



Investing in Austin's Future: Fiscal Health Code Prescription



Infrastructure is as vital to a city's health as the people who live, work, and play within it. Ensuring that this infrastructure is properly funded, built, and maintained is one of a city's most important duties. A revised Land Development Code can better ensure that Austin grows sustainably and provides for all of its residents now and far into the future.



WHAT IS A CODE PRESCRIPTION?

CodeNEXT is the process of aligning Austin’s land use standards and regulations (the Land Development Code, or LDC) with *Imagine Austin*, the city’s comprehensive plan. CodeNEXT progressed through several phases during 2013 and 2014:

- Listening and Understanding: “Listening to the Community Report” and “Community Character Manual.”
- Diagnosis: “Land Development Code Diagnosis.”

The City of Austin’s CodeNEXT team, which includes staff from multiple departments and consultants, is busy drafting and refining code elements. Virtually the entire LDC will be rewritten or revised, including chapters relating to requirements and procedures, zoning, subdivision, site plan, transportation, drainage, environment, and others. The draft code will be released for public review and comment in January 2017. After an extensive review and comment period, the draft code will be revised in accordance with the feedback received and delivered for City Council potential adoption. Once the code is adopted, the city will adopt a new Zoning Map to implement the zoning elements of the code.

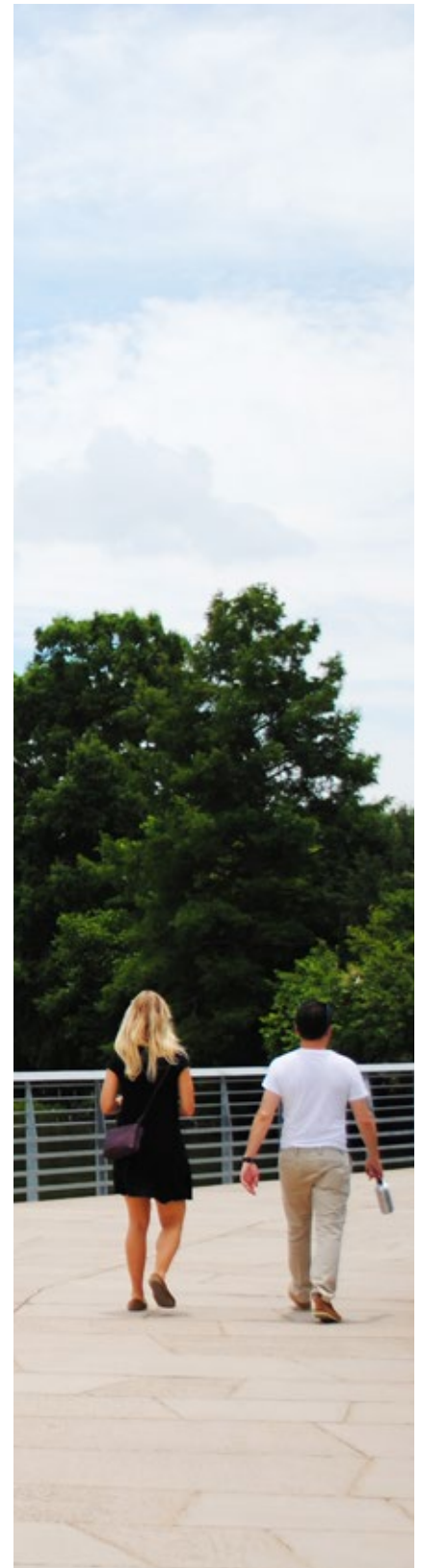
During 2016 – while the CodeNEXT team is drafting and reviewing code – the project team will issue and organize community conversations and feedback on some of the most challenging and important topics that the code will address:

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

This is being accomplished through four “Code Prescription” papers. These Code Prescriptions represent a preview of the specific direction being taken in the new code as well as “conversation starters” to gather community feedback on whether these Prescriptions accurately reflect community values expressed in *Imagine Austin*. While the Code Prescription papers will not be revised based on feedback received, the feedback will be used to shape the new code. Feedback can be provided several ways, including:

- Through your participation in the work of the Council-appointed Code Advisory Group.
- By providing feedback directly at SpeakUp Austin.
- By joining a CodeWalk or a Reddit AMA (Ask Me Anything).

Additional information about all of these means to get involved can be found at the project website: www.austintexas.gov/codenext.





EXECUTIVE SUMMARY

Austin's communities are linked by a labyrinth of public infrastructure. Beneath us are complex utility systems that keep our homes from flooding when it rains, deliver drinking water to our houses, and transport untreated wastewater to treatment plants. Above ground are roadways, creeks, parks, and electricity, gas, and cable lines that power our homes and businesses. These infrastructure networks are operated, maintained, and improved as a system without a focus on one geographical area within the city.

Building upon these underground and street-level networks are City facilities like recreation centers and libraries, emergency medical services, and fire and police stations. The geographic areas served by these facilities are determined by industry standards and best practices as well as departmental goals for providing optimal service. For instance, branch libraries are equipped to serve residents in a two-mile radius, while a "pocket" park typically has a quarter-mile service area. Other infrastructure, such as Zilker Park, serves as a regional destination for communities beyond Austin.

The City of Austin - as well as other public entities such as the County, State, and Federal government - is responsible for ensuring that adequate infrastructure and community services are available to all residents of Austin. How the City addresses infrastructure needs varies depending on the existing infrastructure and development context. Austin's development regulations require new development or redevelopment to provide some infrastructure to meet the increased service demands. To address the remainder of needs, the City funds capital improvement projects, routine maintenance, and city services.

This paper examines how the new Land Development Code (LDC) affects the City of Austin's fiscal health through the lens of its obligation to build and maintain infrastructure and provide effective and efficient services to its constituents. It looks at the following key issues:

1. Building sustainable infrastructure
2. Maintaining existing and future public infrastructure
3. Supporting efficient city services
4. Leveraging public and private investments





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INTRODUCTION

The dynamic nature of a city is highly dependent on continuous public sector and private sector investments. A city's comprehensive plan, regulations for development, real estate market demand, and public infrastructure investments all interact to produce the physical improvements citizens use every day. Coordinating the operations, geographies, and various owners and providers of these complex systems of infrastructure and services is a challenge. Most customers are not concerned with who installs, maintains, or manages community services; just that they exist and are reliable.

The City of Austin's charge is to implement policies and expectations outlined by City Council and in the *Imagine Austin* comprehensive plan, and to do so in an efficient and fiscally responsible manner. The City spends approximately \$650 million each year on its capital improvement program for new construction, renovation, and replacement of infrastructure and facilities¹. Additional operating funds are spent each year on regular and

preventative maintenance and community services. Some capital improvement investments, such as parks and libraries, have a long useful life, so their cost is spread out over many years and paid for by current and future citizens who use them.

Public funds are not the only source of public infrastructure funding. Austin's built environment is a result of tax- and revenue-supported investments as well as regulations that require or incentivize private development to build certain infrastructure, such as stormwater controls and sidewalks. The requirements for private properties vary by the type, scale, and phase of development. In some cases, a private development is required to construct new or improve existing infrastructure; in other cases, the development pays a fee-in-lieu toward larger city investments in the area. The extent and design of private development's contributions to the infrastructure system affects a city's financial obligations to complete or maintain the system and provide services.



WHAT IS FISCAL HEALTH?

The fiscal health of Austin's government reflects the City's ability to provide adequate, uninterrupted service to citizens regardless of any unforeseen economic or demographic changes. This paper focuses specifically on how the Land Development Code affects the City's fiscal health in the following ways:

- Meet short and long-term financial and service obligations;
- Promote long-term financial stability by establishing clear and consistent guidelines;
- Promote long-term financial planning within day to day operations.



How are we doing?

Austin's unique culture, neighborhoods, and natural environment attract an exciting number of new residents and businesses to the area each year. This unprecedented growth also presents some serious growing pains. The Texas A&M Transportation Institute ranked Austin the tenth-most congested city in the country²; a 2015 study by the Martin Prosperity Institute labeled Austin-Round Rock the most economically segregated region in the U.S.³; aging infrastructure is expected to withstand increased demand as well as recent severe weather events; and city staff and elected officials are charged with balancing the community desire to maintain Austin's unique character with the needs of a growing and changing population.

Despite these challenges, Austin continues to grow, and new communities outside of the central city are developing to accommodate the significant population growth. A large share of this development is occurring on previously undeveloped greenfields within city limits, which requires new infrastructure and service extensions. Other City services, such as libraries, recreation centers, resource recovery, and parks, must also plan for and accommodate these new communities. Below are a few things the CodeNEXT team will consider as the City continues to grow and a new Land Development Code (LDC) is rolled out.

INFRASTRUCTURE OBLIGATIONS

Existing Infrastructure

In 2014, the City conducted a Comprehensive Infrastructure Assessment that assessed the condition of public assets and identified capital renewal needs necessary to meet acceptable levels of service with existing infrastructure (Chapter 6 of Austin's [FY 2016-17 Long-Range Capital Improvement Program Strategic Plan](#)). Results found 86% of the assessed infrastructure was in excellent, good, or fair condition, which gives the City's infrastructure a general 'grade' of B.

CITY FINANCES 101

The City's Annual Budget has two primary components: the Operating Budget, which funds daily operations and programs, and the Capital Budget, which funds major infrastructure and facility improvement projects.

OPERATING BUDGET

City Council makes choices about what and how to finance a full range of city services and programs through the annual Operating Budget approval process. This is when decisions are made to reduce, maintain or increase funding for a range of City services. City services that fall within the Operating Budget, including preventative maintenance of infrastructure, are funded through:

- Taxes (property, sales, hotel/motel occupancy taxes, vehicle rental)
- Fees, fines, permits, licenses and inspections
- Charges for services and goods
- Utility charges (electric, water, wastewater, drainage, reclaimed water sales)
- Interest and Other (parking meters, airport parking, rental income)
- Net transfers in and billings to departments or agencies

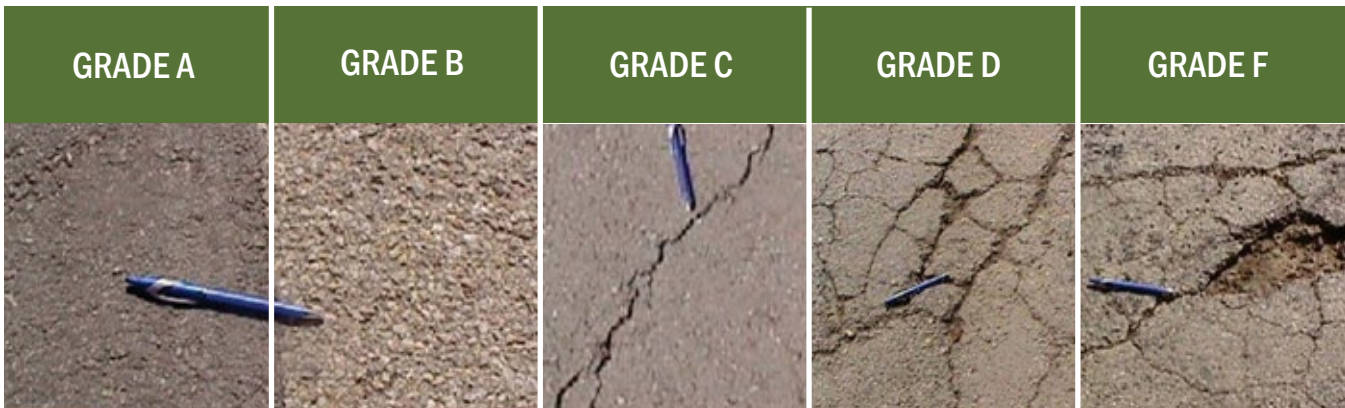
Enterprise departments, such as Austin Energy and Austin Water, generate revenue from the sale of services (e.g. utility rates and user fees) to pay for their operations and capital expenditures. Departments funded by the General Fund, such as Parks and Recreation and public safety departments, are those that do not generally generate revenue in amounts sufficient to pay for their operations and capital needs and therefore rely more on property taxes, sales taxes and other funding sources.

CAPITAL BUDGET

Unlike the Operating Budget, items funded by the Capital Budget are generally decided many years in advance rather than yearly. The City funds its Capital Improvement Program through multiple sources including different types of bonds (debt), grants, cash, transfers from department operating budgets, and other miscellaneous sources. General fund departments typically support capital projects and programs through voter-approved bonds or other types of debt that are repaid through property tax revenues and cash/transfers. Enterprise departments use revenue generated from utility rates and user fees as well as bonds repaid with these revenue streams to fund capital improvement projects. Debt is repaid over a long period of time and spreads the cost out over a large number of citizens for the life of the project.

FUNDING INFRASTRUCTURE MAINTENANCE

The link between capital projects and maintenance can be illustrated by the maintenance of city streets. Regular street maintenance is funded by the Operating Budget, but when a street is rated as poor or failing, the City must rehabilitate the street, which is a capital improvement project funded by the Capital Budget. The two types of projects—maintenance and capital improvements—are related. Without regular and preventative maintenance, infrastructure assets tend to fall into disrepair more quickly and require more frequent investment of capital funds for rehabilitation. Addressing capital renewal needs helps ensure that the City's infrastructure continues to operate and serve the public in the future.



Comparatively, when the American Society of Civil Engineers assessed the nation’s infrastructure in 2013, it gave an overall ‘grade’ of D+. A similar assessment of Texas infrastructure in 2012 resulted in a ‘grade’ of C.

The Comprehensive Infrastructure Assessment also identified pockets of Austin’s infrastructure, such as park infrastructure, with a higher percentage of assets in poor condition. Current conditions were not available for all infrastructure types, but several other departments recommended the urgent need to rehabilitate City facilities, sidewalks, and stormwater drainage.

Austin’s Watershed Protection Master Plan estimates that over the next 40 years, a range of \$1.8 to 2.2 billion in capital funds will be required to construct new or improve existing integrated watershed protection facilities including detention ponds, channel stabilization projects, and other flood, erosion, and water quality controls to address known problems. To put funding needs into perspective, the Watershed Protection Department currently allocates \$26.8 million annually for the Capital Improvement Project. This money mostly comes from the Drainage Utility Fee, with a small amount from development fees such as the Regional Stormwater Management Program. Current rates of repair and replacement are not keeping pace with the growing deterioration of the system, and delays in such action increase



future costs; additional resources and funding are needed to provide adequate levels of asset maintenance of Austin's drainage infrastructure.

City departments do their best within existing funding constraints to manage public assets and keep infrastructure operating safely, efficiently, and meeting established acceptable levels of service. They use asset management practices to minimize the total cost of owning and operating public investments while maintaining desired service levels. This ensures capital infrastructure is repaired, replaced, or upgraded on time and within budget. A high-performing asset management program includes detailed asset inventories, operation and maintenance tasks, and long-range financial planning. Asset management programs with good data—including asset attributes (e.g., age, condition, and criticality), life-cycle costing, proactive operations and maintenance, and capital replacement plans based on cost-benefit analyses—can be the most

efficient method of meeting this challenge. A clear and predictable land development code provides stability to departments forecasting maintenance and construction projects.

Future growth

Because private developers are typically required to pay the initial cost for new infrastructure, the need for immediate public investment in new subdivisions is not substantial. What is unknown are the costs this new development will impose on the city in years to come. At some point, all of the new infrastructure originally paid for by the developer will need maintenance and repair. Roads will need repaving, water and wastewater infrastructure will require repair or replacement, and public safety service demands will increase as the population grows. The new LDC needs to keep in mind the long term maintenance and replacements costs of this infrastructure that eventually becomes the City's responsibility.





SERVING THE CITY

Development patterns directly affect the performance of public safety and community services. As new communities are built in previously undeveloped areas within Austin's city limits, existing resources may be strained to accommodate the increase in demand until funding is available for additional facilities. Whether these new communities are easily accessible and well connected to existing networks affects response times for fire, emergency medical, and police services. In 2015, only seven of Austin's 46 fire stations met the average response time goal of eight minutes or less, and the majority of those seven were located in more connected, denser areas of central Austin. Five new fire stations are proposed in the 2017 budget to accommodate new and projected growth, at a cost per station of approximately \$6 to 8 million. This is in addition to the nearly 70% of Austin's general fund budget that is already allocated to police, fire, emergency medical, and municipal court services. This creates competition for funding other community services such as libraries, parks, recreation centers, and

health centers. All of these are under pressure to provide quality care for new communities, many of which cover a large service area due to lower density development and disjointed infrastructure networks.

STAYING COMPETITIVE

Austin's financial condition and long term obligations are both reliant on and the cause of decisions made by residents that expect certain services at the best price possible. Good infrastructure is a key driver for where real estate investment dollars go⁴. When city infrastructure is perceived as poorly maintained or inadequate, development may look elsewhere for better conditions, oftentimes outside city limits, and with it go new residents, businesses, jobs, and potential tax revenue to the City's operating budget. This perpetuates the challenge of funding infrastructure projects necessary to accommodate regional traffic that enters the City without contributing to the City's operating budget, while also funding strategic infrastructure investments to serve current residents.

How the Land Development Code affects fiscal health

The Land Development Code is one tool in the City's toolbox for creating and maintaining fiscally responsible public investments. When coupled with a strong long-range capital improvement program, the LDC helps set the tone for what Austin can expect when forecasting long-range capital investment obligations.

THE FISCAL IMPACTS OF OUR CURRENT LAND USE PATTERNS

For simplicity, this section discusses two predominant development types in Austin - construction of new residential communities on previously undeveloped land (greenfield subdivisions) and the reuse of previously developed land or filling in of vacant properties in developed areas (infill redevelopment).

Greenfield subdivisions

Private development is often required to fund and build infrastructure in large, previously undeveloped "greenfield" areas. This includes streets, sidewalks, utilities, drainage, and parks. These requirements have evolved over time as the City grows and the needs of Austin's community

changes. For example, Austin's land development regulations did not require the provision of sidewalks in the first half of the 20th century. This is why many parts of older central Austin lack sidewalks in residential areas.

Most of a subdivision's infrastructure is provided on-site by the developer and then turned over to the City or another public entity for long-term maintenance. In this way, Austin's Land Development Code (LDC) sets the framework for larger infrastructure networks and the City's financial obligations to maintain these networks in perpetuity.

On-site requirements are just one component of how a greenfield development affects public infrastructure. The City, County, or State owns and operates major roadways that connect to these sites. Any utilities that run along these public streets may require an upgrade or expansion to accommodate new and future growth. Other facilities required to support these new developments include fire, emergency medical, police, and library services.



CITY INFRASTRUCTURE INVESTMENT NEEDS CAUSED BY PAST DEVELOPMENT REGULATIONS

- The City has spent more than \$30 million to repair erosion problems that threaten existing buildings and infrastructure. These repairs would have been unnecessary had the development been adequately set back from the erosion hazard zone, as required by current regulations.
- All U.S. cities are required by federal law to develop a transition plan for building and improving sidewalks so they are compliant with the Americans with Disabilities Act. Many areas of the central city were developed under regulations designed prior to the ADA being enacted. Bringing all of the City's 2,400 miles of sidewalks into compliance with ADA requirements is estimated to cost approximately \$580 million. This total amount is equivalent to about 90% of all the funds that the City invests in the Capital Improvement Program each year. The City also estimates that Austin has 2,580 miles of absent sidewalks which would cost approximately \$1.64 billion to build.

Infill Redevelopment

Infill redevelopment along Austin's established centers and corridors tends to rely more heavily on existing infrastructure systems, facilities, and services than its greenfield counterpart. These existing infrastructure systems, often originally built by previous private development, are maintained and managed by the City. The extent to which private developers in infill development are

required to "build" or expand existing infrastructure capacity varies. Typically the City already has responsibility for maintaining the condition of infrastructure around the redevelopment property. Depending on the size and nature of new development projects, the City may be required to reprioritize capital improvement projects to accommodate increases in demand.



HOW THE PROPOSED LAND DEVELOPMENT CODE PROMOTES FISCAL HEALTH:

While it is not the silver bullet to fix all of Austin’s infrastructure challenges, the new LDC directly impacts the long-term obligations and financial stability of the City’s capital programs and services. Below are two ways the new LDC will promote fiscal health.

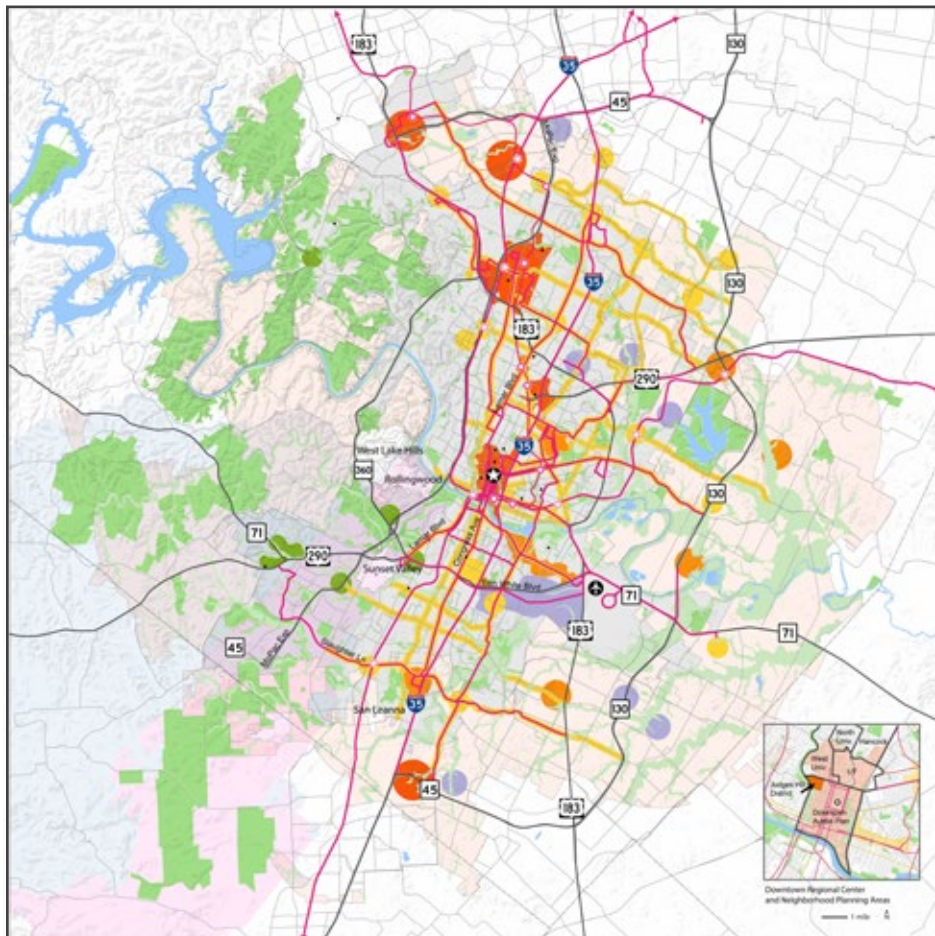
Facilitates fiscally sound investment for both public and private interests.

New LDC requirements for private development are designed to mitigate project impacts on the City’s infrastructure networks and accommodate increased demand. These requirements are coordinated on a district-wide scale rather than the piecemeal one-size-fits-all approach of the current

code. Tying the Land Development Code with the long-term vision for how an area should develop and coordinating with City infrastructure standards and investment needs reduces City financial obligations, maintenance, and reconstruction efforts down the road.

Applies the transect and conventional code in strategic locations that maximize public investment and minimize long term obligations.

The City’s comprehensive plan, *Imagine Austin*, was adopted in 2012 to guide new growth while preserving the quality of life Austin residents know and love. The Plan’s Growth Concept map focuses development along commercial centers



IMAGINEAUSTON
Vibrant. Livable. Connected.

Growth Concept Map

Legend

- Regional Center
- Town Center
- Neighborhood Center
- Activity Corridor
- Activity Centers for Redevelopment in Sensitive Environmental Areas
- Job Center
- Current Open Space
- Future Open Space
- Barton Springs Contributing Zone
- Barton Springs Recharge Zone
- ★ College / University

Transportation

- High Capacity Transit Stop
- ⊕ Proposed High Capacity Transit Stop
- High Capacity Transit
- Highway
- Other Streets

Boundaries

- City Limits
- ETJ
- County Boundaries

The Growth Concept Map applies the Imagine Austin vision statement to the city’s physical development. Generated through a public scenario-building process, it defines how we plan to accommodate new residents, jobs, mixed use areas, open space, and transportation infrastructure over the next 30 years.

Map Disclaimer: A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries. This product is for informational purposes and may not have been prepared for or be suitable for legal engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. This product has been produced by the Planning and Development Review Department for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or completeness.

Adopted June 15, 2012.



and corridors and has the potential to save the City between [\\$4.8 and \\$21.5 billion in infrastructure and services](#) by encouraging “compact & connected” development in these areas rather than the trend scenario of low density, sprawling development⁵.

Mapping of the new code will capitalize on these estimated cost savings by directing denser development and necessary infrastructure investments toward *Imagine Austin* centers and

corridors. This focused strategy also allows City departments to coordinate infrastructure projects with other service providers and customers and increase efficiency in forecasting infrastructure and service improvements in areas outside of *Imagine Austin* centers and corridors. A Citywide development strategy allows the City to think long-term rather than focusing on stop-gap measures to accommodate current demand.

SMART GROWTH SURVEY

The concept of Smart Growth development means building urban, suburban, and rural communities with housing and transportation choices near jobs, shops, and schools. A survey of 17 national studies examines how private development patterns impact short and long-term infrastructure investment and provision of services, and therefore a city’s fiscal health. Findings include:

In general, smart growth development:

- costs one-third less in upfront infrastructure
- saves an average of 10 percent on ongoing delivery of services
- generates 10 times more tax revenue per acre than conventional suburban development

More information on this survey and on Smart Growth can be found at www.smartgrowthamerica.org/building-better-budgets and www.planning.org/policy/guides/adopted/smartgrowth.htm



AMLI
5350
WWW.AMLI.COM
458-5350

BIRCH
LAWMONT

People walking on the sidewalk in front of the building.



BUILD

The infrastructure we use on a daily basis is largely owned and/or maintained by the City of Austin and other public entities. The City is responsible for creating a vision for how public infrastructure networks function, generally where they are located, what standards they adhere to, and which areas are the highest priorities.

Private development contributes significantly to Austin's infrastructure network by paying for and constructing infrastructure on site, connecting to the City's larger networks, and paying fees to mitigate off-site impacts. The costs incurred by both the City and private development vary considerably. For development that is close to existing networks, the costs tend to be relatively low. Larger subdivisions located further out not only build new infrastructure on site, but also go an additional distance to connect to existing networks, increasing costs for materials that are priced by length (roads and pipes).

Where are we now?

The current Land Development Code (LDC) provides many opportunities for improvement when it comes to coordinating City and private investments and reducing long-term infrastructure obligations. Below are a few of the issues the current LDC poses for the long term fiscal health of Austin.

CURRENT REGULATIONS OFTEN DO NOT IMPLEMENT *IMAGINE AUSTIN*

The current LDC was written long before *Imagine Austin*. City staff and citizens have identified numerous places in the existing LDC that do not align with *Imagine Austin*'s vision for investing in context-sensitive complete communities. Many elements of the existing LDC do not require coordination with surrounding land use, transportation, or infrastructure networks to the





degree envisioned in *Imagine Austin*. This increases potential long-term obligations to correct or maintain missed opportunities identified in *Imagine Austin*.

CASE-BY-CASE NEGOTIATIONS LEAD TO INCONSISTENT IMPLEMENTATION

Overly complicated and oftentimes contradictory regulations in the current LDC have created an environment where almost every zoning or site plan review involves some measure of interpretation by or negotiation with City staff. This lack of clarity and consistency increases the cost of uncertainty for the property owner and results in a piecemeal approach to infrastructure investment - sidewalks that lead to nowhere, oversized parking lots that sit vacant, and unusable open space.

LACK OF CONNECTIVITY AFFECTS MORE THAN JUST MOBILITY

New subdivisions require roads, but those with larger lot sizes and more convoluted layouts require more paving and longer service lines for utilities.

The increased linear feet per customer required to service conventional subdivision development increases the cost to provide electric, water and wastewater, drainage, gas, and telecommunication to customers. In many instances, the number of new customers serviced by these extensions does not compensate for maintenance expenses and any additional costs are shouldered by the city at large.

MOST DEVELOPMENT DOES NOT PAY THE FULL COST OF IMPACT

Development fees are one-time charges to pay for all or a portion of the costs of off-site capital improvements necessitated by a new development. Many fees assessed today do not fully fund construction when the City is ready to make necessary system improvements in the future. The City must then fund any shortfall for construction. Austin recently adopted new water and wastewater impact fees that require developers to pay the maximum allowable per state law, reducing the imbalance of impact costs, but fees for other infrastructure require reevaluation as the new code

is adopted. Other infrastructure systems such as transportation and stormwater/drainage do not have an impact fee at all.

Developments just outside City limits also benefit from City infrastructure and amenities, but are not legally obligated to follow current land development regulations or pay for the use of City infrastructure. This issue is outside the purview of CodeNEXT, but continued discussion is warranted as to how the City should handle development decisions occurring in the Limited Purpose and Extraterritorial Jurisdiction areas of the City moving forward.

DENSER INFILL AND REDEVELOPMENT STRAIN OLDER INFRASTRUCTURE

Incremental redevelopment faces several challenges when tying into existing infrastructure networks. One such challenge is connecting to existing systems that are older and not built to current standards. This can add complexity and cost when upgrading older systems to connect to new technology and materials.

Another challenge involves development built prior to the adoption of watershed protection regulations for drainage or water quality. This older development is generally characterized by uncontrolled, polluted stormwater runoff, encroachment and alteration of natural waterways, structures within harm's way in the 100-year floodplain, and undersized, deteriorating storm drain systems. Increased runoff in areas upstream of undersized drainage systems and low-lying structures increases pressure on older conveyance systems and contributes to the flooding problems in many areas. Because the current LDC requirement for flooding is to only mitigate for additional impacts, flood mitigation is not required for redevelopment projects that do not increase impervious cover or change drainage patterns compared to existing conditions. Mitigating additional impacts has the potential to hinder some redevelopment, so the size and extent of a project must be considered when determining the best approach.





Where Do We Want to Be?

- Encourage building for the long-term
- Coordinate public and private investments
- Reduce long-term obligations from greenfield development
- Calibrate fees and requirements for infill and redevelopment to relieve strain on existing infrastructure
- Focus infrastructure investments in key locations to implement *Imagine Austin*

What's the Prescription?

Below are a few ways the new LDC will tackle the challenges of infrastructure investment.

BUILD TO CITY STANDARDS

New subdivision regulations require properties to commit to building infrastructure that meets the standards set forth in all sections of the LDC, regardless of whether the infrastructure remains private or is dedicated to the City. New street design and subdivision requirements will ensure development is provided modern tools and designs to plan for and design adequate infrastructure. This requirement will minimize the long-term effects of private infrastructure that does not meet City standards of construction and connectivity.



CONNECT THE NETWORKS

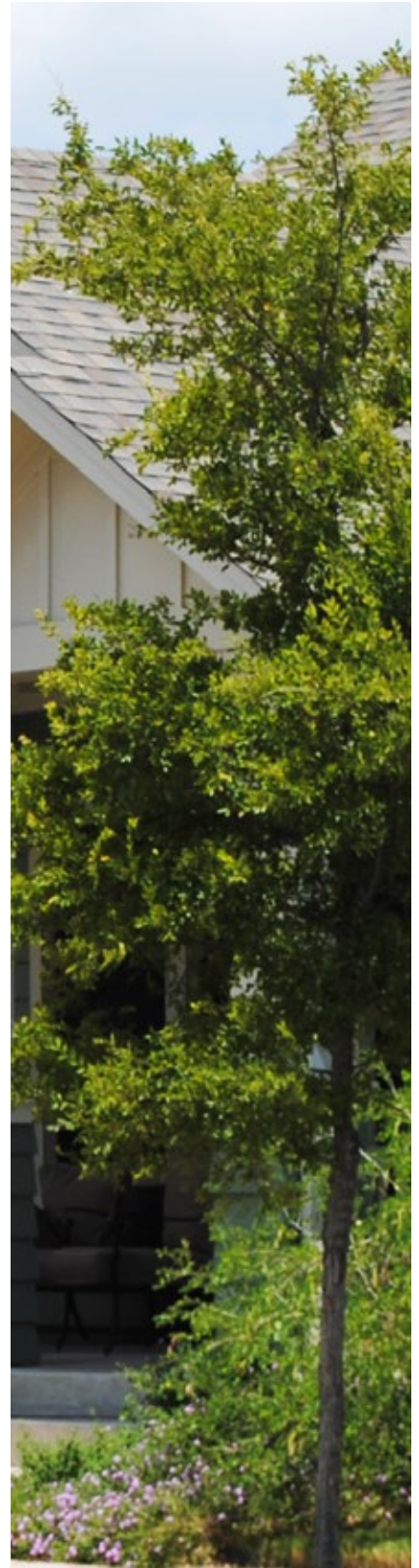
Housing and buildings have a relatively short lifespan, but once the street network and utility networks are in place and properties are subdivided, that framework is very difficult to change in the future. That’s why it is important from the start to build connectivity into and between adjacent subdivisions that may develop at different times. Building more connected street and utility network in greenfield subdivisions provides a better framework for the city to evolve over time. The new LDC includes measures to ensure greater connectivity, and a City interdepartmental working group is currently creating standards and procedures to align infrastructure system development within these newly connected, compact streets. See the “Align City Standards” section on page 27 for more information.

REDUCE THE REGIONAL IMPACT

The new LDC will require on-site mitigation and development features to minimize the impact of greenfield and redevelopment on district infrastructure and natural features. These requirements will be flexible to district-wide approaches to mitigation as well as cooperative efforts with surrounding development, such as shared parking, regional stormwater management, and on-site or district-wide water and wastewater management.

New requirements for mitigating flooding and beneficially using stormwater on-site will have a positive impact on hydrology and health of our streams as well as the capacity of existing infrastructure.

The City is also exploring new requirements for traffic impact analysis (TIA) thresholds and anticipated traffic volumes to address cumulative impacts on existing transportation capacity. These, along with development review process changes, a Street Impact Fee program,





and improvements to the City’s rough proportionality process, will work within or alongside the new LDC to improve transportation systems impacted by development throughout the City.

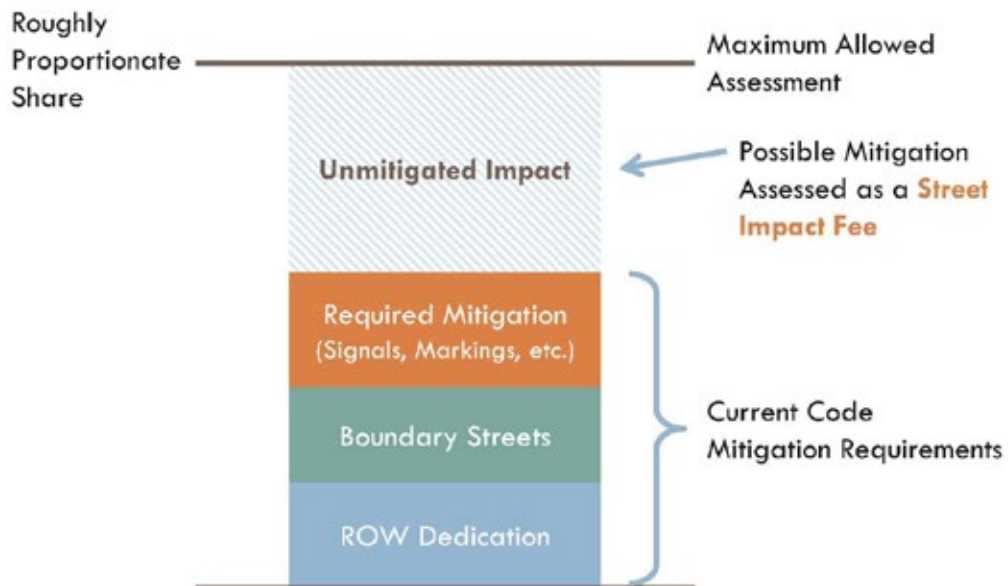
ASSESS STREET IMPACT FEES

Street Impact Fees are a tool authorized by Texas Local Government Code, Chapter 395 that cities can use to cover the cost of capital improvements necessary to help pay for the additional roadway capacity required to accommodate new development.

City staff is currently evaluating methodologies for valuing impacts to the transportation network based on the type and size of development as well as developing a process, ordinance, and rule changes needed to start collecting any proposed street impact fees. Upon adoption by City Council, the fee would be applicable to all development regulated by the LDC, assessed at the time of final plat approval, and collected at the time of building permit issuance.

Street Impact Fees – Relationship to Other Mitigation Tools

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MAINTAIN

Regardless of who put it there, the City and other public entities maintain, repair, and renew a majority of Austin's infrastructure. When development occurs within the City's limits, new infrastructure is built to serve these areas, which means more maintenance and renewal costs in the future. A variety of City fees and maintenance programs are in place to ensure all citizens receive an acceptable level of service, but the long-term maintenance obligations are rapidly increasing as Austin continues to expand with new residential subdivisions and commercial centers.

In this prescription paper, the discussion of "maintaining" infrastructure includes both regular and preventative maintenance of infrastructure as well as capital renewal projects that rehabilitate or replace existing facilities and infrastructure networks due to age or poor condition. The difference between a capital improvement project and routine maintenance is typically the cost of the improvement and its expected lifespan. Capital improvement projects typically cost more than \$50,000, have a four-year or longer lifespan and are funded through the Capital Budget. Routine maintenance projects are typically funded through a department's annual Operating Budget.



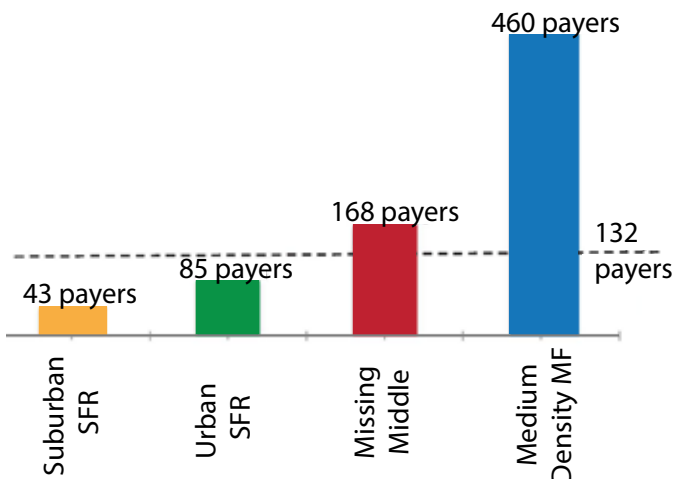
Where are we now?

Land use and infrastructure design decisions are often not made with long-term maintenance in mind. Below are a few of the issues the current Land Development Code (LDC) creates for maintenance of existing and future infrastructure.

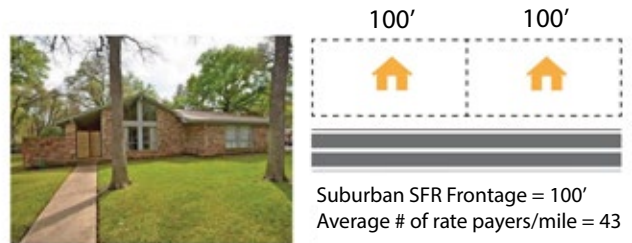
LOW DENSITY INCREASES THE CITY'S LONG-TERM MAINTENANCE COSTS

Land use planning and development for greenfield subdivisions typically focuses on the perceived market demand and potential revenue for both developers and taxing entities rather than the infrastructure and other resources needed to sustain the project. Often, the low density of new households increases the ratio of linear feet of utility lines and streets per customer, which in turn increases the amount of lines to maintain. One analysis conducted by Austin's Public Works Department estimates the density of development required to break even on the cost of maintaining Austin's roadways is 132 households per mile. By comparison, a typical suburban residential development ranges between 43 and 85 households per mile.

AVERAGE NUMBER OF RATE PAYERS PER MILE

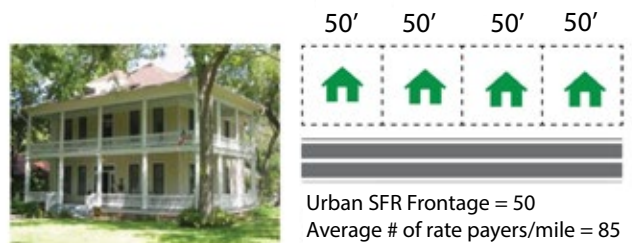


SUBURBAN SINGLE FAMILY RESIDENCE



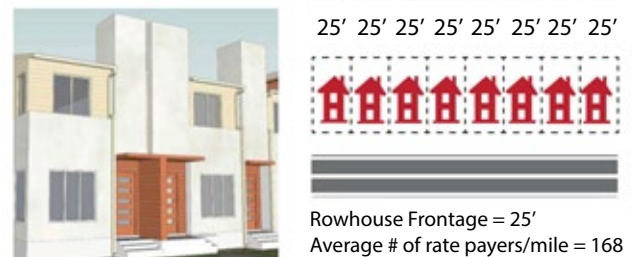
Austin Example: SFR in Balcones Woods

URBAN SINGLE FAMILY RESIDENCE



Austin Example: SFR in Hyde Park

MISSING MIDDLE



Austin Example: Mueller

MEDIUM DENSITY MULTIFAMILY



Austin Example: Saltillo Lofts



CUL DE SACS ACT AS PUBLICLY FUNDED PRIVATE DRIVES

Cul-de-Sacs essentially function as a shared driveway for a small number of households while prohibiting the general public from passing through. However, maintenance is funded by taxes and transportation user fees paid by all citizens and rate-payers. This increases the maintenance obligation for the city as a whole while only providing services for a select few.

OUTDATED STREET SECTIONS INCREASE MAINTENANCE

Outdated automobile-oriented street cross-section standards are still used today to design and build new streets. Many of these require more pavement than necessary to service a neighborhood while others require additional width to accommodate new infrastructure. This contributes to higher speeds, cut-through traffic, and more asphalt to maintain. The construction of automobile-oriented streets also increases the cost of reconfiguration and reconstruction as Austin’s communities shift from auto-centric to people-centric places. Sidewalks and bicycle lanes, if not included in these outdated cross-sections, must be retrofitted into existing streets to accommodate the increase in foot and bicycle traffic.



PRIVATELY MAINTAINED INFRASTRUCTURE IS A LIABILITY

Private drive aisles that serve a development instead of publicly dedicated city streets creates connectivity challenges as well as issues for public service access (e.g. electric, transit, life and safety). A developer may be motivated to construct a private drive in order to minimize the required street width, to avoid dedication of right-of-way, or to use designs that vary from outdated public street specifications, but this comes at a cost when long-term maintenance is required.

For example, homes in a single family condominium development are owned by individuals, but the lot is owned by all the homeowners and each home is accessed by a drive aisle, not a city street. The current LDC allows this type of use with a site plan (condominium residential use) in SF5, SF6, and multifamily zones. This concept has the potential to create missing middle housing choices, but in some cases is used as a means to avoid the platting process. The resulting developments appear to be single-family subdivisions serviced by city streets, but function as multifamily developments that

are not served by adequate infrastructure. When these private roads and infrastructure require maintenance in ten or twenty years, property owners may face substantial unforeseen costs and look to the City for assistance.

CONFLICTING CITY STANDARDS IMPACT THE CITY'S COSTS AND REVENUE

Conflicts between current LDC public realm standards, street cross-section standards, and separation standards for below- and above-ground infrastructure affect staff time, maintenance costs, redevelopment potential, and tax revenue generation. These conflicts and their fiscal impacts are most pronounced in existing infill urban development patterns.

For example, current LDC standards may dictate a minimum building setback or require the placement of sidewalks and street trees in a location where utility criteria manuals necessitate an easement. These easements restrict what can be constructed or installed within them to ensure access for utility maintenance and/or safety clearances per local or national standards. This type of conflict requires City staff and customers to negotiate an alternative



compliance for one or more of the standards during the review process.

If an alternative compliance solution reduces the clear access for maintenance, the cost of maintenance may increase in the short term because alternative methods for repair must be used until a new method is found or created. Conversely, utility placement, easements, and access requirements that push buildings back from the right-of-way reduce the development potential of a site and associated property values, thus reducing new construction and an increase in tax revenue for the city. These delays and design adjustments increase time and cost for both the City and developer.

Where Do We Want to Be?

- Encourage building with maintenance in mind
- Standards that account for the life cycle costs of development
- Up-front coordination of infrastructure investments to reduce long term obligations and missed opportunities





What's the Prescription?

Below are a few ways the new LDC standards build with maintenance in mind.

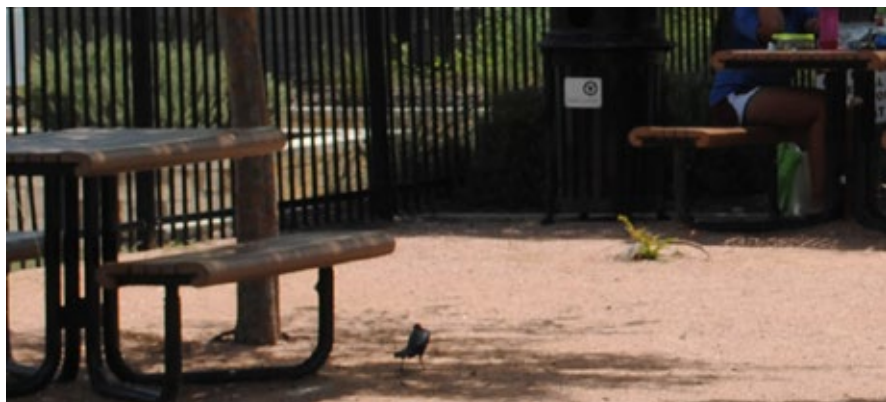
ACCOMMODATE COMPACT AND CONNECTED

Denser development and connected streets on greenfields reduce long-term maintenance costs by reducing the length of infrastructure lines to maintain while also increasing the number of customers per linear mile that pays toward funding infrastructure maintenance. The combination of transect zones, design standards, and connectivity requirements allow for an increase in households per mile, reducing the linear feet of infrastructure per customer and long-term maintenance costs. New subdivision connectivity requirements limit the number and length of cul-de-sacs and require publicly accessible, connected street networks throughout new communities.

ALIGN CITY STANDARDS

An internal multi-departmental working group is tasked with identifying and resolving conflicts between proposed LDC standards, street typologies, and below- and above-ground infrastructure standards.

Recommended solutions will be context sensitive and focus on aligning City standards to meet life and safety requirements as well as community goals. For example, in some contexts a minimum building setback will prevent conflict with national safety clearances for utility assets. In other contexts, alternative approaches for utility equipment and maintenance, or modifications to design criteria, standards, and specifications for utilities may be recommended to create urban environments that are functional, attractive, and comfortable for its users.



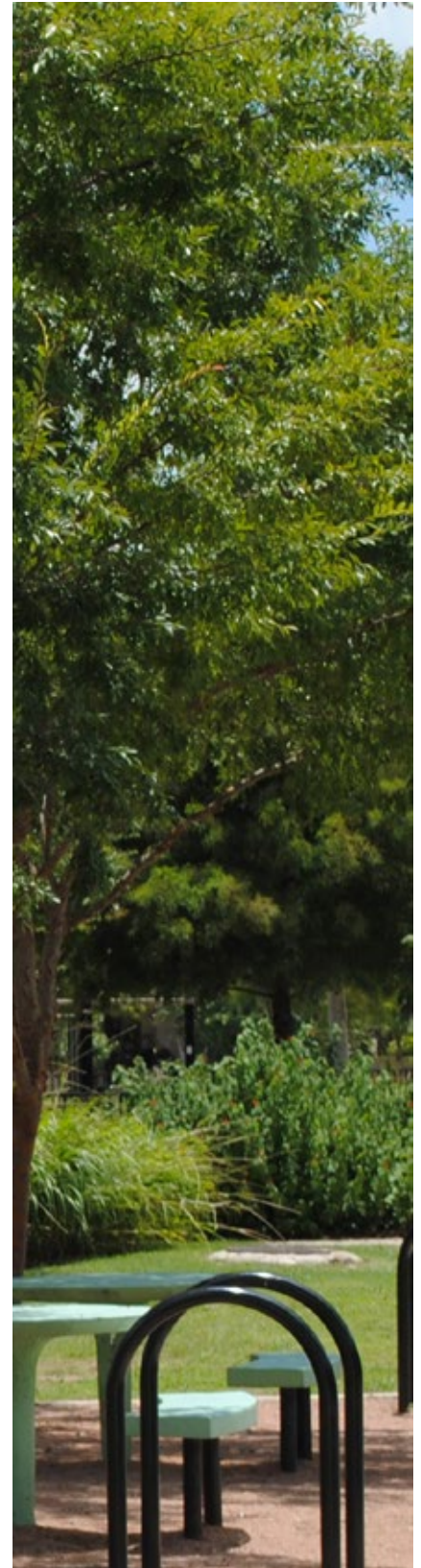
The end goal is to better align City standards to reduce the cost of City staff review time and project delays for capital improvement projects. It should also reduce review time, costs, and project delay for the developer, enhancing the feasibility of projects that support the implementation of *Imagine Austin's* vision.

PRIVATELY MAINTAINED BUT PUBLICLY ACCESSIBLE

The current LDC requires parkland dedication in new development to relieve strain placed on existing parks and meet City goals that all residents have access to a park within at least one-half mile of their home. However, funding to maintain these new parks is not always commensurate in the general fund budget. This concern was addressed in 2016 by a change to the parkland dedication ordinance that gives development more credit for privately maintained but publicly accessible parks. See the “Parkland dedication requirements” section on page 39 for more information.

COORDINATE WITH AUSTIN STRATEGIC MOBILITY PLAN

The Austin Strategic Mobility Plan (ASMP), which is being developed in tandem with CodeNEXT, will look at strategies, projects, and proposed policy to redefine the street network to meet the vision of *Imagine Austin* and the goals of the Complete Streets Policy. A main focus of the ASMP is to shift from planning city streets based solely on functional classification (measured by the character of traffic service) to an approach that incorporates land use context into the transportation planning process. The ASMP will update the current Roadway Table, which defines existing and future conditions of our streets, and will be referenced in the new LDC to coordinate right-of-way requirements obtained through the development review process and through the City’s Capital Improvement Program. Coordination with the new ASMP will reduce disconnected infrastructure investments and missed opportunities that must later be rectified.





AUSTIN FIRE

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SERVE

Austin's public services are experiencing increased pressure to provide quality services for the City's growing population. Below are a few ways the current Land Development Code (LDC) exacerbates this pressure.

Where are we now?

The current LDC has a site-specific view of development and land use regulations. Below are a few ways this limited viewpoint affects City services.

INEFFICIENT EMERGENCY SERVICE DELIVERY

The layout of a community significantly affects public service delivery. Current LDC subdivision regulations allow long, disconnected internal street networks with limited access to larger arterials, which impact response times and fuel efficiency for city services. For emergency services, dead-

end streets and cul-de-sacs often affect service delivery and operations. When responding to a situation on a dead-end or cul-de-sac, only one or two emergency units can get close to the affected building. A multi-unit response will cause units to back up the street, forcing firefighters or other emergency responders to lug hose and equipment longer distances.

Zoning regulations for large-lot single-family neighborhoods also reduce the number of households within service areas and increase travel distance and time. For public safety, evaluation of response times determine where service gaps exist and prioritize the need and placement of new stations. As a result, these communities often require more fire and police stations per capita than those in more compactly developed areas.



INCREASED COST OF PUBLIC SERVICES

Limited street connections and low density regulations impact community services within Austin’s city limits such as waste collection, public transit, and postal delivery by extending service areas and travel time. Just like emergency response, the cost of providing public services to poorly connected suburban subdivisions increases dramatically as the number of ratepayers per mile decreases and poor street connectivity requires more travel miles per service vehicle. Poor connectivity also makes it impractical for community members with limited mobility, particularly those who are disabled, to access transit. Solutions to these connectivity challenges, such as stop gap use of paratransit, come at a much higher cost to the taxpayers than regular bus service.

COSTLY ADMINISTRATIVE REVIEW PROCESS

Private development is an important partner in building many of the City’s capital projects - through upgrading infrastructure to accommodate new development, building new infrastructure (including service facilities), and providing other community benefits such as affordable housing and open space. Opportunities to partner with private developers are diminished when a development is no longer feasible due in part to extended development timelines resulting from complex code and a lengthy City review process (see page 288 of the [Zucker Final Report](#), Chapter IX). This extended review process also affects capital improvement projects, which are many times tied to bond cycle timelines and department capital budgets.



Where Do We Want to Be?

- More connected customers per square mile
- Manageable service areas
- Community benefits incorporated into new development



What's the Prescription?

NEW SUBDIVISION PROVISIONS

New subdivision provisions remove barriers to construction of missing middle housing and clarify connectivity standards as well as approval criteria for plats. The subdivision provisions are streamlined to contain only the subdivision process. Design standards, such as block length, connections to adjacent property, extension of streets, and similar standards, are updated and organized within the Transportation section. The recently adopted parkland dedication requirements will be retained, and parkland will continue to be implemented when property is subdivided or at site plan. New subdivision connectivity requirements limit the use and length of cul-de-sacs and require improved connectivity throughout new communities, thus reducing impact to emergency service operations.

LONG TERM GROWTH STRATEGY

Mapping of the new LDC transects will direct compact development to centers and corridors, creating denser areas of customers in service areas.

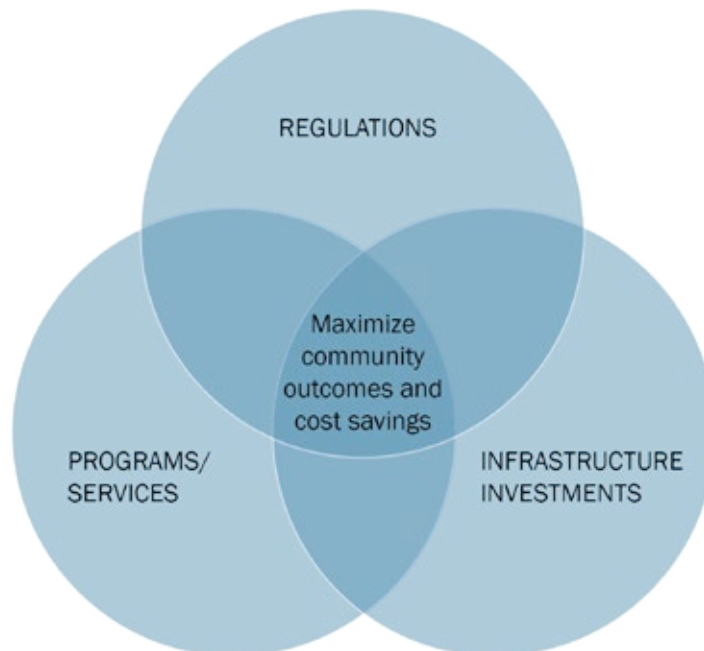
NEW ADMINISTRATIVE PROCESS AND PROCEDURES

On April 21, 2016, the City Council approved Ordinance number [20160421-039](#) which changed staff review times for development applications, modified the life of a site plan application, established stop-clock provisions for development applications that require a public hearing, and established expiration times for subdivision vacation and construction plan applications. These provisions provide more predictable timeframes for both City staff and customers, thus reducing costly delays and missed opportunities for coordination with other City programs and efforts. All provisions found in this ordinance will be carried forward in the new Land Development Code.



LEVERAGING PUBLIC AND PRIVATE INVESTMENTS

Aligning CodeNEXT regulatory changes with other supportive City policies, programs, and projects is necessary if the City wants to be successful in meeting long-term financial obligations and realizing *Imagine Austin's* vision. All of these public and private efforts work together to address community needs. It is the alignment of public and private investments that results in the greatest opportunities for enhanced community outcomes and combined cost savings.



Below is a small sample of policies, programs, and projects that work alongside the LDC:

- Sidewalk and Urban Trails Master Plans
- Parks and Recreation Department Long Range Plan for Land, Facilities and Programs
- Austin Strategic Housing Plan
- Density Bonus Programs
- Analysis of Impediments to Fair Housing Choice (AI)
- City of Austin Comprehensive Housing Market Study (2014)
- Complete Streets Policy
- Transit-Oriented Development Policy
- Capital Area Metropolitan Planning Organization (CAMPO) 2040
- Residential Permit Parking (RPP) Program
- Watershed Protection Master Plan
- Austin Music Census (2015)
- Long-Range CIP Strategic Plan



Where are we now?

The costs to install and maintain Austin’s infrastructure network are significant due to the scale and nature of improvements involved. Gaps in existing networks are due in large part to a lack of alignment between City development regulations, programs, policies, and projects. Gaps also occur from a lack of differentiation between what the City and private development can deliver in different contexts, i.e. infill and greenfield.

FINANCING CURRENT DEVELOPMENT PATTERNS

With the exception of recent infill development projects in the urban core, Austin’s overall development pattern is sprawling greenfield growth. Sprawling development patterns require significant investment in new infrastructure to serve a much smaller number of residents and businesses. Fewer residents and businesses means less tax base that the network is serving. This rapid pace of expanding infrastructure to meet the needs of sprawling development has a high potential of outpacing the amount of public funding that can support infrastructure investments and maintenance.

Urban infill development faces its own set of challenges when connecting to older infrastructure that was built when the city was smaller and walking was the primary means of getting around. Higher density development found in these areas often requires increasing the capacity of aging streets, water, wastewater, and storm infrastructure. The cost of retrofitting already built, older infrastructure to accommodate new design criteria often exceeds what any one developer is able to finance. This, coupled with an inability to fit parking, parkland, and water quality requirements of the current LDC on small infill lots becomes a barrier to urban infill development.



INTEGRATING OLD AND NEW

Significant, incremental redevelopment is occurring in areas of Austin with older infrastructure systems, which presents challenges for seamless infrastructure system integration. Often the systems that new projects tie into are older and not built to current standards, adding complexity to infrastructure improvements that typically result in cost overruns and project delays.

Creating a seamless infrastructure network in the context of incremental lot-by-lot development becomes even more challenging when the City has a vision or plan for enhanced infrastructure improvements in an area, but does not yet have funding or an exact timeframe in which those changes will be made. This challenge occurs in Transit Oriented Development (TOD) districts, where requirements to install the streetscaping at project build-out creates a patchwork of parcel-by-parcel upgraded streetscaping, rather than across an entire block-face. In these instances, the City must work with private development to ensure construction does not preclude or hinder future City infrastructure investment, but actually furthers the goals of future capital improvement needs.

LOTS OF PLANS TO IMPLEMENT

Budgets are tight and expectations are high for both publicly and privately funded projects. The City has conducted many studies and adopted numerous plans that address infrastructure and service improvements, but only recently has it systematically, proactively integrated overlapping community and infrastructure plans to create a geographic strategy that addresses multiple issues together. Continued efforts are needed to combine limited tools and resources and prioritize investments in support of *Imagine Austin*.





Where Do We Want to Be?

- Effective, long-range capital planning
- Coordinated strategic capital investments that go beyond meeting basic needs for rehabilitation and replacement of current infrastructure and increased capacity needs
- Concentrated efforts in areas where investments will have the farthest reach in implementing approved planning and policy initiatives and goals.
- Concurrent implementation of City projects and programs with improved land development code regulations.

What's the Prescription?

The prescriptions below reflect City policies, programs, and projects that effectively leverage public and private investments both outside of and in conjunction with improvements to the Land Development Code (LDC).

PUBLIC-PRIVATE PARTNERSHIPS

Public-private partnerships offer a unique solution to addressing the biggest challenges associated with delivering and maintaining the City's infrastructure network. In a public-private partnership, cooperation between the public and private sector brings together tools and resources to minimize gaps in city networks, particularly in areas where growth is hindered by limited public funds to meet current



and future needs. Additionally, public-private partnerships encourage infrastructure investment in more economically underserved neighborhoods where projects face additional financing hurdles due to market constraints and limited revenue resources such as rental prices. Future City efforts will:

- Create a toolkit to attract private sources of capital to public infrastructure investments, including public financing mechanisms.
- Expand the Regional Stormwater Management Program to all watersheds, and allow cost participation for regional stormwater solutions where appropriate.

STRATEGIC CIP INVESTMENT

The [Long Range Capital Improvement Program \(CIP\) Strategic Plan](#) cites several strategies for prioritizing capital investments that fall within Strategic Investment Areas (page 43). These investment areas show the geographic alignment of City plans and policies with anticipated growth patterns and future capital investment needs. They connect City plans, particularly *Imagine Austin*, with projected growth and development to create an effective location-based strategy to leverage private investment, where possible, for realizing City goals and priorities.

REINFORCE *IMAGINE AUSTIN* CENTERS AND CORRIDORS

To successfully realize *Imagine Austin’s* vision for the City, plans and policies need to increase efforts to reinforce the *Imagine Austin* centers and corridors. These efforts can improve the fiscal health of the City by increasing revenue and focusing capital investments in areas that serve a larger customer base. Future city efforts will:





- Organize and support the retention of legacy businesses along *Imagine Austin* Activity Corridors and within *Imagine Austin* Activity Centers to help maintain the economic health of these areas of the City (Soul-y Austin).
- Reinforce *Imagine Austin* Centers and Corridors through public infrastructure investment, an example of which is a publicly funded parking structure or public realm improvements in coordination with private investment in the area.

DEVELOPMENT BONUSES

As discussed in the [Household Affordability Code Prescription](#), the revised code will replace the existing inconsistent density bonus programs with a new program to cover *Imagine Austin* Centers and Corridors where larger buildings are deemed acceptable. A second type of density bonus program will be available in and around *Imagine Austin* Activity Centers and Corridors with access to transit where smaller buildings with height and bulk appropriate to their neighborhood context are more appropriate. These density bonus provisions act as a public-private leveraging tool to achieve community benefits outlined in *Imagine Austin* as well as improvements to public infrastructure.

PARKLAND DEDICATION REQUIREMENTS COORDINATED WITH THE CITY'S CIP NEEDS

The recently adopted revised Parkland Dedication Ordinance establishes a prioritization for obtaining new park acres by increasing requirements for private sector parkland investments. These requirement changes are accompanied by a mapping tool that allows developers to determine earlier in the development process where City-identified parkland-deficient areas are located and whether a



parkland dedication or fees-in-lieu of parkland will be required for their project. The City is then able to use private dollars and parkland dedications to fulfill community needs for parks and open space. Park development fees were also added to the parkland dedication formula to provide funding for improvements on newly-dedicated undeveloped land. Private park investments and fee contributions free up public funds for larger capital replacement projects such as replacing aging swimming pools. All new parkland dedication requirements will be carried forward in the CodeNEXT draft.

ALIGN PLANNING EFFORTS WITH TRANSPORTATION

Regulations for areas mapped as part of a transect will customize development standards to implement *Imagine Austin* and the district-wide goals envisioned for the area. The new LDC provides clear and predictable requirements that ensure the installation and upgrade of infrastructure coordinates with surrounding development and City plans and initiatives. However, many plans and initiatives must also be updated or created to support the new LDC. The Austin Transportation Department is currently updating Austin’s transportation plan which defines our City’s transportation needs moving forward. This Strategic Mobility Plan pulls multiple mobility programs and plans into one comprehensive vision and applies an integrated approach to planning for all modes of Austin’s transportation system. The proposed plan will identify strategies in the form of programs and projects to shape Austin’s future transportation network, as well as provide policy for stronger Transportation Demand Management (TDM) programming that aligns TDM incentives and regulations proposed in the new land development code. New street cross-sections will also inform updates to the Transportation Criteria Manual, which guides street design and operations.

CITY EFFORTS THAT INFORM THE NEW LDC

- Long-Range CIP Strategic Plan
- Small Area Plans
- Land Regulating Plans
- Mobility Plans
- Corridor Improvement Programs
- Revision of the Transportation Criteria Manual



ELLA WOOTEN PARK
2047 MCCLOSKEY STREET



FOOTNOTES

1. More information on Austin’s Capital Improvement Program and Long Range Strategic CIP Plan can be found at <http://www.austintexas.gov/department/capital-planning/documents>
2. Texas A&M Transportation Institute. “2015 Urban Mobility Scorecard”. <http://mobility.tamu.edu/ums/report/>
3. Martin Prosperity Institute. “Segregated City: The Geography of Economic Segregation in America’s Metros” <http://martinprosperity.org/content/insight-segregated-city/>
4. More information about the role of infrastructure in real estate investment decisions can be found in the Urban Land Institute’s report “Infrastructure 2014: Shaping the Competitive City”. <http://uli.org/infrastructure-initiative/infrastructure-2014-shaping-the-competitive-city/>
5. July 2012 study conducted by Chan & Partners Engineering, LLC. “Imagine Austin Comprehensive Plan: Infrastructure, Operations, Maintenance & Service Cost Comparison - Preferred Growth Scenario and Trend Growth Scenario. https://www.austintexas.gov/sites/default/files/files/Planning/ImagineAustin/Imagine%20Austin%20Comp%20Plan%20Cost%20Report%202012-07_small.pdf



CODENEXT

SHAPING THE AUSTIN WE IMAGINE

Fiscal Health Code Prescription

September 2016