited	permitted (T4 L, T4 Q)	permitted (T5 L, T5 Q)	permitted (T6 L, T6 Q)	permitted (T8 L, T8 Q)
g. Gallery			prohibited	prohibited	permitted **	permitted **	permitted **
h. Arcade			prohibited	prohibited	permitted **	permitted **	permitted **
BUILDING HEIGHT (Stories)							
a. Principal Building			2 max.	3 max.	2 max. 5 max.	2 max. 8 max.	2 max. 12 max.
b. Outbuilding			2 max.	2 max.			
c. Overall Height						4 max. **	8 max. **
* Abating T6, T8 & T4 only							24 max. **

The Rules That Shape Urban Form

The Take-aways

	Austin	Mooreville	Denver MS	Arlington	Livermore	Miami
Building Types						
Frontage Types						
Public Space Standards						
Block & Subdivision						
Regulating Plans						
By Right Development						

The Rules That Shape Urban Form

The Take-aways



The Rules That Shape Urban Form

Form-based controls and other planning goals

- Sustainability
- Demographic change
- Housing affordability
- Historic preservation



The Rules That Shape Urban Form

The Take-aways on Sustainability

FIVE KEY TARGETS FOR SUSTAINABLE ZONING					
Key Form-Based Tools	Air Emissions / Climate Change	Energy, Conservation, and Renewable Energy	Water Conservation	Urban Agriculture	Walkability/ Public Health
Building Types / Standards	●	●	○	○	●
Frontage Types / Standards	◎	◎	○	○	●
Public Space Standards	◎	◎	○	◎	●
Block and Subdivision Standards	◎	◎	○	○	●
Regulating Plans	◎	◎	○	○	◎
Administration	○	○	○	○	○
<p>● = Potentially significant contribution</p> <p>◎ = Moderate or mixed contribution (e.g., impacts in more dense areas may be offset by impacts in other areas)</p> <p>○ = Little impact or no different than nonform-based controls</p>					

The Rules That Shape Urban Form

Demographic Change

- Average age increasing
- Household size decreasing
- Ethnic diversity increasing
- Multi-generational households increasing



The Rules That Shape Urban Form

The Take-aways on Demographic Change

- **Forms Help Sell Good Planning.** Form-based controls can help “sell” the acceptability of small lot detached, attached, and multifamily building forms needed to address the growing number of smaller households, and aged households
- **Don’t Define Forms Narrowly.** Be careful to define the forms and standards broadly enough to allow the types of specialized facilities (nursing homes, assisted care facilities, small hospitals, and social services facilities) needed to serve an aging and potentially poorer population
- **Don’t Lock in Bad Forms.** Form-based controls based on current urban fabric can wind up “locking in” dispersed large lot single-family areas and make it harder for them to densify as needed to allow older families to age in place

The Rules That Shape Urban Form

Housing Affordability

Average market prices of housing have been rising faster than average wages for 50 years

- % of income spent on rent
1960= 19% → 2005 = 29%
- % of households spending more than 30% of income on housing
1960 = 29% → 2005: 49%



The Rules That Shape Urban Form

The Take-aways on Housing Affordability

- **Forms Help Sell Good Planning.** Form-based controls can help “sell” the acceptability of small lot detached, attached, and multifamily building forms needed to address the growing demand for affordable
 - and making low-density detached building forms unavailable in denser areas may prevent use of prime sites for less affordable housing types
- **Don't Forget Bonuses.** Don't remove height bonuses necessary to allow affordable builders to compete with market rate builders
- **Don't Lock in Bad Forms.** Form-based controls based on current urban fabric can wind up “locking in” dispersed large lot single-family areas and make it harder for them to densify as needed to meet affordable housing demand

The Rules That Shape Urban Form

The Take-Away

Not surprisingly, some elements of form-based controls can help achieve planning goals related to sustainability, affordability, and demographic change

...

While others perform no better than traditional controls

Be careful of locking in patterns and densities that will prevent the evolution and densification of lower-density neighborhoods over time – unless you really want that

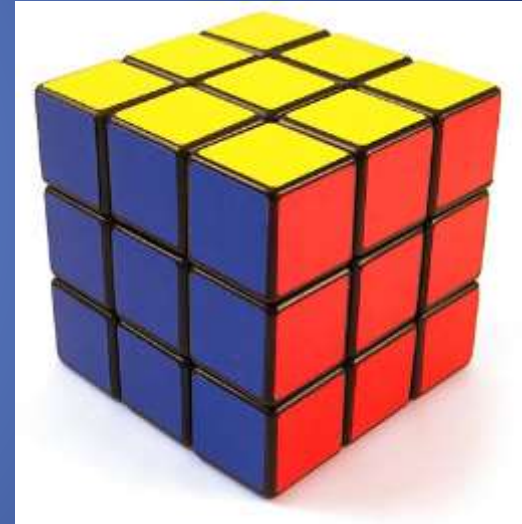
The Rules That Shape Urban Form

Remember to “Unpack” the Idea . . .
And then Take the Parts You Need



The Rules That Shape Urban Form

Remember to “Unpack” the Idea . . .
And then Take the Parts You Need



Six Questions to Consider Before Preparing Form Regulations...

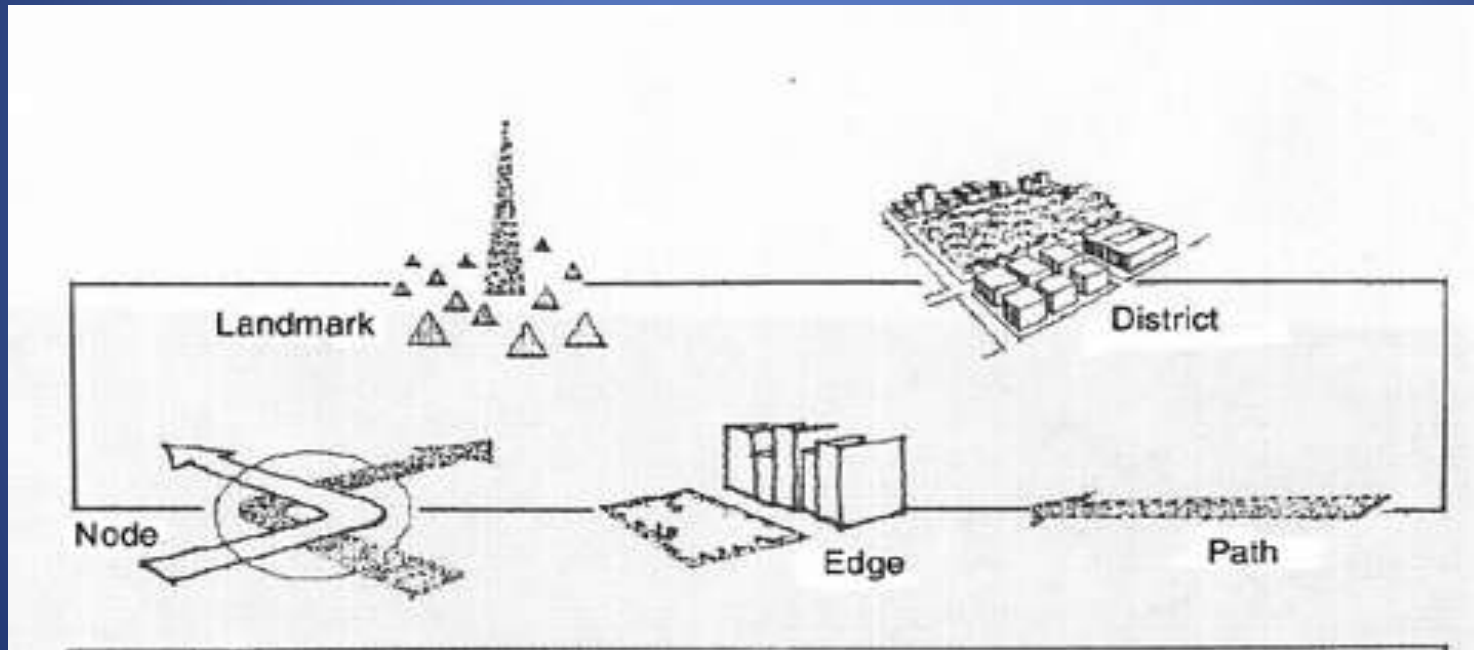


1. Will the form controls cover the entire community, or just certain areas?



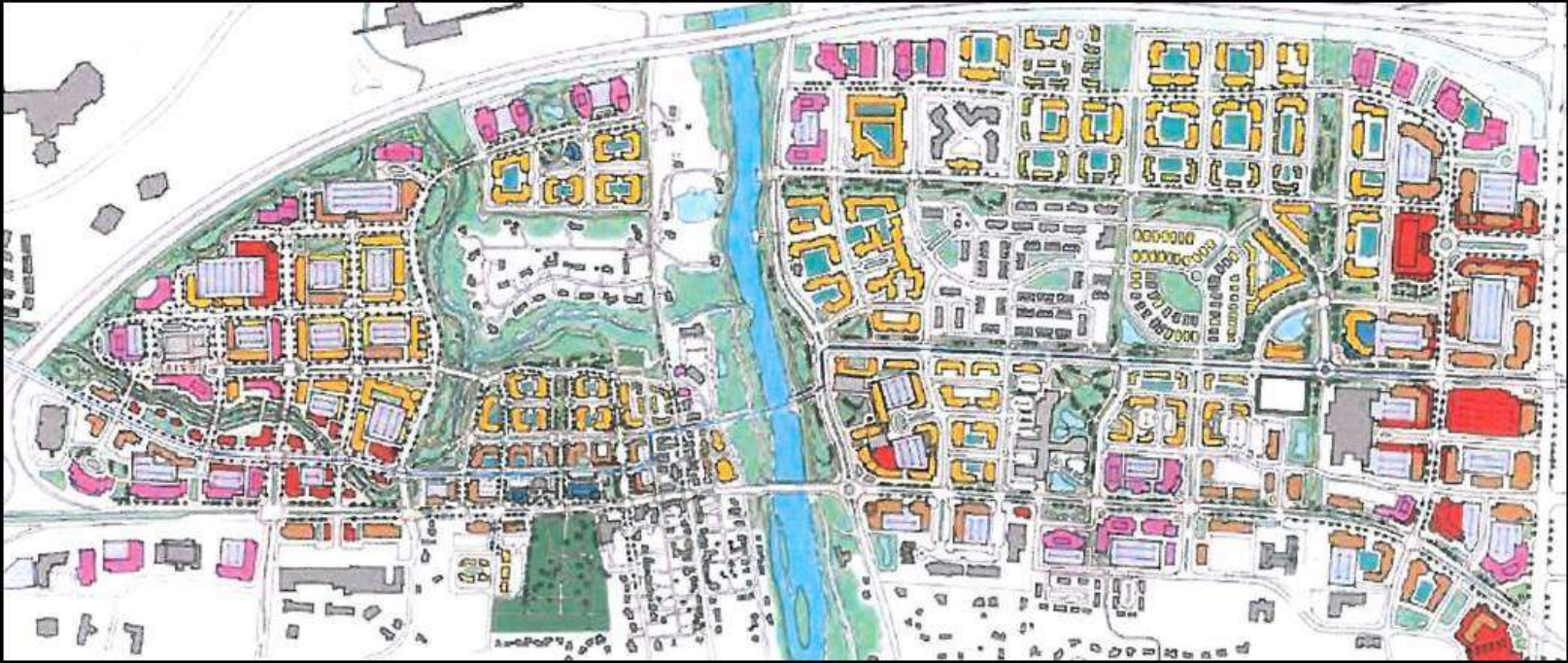
1. Will the form controls cover the entire community, or just certain areas?

Kevin Lynch's Key Elements in How we Understand Cities

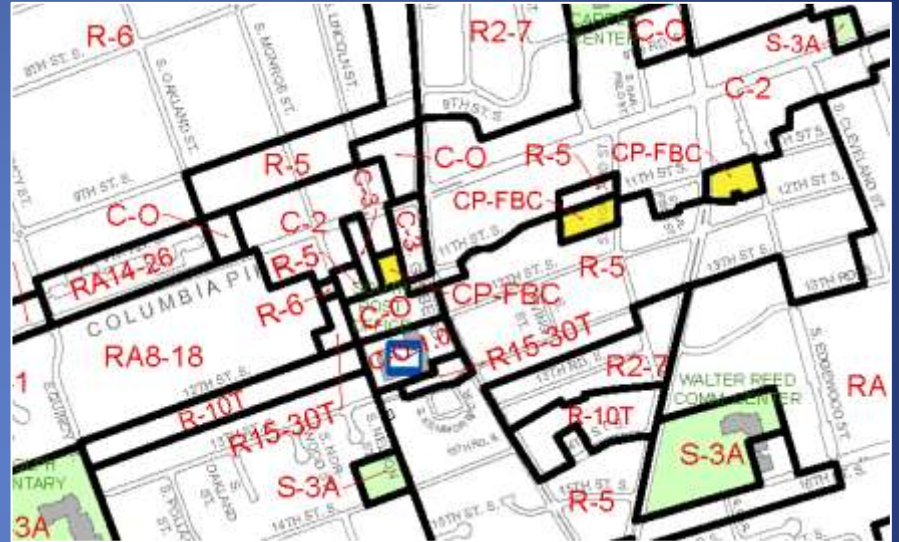


There are “Places” and “places”
– and many “places” do not need form-based controls

2. If it applies to only a specific area, is there a plan for that area?



- Is the plan more than a drawing?
- Be careful of locking in too much detail
 - Life never turns out like the picture on the box
 - Lots of unanticipated events will take place before buildout
 - How much detail do you need to make the place a success



Many current codes are optional (parallel codes or floating zones)

- Mandatory codes may be harder to adopt
- Optional codes may make administration harder
- Both can be effective

4. Are the regulations for:

Greenfield sites?

- If one owner or cooperating owners, good to go
- Really a more disciplined PUD

Major redevelopment sites?

- If one owner or cooperating owners, you're lucky
- Watch out for proposals to reinvent street patterns – they often require re-subdivision, relocation of utilities, money. Will the new controls apply until the new streets are in place

Small infill redevelopment sites over time?

- Don't make the current owners nonconforming
- Assume random timing/location of individual projects
- Don't require neighbors to prepare a joint regulating plan before proceeding

5. Will the form-based tools be “contextual” or “prescriptive”?



Knowing the answer makes the job easier
– and more transparent

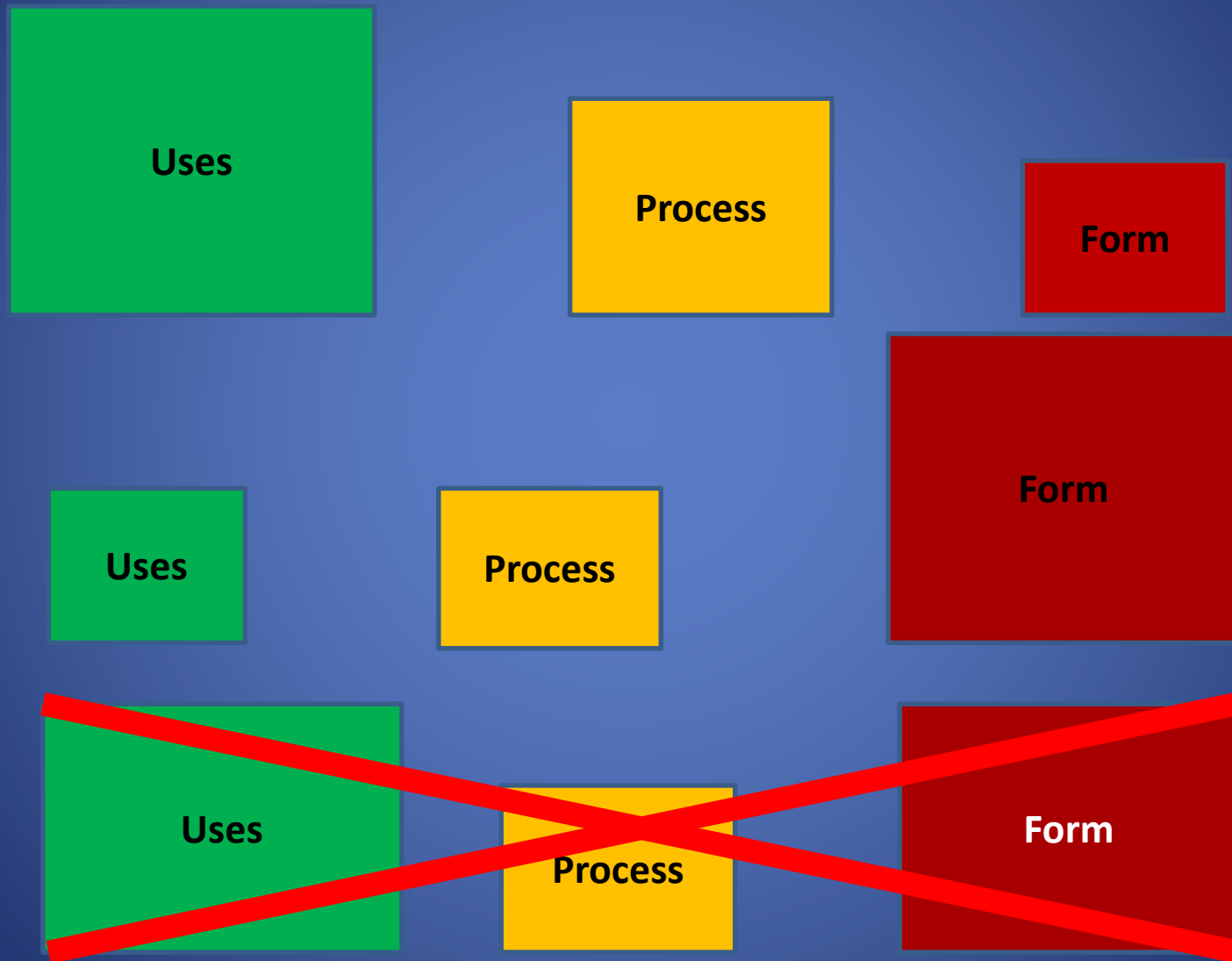
Some benefits will depend on the answer

6. How will you treat existing development that doesn't meet the standards?



- “The greenest building is the one that has already been built”
- DON'T put them in “zoning parole” -- nonconformities

Remember to Lighten Up on Use Controls



Form-based Zoning Grows Up

Questions?

