

# LEAN CODE TOOL

INCREMENTAL ZONING REPAIR

S

M

L

XL

the project for

**LEAN**  
**URBANISM**  
MAKING SMALL POSSIBLE

[leanurbanism.org](http://leanurbanism.org)

# LEAN CODE TOOL

INCREMENTAL ZONING REPAIR

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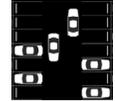
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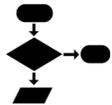
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Learn about Lean Urbanism and how to enable it by making strategic repairs to your code. **p. 4**



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Reduce barriers to walkability and economically viable development. **p. 25**



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Create processes that are efficient and encourage small-scale development. **p. 10**



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Clarify the code, allow uses that create good places, and employ proper controls. **p. 30**



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Set reasonable standards to enable affordable, walkable places. **p. 18**



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Reduce the complications of sign ordinances. **p. 36**



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Allow infill on more sites and increase safety and walkability. **p. 22**



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Set standards that reduce expenses for small projects and create streets that make good places. **p. 38**

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# INTRODUCTION

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## WHAT IS LEAN URBANISM?

Lean Urbanism is an international campaign to facilitate small-scale economic development and enable neighborhood revitalization. The Project for Lean Urbanism is dedicated to “Making Small Possible” by providing tools and technical assistance to level the playing field for small projects, allowing more people to participate in building their homes, businesses, and communities. Unleashing the power of small actors and small projects enables community-driven growth and revitalization, with residents and business owners not only participating in but also leading and benefiting from the efforts.

Placing the same requirements on projects of different scales creates disproportionate burdens for the smaller projects. **Zoning codes** are the most frequent source of such burdens on small-scale development. Reducing or removing those burdens requires **overhauling** or **repairing** the zoning code and its administration.

For municipalities that wish to overhaul their zoning codes, the [Center for Applied Transect Studies](#) provides the [SmartCode](#), a free, Transect-based, model zoning code to calibrate for their localities. The SmartCode includes streamlined processes and a section to enable Lean urbanism.

But writing a new zoning code is time-consuming, fraught with political landmines, and unlikely to happen in most places. **This tool was created for municipalities that wish to repair their zoning codes — with a limited number of strategic revisions — to allow Lean Urbanism and improve or create walkable, livable environments.** It identifies a small number of issues that are frequent obstacles to Lean Urbanism, suggests strategies, and outlines a Lean process for experts or non-experts to incrementally repair their codes.

## KEY CONCEPTS

The goal for Lean code repair is not only **revitalization**, but also the creation of **affordable neighborhoods**. Lean Urbanism enables small developers, often residents themselves, to offer an array of **lower-cost housing options** for neighbors of varying income levels and stages of life. They also offer an array of **commercial spaces**, supporting local businesses. Lean Urbanism places particular emphasis on **walkability**. With streets that are pleasant and safe to walk, and with jobs and other daily needs accessible on foot, walkable places are not only more livable, but also help residents reduce transportation expenses, a major part of most household budgets.

When used for **Urban Infill [Ui]**, with small lots and existing infrastructure, Lean Urbanism benefits municipalities by generating higher tax revenues and lowering costs of services. When used for **Sprawl Repair [Sr]**, Lean Urbanism helps transform expensive sprawl into walkable, economically sustainable places.

## HOW TO USE THIS TOOL

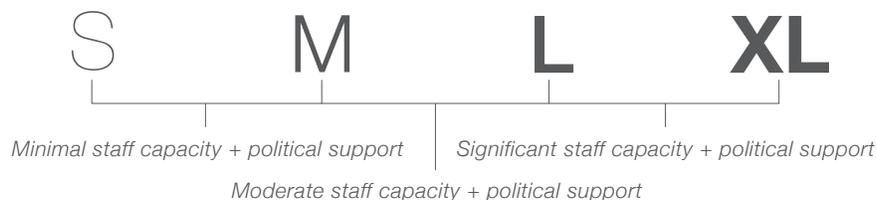
The Lean Code Tool focuses on the small number of zoning issues that are the most common and important for reducing barriers to small-scale development.

**The tool begins with a series of decision points that help the reader select the best strategies for incremental code repair.**

1. Does your comprehensive plan support infill and walkable urban places?

<b>YES</b>	<input checked="" type="checkbox"/>	<b>PROCEED</b>
<b>NO</b>	<input type="checkbox"/>	<b>SEE LEAN COMP PLAN TOOL</b>

2. What amount of staff capacity and political support is there for zoning repair?  
Each strategy in this tool is labeled with one of the following tags to identify the staff capacity and political support needed for its implementation.

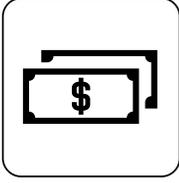


The Self Assessment Tool on the next page will help you consider what is needed for code repair and match capacity with appropriate strategies. Totals will range from 22 to 110. Higher totals suggest capacity and support to employ all the strategies, while lower scores suggest the use of S and M strategies. Transparent responses are critical to assuring the proper strategies are selected. Local governments who find accurate self-assessment difficult are advised to have outside advisors confirm the findings.

3. The Lean Code Tool organizes changes by urban context. Do you intend to incentivize **Urban Infill** or to implement **Sprawl Repair**? Match strategies with urban context using these tags.

**[Ui]**      **[Sr]**  
Urban Infill      Sprawl Repair

Finally, each strategy is tagged with the type of barrier it addresses:

	<b>REGULATORY BARRIER</b>
	<b>FINANCIAL BARRIER</b>
	<b>WALKABILITY BARRIER</b>

# CODE REPAIR CAPACITY SELF-ASSESSMENT TOOL

Higher totals: employ all strategies. Lower totals: strategies tagged S or M.

What can our community accomplish?		Strongly Agree	Neutral		Strongly Disagree	
		5	4	3	2	1
1	Repairing our code is likely to be UNcontroversial.					
2	We can confidently list the key individuals and groups likely to be supportive, neutral, and opposed to code repair of the type we're considering.					
3	We can anticipate topics that are likely to elicit agreement AND ones that are likely to expose conflicts among key groups and individuals who can influence outcomes of a code repair process.					
4	We can articulate the underlying values driving the perspective of individuals and groups who are supportive, neutral, and opposed to a code repair process like this one.					
5	We know who the stakeholders are who are affected by code repair or who have rights or powers related to making decisions about code repair.					
6	We can identify the most politically influential of the individuals and groups likely to weigh in on this process and understand the degrees of influence they enjoy.					
7	The stakeholders who are affected by this code repair are homogenous in their outlook (they agree with each other).					
8	The stakeholders who have rights or powers related to making decisions about code repair are homogenous in their outlook.					
9	Different stakeholder groups affected by this code repair have similar levels of power and resources.					
10	Stakeholders who are affected by this code repair have access to the power structure; they already participate in planning politics.					
11	Our community has successfully implemented a change of this magnitude in the last five years.					
12	Networks in our community (neighborhoods, business groups, etc.) have a history of reaching agreement and working together for effective planning.					
13	We know how to reach out to and converse with diverse networks, people, and organizations in our community.					
14	If asked, most people in community networks (neighborhoods, business groups, etc.) will say that they trust that the local government will work with them effectively.					
15	Elected officials and staff across departments who will implement results agree on what will constitute success for this code repair.					
16	Our government has successfully implemented projects that require cross-departmental cooperation in the last five years.					
17	Department heads can confidently predict how their bosses will react or what positions they will take.					
18	Government staff can confidently predict how elected officials will react or what positions they will take.					
19	Resources necessary to successfully implement a code change (staff training, funding, new staff) will be available at the time they are needed.					
20	A single entity can implement the code change.					
21	The sponsor has the legal authority to change the code.					
22	People generally agree that the sponsor has the right to change the code.					
Totals						

## LEAN CODE REPAIR CHECKLIST

Use this checklist to track the strategies chosen for code repair, to quickly review the barriers, capacity, and context for each, and to make notes such as responsible parties.

✓ 1.0 Procedures	Barriers	Capacity	Context	Notes	
1.1	Adjust regulations for nonconforming buildings and uses	 	S	[Ui]	
1.2	Adopt the International Existing Building Code	 	S	[Ui] [Sr]	
1.3	Provide design assistance		S	[Ui]	
1.4	Improve application and review processes		S	[Ui] [Sr]	
1.5	Consolidate and right-size application fees	 	M	[Ui] [Sr]	
1.6	Simplify small subdivisions	 	M	[Ui] [Sr]	
1.7	Provide clear and objective standards		L	[Ui] [Sr]	
1.8	Eliminate subjectivity in design review guidelines		L	[Ui] [Sr]	
1.9	Create subdivision standards for walkable, mixed-use districts	  	L	[Ui] [Sr]	
1.10	Set development thresholds	 	L	[Ui]	
1.11	Craft by-right standards		L	[Ui] [Sr]	
1.12	Revise impact fees	  	<b>XL</b>	[Ui] [Sr]	

✓ 2.0 Urban Form	Barriers	Capacity	Context	Notes	
2.1	Do not require a minimum number of stories	  	S	[Ui] [Sr]	
2.2	Amend setback regulations	  	S	[Ui] [Sr]	
2.3	Require parking to be in proper locations		M	[Ui] [Sr]	
2.4	Provide separate standards for pedestrian streets and access streets	 	M	[Ui]	
2.5	Remove or reform FAR		L	[Ui] [Sr]	

✓ 3.0 Site Development	Barriers	Capacity	Context	Notes	
3.1	Reform vehicular site access standards		S	[Ui] [Sr]	
3.2	Eliminate or right-size requirements for minimum lot sizes		M	[Ui] [Sr]	
3.3	Eliminate buffer requirements in mixed-use districts	  	M	[Ui] [Sr]	

## LEAN CODE REPAIR CHECKLIST

✓ 4.0 Parking		Barriers	Capacity	Context	Notes
4.1	Reduce minimum sizes of parking stalls and aisles	 	S	[Ui] [Sr]	
4.2	Enable shared parking	 	S	[Ui] [Sr]	
4.3	Reduce parking requirements	  	M	[Ui]	
4.4	Count on-street parking	 	M	[Ui] [Sr]	
4.5	Eliminate or reduce minimum parking requirements	 	<b>XL</b>	[Ui] [Sr]	

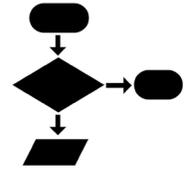
✓ 5.0 Use		Barriers	Capacity	Context	Notes
5.1	Permit residential uses on ground floors in urban districts	  	S	[Ui]	
5.2	Permit mixed uses in urban districts, but do not require them	 	S	[Ui] [Sr]	
5.3	Permit non-hazardous, small-scale manufacturing and light industrial in mixed-use districts	 	S	[Ui] [Sr]	
5.4	Simplify how the code describes allowable uses of land		M	[Ui] [Sr]	
5.5	Expand allowances for home occupation and live/work units		M	[Ui] [Sr]	
5.6	Reduce requirements for change of use	  	L	[Ui] [Sr]	
5.7	Coordinate zoning use categories with the International Building Code (IBC)		L	[Ui] [Sr]	
5.8	Remove or revise density restrictions	  	<b>XL</b>	[Ui] [Sr]	

✓ 6.0 Signage		Barriers	Capacity	Context	Notes
6.1	Permit signs by right.		S	[Ui] [Sr]	
6.2	Simplify sign requirements		M	[Ui] [Sr]	

✓ 7.0 Transportation		Barriers	Capacity	Context	Notes
7.1	Reduce minimum widths of travel and parking lanes	 	M	[Ui] [Sr]	
7.2	Use Effective Turning Radius	 	M	[Ui]	
7.3	Revise clear sight triangles in urban conditions	  	L	[Ui] [Sr]	
7.4	Reduce traffic impact study requirements	 	L	[Ui] [Sr]	
7.5	Adopt the UC Davis Trip-Generation Adjustment Tool for mixed-use areas		<b>XL</b>	[Ui] [Sr]	

# 1

# PROCEDURES



Regulatory processes are often complicated, confusing, time-consuming, and unpredictable. This is especially burdensome for small projects and novice developers. This section focuses on changes to procedures to encourage Lean Urbanism and walkability.

## NON-CONFORMING

### 1.1 Adjust regulations for nonconforming buildings and uses

#### BARRIER



#### CAPACITY



#### CONTEXT



#### SITUATIONS:

- Standards for nonconforming buildings or uses can be burdensome, particularly for small projects.

#### STRATEGIES:

- Rewrite the nonconforming section of the zoning code to remain strict on nuisances but more lenient on improvements and adaptive reuse.

#### DISCUSSION:

Existing buildings are important resources to any community, particularly for small-scale economic development. Zoning regulations that govern ‘nonconformities’ often do unwitting damage to this resource. When zoning regulations or districts are changed, existing buildings may not meet the new standards. These buildings often cannot be expanded or their uses cannot be changed without coming into full compliance with the new standards. In other cases, expansions are limited to an arbitrary dollar amount or percentage of value.

These regulations should be written to minimize the effects of nonconformity except where buildings or their uses are offensive or true nuisances. Simple strategies include increasing the amount of allowable improvements to nonconforming buildings and providing clear criteria that authorize further improvements if they bring buildings closer into compliance. For example, a building may not meet a build-to line maximum, but an addition that moves closer to the required build-to line would be permitted.



## 1.2 Adopt the International Existing Building Code

### BARRIER



### CAPACITY

S M L XL

### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Building codes designed for new construction are misapplied to renovations of existing buildings.

#### STRATEGIES:

- Adopt the International Existing Building Code (IEBC).
- Amend the IEBC to reduce barriers when changing uses.

#### DISCUSSION:

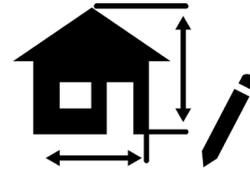
When renovating existing buildings, requirements of the International Building Code often cause unnecessary financial barriers because of code requirements that cannot physically be met. This can make older buildings liabilities rather than assets. To address the special needs of older (but not necessarily truly historic) buildings, the International Existing Building Code can be adopted. This simple option is often overlooked even in communities that need it the most.

During the adoption process, cities should adjust the definition of buildings of historic value to address their own situations. For instance, if adaptive reuse of mid-century buildings is desired, buildings of historic value could include all structures built prior to 1970.

Adjustments can also be made to ease changes in use; adaptive reuse is often the saving grace for older buildings.

#### REFERENCES:

- International Codes Council: <http://www.iccsafe.org/>  
 2018 IEBC: <https://codes.iccsafe.org/content/IEBC2018>  
 City of Phoenix Adaptive Reuse Code: <https://www.phoenix.gov/pddsites/Pages/pddarp.aspx>



## 1.3 Provide design assistance

### BARRIER



### CAPACITY

S M L XL

### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Regulations may not explain the city's goals for new buildings.
- The application process is complicated for applicants.

**STRATEGIES:**

- Trained staff or an on-call urban designer assist applicants in understanding how the city’s code and vision could apply to their properties.
- Applicants who use these services are rewarded with expedited permitting.

**DISCUSSION:**

A city’s goals are often not apparent from reading detailed code documents. Infill and redevelopment can be complicated. Where these are important priorities, a city can provide formal or informal design services. Developers who use these services these services should qualify for expedited processing of their applications. Reducing missteps can save time and money for all parties while assisting in the realization of the municipality’s vision.



**1.4 Improve application and review processes**

**BARRIER**

**CAPACITY**

S M L XL

**CONTEXT**

[Ui] [Sr]

**SITUATIONS:**

- Applicants submit applications without knowing whether their projects satisfy the numerous requirements of dispersed

departments, and often need to make changes during the reviews.

- There is no cross-departmental review process.
- The application and review processes are not described graphically.

**STRATEGIES:**

- Offer pre-submittal meetings with all departments present to discuss plans, application requirements, and review processes.
- Provide a checklist of required application materials for all departments.
- Establish a cross-departmental review process.
- Provide a graphic representation of the application and review processes, including submittals, departments, review periods, fees, and approval process.

**DISCUSSION:**

The various requirements for zoning codes, building codes, fire codes, site development, public works, transportation, and other departments can be difficult to identify, much less to satisfy, particularly if the requirements contradict each other. This is an especially heavy burden for novice developers or those without the resources to hire consultants.

Many cities require applicants to submit applications without knowing whether their projects satisfy the numerous standards, requiring multiple rounds of changes to the application during the reviews. This added time, cost, and complication are especially difficult for small projects to bear.

This burden can be greatly reduced by offering pre-submittal meetings with representatives from all relevant departments, who can answer questions, point out potential stumbling blocks, direct applicants to additional requirements, and avoid problems that could lead to denied applications.

Many cities put applicants in awkward positions when different departments have separate review processes. Sometimes city departments disagree on an application; in other cases, one department may not review applications on a timely basis. Cross-departmental review committees can resolve these problems. Applicants should not be expected to mediate interdepartmental disputes or face unnecessary delays after submitting applications.

Application review processes are often complicated and unclear. Complicated processes are a burden to applicants who must invest additional time and money into the review process rather than in the development project. This can be eased with the creation of a checklist for application materials and fees and a graphic flowchart of the departments, review process, and timeline.



### 1.5 Consolidate and right-size application fees

**BARRIER**

**CAPACITY**

S M L XL

**CONTEXT**

[Ui] [Sr]

- Application fees are separated by department, trade, or other means, causing confusion and multiple payments.

- Fees do not vary by project size, placing a disproportionate burden on smaller projects.

#### STRATEGIES:

- Consolidate all department-specific fees into a single fee per application.
- Scale application fees by project size.

#### DISCUSSION:

Application review and permitting fees should be clear and easily accessible, however they are often difficult to find and obscure in their organization. All fees should be made available in a single location that is well organized and publicly accessible. Make fees proportional to project size to remove the penalty for small projects. Fees should be adjusted to reflect the policies of the community. If urban infill and sprawl repair is a priority, fees in those environments should be less.



### 1.6 Simplify small subdivisions

**BARRIER**

**CAPACITY**

S M L XL

**CONTEXT**

[Ui] [Sr]

#### SITUATIONS:

- State legislation permits abbreviated processes for minor subdivisions, but the city's subdivision processes do not provide an abbreviated path.

**STRATEGIES:**

- Amend regulations to provide an abbreviated process for small subdivisions in coordination with state legislation.

**DISCUSSION:**

Some state legislation permits the subdivision of small properties or a limited number of lots through an abbreviated, and often administrative process. Where this is available, the process should be included in municipal subdivision ordinances and those ordinances simplified for urban conditions.

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**1.7 Provide clear and objective standards**

**BARRIER**



**CAPACITY**

S M L XL

**CONTEXT**

[Ui] [Sr]

**SITUATIONS:**

- Code provisions are written in paragraph format, obscuring the regulations.
- Details of code provisions are not listed in numeric or bulleted lists.
- Regulations and guidelines are mixed in regulatory documents.
- Regulations require interpretation from municipal officials.

**STRATEGIES:**

- Consider following Federal Plain Language Guidelines in rewriting regulatory documents.
- Rewrite regulations based on objective criteria.

**DISCUSSION:**

Complex and obscure regulations narrow the field of developers to those very familiar with the local process and code or projects with budgets large enough to afford to hire consultants. Applicants unfamiliar with the codes are unable to easily determine what can be built without spending time and money interpreting difficult code language. This is particularly difficult for first-time developers, who are likely to do small-scale projects.

These discretionary decisions stifle small-scale development and perpetuate the current condition. Achieving clear and objective standards may be difficult in places where power is derived through obscurity and subjective judgment, so political support is crucial.

**REFERENCES:**

Federal Plain Language Guidelines:  
<https://plainlanguage.gov/guidelines/>

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**1.8 Eliminate subjectivity in design review guidelines**

**BARRIER**



**CAPACITY**

S M L XL

**CONTEXT**

[Ui] [Sr]

**SITUATIONS:**

- Applicants are subject to zoning and development regulations as well as design guidelines addressing style, specific site conditions, and other conditions not directly regulated by zoning.

**STRATEGIES:**

- Eliminate subjectivity in design review guidelines. While design guidelines may be appropriate in some situations, such as historic districts, the requirements should be clear and objective.

**DISCUSSION:**

Because state enabling legislation limits municipal power in zoning, many places rely upon guidelines as part of design review processes. Due to the discretionary nature of most guidelines, they tend to create an unpredictable development environment. Complexity and unpredictability are major burdens and limit the development community to those players who have experience in the system and political connections. Any requirements should be clear, concise, and not exposed to negotiation.



**1.9 Create subdivision standards for walkable, mixed-use districts**

**BARRIER**



**CAPACITY**



**CONTEXT**



**SITUATIONS:**

- Subdivision regulations do not differentiate between suburban districts and rural, urban or mixed-use districts.

**STRATEGIES:**

- Create a separate set of subdivision requirements for compact, walkable zoning districts.

**DISCUSSION:**

Subdivision requirements often introduce unintended complications in compact, walkable conditions because they are written for suburban contexts. When subdividing property in mixed-use districts, applicants may be confronted with suburban street requirements, utility requirements, buffering, and other inappropriate standards.



**1.10 Set development thresholds**

**BARRIER**



**CAPACITY**



**CONTEXT**



**SITUATIONS:**

- Development and redevelopment is subject to one set of standards regardless of scale or scope.

**STRATEGIES:**

- Provide relief for small-scale redevelopment and adaptive reuse.

**DISCUSSION:**

Many regulations are oriented toward new development on large sites rather than reuse and small-site development, and standards are set for the effects of large developments. Thresholds of development should be established to clarify which standards apply to small lots.

Thresholds are a central theme of Lean Urbanism. One-size-fits-all standards disadvantage small projects because they must account for the largest possible impact and subject all to those standards.

Determine minimum thresholds where expensive standards may be avoided. For example, adaptive reuse may be permitted by right. This strategy requires coordination for determination of threshold standards and adjustments.

**REFERENCES:**

Tigard Triangle Lean Code: [http://www.tigard-or.gov/tigard\\_triangle.php#leanCode](http://www.tigard-or.gov/tigard_triangle.php#leanCode)  
Phoenix Adaptive Reuse Tiers: [https://www.phoenix.gov/pdds/site/Documents/TRT/dsd\\_trt\\_pdf\\_00390.pdf](https://www.phoenix.gov/pdds/site/Documents/TRT/dsd_trt_pdf_00390.pdf)



**1.11 Craft by-right standards**

**BARRIER**

**CAPACITY**

S M **L** XL

**CONTEXT**

[Ui] **[Sr]**

**SITUATIONS:**

- Planning boards and elected officials comment on and negotiate over by-right standards with applicants. This is especially burdensome for small projects.

**STRATEGIES:**

- Develop criteria for clear and objective by-right standards with levels of required review.

**DISCUSSION:**

There's an assumption in many local governments that by-right development still has a certain amount of discretion and administrative procedures can be a challenge. Develop by-right thresholds that include:

- **NO APPROVAL REQUIRED:** Very small projects such as interior changes, changes in use within the same category, and small, unheated projects like decks that are well within the permitted setbacks and lot coverage.
- **BUILDING PERMIT ONLY:** No zoning review required if in compliance with all lot requirements.
- **ADMINISTRATIVE REVIEW:** Allow administrative approval for projects that meet by-right standards. Set acceptable variances from by-right standards for small projects on issues such as lot size, lot coverage, setbacks, and parking, and allow administrative approval if they fall within those variances.



## 1.12 Revise impact fees

### BARRIER



### CAPACITY

S M L **XL**

### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Impact fees intended to fund new facilities in greenfield locations are also charged for projects in locations with existing facilities.
- Fees are set at average levels and applied to every case, putting a disproportionate burden on small projects.

#### STRATEGIES:

- **OPTION 1:** Remove impact fees for urban infill development where facilities already exist, and tier fees in greenfield locations according to size
- **OPTION 2:** Tier fees for all projects according to size.

#### DISCUSSION:

Impact fees are intended to fund new facilities needed because of growth in undeveloped areas. They are not intended to fund the maintenance of existing infrastructure, yet infill projects are often charged impact fees, even though the facilities are already in place. This adds expense to urban infill projects and subsidizes greenfield projects, which often has the effect of degrading walkability. The financial burden for small-scale

infill projects is compounded when they are charged the same fees as larger projects, despite their lesser impact. For example, when fees are applied to each residential unit, a small apartment is charged the same as a large house. This discourages both multi-family and small-scale development. In many places, impact fees have become an easy substitute for property tax increases. Charging impact fees for residential infill development also raises the cost of housing.

**Option 1** is preferable but more difficult because of the political support required. **Option 2** should be considered **M** rather than **XL** because it maintains the municipal revenue stream while recognizing that the impact of development is not one-size-fits-all.

#### REFERENCES:

[http://www.scholarsstrategynetwork.org/sites/default/files/ssn\\_basic\\_facts\\_trosper\\_and\\_burge\\_on\\_mitigating\\_urban\\_sprawl1.pdf](http://www.scholarsstrategynetwork.org/sites/default/files/ssn_basic_facts_trosper_and_burge_on_mitigating_urban_sprawl1.pdf)

<https://www.huduser.gov/portal/publications/impactfees.pdf>

# 2

# URBAN FORM



This tool addresses code repairs to improve urban form rather than advocating for an overhaul to a form-based code. Repair is easier and faster, and can build local capacity that may result in more substantial code reform over time.



## 2.1 Do not require a minimum number of stories

### BARRIER



### CAPACITY



### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Zoning code requires a minimum number of stories for buildings in a zone. This is common with pre-recession form-based codes for main street environments.

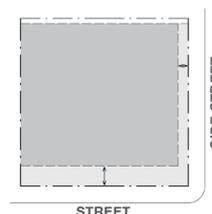
#### STRATEGIES:

- Remove minimum stories for buildings.

#### DISCUSSION:

Many form-based codes and urban planners require height minimums to ensure walkability and street enclosure, particularly in a main street condition. While this is aspirational, it is no longer considered a

best practice post-recession. Successional growth dictates that single-story structures will be redeveloped once there is sufficient market demand. Requiring multi-story structures where there is not sufficient market demand burdens landowners and may restrict development.



## 2.2 Amend setback regulations

### BARRIER



### CAPACITY



### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Front setbacks often specify minimums only; on large parcels, buildings can be any distance from the street, encouraging parking lots in front of buildings.
- In urban contexts, small front setbacks are

sometimes permitted but setback ranges or maximums are not specified.

- Minimum side and rear setbacks can also hinder redevelopment, particularly for urban infill on small lots, where they can prohibit the renovation or expansion of existing buildings or the construction of ADUs.

**STRATEGIES:**

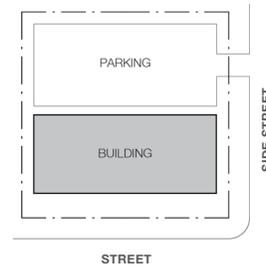
- Amend setback regulations, changing minimums to ranges that create the desired urban form.

**DISCUSSION:**

A minimum setback alone allows buildings to be unrelated to sidewalk and street activity. Setback ranges or maximum setbacks can ensure interaction between sidewalks and ground-floor uses.

Especially In walkable neighborhoods, buildings should be close to sidewalks to provide a relatively consistent street enclosure. This is especially important for mixed-use and commercial buildings. In walkable urban contexts, maximum front setbacks are often 12' (not applying to forecourts or terraces), but local observations should be used to set regionally appropriate maximums.

Even in non-pedestrian areas, maximum setbacks ensure that buildings have at least minimal relations with street activity.



### 2.3 Require parking to be in proper locations

**BARRIER**



**CAPACITY**



**CONTEXT**



**SITUATIONS:**

- Parking lots routinely separate buildings from sidewalks and streets.

**STRATEGIES:**

- Establish parking-location criteria that place parking behind buildings where possible, prohibit large parking lots between urban buildings and the street, and limit parking between suburban buildings and the street.
- Where alleys do not exist, consider permitting parking at the side of the building with a short wall or hedge to screen parked cars from the street.

**DISCUSSION:**

As explained in 2.2, excessive setbacks encourage parking lots in front of buildings. In addition to amending setback regulations, it is important to require parking to be in proper locations. This is a critical strategy to create walkability with sprawl repair and to preserve or restore it with urban infill. This is a good strategy

to use in conjunction with 4.5, eliminating parking requirements to enable urban infill.

These locational strategies are fairly simple to draft, but require political support to adopt.



## 2.4 Provide separate standards for pedestrian streets and access streets

**BARRIER**

**CAPACITY**

S M L XL

**CONTEXT**

[Ui] [Sr]

### SITUATIONS:

- All streets in an urban mixed-use district are held to the same high standards. This is more likely to occur in a form-based code because it prioritizes the design of frontages.

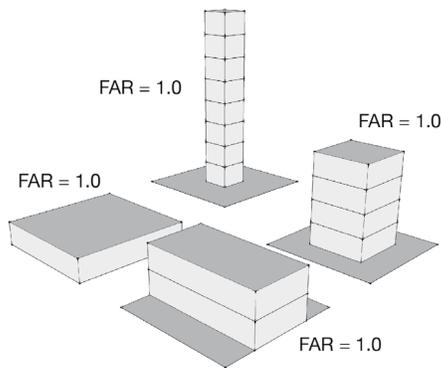
### STRATEGIES:

- Regulate pedestrian and access streets with two sets of standards. Pedestrian streets, or A-streets, have the highest walkability standards, and access streets, or B-streets, are permitted to accommodate access, deliveries, larger vehicles, and less urban formats.
- Access-street regulations should:
  - Maintain the pedestrian-street standard for the first 50 feet of the access street to protect the quality of the intersection.

- Reduce frontage buildout requirements.
- Reduce, but do not remove, glazing requirements.
- Permit parking at the frontage when screened by a wall or hedge.

### DISCUSSION:

Many codes that promote walkability and urban infill require a high standard for frontages along every street. This is critical for the success of the walkable environment; however, consideration must also be given for access, deliveries, garbage collection, etc. In infill situations and existing downtowns, block and lot sizes are often not coordinated with the reality of automobile access. Adding a grid of access streets alleviates the barrier of creating high-quality streetscapes everywhere. Access streets are also valuable for Lean Urbanism because property prices are often lower. Requiring high standards raises costs and makes small-scale development more difficult. New development often doesn't require such a system because automobile and delivery access can be coordinated through the design of place. Where A-B grids are implemented, they provide for a targeted high-quality street network. Once this network has been achieved, the B-streets may be reconsidered.



## 2.5 Remove or reform FAR

### BARRIER



### CAPACITY



### CONTEXT

**[Ui] [Sr]**

#### SITUATIONS:

- Building area is restricted by Floor Area Ratio.

#### STRATEGIES:

- **OPTION 1:** Remove FAR restrictions. Building area should be regulated by a combination of lot coverage, height, and setbacks.
- **OPTION 2:** Right-size FAR by studying the desired building mass per district.
  - **2A:** Where FAR does not include structured parking in high-density districts, revise FAR to include the area of parking structures.

#### DISCUSSION:

Many zoning codes restrict the area of buildings according to Floor Area Ratio (FAR), which is related to the total area of a lot. For example, a FAR of 1.0 on a 25,000-sf lot permits a build-

ing with a total area of 25,000 sf. As shown in the graphic to the left, such a method could result in a number of building forms, with no connection to the desired character of the district. FAR designations also frequently restrict buildings to much smaller sizes than are appropriate for the character of an area. As it regards Lean Urbanism, FAR is often difficult for first-time developers to understand and calculate, creating another obstacle to small-scale development. Building size can be controlled using lot coverage, height, and setbacks rather than the unnecessary complication of FAR.

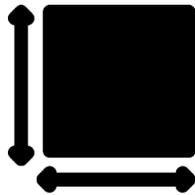
Because this issue can be contentious, the best first step may be to reform FAR by testing lot coverage, setback, and height restrictions on a series of sites in a zone to determine the appropriate FAR for the desired character.

#### REFERENCES:

FAR was a contentious topic in the Miami21 process. The solution was to right-size FAR by aligning it more closely with the height, setback, and lot coverage restrictions of real sites.

# 3

# SITE DEVELOPMENT



Many site-plan requirements limit the potential for Lean, walkable development. This section addresses both the most critical and the most attainable issues associated with site-plan regulations.



- **OPTION 1:** Where alleys exist, restrict vehicular access to sites to alleys and side streets only.
- **OPTION 2:** Where alleys do not exist, restrict vehicular access to one point per site except where life safety requires separate ingress and egress.

### 3.1 Reform vehicular site access standards

**BARRIER**



**CAPACITY**



**CONTEXT**

[Ui] [Sr]

**SITUATIONS:**

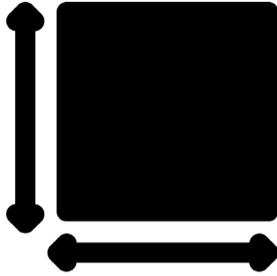
- Driveways may exceed 24 feet in width in mixed-use areas.
- Curb cuts are permitted more frequently than every 100 feet.

**STRATEGIES:**

- Limit the maximum width of driveways to 24 feet for two-way travel and 12 feet for one-way travel.
- Encourage off-street parking areas to connect between properties and share access points.

**DISCUSSION:**

Excessive curb cuts increase the number of conflicts between pedestrians and vehicles. Site access should be limited where possible. Each driveway and curb cut along a main street deteriorates walkability. Access and parking areas should be shared between lots, with access provided from side streets and alleys where they exist.



### 3.2 Eliminate or right-size requirements for minimum lot sizes

**BARRIER**





**CAPACITY**

S M L XL

**CONTEXT**

[Ui] [Sr]

**SITUATIONS:**

- Minimum lot size is regulated.
- Minimum lot size is greater than 1,500 square feet in mixed-use, mainstreet, or downtown areas.

**STRATEGIES:**

- **OPTION 1:** Eliminate minimum lot size requirements. The building code, lot coverage, and setbacks provide sufficient constraints to ensure lots are buildable.
- **OPTION 2:** Right-size minimum lot sizes in mixed-use areas, main streets, and downtowns.

**DISCUSSION:**

Minimum lot sizes are often regulated according to a suburban context, requiring they be much larger than necessary. Compact, walkable, mixed-use areas usually include a wide variety of lot sizes. Small lots are essential to affordability, and add variety and vibrancy in these areas.

The simplest solution is to eliminate lot-size minimums altogether. This is not as controversial as it may seem. Without such minimums, a developer creating new lots is still subject to a number of constraints:

- **Building code** includes minimum sizes for dwelling units, bedrooms, and other spaces.
- **Height and Setbacks** limit the extent of the building.
- **Lot coverage** further restricts the building envelope.
- **The Market** will require minimum building sizes, unit sizes, and tenant spaces.

Another option is to right-size for the context. Townhouse lots may be as small as 1,000 square feet. Single-family homes often occupy lots of 3,000 – 4,500 square feet. Small mixed-use buildings may be as small as 3,000 square feet. This must be locally calibrated to the desired context.



### 3.3 Eliminate buffer requirements in mixed-use districts

#### BARRIER



#### CAPACITY

S M L XL

#### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Buffer requirements exist between uses or lots in mixed-use districts.

#### STRATEGIES:

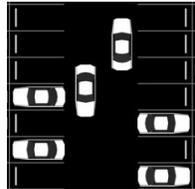
- Eliminate buffer requirements within mixed-use districts.

#### DISCUSSION:

Requirements to include buffers between different uses are intended for conventional suburban development, in which use categories are tightly controlled and separated from each other. Such requirements are not compatible within mixed-use districts, which rely on the direct adjacency of multiple uses, and can make urban infill on small lots difficult or impossible.

There may be a need for buffers between areas that are suburban in character and those that have mixed uses. There may also be a need for transitions between uses of different intensities, but this is best handled through height restrictions and step-back requirements rather than buffers.

# 4 PARKING



*Conventional parking standards create a tremendous economic burden to redevelopment while also creating one of the greatest barriers to walkability.*

## 4.1 Reduce minimum sizes of parking stalls and aisles

**BARRIER**



**CAPACITY**

S M L XL

**CONTEXT**

**[Ui] [Sr]**

**SITUATIONS:**

- Minimum off-street parking aisle and stall sizes are larger than commonly accepted standards.
- On-street parking spaces are required to be larger than seven feet wide and 22 feet long.

**STRATEGIES:**

- Revise the minimum off-street parking aisle and stall sizes to match commonly accepted minimum standards.
- Revise the minimum on-street parking space to seven feet wide by 22 feet long.

**DISCUSSION:**

Efficient parking lot design provides more buildable area on a site. This is particularly important for small-scale urban infill. While eliminating minimum requirements is not likely in most municipalities, the dimensional require-

ments should be sized to reduce excessive impervious surfaces. For 90-degree parking, there should be a total of 60 feet for a bay of two parking rows and a two-way aisle.

On-street parking is also often required to be larger than necessary. This results in wider and more expensive streets and may limit its availability. On-street parking space minimums should be seven feet wide by 22 feet long.

## 4.2 Allow on-street parking to count toward parking requirements

**BARRIER**



**CAPACITY**

S M L XL

**CONTEXT**

**[Ui] [Sr]**

**SITUATIONS:**

- Adjacent on-street parking does not count toward minimum off-street parking requirements.

**STRATEGIES:**

- Permit on-street parking along lot frontages to count toward required parking for the lot.

**DISCUSSION:**

Parking requirements are often excessive and burdensome, particularly in infill situations, and may limit opportunities for redevelopment. Where on-street parking is provided, it can account for a significant number of parking spaces for every block. Parking spaces cost approximately \$9,550 for surface spaces and \$19,050 for structured spaces, including land, construction and design costs, but excluding the cost of operations. (*Victoria Transport Policy Institute, 2016*) This poses a serious financial barrier to development and redevelopment.

Additionally, each space consumes approximately 300 square feet of usable site area. Adaptive reuse situations are extremely sensitive to parking where changes in use may require more parking than can be provided on the lot. To equitably share to equitably share on-street spaces, they should count only for the lots that are directly adjacent to the space.



**4.3 Enable shared parking**

**BARRIER**



**CAPACITY**

S M L XL

**CONTEXT**

[Ui] [Sr]

**SITUATIONS:**

- Shared parking between multiple uses is not permitted.

**STRATEGIES:**

- Adopt a shared parking strategy and revise regulations.

**DISCUSSION:**

Many parking spaces are unused for significant portions of the day. Many religious facilities, for example, need parking for only a few hours one or two days per week, and residential parking is used more at night. Regulations should allow shared parking by uses that need parking at different times. These strategies have been widely implemented, proving the concept.

The APA has studied and published a shared parking schedule worksheet that determines overlapping demand for parking shared between multiple uses. This table should be integrated into parking requirements, enabling the reduction of spaces on nearby lots with multiple uses.

**REFERENCES:**

APA Parking Solutions: <https://www.planning.org/>

Mary Smith, "Shared Parking," Urban Land Institute, 2nd Edition, 2005; 158 pages from the ULI Bookstore <https://uli.bookstore.ipgbook.com/shared-parking-products-9780874209396.php>



#### 4.4 Reduce parking requirements for affordable housing

##### BARRIER



##### CAPACITY



##### CONTEXT

[Ui] [Sr]

##### SITUATIONS:

- Affordable housing requires the same number of parking spaces as market rate housing.

##### STRATEGIES:

- Adopt reduced parking requirements for affordable housing. The reduction depends on the region, urban/suburban context, and public transportation access.

##### DISCUSSION:

Parking requirements for affordable housing are often too high, raising the cost to provide the housing and providing more parking than is needed. While parking for multi-family housing is often a contentious issue, affordable multi-family housing frequently requires less parking than market rate housing. Car ownership is an expensive proposition and many families are only able to afford one vehicle, if that. When affordable housing is required to provide market rate parking spaces, many spaces sit unused and represent a waste of public funding.

- If access to transit is nearby, affordable housing may require only 0.5 spaces per unit.
- Where public transportation is not available, parking may be required at 0.75-1 space per unit. Requirements above this are usually excessive and wasteful.

##### REFERENCES:

Kyle Smith, Daniel Kay Hertz, Cindy Copp & Peter Haas, "Stalled Out: How Empty Parking Spaces Diminish Neighborhood Affordability," March 2016, CNT: [http://www.cnt.org/sites/default/files/publications/CNT\\_Stalled%20Out\\_0.pdf](http://www.cnt.org/sites/default/files/publications/CNT_Stalled%20Out_0.pdf)

Center for Neighborhood Technology parking demand estimating and database tools from various regions:

- <http://www.cnt.org/tools/greentrip-parking-database>
- <http://www.rightsizeparking.org>
- <http://www.transformca.org/landing-page/greentrip>



## 4.5 Reevaluate off-street parking requirements

### BARRIER



### CAPACITY

S M L **XL**

### CONTEXT

**[Ui]** **[Sr]**

#### SITUATIONS:

- Off-street parking is required for every parcel, and often for every use on a parcel.
- Local parking demand has not been analyzed by use and time of day.
- Parking requirements for all districts, including walkable areas, are based on suburban models.
- Requirements specify more parking than is needed.

#### STRATEGIES:

- **OPTION 1:** Eliminate off-street parking requirements.
- **OPTION 2:** Reevaluate off-street parking requirements in all districts
  - **2A:** Consider removing parking requirements in mixed-use, walkable districts.
  - **2B:** Consider parking maximums in addition to parking minimums.

#### DISCUSSION:

The negative effects of off-street parking requirements include the validity of the data and methodology they are based on, the high costs imposed on new construction and changes of use, and the environmental harm of oversized impervious surfaces and degraded walkability. For small projects the cost of providing excess parking can be especially difficult, and for small infill lots the requirements often leave too little room for buildings, making them undevelopable.

Off-street parking requirements for various use categories often follow guidelines from the Institute of Transportation Engineers (ITE), but the ITE studies were conducted in drive-to suburban locations, and are not appropriate for walkable places. A 2011 study by the Transportation Research Board (NCHRP Report 684) and a more recent study by UC Davis found mixed-use districts generate more than 30% fewer vehicle trips, which parking ratios are based on, than the ITE assumptions.

There is significant merit to removing minimum parking requirements altogether. Parking needs are better determined by developers and business operators, who have to satisfy demands from the market and lenders, and are the ones responsible for the success of their ventures.

**OPTION 2** should be considered **L** rather than **XL**, because it may require less political support. Employing other strategies in this chapter will reduce the need for off-street parking, which should then be reevaluated for drive-to suburban districts. On-street parking, particularly if market-priced, may eliminate the need for off-street parking requirements in mixed-use, walkable districts. At the least they should be right-sized for actual demand rather than peak drive-to demand.

For parking maximums, consider the Portland, Oregon, MPO's parking ratios, which provide regional minimum and maximum ratios that better reflect the common condition that is between drive-to and walkable.

#### **REFERENCES:**

Oregon Metro parking standards: <https://www.oregonmetro.gov/sites/default/files/2014/05/18/chap308.pdf>

Market-based parking requirements: <https://lkyspp.nus.edu.sg/docs/default-source/faculty-publications/paul-a-barter/barter-off-street-parking-policy-without-parking-requirements-preprint-for-transport-reviews-2011.pdf>

Why minimum parking requirements are bad business: <http://shoup.bol.ucla.edu/Trouble.pdf>

Case for parking maximums instead of minimums: <http://www.shoupdogg.com/wp-content/uploads/sites/10/2015/08/Putting-a-Cap-on-Parking-Requirements.pdf>

The true cost of minimum parking requirements for housing, office and retail: <http://shoup.bol.ucla.edu/HighCost.pdf>

Effect of parking minimums on the poor: <https://www.washingtonpost.com/news/in-theory/wp/2016/03/03/how-parking-requirements-hurt-the-poor/>

# 5 USE AND DENSITY



Most zoning ordinances are explicit in the segregation of use and density. This section offers strategies to lighten this regulation to encourage economic development within the evolving city.

Since contemporary zoning was introduced in the United States in the early 20th century, ordinances have become more and more restrictive in the control of land use. Use has been the regulatory tool of choice over the last century to exclude specific activities. Density has also been employed to further limit use on the vast majority of land in many municipalities by prohibiting multifamily development. Use and density, when too restrictive, also make small-lot development difficult.

As uses and densities have become more and more explicit, regulations have limited municipalities' ability to nimbly respond to markets, trends, and consumer demand.



## 5.1 Permit residential uses on ground floors in urban districts

### BARRIER



### CAPACITY



### CONTEXT



#### SITUATIONS:

- Ground-floor residential is not permitted in urban districts.

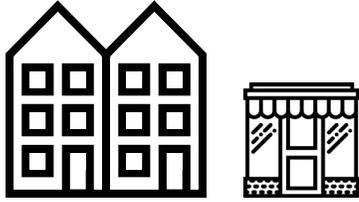
#### STRATEGIES:

- Permit ground-floor residential uses.

#### DISCUSSION:

Zoning codes often prohibit residential uses on the ground floor in mixed-use urban districts. While main streets should be primarily commercial at the ground-floor, prohibiting residential use can limit economic development when the zoning code requires more commercial space than the market will support. Ground-floor space that sits vacant is a drain on finances, neighborhood vibrancy, and walkability.

Restricting ground-floor residential not only reduces the flexibility that small developers need, but it may also eliminate the ability of small developers to develop mixed-use buildings that rely on ground-floor units to meet ADA requirements. Many districts mix uses horizontally, in small buildings, rather than vertically, because vertical mixed-use can be difficult to achieve. Main streets can be vibrant with apartments on the ground floor, so the local market should determine the composition of uses.



## 5.2 Permit mixed uses in urban districts, but do not require them

### BARRIER



### CAPACITY

S M L XL

### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Mixed uses are not permitted in any district.
- Mixed uses are required in a zoning district.

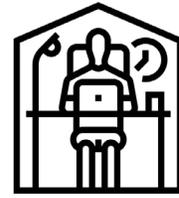
#### STRATEGIES:

- Permit mixed uses in urban districts, but do not require them.

#### DISCUSSION:

Mixed uses are critical to neighborhood vibrancy, ensuring a high degree of activity. Where main streets, downtowns, and urban neighborhoods exist or are desired, mixed uses must be permitted.

Mixed uses should be an available option, not a requirement. Successful mixed-use districts are not usually entirely mixed-use; rather, they include some single-use buildings, both residential and commercial, alongside buildings with mixed uses. The mix should be flexible and determined by the market.



## 5.3 Expand allowances for home occupations and live/work units

### BARRIER



### CAPACITY

S M L XL

### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Home occupations are not allowed or are heavily restricted.
- Live/work units are not allowed or are allowed only in very limited areas.

#### STRATEGIES:

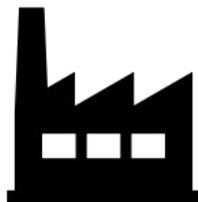
- Permit home occupations in all residential zoning districts.
- Expand allowances for home occupation square footage, visitation, and employees.
- Permit live/work units in most, if not all, zoning districts.

#### DISCUSSION:

Home-based businesses expand the local economy. Permitting home-based businesses also contributes to home affordability and may assist in the costs of childcare. Some level of home occupation should be permitted in all zoning districts.

In mixed-use districts and more urban neighborhoods, restrictions of size, allowances for employees, and the ability of customers to come

to the business should be relaxed or eliminated. Residential use is often prohibited or restricted in commercial or mixed-use districts, excluding the opportunity to develop live/work units. These should be permitted in most, if not all zoning districts. Live/work units tend toward small office or service uses and have minimal traffic and parking demands. While some single-family areas may resist their inclusion, they have very limited effects on neighborhoods. At a minimum they should be permitted in all zones except low-density single-family and industrial.



#### 5.4 Permit non-hazardous, small-scale manufacturing and light industrial in mixed-use districts

##### BARRIER



##### CAPACITY

S M L XL

##### CONTEXT

[Ui] [Sr]

##### SITUATIONS:

- Small-scale manufacturing and light industrial uses are not permitted in urban or mixed-use districts.

##### STRATEGIES:

- Permit non-hazardous, small manufacturing and light industrial in urban or mixed-use districts.

- Control types of development with the following regulations:
  - Limit building footprint.
  - Limit building width.
  - Control environmental impacts including glare, noise, fumes, and combustion.

##### DISCUSSION:

Manufacturing and industrial uses have historically been restricted from proximity to housing due to the noxious nature of those uses: their noise, smell, and effect on air and water quality. Contemporary small-scale manufacturing and light industrial, however, are not incompatible with residential or mixed-use neighbors, provided there are some basic constraints.

Maintaining workspace in urban districts supports economic diversity and increases the supply of local jobs. Workspace is critical to successful, 24-hour mixed-use districts, and the character of workspace is diversifying. The widest set of uses should be permitted in mixed-use districts, restricting only those that are socially and physically noxious.

#### 5.5 Simplify how the code describes allowable uses of land

##### BARRIER



##### CAPACITY

S M L XL

##### CONTEXT

[Ui] [Sr]

**SITUATIONS:**

- The zoning code provides a separate list of uses for each zoning district.
- The zoning code consolidates uses into a single use table, but the table is extremely lengthy and complex.

**STRATEGIES:**

- Remove unnecessary distinctions between uses that have similar impacts.
- Consolidate zoning districts where the distinctions between districts are minor.
- Eliminate district-by-district lists of uses and replace them with a matrix that shows uses and zoning districts.
- Simplify overly complex matrices.

**DISCUSSION:**

Many zoning codes suffer from overly specific use designations that may unintentionally limit beneficial, unforeseen uses and add unnecessary complexity. Many also include a “prohibited if not permitted” clause, which can be detrimental to new development.

Uses should be described in the broadest categories possible, such as Residential, Office, Service, Retail, Manufacturing, Industrial, and Food Service. There are few meaningful differences between specific use sub-categories, so the code should have the fewest specific distinctions possible. Consolidate similar uses. A specific use does not require its own category unless it is to be excluded in more than one district. The building code also regulates some uses, and should not be contradicted or duplicated by the zoning code. This strategy enables easier changes of use, helps keep buildings occupied, and assists with a robust economy.

**5.6 Reduce requirements for change of use**

**BARRIER**



**CAPACITY**



**CONTEXT**



**SITUATIONS:**

- Changes of use often result in nonconforming situations, significant impact fees, increased parking requirements, and older buildings remaining empty and suffering from disinvestment.

**STRATEGIES:**

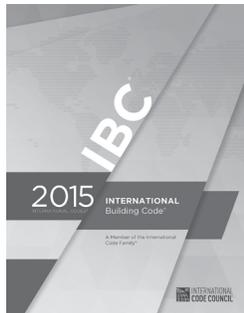
- Simplify the process for change of use to avoid unnecessary financial and regulatory barriers.

**DISCUSSION:**

For mixed-use districts to remain vibrant, spaces must be able to change uses over time. As market demands shift, uses should be able to adapt. However, many codes and ordinances present significant financial and regulatory barriers to changing uses by the imposition of higher parking requirements, unattainable stormwater infrastructure in an infill condition, nonconforming conditions, and assessment of impact fees.

Imposing harsh concurrency standards for change of use hampers economic development. The costs of concurrency, new parking, and impact fees for a conversion to a coffee shop could add \$50,000 in some municipalities. (*City of Tigard, OR*) The results are vacant

storefronts, reduced walkability, and negative impacts to the street or neighborhood. Change of use within an existing building should be permitted with as few requirements as possible. When buildings are redeveloped, they may be assessed for concurrency.



### 5.7 Coordinate zoning use categories with the International Building Code

**BARRIER**





**CAPACITY**

S M **L** XL

**CONTEXT**

**[Ui] [Sr]**

**SITUATIONS:**

- Use categories in the zoning code do not align with use categories in the International Building Code (IBC).

**STRATEGIES:**

- Revise zoning use categories to align with the larger use categories within the IBC.

**DISCUSSION:**

Both building codes and zoning codes regulate use. The two types of codes were developed independently, with building codes addressing use to establish safety standards, and zoning codes addressing use to reduce nuisances such as noise, traffic generation, and parking demands. The two sets of categories and restrictions are usually administered by separate municipal departments and are often redundant on some issues and contradictory on others. This requires applicants to reconcile differences between the codes and mediate disagreements between departments, which is particularly difficult for novice developers and small projects. The two types of codes were developed independently, with building codes addressing use to determine safety standards, and zoning codes addressing use to reduce nuisances such as noise, traffic generation, and parking demands.

Zoning requirements should be revised to match the larger set of IBC requirements for uses, with conditions or additional restrictions as necessary to control issues such as environmental impact. The result is a tighter coordination between zoning and building regulation, and a much simpler process for applicants.

## 5.8 Remove or revise density restrictions

### BARRIER



### CAPACITY

SML **XL**

### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Density is governed by both the comprehensive plan and the zoning code.
- Density restrictions in the zoning code are not coordinated with the community's vision in the comprehensive plan or with standards in other codes.

#### STRATEGIES:

- **OPTION 1:** Remove density restrictions from the zoning code.
- **OPTION 2:** Make targeted changes to density.
  - Don't count accessory dwelling units toward density restrictions.
  - Coordinate density restrictions with other controls.

*Note: Density restrictions in the comprehensive plan may also be problematic. See the Lean Comp Plan Tool.*

#### DISCUSSION:

Explicit restrictions on density in the zoning code are often redundant and not coordinated with other controls. Density is often controlled by numerous sections of the zoning code, such as restrictions on use, parking, floor-area ratio, lot coverage, building height, and setbacks. Density is also restricted by overlapping controls in the comprehensive plan, and restrictions in the

zoning code are often set arbitrarily rather than representing the community's vision.

When set too low, density can also affect the viability of transit and walkability and can make small-lot development difficult.

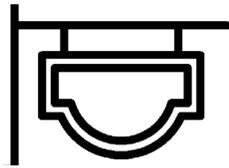
Density restrictions can be removed from the zoning code, relying on other standards to control it. **Option 2** should be considered **M** rather than **XL** because it requires less political support.

## 6

## SIGNAGE



Sign regulations can be some of the most complex standards in a zoning ordinance. This short section focuses on the simplification of permit requirements and physical standards.



Sign standards should be simple and concise, and the application process should be predictable and efficient. Legal counsel may be needed to avoid content-based restrictions that were prohibited by a 2015 Supreme Court ruling.

### 6.1 Simplify sign requirements

#### BARRIER



#### CAPACITY

S M L XL

#### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

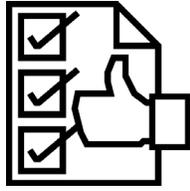
- Sign standards are lengthy and complicated.

#### STRATEGIES:

- Simplify sign restrictions.
- Streamline the permitting process.

#### DISCUSSION:

The standards for signs are among the most convoluted and excessive in zoning codes, and permitting processes are unnecessarily complicated and confusing. Most restrictions are common across sign types, but are often repeated unnecessarily.



## 6.2 Permit signs by right

### BARRIER



### CAPACITY

S M L XL

### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Sign regulations require conditional permits or excessive specifications even for the most routine types of signs.

#### STRATEGIES:

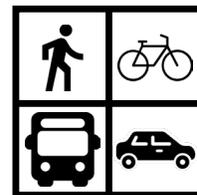
- Permit common signs by right.

#### DISCUSSION:

The primary purpose of sign restrictions is to control quality and visual pollution, but most create complex codes that don't control either. Many complex sign codes result in conditions that are not significantly different from suburban commercial strips. Sign standards should be simple and all common signs should be permitted with minimal requirements from businesses and developers.

## 7

## TRANSPORTATION



*Transportation standards create more barriers to walkability than any other category.*

## 7.1 Use Effective Turning Radius

### BARRIER



### CAPACITY

S M L XL

### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Minimum curb return radius in mixed-use districts is greater than 15 feet.

#### STRATEGIES:

- **OPTION 1:** Adopt a new series of curb return radii for mixed-use streets, by street type.
- **OPTION 2:** Adopt reductions to curb return radii to account for on-street parking and bicycle facilities. Curb return radius may be reduced by the combined width of bicycle and parking facilities to a minimum of 10 feet.

#### DISCUSSION:

Curb radii at intersections control the speed at which vehicles turn. Most municipalities use a standard set of curb return radii by functional classification of roadway, often with 25 feet as the smallest radius. These suburban standards are dangerous in walkable districts. Drivers who turn at higher speeds are less likely to notice pedestrians

and cyclists, endangering these roadway users. Tight curb radii signal drivers to slow or stop before making a turn.

Curb radius minimums are not justified as accommodation for emergency vehicles with longer wheelbases than private vehicles. The effective radius strategy accounts for the fact that travel lanes are not always directly adjacent to curbs, so turn movements may follow a wider radius than the curb. Parking lanes and bicycle lanes move the travel lane away from the curb and result in an effective turning radius much larger than the actual curb radius. While an effective radius is large, a tight curb radius still signals drivers to take turns cautiously.

## 7.2 Revise clear sight triangles in urban conditions

### BARRIER



### CAPACITY

S M L XL

### CONTEXT

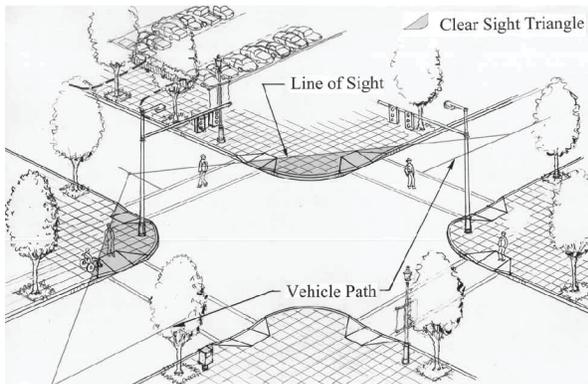
[Ui] [Sr]

#### SITUATIONS:

- A single sight triangle standard is applied in all contexts – rural, suburban and compact urban.
- Sidewalks and adjacent planters are greater than 8 feet wide.

#### STRATEGIES:

- Exempt private property from requirements imposed by sight triangles in a compact urban context.
- Revise sight triangle standards according to the width of public frontage (sidewalk + planter) and the presence of parking lanes.



#### DISCUSSION

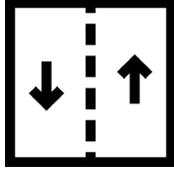
The intent of sight triangle regulations is sound, however they are often imposed without regard for context. Sight triangles are imposed at intersections to ensure drivers can see oncoming traffic on intersecting streets. They often restrict planting, buildings, furniture, and parking near the intersection to provide a clear view for drivers.

In most compact urban environments, every intersection is controlled through signals or stop signs. This control decreases the hazards associated with limited view. Applying rural and suburban sight triangle requirements to urban contexts results in unbuildable lot areas at corners, which can make small lots more difficult to develop. Also, urban character relies on buildings at the majority of lot corners, and can be eroded by the use of non-contextual sight triangles.

Sight triangle regulations typically specify a distance from the property line, assuming a standard condition for the position of the curb relative to the right-of-way and for the position of the driver relative to the curb. But these assumptions are based on suburban conditions. In walkable urban locations, where there are wide sidewalks, planters, and/or parallel parking, drivers are farther from the right-of-way edge than they are in suburban conditions. Sight triangles should be measured from the point of view of drivers, and therefore account for the distances from rights-of-way and curbs. (See the illustration above from the ITE Context-Sensitive Solutions.)

#### REFERENCES:

ITE Context Sensitive Solutions urban sight triangles: <http://library.ite.org/pub/e1cff43c-2354-d714-51d9-d82b39d4dbad>



### 7.3 Reduce minimum widths of travel and parking lanes

#### BARRIER



#### CAPACITY



#### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Vehicular travel lane minimums exceed 10 feet in width.
- Parallel parking lane minimums exceed seven feet in width.

#### STRATEGIES:

- Adopt a vehicular travel lane of 10 feet for walkable districts.
- Adopt a parallel parking lane of seven feet for walkable districts.

#### DISCUSSION:

Roadway width is the primary determinant of vehicle speed, and vehicle speed is a determinant of pedestrian safety in walkable districts. To improve pedestrian safety, vehicles must be slowed. The most effective means of slowing vehicles is to right-size the roadway.

Standards for public works often include minimum widths for travel lanes and parking lanes that encourage high-speed conditions. In many municipalities, these can be as wide as 12 and nine feet, respectively. Every inch of width over

the bare minimum increases vehicle speed and decreases pedestrian and cyclist safety. Vehicular travel lanes should be permitted at 10 feet generally and nine feet in residential portions of walkable districts. Provisions may be provided for 10.5 feet along bus routes to address mirror conflicts. Parallel parking lanes should be permitted at seven feet generally, which accommodates the widest private vehicles.

### 7.4 Remove or reduce requirements for traffic studies

#### BARRIER



#### CAPACITY



#### CONTEXT

[Ui] [Sr]

#### SITUATIONS:

- Traffic studies are required for most projects, including change of use, adaptive reuse, expansion, redevelopment, and new development, regardless of scale.

#### STRATEGIES:

- **OPTION 1:** Exempt all projects in walkable urban districts (except those with atypical uses such as arenas) from traffic studies.
- **OPTION 2:** Determine a threshold below which projects may be exempted from conducting traffic studies.

#### DISCUSSION:

In existing mixed-use districts, or those with urban street grids, traffic studies are generally unnecessary. Trip-chaining, multi-modal access,

and park-once opportunities significantly reduce impacts for most uses in these conditions, and the adjacent tax base is able to fund infrastructure maintenance and upgrades. Only major redevelopment projects that add atypical uses, such as convention centers and sports arenas, generate traffic in amounts that require mitigation. All other projects in these conditions should be exempted from traffic studies.

Traffic studies are generally needed for suburban conditions, where all new uses generate new vehicle trips and where adjacent tax revenues don't support maintenance and upgrades.

In addition to being unnecessary in certain conditions, traffic studies are expensive for small projects, which on their own have little effect on traffic and are less able to fit the costs into small budgets. **Option 2** should be considered **M** rather than **L** because it requires less political support and little staff capacity to determine a threshold based on scale or estimated trip generation. Projects below the threshold should be exempted from providing traffic studies, regardless of local conditions.

## 7.5 Use the UC Davis Trip-Generation Adjustment Tool for mixed-use areas

**BARRIER**

**CAPACITY**

S M L **XL**

**CONTEXT**

**[Ui] [Sr]**

### SITUATIONS:

- Transportation impact is considered in determining fees, off-site improvements, on-site facilities, or other aspects of development.
- Trip-generation estimates for suburban contexts are applied to walkable mixed-use districts.

### STRATEGIES:

- Apply the UC Davis Trip-Generation standards for use in walkable, mixed-use districts.
  - **OPTION 1:** Provide for a blanket 30% reduction in trip-generation estimates from the numbers estimated by the ITE Trip Generation Manual.
  - **OPTION 2:** Use the UC Davis Trip-Generation Adjustment Tool to study actual local trip generation in mixed-use areas and create new standards for trip estimates in such conditions.

### DISCUSSION:

The ITE Trip Generation Manual has been adopted in most municipalities as the standard methodology for estimating vehicle trips. The manual and methodology was created solely for suburban contexts, where driving is required and trip numbers are high, yet it is applied equally to all contexts. A series of studies have proven that the manual overestimates vehicle trips for walkable, mixed-use areas, rural areas, and areas served by transit or with a large population of cyclists. Trip generation is often tied to off-site transportation improvements that developers may be required to provide as part of a development agreement, costing tens of thousands to millions of dollars to complete.

The University of California at Davis created a tool for an alternative methodology for walkable, mixed-use, and multi-modal areas. Collectively the areas studied in creating this methodology show an average trip generation

that is 30% below those estimated by the ITE's Trip Generation Manual.

Proper use of the ITE manual would require that local traffic studies be performed in accordance with the manual's methodology, determining the average vehicle trips generated by different uses in the local context. Because such a study is expensive, complicated, and time consuming, it is rarely performed. As a result the suburban condition which the ITE measured for their manual is the default context assumed in almost all traffic studies.

Use the Trip-Generation Adjustment Tool to set standards based on actual conditions. As a minimum step toward correcting this issue, a blanket 30% reduction of the numbers stated within the ITE Trip Generation Manual may be used, following the results of the UC Davis study. The Metropolitan Planning Organization for the Portland, Oregon – Metro has employed a similar strategy. Metro permits a blanket 30% reduction of the numbers stated within the ITE Trip Generation Manual for areas identified as centers and main streets, essentially mixed-use areas. This methodology was developed prior to the UC Davis study.

**REFERENCES:**

Oregon Metro (MPO, Portland, Oregon region) Urban Growth Management Functional Plan: <http://www.oregonmetro.gov/urban-growth-management-functional-plan>

Trip-Generation Adjustment Tool:  
<https://ncst.ucdavis.edu/research-product/smart-growth-trip-generation-adjustment-tool>