



## The Next Austin: Manage our growth, keep our character

Natural and Built Environment Code Prescription

# DRAFT



# CODENEXT

SHAPING THE AUSTIN WE IMAGINE

The physical form of Austin not only shapes how the city functions, it also is an expression of our city's values and the experience people have living here. The Land Development Code reflects a grand balancing of our public values – livability, affordability, environmental protection, mobility, thriving economy, and preservation versus change.





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## NATURAL AND BUILT ENVIRONMENT CODE PRESCRIPTION

## Introduction

Imagine Austin, Austin's Comprehensive Plan, articulates a broad vision for our city. It calls for economically mixed and diverse neighborhoods, interconnected development patterns that promote transportation choices, and protection for our natural resources. To realize the vision in Imagine Austin, we must revise our rules for development, known as the Land Development Code (LDC). The process of revising the LDC is called CodeNEXT. During the coming months, the CodeNEXT team will release a series of Code Prescriptions, which will preview how the new LDC will help implement Imagine Austin. The Prescriptions will focus on four topics:

- Natural and Built Environment
- Household Affordability
- Mobility
- Fiscal Health

This Code Prescription focuses on the Natural and Built Environment—the physical form and character of our city. The physical form of Austin not only shapes how the city functions, it also is an expression of our city's values and the experience people have living here. For example:

- Barton Springs: Austin is fortunate to have this incredible natural feature right in the middle of the city. Through the generosity of individuals, and through the hard work of citizens and elected officials, we have protected

it against multiple threats. The Springs not only plays a large role in the life of the city; it also stands as a beacon of our values.

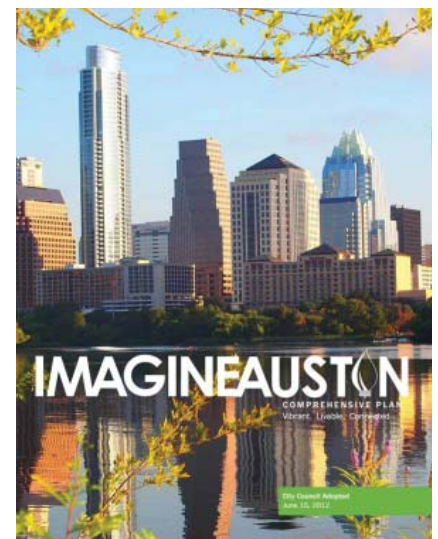
- Road Networks: Some areas of the city were built with a web of inter-connected roadways that allow great flexibility of route and mode to move around the city. Other areas were developed in isolated “pods” that provide some tranquility but require getting on busy and congested arterials to move outside the neighborhood. These choices dramatically shape how we live and move around the city.

Based on the goals of Imagine Austin and what we have learned from more than three years of code-specific outreach and work, this Prescription includes:

1. Treating water like a precious resource. Austin needs to be strategic about how we treat rainwater, adopting a conservation mindset.
2. Addressing flooding through a variety of active and passive technologies.
3. Finding better ways to integrate nature into the city.
4. Increasing road, sidewalk, and trail connectivity, giving people more transportation options.
5. Allowing for a diversity of lot sizes and building types, increasing the opportunity for affordability in residential and commercial development.

6. Encouraging redevelopment and infill, which better utilizes existing infrastructure and fosters community through increased connectivity and proximity.
7. Reducing sprawl in greenfield development with requirements for connectivity and tools that respect the natural environment, such as conservation subdivisions.

Ultimately, the Land Development Code reflects a grand balancing of our public values – livability, affordability, environmental protection, mobility, and preservation versus change. CodeNEXT has benefitted from valuable community engagement for more than three years, and these Code Prescriptions represent a proposal for how the new code can strike a balance that achieves our city's vision for itself as expressed in Imagine Austin.









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## NATURAL AND BUILT ENVIRONMENT CODE PRESCRIPTION

## WATER AND WATERSHEDS

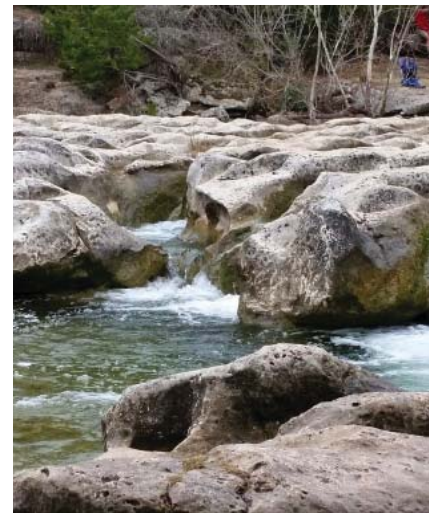
Austin's waterways are a cornerstone of our identity, the source of immense pride for residents, and a powerful magnet for visitors, new residents, and businesses. For over 30 years, Austin has protected its watersheds through a number of regulatory measures including stream setbacks, sensitive feature protection, stormwater controls, and watershed impervious cover limits. These measures help to preserve the natural character of Austin and integrate nature into the city (and the city into nature) in a sustainable and sensitive manner. Preserving and restoring our natural environment will create a more livable and walkable built environment and implement the Imagine Austin goals of integrating nature into the city, sustainably managing our water resources, and creating complete communities.



### Where Are We Now?

#### Successes

1. The Watershed Protection Ordinance, adopted by City Council in 2013 after an extensive two-year public stakeholder process, was called for in Imagine Austin. This is a major overhaul to the drainage and water quality chapters of the Land Development Code. The ordinance extended creek setback protections to over 400 miles of “headwaters” streams and recognized the importance of protecting natural floodplains and the need to mitigate natural and human-caused creek erosion. Together, these key changes will help foster the recovery and reforestation of degraded waterways, which will in turn better protect streams, rivers, and lakes downstream – preserving water quality for the citizens of Austin. By improving the protection of creeks and floodplains citywide, the ordinance will also establish a network of protected and connected green infrastructure which can also support other city priorities such as trails, community gardens, and parks.
2. The Green Infrastructure Working Group (a group of experts, stakeholders, and City staff) met from January to June 2015 to discuss how to achieve the Imagine Austin goals of integrating nature into the city, sustainably managing our water resources, and creating complete communities – through revisions to the zoning, drainage, and environment codes. Specifically, the Working Group (GIWG) examined how the Land Development Code can encourage the broader vision of green infrastructure established by Imagine Austin: “an interconnected system of parks, waterways, open space, trails, green streets, tree canopy, agriculture, and stormwater management features that mimic natural hydrology.” Because CodeNEXT





Flooding in central Austin - Memorial Day 2015.

was already underway, the Working Group (GIWG) was able to make recommendations specifically tailored to enhance the CodeNEXT process and results. See the Sources section at the end of this document for a full summary of the GIWG's recommendations.



Austin experiences periods of long droughts followed frequently by flash floods.

## Issues

### 1. Stormwater and Flooding

- a. There have been a number of major flood events in recent years, including the Halloween floods of 2013 and 2015, and the Memorial Day flood of 2015. These once abnormal events may point towards a “new normal” of severe rain events that must be considered in the new Land Development Code regulations.
- b. Under current rules, new development may not produce additional adverse flooding impacts on downstream properties. This means that flood mitigation is typically required for “greenfield” projects, where impervious cover is added to a previously undeveloped site. However, because the requirement is to mitigate for additional impacts, current rules do not require flood detention for redevelopment projects that do not increase impervious cover or change drainage patterns compared to existing conditions. This contrasts with our water quality rules, which require water quality controls for all redevelopment over 8,000 square feet regardless of existing conditions. This is a significant issue because many sites that were developed before detention requirements were introduced in 1974



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lack detention facilities of any kind, and the runoff from these sites may currently contribute to downstream flooding.

## 2. Water as a Resource

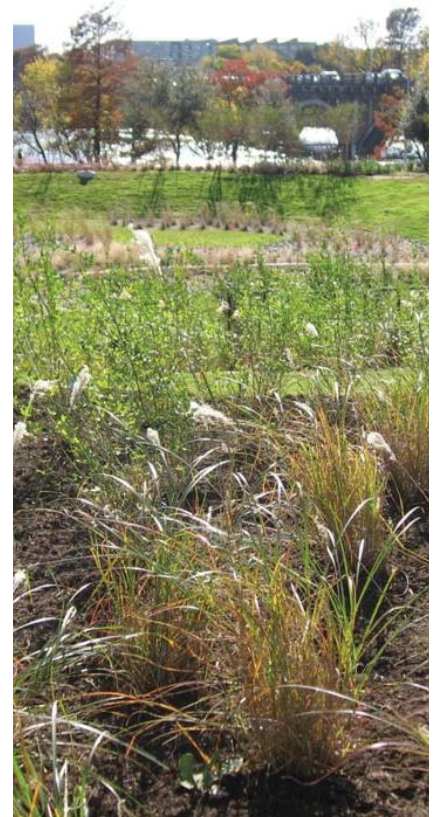
Austin's Land Development Code has historically regarded stormwater as a nuisance to be dealt with rather than a valuable resource to be utilized. Although current code requires stormwater to be captured and treated, that water is typically released after 48 hours and sent downstream. These rules do a good job of cleaning and slowing polluted runoff, but they do not significantly address other important goals: enhancing creek base flow, supporting on-site vegetation, and reducing potable water consumption. These goals are increasingly important in light of climate change, which may be responsible for increases in annual average temperatures, more frequent high temperature extremes, more frequent extreme precipitation, and more frequent as well as extended drought conditions in the summer<sup>1</sup>.

## 3. Impervious Cover

Impervious cover, which is anything that stops rainwater from soaking into the ground including roads, sidewalks, driveways, parking lots, swimming pools, and buildings, has a major impact on Austin. In an environmental context, impervious cover contributes to the urban heat island effect, and since it prevents rainwater from soaking into the ground, large quantities of water are instead channeled to surrounding land, waterways, and roads, causing flooding. Due to the pollutants often found on roads and driveways, impervious cover contributes to environmental contaminants entering Austin's waterways. In addition, an abundance of parking lots and sidewalks that merge with driveways create an unfriendly and sometimes unsafe environment for pedestrians and bicyclists that is also visually unappealing.

## Where Do We Want to Be?

1. Imagine Austin has numerous policies in support of Austin's rich history of watershed protection, including conserving Austin's natural resources, enhancing the protection of creeks and floodplains, and integrating development with the natural environment.
2. Imagine Austin recognized the need for treating stormwater as a resource, and called on the city to "plan for and adapt to increased drought, severe weather, and other potential impacts of climate change on the water supply."







3. The inclusive processes embodied in the 2013 Watershed Protection Ordinance and the Green Infrastructure Working Group provided decisive recommendations that translate the broad vision of Imagine Austin into concrete recommendations for CodeNEXT.



### What's the Prescription?

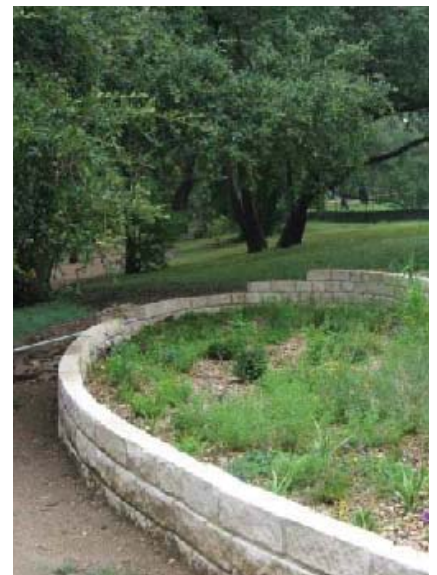
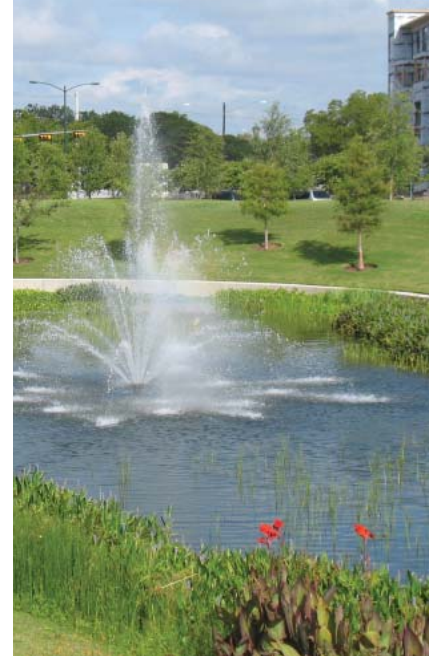
1. Maintain Austin's historic watershed regulations and recent Watershed Protection Ordinance improvements.
2. Incremental redevelopment should occur in step with an evaluation of infrastructure, including drainage capacity.
3. Redevelopment – like new development – will be required to mitigate for the site's share of existing downstream flooding.<sup>2</sup> This means reducing post-development peak rates of discharge to match peak rates of discharge for undeveloped conditions, instead of existing pre-development conditions. Undeveloped conditions are assumed to be grassland unless otherwise demonstrated by the applicant.
4. Tools for mitigating flood impacts could include on-site detention, off-site detention, off-site conveyance improvements, or participation in the Regional Stormwater Management Program (RSMP). Determining the appropriate flood mitigation tool will depend on the location in the watershed (e.g., headwaters) as well as the available downstream capacity. Generally, on-site detention is appropriate in the upper portions of a watershed, whereas lower portions of a watershed are more suitable for conveyance upgrades or participation in RSMP.



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- a. Where applied, on-site detention may be achieved either above-ground or underground depending on the nature of the project area (dense, urban site versus non-dense suburban site).
  - b. Sites participating in the Regional Stormwater Management Program will have to demonstrate no adverse impact from flood or erosion potential; adequate downstream flood conveyance capacity; and compliance with the requirements for beneficial use of stormwater.
5. New and redevelopment sites will be required to retain and beneficially use stormwater onsite – a practice already implemented by numerous states and major cities around the country.<sup>3</sup>
6. Require sites and subdivisions to prevent off-site discharge from all rainfall events less than or equal to the 95<sup>th</sup> percentile event<sup>4</sup> through practices that infiltrate, evapotranspire, and/or harvest and use rainwater. This can be accomplished through the use of green stormwater infrastructure – both passive technologies, such as rain gardens and porous pavement, as well as more active technologies like rainwater harvesting systems and green roofs.
- a. Reference national models for beneficial reuse requirements that have alternative standards for redevelopment, pollution hotspots, karst, areas with a shallow water table, and other unique site conditions.<sup>5</sup>
  - b. On high impervious sites (more typical in the urban core), infiltration-based approaches may not be economically feasible because they can potentially occupy a significant percentage of the site area.<sup>6</sup> Given these constraints, projects located within urban core watersheds will be allowed to request approval to reduce the requirement for on-site beneficial use of stormwater and instead provide payment-in-lieu based on a checklist of applicable site conditions (e.g., high existing impervious cover, poor draining soils, etc.). As with water quality payment-in-lieu, the funds collected would be used to build water quality controls and green stormwater infrastructure in the Urban Watersheds. Even in highly impervious sites, however, opportunities often exist to re-use the water both indoors and outdoors for advanced conservation, environmental, and place-making benefit. Examples include recessed parking islands and disconnected downspouts.
  - c. The recommendations for beneficial use of stormwater, as well as the city's current requirements for water quality, apply to smaller storms (e.g., less than 3 inches of rain). Flooding issues associated with larg-



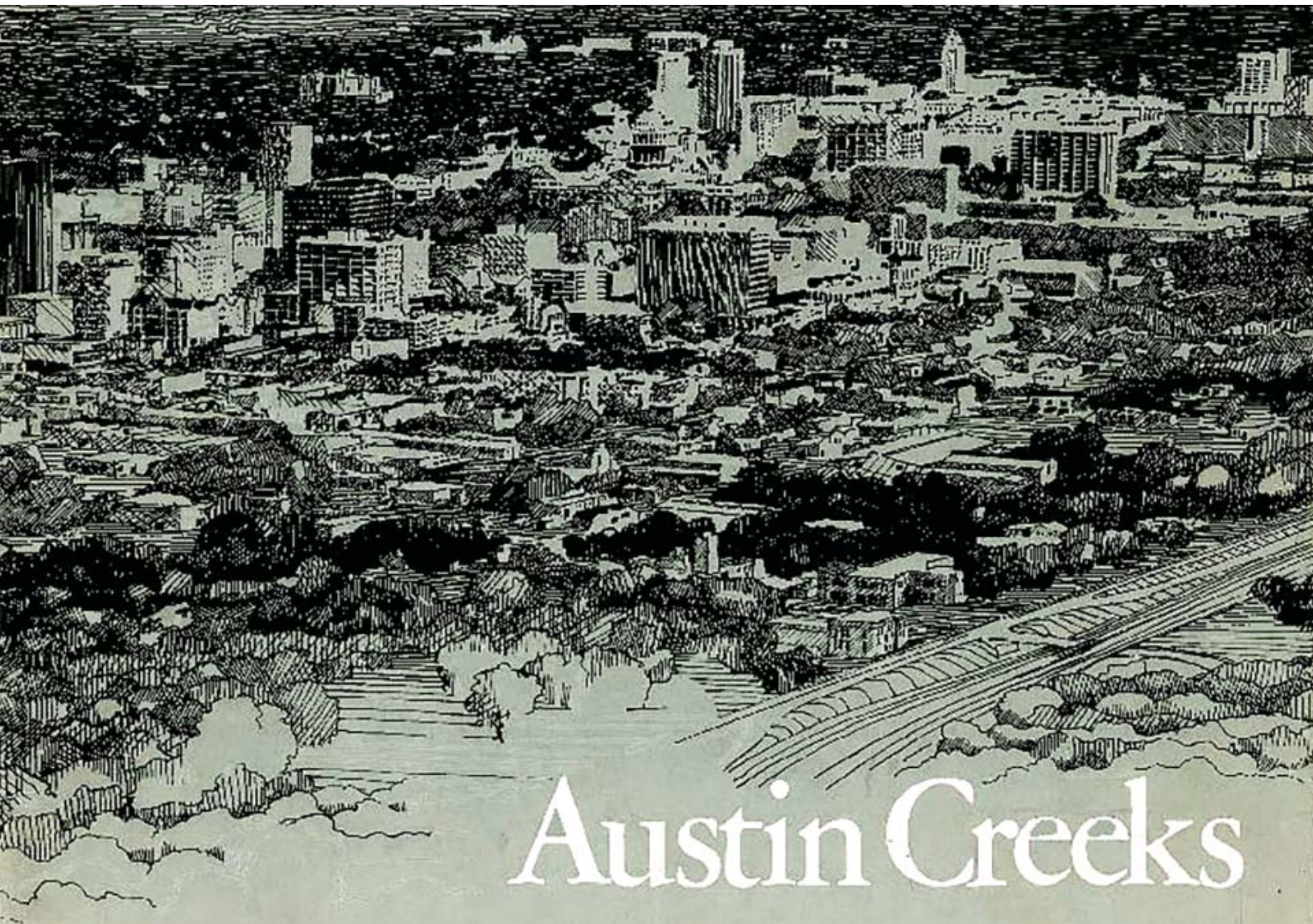


**Spotlight:**

The Austin Creeks Plan proposes a city of greenbelts with continuous pedestrian and bicycle trails along Austin's 18 creeks. These trails would link all areas of the city and promote cultural, recreational, and commercial development while restoring or preserving natural areas.

er storms are addressed through requirements and strategies for flood mitigation, as described in the section above. Although green storm-water infrastructure tools such as rain gardens improve water quality and help integrate nature into the city, they do not significantly address the flooding associated with large storms. To effectively address both flooding and water quality concerns, sites will need a combination of different tools.

7. Reclaim excess right of way for green infrastructure.
8. Incorporate green streets throughout Austin that are calibrated for context, whether located downtown or in a neighborhood.





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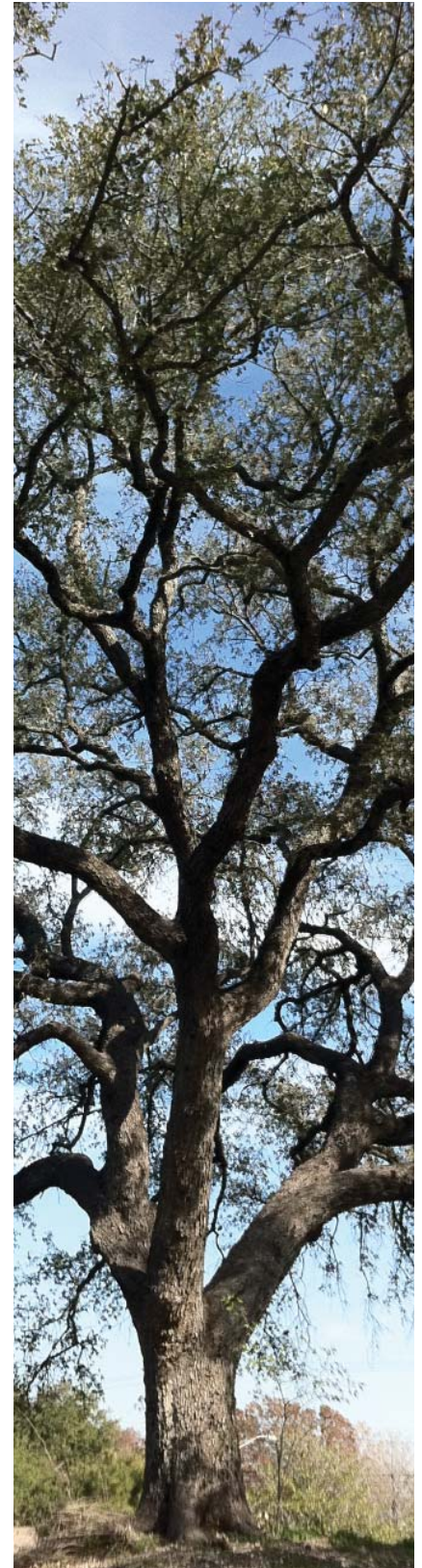
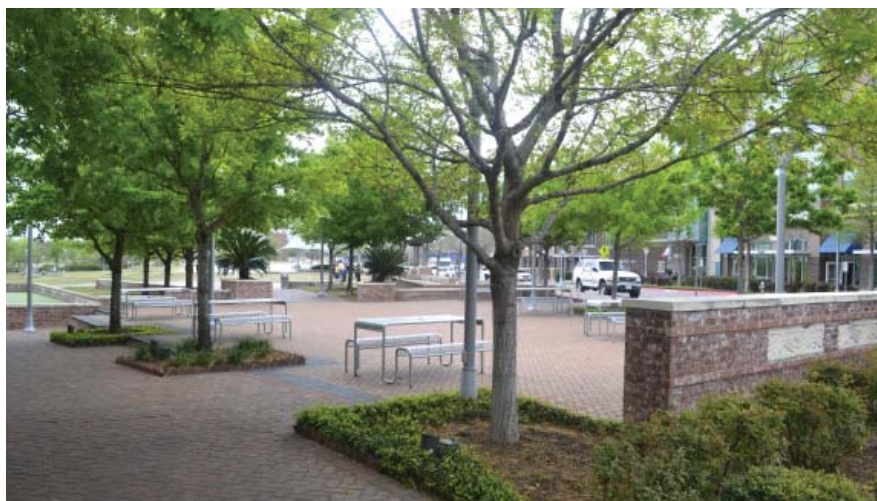
## LANDSCAPE AND TREES

Austin's landscape and urban forest are vital to water and air quality, and help to mitigate the urban heat island effect. Urban forest preservation provides economic, social, and environmental benefits. A recent first-of-its-kind study by the U.S. Forest Service and Texas A&M Forest Service estimated that there are nearly 34 million trees in the City of Austin, and that the environmental services alone (e.g. removing air pollution, avoiding runoff, sequestering carbon, etc.) has an irreplaceable compensatory value of \$16 billion dollars. To remain a national leader in urban forest preservation, the new Code will recognize the importance of landscape, trees, and their contribution to green infrastructure.

### Where Are We Now?

#### Successes

1. The City of Austin's commercial landscape code, first passed in 1979, was ahead of its time in recognizing the multiple benefits of integrating the built and natural environments.
2. The revised Landscape Ordinance of 1982 declared that "protection and enhancement of the unique natural beauty, environment and greenspace within the City" was instrumental in attracting business, and it recognized that "alteration of the natural topography and creation of impervious cover" threatened the natural balance of the environment. CodeNEXT provides the opportunity to improve and update the landscape regulations to account for changes in development patterns and advancements in knowledge.







3. The City of Austin pioneered urban tree protection in the United States. Austin's 1983 Protected Tree Ordinance adopted an approach to preserve trees, with few exceptions, rather than the then-prevailing approach of removing and replanting trees.
4. In 2010 the Austin City Council furthered tree preservation by adopting the Heritage Tree Ordinance, which provides additional protection for our largest trees.

## Issues

1. Incorporating natural elements into a rapidly growing city:

As Austin grows, it is critical for trees, plants, and natural beauty to be incorporated into the city; benefits include air and water quality improvements as well as aesthetic beauty.

2. Current standards are not context-sensitive:

The current landscape requirements are based on a suburban setting where a parking lot exists between a building and the street; the assumption is that this parking lot needs landscaping to buffer the building from the street. These requirements do not account for newer urban development which may not require a parking lot or where parking is placed to the side or rear of the building. Tree preservation requirements are also unresponsive to context in that they do not fully take into account elements such as tree distribution and health.





**DRAFT****NATURAL AND BUILT ENVIRONMENT CODE PRESCRIPTION****Where Do We Want to Be?**

1. Imagine Austin calls for a green infrastructure management program that creates an interconnected system of parks, waterways, open space, trails, green streets, tree canopy, agriculture, and stormwater management features. Appropriate requirements for landscape and tree preservation are critical to achieving this vision.

**What's the Prescription?**

1. Maintain our current code's strong emphases on preservation of existing topography, native vegetation, and environmental health.
2. Require a comprehensive approach to landscape treatment throughout the site, creating opportunity to integrate environmental, aesthetic, and site-use functionality.
3. Encourage the incorporation of low-impact development in coordination with landscaping standards







**4.** Adopt the context-based approach that is the cornerstone of the new LDC:

- a. For the mid- to low-density suburban context, the new code will bring adjustments to address the move toward compact, pedestrian-centered development. Current landscape requirements rely heavily on the size of the “streetyard,” the area between right-of-way and building façade. This assumes a suburban, automobile-oriented style of development, with lots of space between street and building. Compact development diminishes or altogether eliminates the streetyard, bringing buildings closer to the street. The new code will utilize an approach based on integrating landscape elements throughout the site, while providing a visually unified and contextually appropriate public-private interface .
- b. For the higher-density Centers and Corridors called for by Imagine Austin, which may offer fewer opportunities for vegetated landscape, the new code likely will offer an options-based palette of urban-green options aimed at providing high functioning landscape in small spaces. This could operate similar to “Functional Green,” a point-based system that allows choices among elements such as green roofs, green walls, stormwater collection and re-use, pervious pavement, rain gardens, etc. to meet landscape requirements.

**5.** Recognize that compact development can pressure existing vegetation, particularly trees; provide the tools to implement a site-specific approach to preservation that prioritizes protection of “significant” trees.

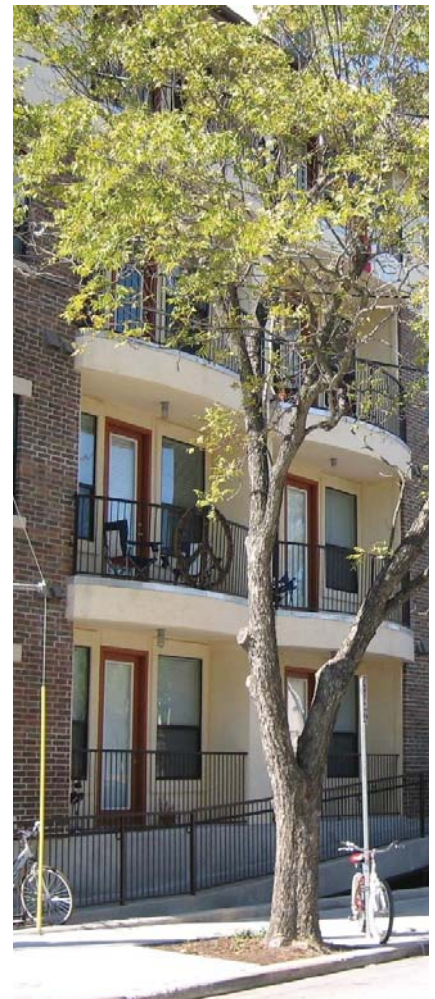
**6.** Promote land cover that performs multiple ecosystem functions, requires fewer resources, and provides better planting environments for a more sustainable urban landscape.

- a. Bring forward improvements to the Landscape code that account for advances in urban environmental science, especially in soil science and hydrogeology, as well as technological improvements in water-re-use, and understanding of urban heat-island effects.
- b. Set minimum soil quality and quantity standards.
- c. Allow double-counting of Landscape and Watershed Protection requirements, thereby encouraging development to incorporate green infrastructure and sustainable water management best practices into landscape areas.



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7. Clarify existing code provisions regarding applicability, definitions, survey requirements, review requirements, and other code sections.
8. Set impervious cover limits as a maximum, not a guarantee of buildable land. It is possible that an impervious cover limit will not be reached due to unique site characteristics, such as regulated trees. Tree regulations, therefore, will apply regardless of a site's allowable impervious cover limit and may impact the final allowable impervious cover.
9. Improve administrative procedures to ensure clear, consistent, and timely reviews and inspections.
  - a. Integrate tree permits into the Plan Review process to avoid duplicative reviews
  - b. Offer online applications and payment
  - c. Offer a pre-submission consultation for applicants
10. Use a site-by-site approach to tree preservation. Avoid the use of a purely quantitative, one-size-fits-all, approach to tree preservation (e.g. 80% of site trees must be preserved), in recognition of the non-uniform distribution of trees, the varying biological and structural health of trees, and differing land development types.
  - a. Look at reasonable use of and reasonable access to the property.  
To administer these criteria effectively, the City Arborist will utilize a process that assesses specific site characteristics and identifies the health of the regulated trees to ensure protection of the healthy trees onsite.
  - b. Adopt policies to define more effectively the varying contexts (e.g. urban, suburban, commercial, residential, etc.) and how best trees can be preserved in these varied contexts.
11. Allow for more flexibility in accounting for various building types, internal circulation, utility assignments, parking requirements, and so forth, allowing more creative site layouts to preserve trees.
12. Integrate public tree standards in City Code Title 6 with the Land Development Code for consistent code application.
13. Explore opportunities to improve tree preservation for “missing middle” developments. For example, protecting trees smaller than 19” might be an opportunity to bridge the gap between the current commercial site plan recognition of trees (8” inch and greater diameter trees) and single-family home development (19” and greater diameter trees).









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## COMPATIBILITY AND TRANSITIONS

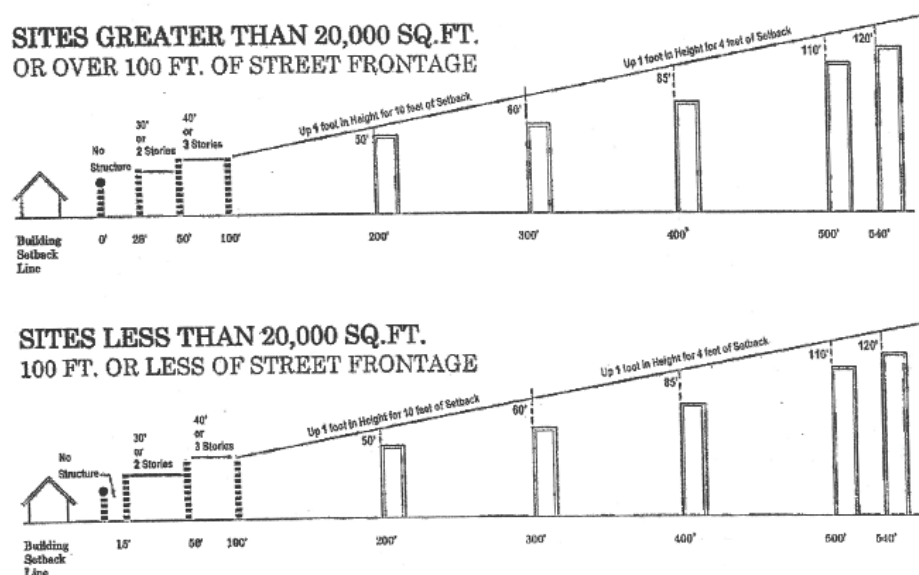
“Compatible” (Merriam-Webster online dictionary): “able to exist together without trouble or conflict; going together well.”

Being at odds with one’s neighbor is generally not a happy human condition. Whoever said “Good fences make good neighbors” failed to capture the full essence of “compatibility.” Austin’s Land Development Code attempts, with varying degrees of effectiveness, to ensure compatibility between adjoining and nearby development. CodeNEXT offers the opportunity to bring new tools and heightened effectiveness to that effort.

### Where Are We Now?

With some limited exceptions (e.g., McMansion Ordinance, Regulating Plans), Austin’s current Land Development Code attempts to ensure compatibility between new and existing development through the use of “Compatibility Standards” (LDC 25-2, Article 10) that regulate the height and placement of new development relative to its location with respect to single-family residential buildings. Compatibility Standards came into being because our base zoning districts lack the standards necessary to ensure compatibility.

The LDC’s Compatibility Standards, however, have significant limitations, sometimes failing to produce true compatibility and graceful transitions, and other times dictating significant design limitations that may be unnecessary and unreasonable. For example:



*A one-size-fits-all approach to compatibility*





Above: The effects of Compatibility along Burnet Rd.



1. The Standards do not take into account changes in elevation between the “triggering” property (the existing property that is entitled to protection) and the “receiving” property (the property required to be designed or placed in a certain way).
2. The Standards fail to provide long-term predictability since they are tied to uses that could change over time.
3. The current Standards reach as far as 540’ from the triggering property. In areas such as Corridors and Centers where Imagine Austin calls for accommodating redevelopment, this reach can sometimes inhibit what would otherwise be positive redevelopment.
4. The current Standards are premised upon several potentially flawed assumptions, including:
  - a. That only single-family properties deserve protection. Any property, whether used for a residential, multi-family, or commercial purpose can be impaired by an incompatible neighbor. Yet we extend protections only to single-family properties.
  - b. That height is always something to be protected against. Height can, but doesn’t always, create an incompatible condition, depending on topography, landscape, and building design.
5. Simplistic reliance on height in the current Standards does not account for other elements of compatibility, such as:
  - a. Building orientation and relationship to the street as well as surrounding buildings
  - b. Placement of elements such as parking, loading docks, and dumpsters.
  - c. Neighborhood-specific patterns such as lot size, height, and building footprints.

As briefly noted above, the LDC’s current Compatibility Standards could have a significant detrimental impact on achieving Imagine Austin’s directive to accommodate new growth along Corridors and in Centers, primarily because of its heavy reliance on distance as a means of achieving “compatibility,” constraining the height of new development as far as 540’ (the length of almost two football fields).



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**Where Do We Want to Be?**

1. Imagine Austin acknowledges the importance of compatibility, noting that “Creating the compact and connected city envisioned by this plan requires establishing harmonious transitions between different types of land uses, such as retail and residential areas or buildings of different heights and scales. New and redevelopment along corridors and at the edges of centers should complement existing development such as existing neighborhoods.”
2. The Land Development Code Diagnosis (2014) identified the deficiencies of our current Compatibility Standards, and recommended incorporating into base zoning districts the form-based standards that will ensure compatibility.
3. The Green Infrastructure Working Group recommended using landscaped transitions as a means of achieving compatibility between adjacent development.



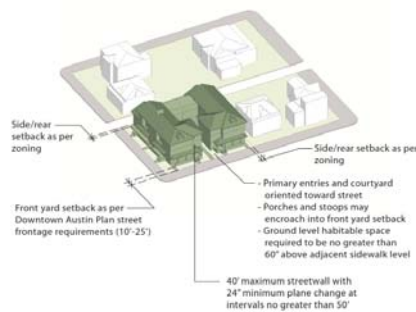




## What's the Prescription?

The new Land Development Code will not do away with compatibility protections, but it will provide a more carefully crafted approach (and one that can be applied in a context-specific manner) to promoting compatibility between adjacent and nearby properties and more graceful transitions from areas of greater intensity to areas of less intensity. The tools that the new code will bring to achieve compatibility and transitions go beyond a simple calculation of height to include the following:

1. **Form-Based Standards:** These standards, which will regulate factors like building placement, height, and mass, parking placement, four-sided design, and so forth, will allow compatibility to be built right into the base zoning districts. The new standards will also employ landscape as a means of promoting compatibility.
2. **Building Types:** Each Transect District will authorize certain specific Building Types, each of which must adhere to certain design and dimensional standards. This will allow the application of Transect Zones to compel compatibility. Unlike the current Compatibility Standards, which are tied to use (residential zoning or residential use), the use of Building Types acknowledges that form – rather than use – is typically what drives compatibility.



Form-Based standards example from the Downtown Austin Plan





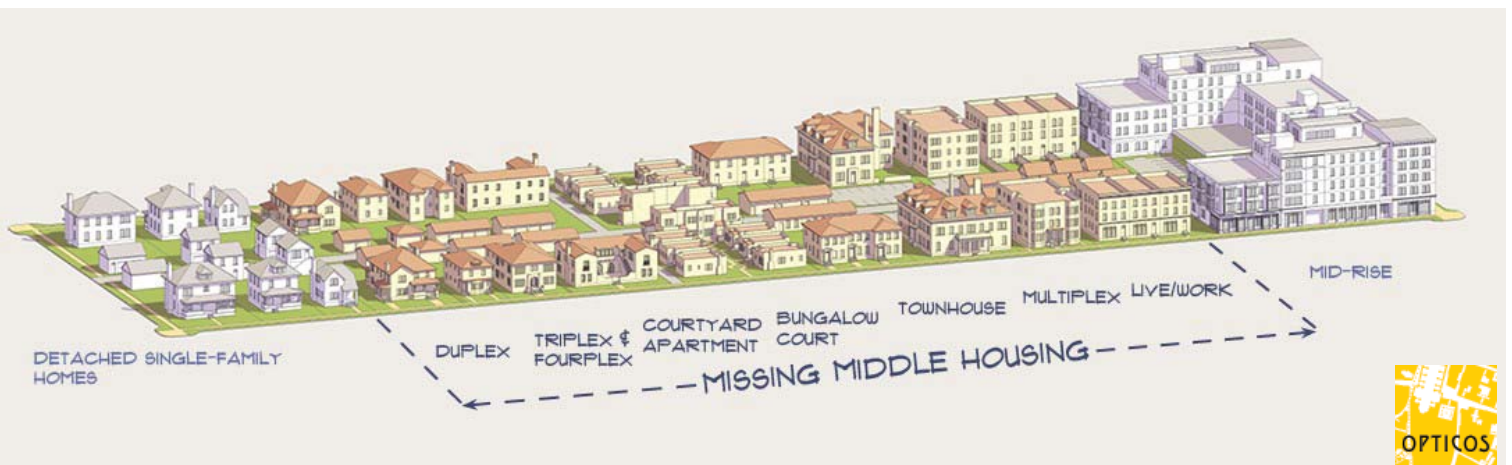
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3. **Housing Types:** A greater array of housing types, including Missing Middle Housing, which allows the code to regulate more effectively for compatibility.
4. **Compatibility Standards:** It is likely that the new code will retain something akin to the current Compatibility Standards in the portions of Austin that remained zoned with “use-based” (as opposed to form-based) zoning districts.

It should be noted that the effective deployment of these tools to ensure true compatibility will rely heavily upon sound mapping decisions. Mapping is the process of assigning various zoning districts to parcels on a map. Since the mapping process can take into account topography and other context-specific factors, it can allow the customization of compatibility, which is in contrast to the current Compatibility Standards.



*Variety of housing types.*









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## DESIGN FOR MOBILITY

### Where Are We Now?

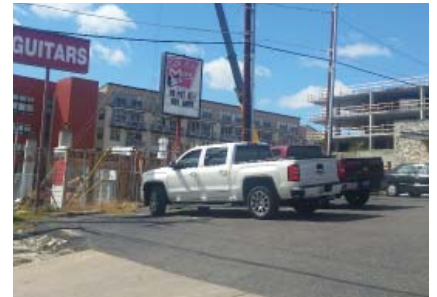
Winston Churchill is said to have stated, “We shape our buildings, and then our buildings shape us.” In a similar manner, it might be said that “We shape our mobility systems, and then our mobility systems shape us.” So much of Austin’s built environment is shaped by our automobile-oriented mobility system. The manifestations of that system include:

- Development sites being shaped, and sometimes dominated, by parking.
- Stark surface parking lots separating building from building and building from roadway.
- Parking lots contributing to huge amounts of impervious cover.
- Large and “loud” signage designed to catch the eye of motorists driving at high speeds.
- Gas stations and drive-through banks and restaurants dominating streetscapes.
- Roadways where the pedestrian path is more driveway than sidewalk.
- Wide roadways built for high-speed automobile travel compromising pedestrian safety and impeding the emergence of a walkable, mixed use environment.

The Code Diagnosis document noted: “The Land Development Code, in particular the base zoning district standards and regulations, create a car dependent environment that is not in keeping with the goals of Imagine Austin of investing in a compact and connected Austin, creating healthier communities, supporting multiple transportation options and promoting household affordability.”

### Where Do We Want to Be?

1. Imagine Austin calls for changing Austin’s land development regulations to promote a compact and connected city. Further it states that the new code should include incentives for compact and transit oriented development and complete streets. It also calls for continuing to expand the range of mobility options beyond the single occupant automobile.
2. In 2014, the Austin City Council adopted a Complete Streets Policy as an element of implementing Imagine Austin, and to “to enhance Austin’s quality of life over the long-term by advancing mobility; economically sound, compact, and connected development patterns; public health and safety; livability; environmental enhancement; sustainability; equity;







affordability, economic activity; climate resiliency; and excellence in urban design and community character”

## What’s the Prescription?

CodeNEXT will not (nor should it) spell the demise of the automobile. Our city is, in many ways, built for the automobile, and most of us rely on it for many of our mobility needs. But CodeNEXT can offer some tools to provide non-automotive options for those who choose them, tame the automobile’s negative impacts on our built environment, and prepare our city for rapid changes powered by emerging technologies (electric and autonomous vehicles) and systems (mobility on demand). For example, we don’t want to look back from 2040 (where mobility options are available on demand and when car ownership might be viewed as a quaint, old-fashioned notion) wishing we had not wasted so much space and money on vast seas of parking that are difficult to redevelop.

The Code Prescription for Design for Mobility includes:

1. **Parking:** Reduced parking minimums in areas of the city targeted for compact development, especially when those areas have robust transit and other mobility options. This will be a continuation of the approach taken in the recent code amendments regarding Accessory Dwelling Units (ADUs), where parking requirements were reduced in settings close to Imagine Austin Corridors.

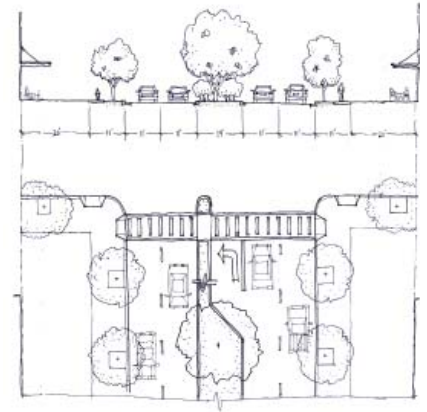




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2. **Form-Based Standards:** Form-based zoning districts that provide functionality but also minimize the negative impacts of on-site parking such as sidewalks interrupted by wide and frequent driveways, surface parking lots separating the sidewalk from the building, and parking lots without trees.
3. **Signs:** Sign rules that are not solely oriented around visibility from automobiles.
4. **Roadway Design:** Courtesy of the Austin Thoroughfare Plan (being developed as part of CodeNEXT), roadway designs based not only the function of a roadway, but also on the contexts through which it passes.
5. **Location Efficiency:** Form-based coding that will enable compact redevelopment to be constructed in transit-rich environments (e.g., rail, rapid bus, and frequent service bus lines). By doing so, the new code will promote land uses and development patterns that support mobility choice, reduce congestion, and reduce the negative environmental consequences of prolific automobile usage.
6. **Connectivity:**
  - a. Subdivision and Site Plan standards that promote connectivity by: ensuring that development sites include roadway connections, and where that is not possible, through pedestrian and bicycle connections; and through block sizes and patterns that promote walking, biking, and efficient automobile circulation.
  - b. Using greenways to build new transportation systems; for example, by utilizing a certain number of feet from a floodplain to provide trails, bank stabilization, and to keep natural flooding areas free from development.

**Spotlight:**

The new Land Development Code will implement many of the mobility goals of Imagine Austin, but those goals also will be supported by a number of ongoing or upcoming efforts including: developing the Austin Strategic Mobility Plan; continued refinement and implementation of the various mode-specific master plans (pedestrian, sidewalk, bicycle, urban trails); continued implementation of the Complete Streets Policy; the Corridor Improvement Program; and the city's Vision Zero efforts.









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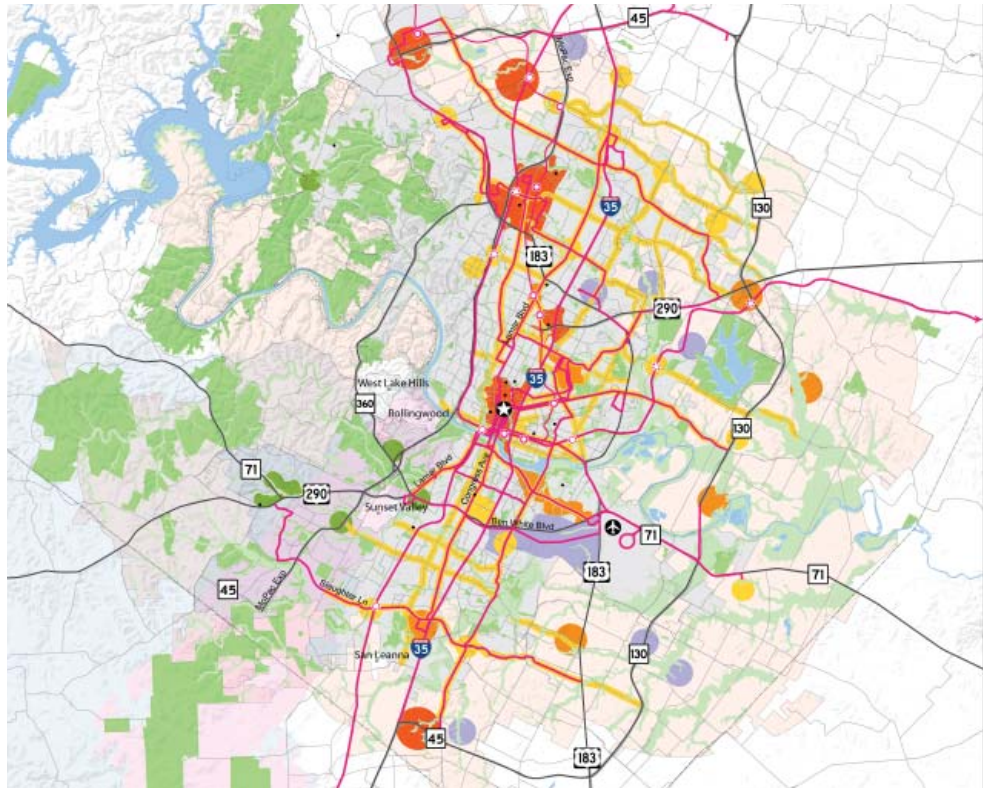
## NATURAL AND BUILT ENVIRONMENT CODE PRESCRIPTION

## REDEVELOPMENT

## Where We Are Now?

Imagine Austin's Growth Concept Map calls for: promoting a compact and connected city; promoting infill and redevelopment as opposed to low-density, greenfield development; and focusing new development in activity Corridors and Centers accessible by walking, bicycling, transit, and car. But since relatively little undeveloped land remains within our Corridors and Centers (as well as much of the central city), accomplishing that will require a regulatory environment that supports redevelopment and infill while balancing that goal with other public values such as water quality and stormwater protection, tree protection, adequate parking, neighborhood character, and compatibility. That balancing act between Imagine Austin's vision to grow as a compact and connected city and other public values is discussed here and in other sections of this paper.

Redevelopment will sometimes take the form of demolishing what is there and replacing it with something entirely new, and the new code will address that scenario. But redevelopment also will often take the form of retrofitting existing development. Austin's Centers and Corridors contain many older large shopping centers and commercial developments that, because they were designed around auto-mobility, do not fit well with Austinites' current

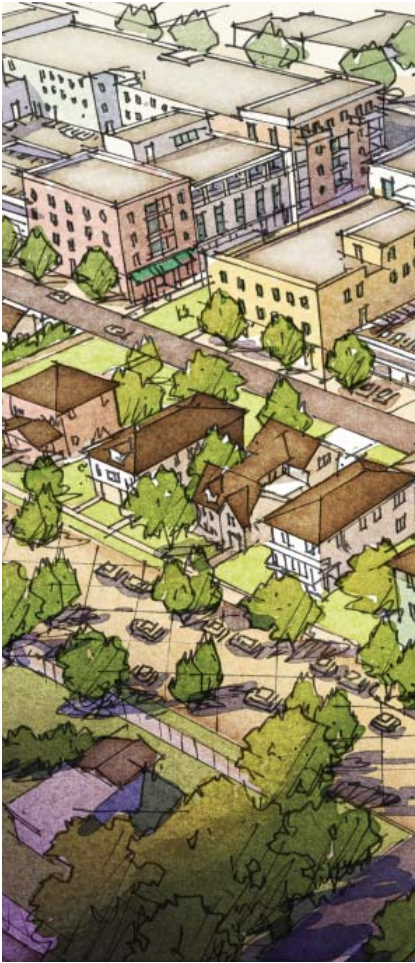


visions and values. Retrofit of these places will involve mitigating some of the negatives that stemmed from the auto-oriented design: huge surface parking lots that serve as barriers to pedestrians and blight the visual and natural environment, a lack of meaningful and functional landscaping, little regard for water quality and stormwater impacts, and lack of connectivity both within the site and to adjacent sites.

## Where Do We Want to Be?

1. Imagine Austin states: "We will become a city of Complete Communities," where the needs and wants of our citizens (access to economic opportunity, access to mobility, and access to goods and services) are well served. Redevelopment along Corridors and in Centers provides a golden opportunity to build complete communities, especially where single-use buildings and parcels are replaced or retrofitted with new buildings and uses that meet multiple needs.
2. The Code Diagnosis document noted that "commercial zoning districts were mapped on every major corridor, mile after mile, with no hierarchy of form or context, and no real understanding of the maximum amount of commercial space that the market could support." As market trends always encourage, the newer and larger commercial-use areas have moved





farther and farther out along these corridors, leaving behind in its wake, shopping centers with lower quality commercial uses along the corridors.” And the Diagnosis also noted the opportunity that could be leveraged through the redevelopment of these corridors.

## What’s the Prescription?

### 1. Reduce Parking Standards

- a. Required parking minimums will be reduced from current levels to improve stormwater and water quality benefits; reduce development costs; promote walking, bicycling, and transit; provide opportunities for building expansion and development in retrofitted parking lots; and provide opportunities for open space and landscaping.
- b. These reductions in parking standards will likely be focused in walkable urban areas, Transect Zones T4 and higher, and areas near high capacity transit. Drivable suburban areas and Transect Zones T3 and lower may see less of a reduction. In other words, the parking standards will be calibrated to context.

### 2. Compatibility and Transitions: See the Compatibility and Transitions section of this paper.

### 3. Connectivity: In order to reap the full benefit of redevelopment in Centers and Corridors, those redeveloped areas will need to be well connected to nearby neighborhoods so that those neighborhoods can take advantage of the increased access to services and amenities that redevelopment will provide.

- a. Require the extension of roads, alleys, trails, bike lanes, sidewalks, or green connectors as opportunities allow.
- b. Walkability will be promoted on large parcels through requirements for walkable block sizes, the number of required parking spots and their placement, and building coverage and placement standards.

### 4. Housing and Building Diversity:

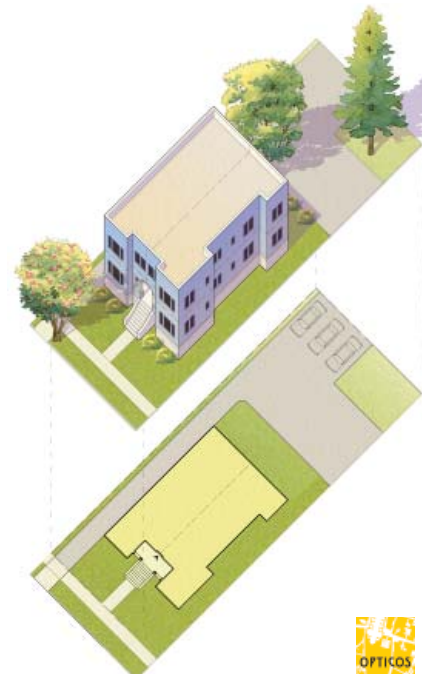
- a. Providing a diverse array of housing and building types leverages redevelopment in at least two ways:
  - i. It affords access to the array of amenities and services available in Corridors and Centers to diverse households and businesses





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- ii. It ensures that redevelopment occurs in the compact manner for which Imagine Austin calls.
  - b. The new Land Development Code will promote this diversity through: reduced parking requirements, diverse and compact lot sizes, adaptable buildings that readily accommodate shifting markets and uses, and carrying forward the recently adopted Accessory Dwelling Unit code elements.
- 5.** Stormwater Management and Flood Mitigation: See Water and Watersheds, above.
- 6.** Subchapter E:
- a. Subchapter E of the Land Development Code, also known as “Commercial Design Standards,” includes site development standards (e.g., building placement, parking placement, exterior lighting, and open space), building design standards, and rules regarding mixed-use projects.
  - b. In the new code, most of the site development and building design standards will be integrated directly into the base zoning district (rather than being “stand-alone” as they are today). In addition to providing greater ease of use and administration, this will ensure that site and building design standards can be applied specific to context, rather than in the current one-size-fits-all approach.
  - c. Subchapter E also contains standards for Vertical Mixed Use Buildings, including a density bonus program that incentivizes the creation of affordable housing units in return for increased density. The density bonus program of Subchapter E (and other density bonus programs) will be addressed in the upcoming Household Affordability Code Prescription, to be released later in 2016.
- 7.** Form-Based Standards: The new Land Development Code will integrate into the base zoning district standards that will help integrate redevelopment with its surroundings and adjacent neighborhoods. These standards will include: interconnected streets; walkable block sizes; lower parking ratios and appropriate design and location of parking; requirements compelling meaningful and functional landscape and open space; and requirements for flood mitigation and water quality. And the zoning districts will allow a wide array of uses, thereby allowing the creation of more complete communities.









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## NATURAL AND BUILT ENVIRONMENT CODE PRESCRIPTION

## GREENFIELD DEVELOPMENT

As noted earlier, Imagine Austin prioritizes growth within our Corridors and Centers through redevelopment instead of unfettered sprawling, low-density development far from the city's core. Redevelopment in Corridors and Centers will not, however, accommodate all of Austin's new growth, and some development will occur in previously undeveloped areas. This is known as greenfield development. As these previously undeveloped areas become home to new residents and businesses that need streets, utilities, buildings, and access to nature, how we develop is critically important to environmental sustainability, household affordability, fiscal health, and maintaining quality of life for all Austinites.

### Where Are We Now?

Greenfield development can be attractive to developers and buyers because the land (and resulting product) is often less expensive than equivalent development in the center city. However, this type of development can have serious fiscal and environmental consequences. The tradeoff is that greenfield development often requires extending existing water, electric, and road infrastructure, which is expensive to construct and maintain. Low-density greenfield development typically also consumes more natural resources when compared with more compact development near the city's core. In addition, without appropriate connectivity and non-single occupant vehicle options, development on the city's outskirts can dramatically increase individual dependence on the automobile, lead to higher reliance on automobile (accompanied by higher greenhouse gas emissions and air pollution), promote highway-style road development, and exacerbate Austin's traffic woes. These consequences are the reality of our current development standards, so we must start growing in a more strategic way.







When done well, greenfield development presents an opportunity to grow in a smart and sustainable way by connecting to existing transportation networks and utilities, thoughtfully integrating new development with the existing natural environment, and providing additional lifestyle choice.

### Where Do We Want to Be?

Greenfield development often requires subdividing large tracts of land before new development begins. The process for revising Austin's subdivision regulations (which have a significant impact on greenfield development) began in 2012, but was folded in to CodeNEXT during the Spring of 2015. Some of the biggest critiques of our current subdivision regulations and process include a desire to achieve predictability and simplicity in the review process, to have context-sensitive regulations, the need for flexibility in standards, and a concern that additional regulations would constrain subdivision design possibilities. The new subdivision code will seek to resolve these issues, creating a simpler, more efficient, context-sensitive, and reliable experience for residents, developers, and City staff.



### What's the Prescription?

1. The new subdivision code will be simplified to contain only the process for creating a legally platted lot; specific standards such as those for design and connectivity will still apply, but will be in other sections of the code. For areas within Austin's full-purpose jurisdiction, for example, specific criteria such as minimum lot sizes and setbacks will be located in the zoning ordinance and watershed regulations. The subdivision code will rely on a parcel's base zone for the applicable design criteria; this will help prevent conflicts with other sections of the LDC. For areas in the extraterritorial jurisdiction where the City lacks zoning authority, this type of information will be included in the subdivision section.





**DRAFT****NATURAL AND BUILT ENVIRONMENT CODE PRESCRIPTION****2. Promote connectivity:**

As the city grows, it is increasingly important to create a built form that promotes walking and other mobility options, and that can be connected with other parts of the city, both existing and future. Our current greenfield development does not usually meet this standard, leading to isolated developments that generate car traffic and are often unsafe for other modes of transportation, such as walking and biking.

- a. The Code prescription for new development will include increased connectivity through shorter block lengths, such as 400-500 feet, and by re-examining our minimum lot size to allow for a variety of building types on varying lot sizes.
- b. New tools to encourage creative design that respects the natural environment, such as conservation subdivisions.

**3. Protect the natural environment as growth occurs:**

Natural features such as rivers, creeks, trees, and open space are critical to creating a people-friendly Austin. One concern with greenfield development is that trees and open space may be lost, resulting in fragmented areas of private green space that are not accessible to everyone, and poor water quality when runoff from the new development reaches existing creeks and rivers. Therefore, the Code prescription entails:

- a. Retain many of our current environmental protections, such as stream setbacks, tree preservation requirements, sensitive feature protection, and impervious cover limits.
- b. Promote green spaces that are connected, desirable, and multi-functional. Examples of this could include preserving land for a network of greenways and urban trails which could be used for recreation and commuting by bicycle or foot, giving people an alternative to roadway connections.
- c. Require stormwater to be filtered, retained, or otherwise reused onsite to support vegetation, supply baseflow to local springs and waterways, and reduce potable water consumption. For more information, please reference the previous sections on Water and Watersheds, and Landscape and Trees.









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## PARKS AND OPEN SPACE: BUILD GREAT PUBLIC SPACES

### Where Are We?

We're all drawn to people-friendly places where we can interact with nature and the outdoors. Civic and open spaces are important components within a city's overall inventory of outdoor public space. These include metropolitan parks, downtown squares, pocket parks, and natural preserves, among other types of natural and public spaces. With improved code standards, we have the opportunity to create more such places as Austin grows—places that are active, accessible, comfortable, and sociable. In any city, the places between the buildings need to be designed to connect people. Great city parks, plazas, trail systems, open-air and farmers markets, streetscapes, waterfronts, gardens, and other public places all enhance our city's attractiveness and livability.

The demand for urban life has increased, but humans also want (and need) access to the outdoors. For example, it's no coincidence that Downtown's residential population growth has largely occurred within blocks of Lady Bird Lake and its wonderful outdoor opportunities. However not all Austinites have access to nearby park space. Thus, as we become a more compact city, we will need a variety (size and function) of parks and open spaces distributed across our urban places.







## Where Do We Want to Be?

1. Imagine Austin's vision includes the following elements: "We enjoy an accessible, well-maintained network of parks throughout our city. . . . Our open spaces and preserves shape city planning, reduce infrastructure costs, and provide us with recreation, clean air and water, local food, cooler temperatures, and biodiversity."
2. Imagine Austin further directs the creation of "an interconnected system of parks, waterways, open space, [and] trails." The plan goes on to stress the importance of maintaining "our pleasant outdoor setting and provide safe access to green space and recreation for all Austinites, particularly in urban activity centers and corridors."
3. In 2010, the City Council adopted the Long Range Plan for Land, Facilities, and Programs as the City's long-range plan for parks and recreation. The Plan noted, "The Department has shifted its parkland acquisition program to address growing inner-city needs by establishing the category of pocket parks. These 'infill' parks are a priority for parkland acquisition." Among the goals of the Plan are: "Provide safe and accessible parks and facilities to all citizens. Provide a diversity and sufficiency of recreational opportunities. Design and maintain parks and facilities to achieve environmental sustainability."
4. Council Resolution 20091119-068 established a goal that public acces-





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## NATURAL AND BUILT ENVIRONMENT CODE PRESCRIPTION

sible and child-friendly parks or green space be provided within ¼-mile of all urban core residents and ½-mile walking distance outside the urban core. To meet that goal, the Parks Department, in conjunction with the Watershed Department and Transportation Departments, created a Park Deficient Area Map that outlines where in the City that goal has not been met.

## What's the Prescription?

1. Increase park and open space types; calibrate them to complement particular contexts; and incentivize the creation of great, active public spaces.
2. Increase access to recreation, as recommended in Imagine Austin, by expanding the number of parks and outdoor play spaces available to residents.
3. Develop standards for public spaces that are well-designed and tree-covered, and incentivize such spaces in new and redevelopment projects.
4. Infuse recommended code changes from the Parkland Dedication Ordinance:<sup>7</sup>

Parkland Dedication requires developers of dwelling units to provide land for parks or pay a fee in-lieu of land in proportion to the impact their development has on the park system.

- a. Expand the amount of parkland options by setting fees to current land and construction costs and increase the amount of land required to meet the City's current level of service for neighborhood parks (9.4 acres of parkland per 1,000 residents).
- b. Increase credits for developments that agree to provide outdoor spaces that, while not dedicated parkland, are designed and designated for active use by the public. These private park spaces are maintained by the development and can provide unique play areas throughout the city.
- c. Develop standards for public spaces to be used in giving parkland dedication credits. Practices for making earlier decisions about whether land will be given or fees paid on a residential development also give the development community increased assurances about incorporating public space and parkland into their project.
- d. Retain the City's Park level-of-service as codified in the new parkland dedication ordinance. Intense competition for space on parcels in the







City's core usually makes parkland an afterthought. Items labeled Open Space are routinely stormwater detention and drainage areas, protected tree stands, a swimming pool area for residents, or transitional elements between building types where no recreation items are allowed under current Compatibility Standards. The Code must include:

- i. Metrics or design standards that retain percentages or pervious areas while incentivizing options for active recreation in urban and dense areas, as there is intense competition for space in the city's core.
  - ii. Improve the definition of Open Space to counteract current ambiguity in code.
  - iii. Open space in a project may be designated as a transitional element between building types where no recreation items are allowed under current Compatibility Standards.
  - iv. Open space may also be identified in the stormwater detention or drainage area.
5. Incorporate a metric for green infrastructure, for public space, and other items to obtain higher quality Open space.
  6. Incentivize designing green infrastructure with dual active recreation options to meet dual purposes in the code.
  7. Require connections between new and infill projects to adjacent or nearby parkland.



In 2014, the City Council adopted the Urban Trails Master Plan to guide the creation of an urban trail system. Many connections are needed through private property. Current code has an option for non-residential projects to make connections from their front entrances to adjacent parkland, but it is not mandatory. Requirements for connections to urban trails and nearby parkland will be included in the code.

8. Create a common language and incentivize the use of varied park and open space typologies as identified below:



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## a. Parks:

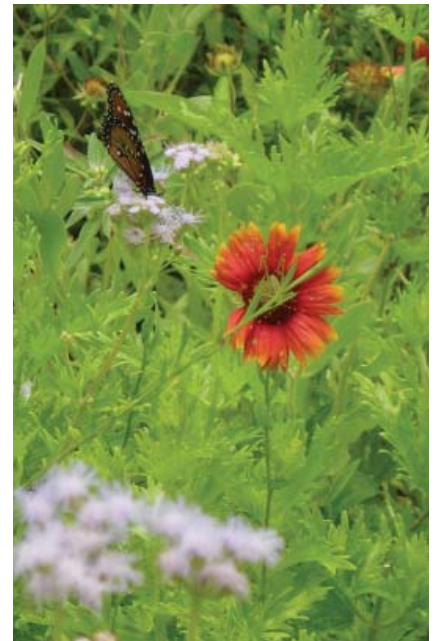
- i. Metropolitan Parks
- ii. District Parks
- iii. Neighborhood and School Parks
- iv. Neighborhood and Urban Pocket Parks
- v. Special Parks



## b. Sub-category of Parks:

The code will address additional sub-categories of parks not included in the PARD Long Range Plan for Land, Facilities and Programs. These sub-categories would help refine the palette of parks. This list generally adds additional parks that are not intended for structured sports activities, such as baseball, football or soccer. The palette of sub-categories will include standards including placement and location based on context. Sub-categories could include:

- i. Greenway
- ii. Green
- iii. Square
- iv. Plaza
- v. Pocket Plaza
- vi. Pocket Park
- vii. Nature Preserve









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## NATURAL AND BUILT ENVIRONMENT CODE PRESCRIPTION

## FOOTNOTES AND SOURCES

- 1 [https://austintexas.gov/sites/default/files/files/Sustainability/atmos\\_research.pdf](https://austintexas.gov/sites/default/files/files/Sustainability/atmos_research.pdf)
- 2 To help inform the calibration of the proposed standards, staff is currently working on modeling neighborhoods in various contexts (urban redevelopment versus suburban greenfield development) to quantify the impacts and benefits of the CodeNEXT recommendations for stormwater management, open space, and impervious cover.
- 3 [http://www.epa.gov/sites/production/files/2015-11/documents/sw\\_ms4\\_compendium.pdf](http://www.epa.gov/sites/production/files/2015-11/documents/sw_ms4_compendium.pdf)
- 4 The 95th percentile means that 95 percent of all rainfall events that occur in Austin are less than a certain size (~1.8 inches of rain).
- 5 [http://www.epa.gov/sites/production/files/2015-11/documents/sw\\_ms4\\_compendium.pdf](http://www.epa.gov/sites/production/files/2015-11/documents/sw_ms4_compendium.pdf)
- 6 Modeling in Envision Tomorrow indicated that more passive stormwater technologies (both beneficial use and flood mitigation) can be accommodated on sites with at least 25 percent pervious area. This estimate assumes poor-draining soils and does not factor in additional requirements for landscaping, open space, and tree protection.
- 7 Found in 25-1-601 through 25-1-609.

### Additional Sources

- Austin Water Resource Planning Task Force (Final Report to City Council).
- Climate Change Projections for the City of Austin.
- CodeNEXT: Code Advisory Group: Spring 2015 Working Groups.
- CodeNEXT: Code Diagnosis report.
- Community Viewpoints and Submittals.
- “Challenges most impactful on infill, missing middle and compatibility” CodeNEXT Code Advisory Group, March 10, 2015.
- “Code Approach Alternatives and Annotated Outlines: Recommendations,” ASLA-Austin (9/15/14).
- Complete Streets Policy.
- Complete Streets: A Guide to City of Austin Resources.
- Final Report, Austin Water Resource Planning Task Force.







- Flood Mitigation Task Force.
- Green Infrastructure Working Group (Summary of Feedback and Recommendations).
- Imagine Austin Comprehensive Plan.
- Parks and Recreation: Long Range Plan for Land, Facilities, and Programs.
- “Post-Construction Performance Standards & Water Quality-Based Requirements.” EPA 833-R-14-003. June 2014
- Resource Bulletin NRS-100. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 55 p.
- Urban Forest Plan.
- Watershed Protection Master Plan.
- Watershed Protection Ordinance.





**CODE**  **NEXT**

SHAPING THE AUSTIN WE IMAGINE

Natural and Built Environment Code Prescription

March 2016