LEANDER CITY COUNCIL
and
PLANNING & ZONING COMMISSION
JOINT WORKSESSION
CITY OF LEANDER, TEXAS

Pat Bryson Municipal Hall ~ 201 North Brushy Street ~ Leander, Texas

Thursday ~ February 20, 2014 at 6:00 p.m.

Worksession will recess at 7:00 p.m. for the Regular City Council Meeting and reconvene after close of meeting

Mayor – Christopher Fielder

Place 1 – Andrea Navarrette
Place 2 – Kirsten Lynch
Place 3 – Simon Garcia
Place 4 – Ron Abruzzese
Place 5 – Jason Dishongh (Mayor Pro Tem)
Place 6 – David Siebold

City Manager – Kent Cagle

Chairman – Jeff Seiler

Place 1 – Michelle Stephenson (Vice Chair)
Place 2 – Joel Wixson
Place 3 – Jason Anderson
Place 4 – Sid Sokol
Place 5 – Richard Allen
Place 6 – Betty Saenz

This meeting is open to the Public but does not allow for public participation

1. Open Work session (Mayor Fielder and Chairman Seiler)

2. Roll Call

3. Discuss FY 2013-14 Comprehensive Plan Implementation Priorities:
   a) Proposed Future Land Use Node Plan and Map
   b) Proposed updates to the Transportation Plan
   c) Possible amendments to the City's Development Ordinances related to the preservation of trees, riparian corridors, natural features and resources

4. Adjournment

CERTIFICATION

This meeting will be conducted pursuant to the Texas Government Code Section 551.001 et seq. At any time during the meeting the Council reserves the right to adjourn into executive session The City of Leander is committed to compliance with the American with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request. .I certify that the above agenda for this Joint Work Session of City Council and the Planning & Zoning Commission of the City of Leander, Texas, was posted on the bulletin board at City Hall, in Leander, Texas, on the 14th day of February, 2014 by 5:00 pm pursuant to Chapter 551 of the Texas Government Code.

Debbie Haile

Debbie Haile, TRMC
City Secretary

Executive Summary

February 20, 2014

Agenda Subject: Comprehensive Plan Implementation – Priority #1: Adopt a Future Land Use Node Plan.

Background: One of the goals of the Comprehensive Plan is to "Adopt Town Center, Community Center, and Neighborhood Center nodes for commercial, educational, recreational, and civic activities within walking radii of residential neighborhoods." Currently, the Comprehensive Plan includes a node plan that provides general goals for each type of node, but does not provide specific guidance for appropriate zoning and land use regulations within each node type and between the nodes and surrounding neighborhoods.

Origination: City of Leander Planning Department

Financial Consideration: None

Recommendation: This agenda item provides an opportunity for staff to present a preliminary draft of the future land use node plan for Commission and Council review and feedback.

Attachments:

1. Proposed Future Land Use Node Plan
    a. Land Use Category Descriptions
    b. Example of Node Sizes
    c. DRAFT Future Land Use Map
2. Priority Work Plan

Prepared By: Tom Yantis, AICP
Development Services Director 02/12/2014

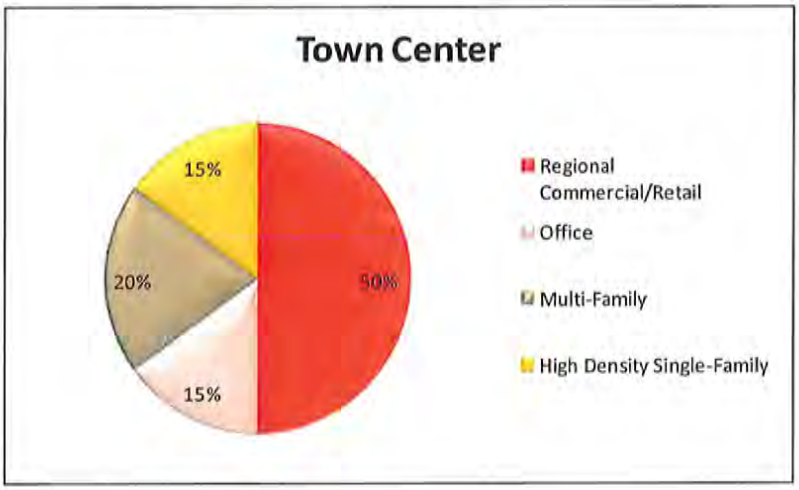
DRAFT - Future Land Use Category Descriptions & Use Mix

Town Center

The Town Center land use node is intended to be located at the intersections of major arterials within the community. These nodes are approximately one mile in diameter and incorporate approximately 500 acres. These areas are intended for large scale commercial, retail and office uses that require locations with direct access to major arterials and that serve both the community and a larger trade area outside the city limits. These areas are also intended for high density multi-family and single-family housing.

Appropriate Zoning Use Components

GC, LC, LO, MF, TF, SFT, PUD

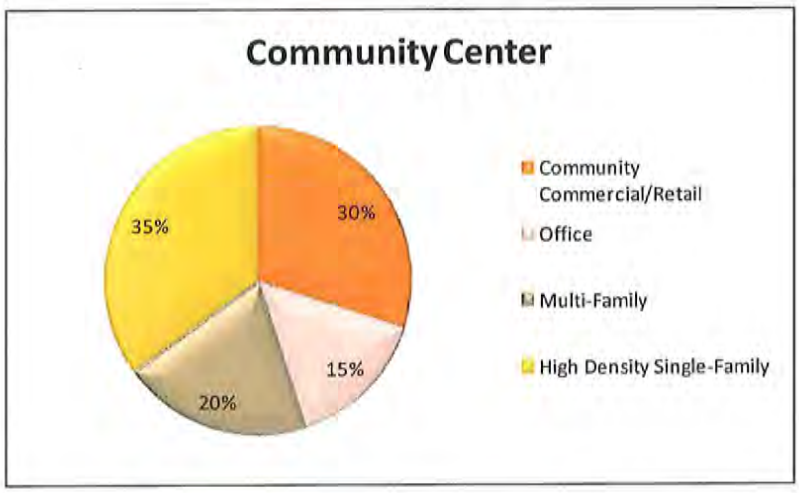


Community Center

The Community Center land use node is intended to be located at the intersections of arterial streets or arterials and major collectors. These nodes are approximately one half mile in diameter and incorporate approximately 125 acres. These areas are intended for commercial, retail and office uses that primarily serve residents within the community. These areas are also intended for medium density multi-family and high density single-family housing.

Appropriate Zoning Use Components

GC, LC, LO, MF, TF, SFT, SFL, PUD

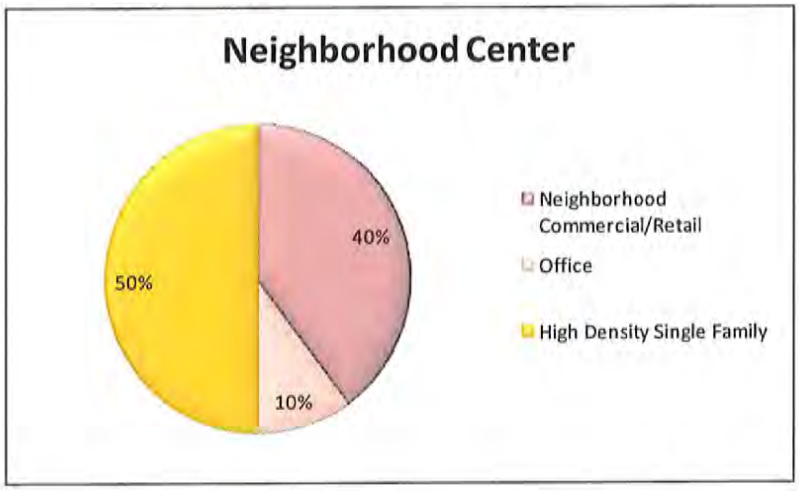


Neighborhood Center

The Neighborhood Center land use node is intended to be located at the intersection of collector streets. These nodes are approximately one quarter mile in diameter and incorporate approximately 30 acres. These areas are intended for neighborhood scale commercial, retail and office uses that serve the immediately adjacent neighborhoods. These areas are also intended for higher density single-family, two-family and other compatible housing types including townhouses and condominiums.

Appropriate Zoning Use Components

LC, LO, TF, SFT, SFL, PUD



Industrial District

The Industrial District land use category is intended to be located in close proximity to major transportation systems including highways, tollways, railroads, etc. These areas are intended for industrial and employment land uses that may generate traffic and noise and that may require outdoor areas for storage or manufacturing/assembly. These are important for the City's economic development, but should be developed in a way to minimize negative impacts on surrounding uses.

Appropriate Zoning Use Components

HC, HI

Transit Oriented Development District

The TOD is the area in the northeast quadrant of the City, including "Old Town", areas west of US 183, south of FM 2243, and going north, almost to the San Gabriel River. The TOD is governed by the Leander Smart Code, unlike the rest of the City which is governed by the Composite Zoning Ordinance. In the Smart Code, emphasis is placed on the location and public interface of development, i.e. "form", rather than the use of the property. The Smart Code is based upon New Urbanism principals designed to create traditional pedestrian-oriented communities with neighborhoods and town centers with a mix and integration of residential, commercial and retail uses.

Residential Neighborhoods

The predominate land use category within the City is the residential neighborhood. These areas provide opportunities for the development of low- to medium-density single-family residential neighborhoods. Residential neighborhoods provide connections to each other and to neighborhood, community and town center nodes. Areas with significant topography, flood plain or other natural features that are intended to be preserved will be most appropriate for lower density development, whereas areas with fewer of these features will be most appropriate for increased residential density. A variety of lot and house sizes are encouraged within residential neighborhoods.

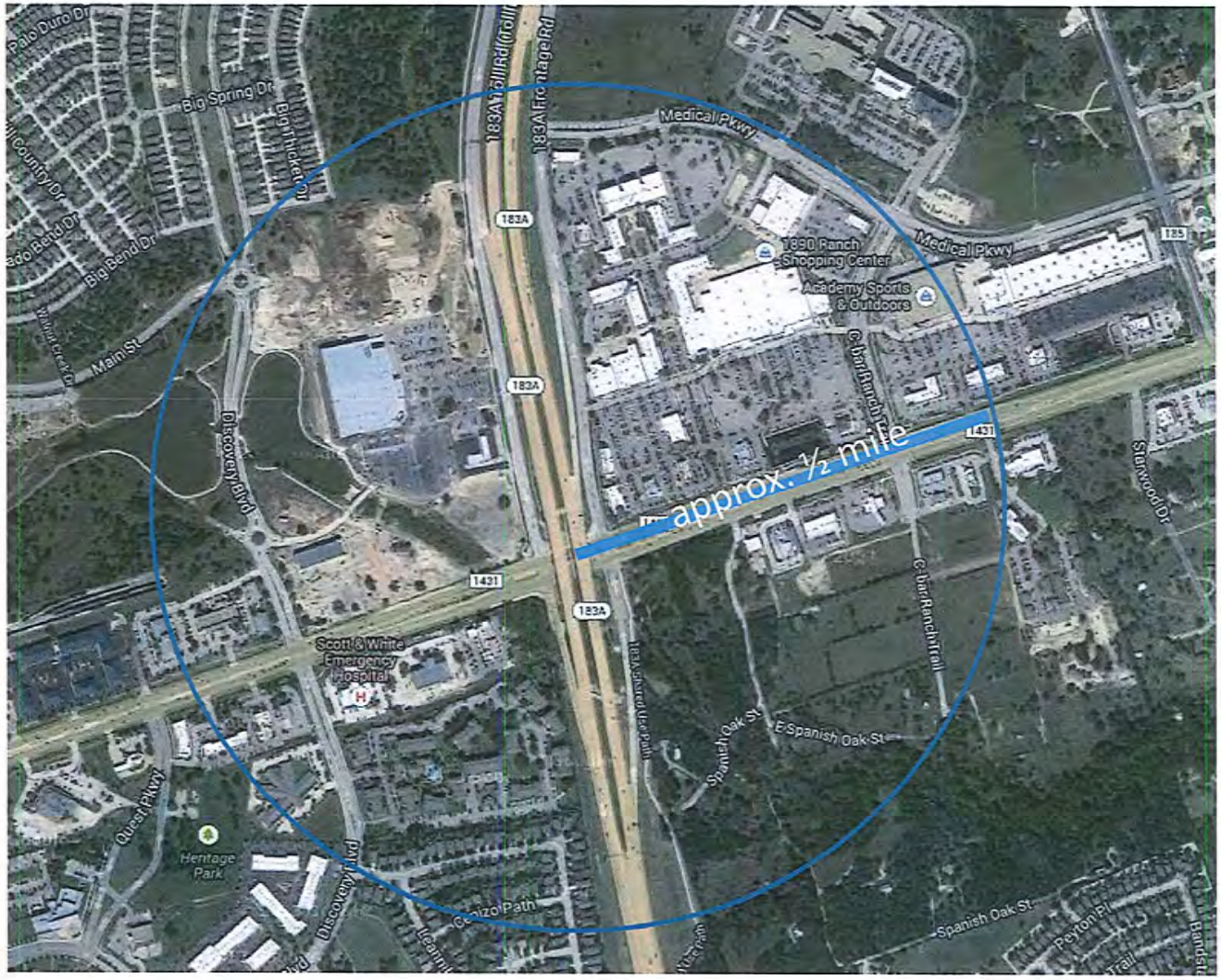
Appropriate Zoning Use Components

SFR, SFE, SFS, SFU, SFC, SFL, SFT, PUD

Future Land Use Node Plan

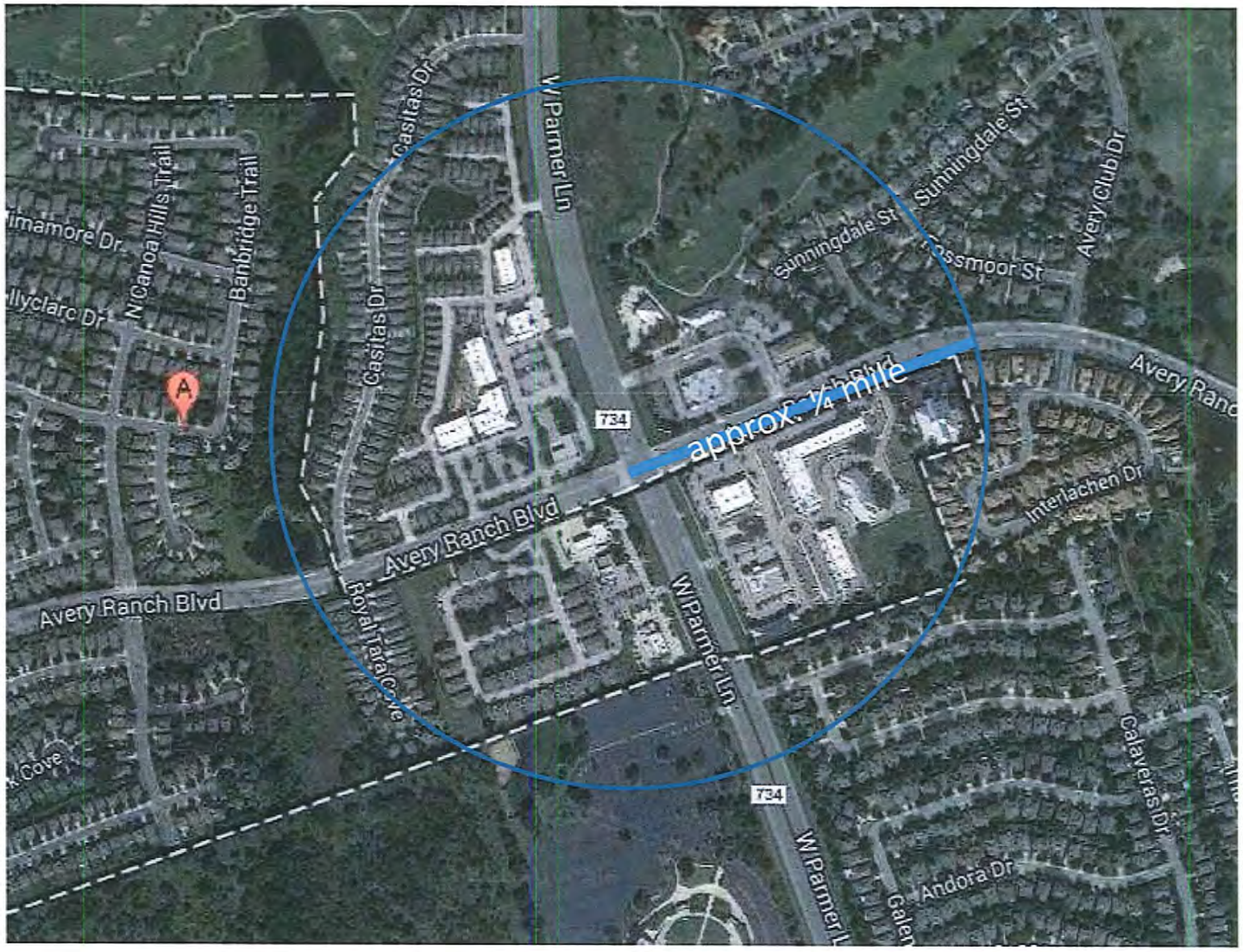
Examples of Node Sizes

Town Center

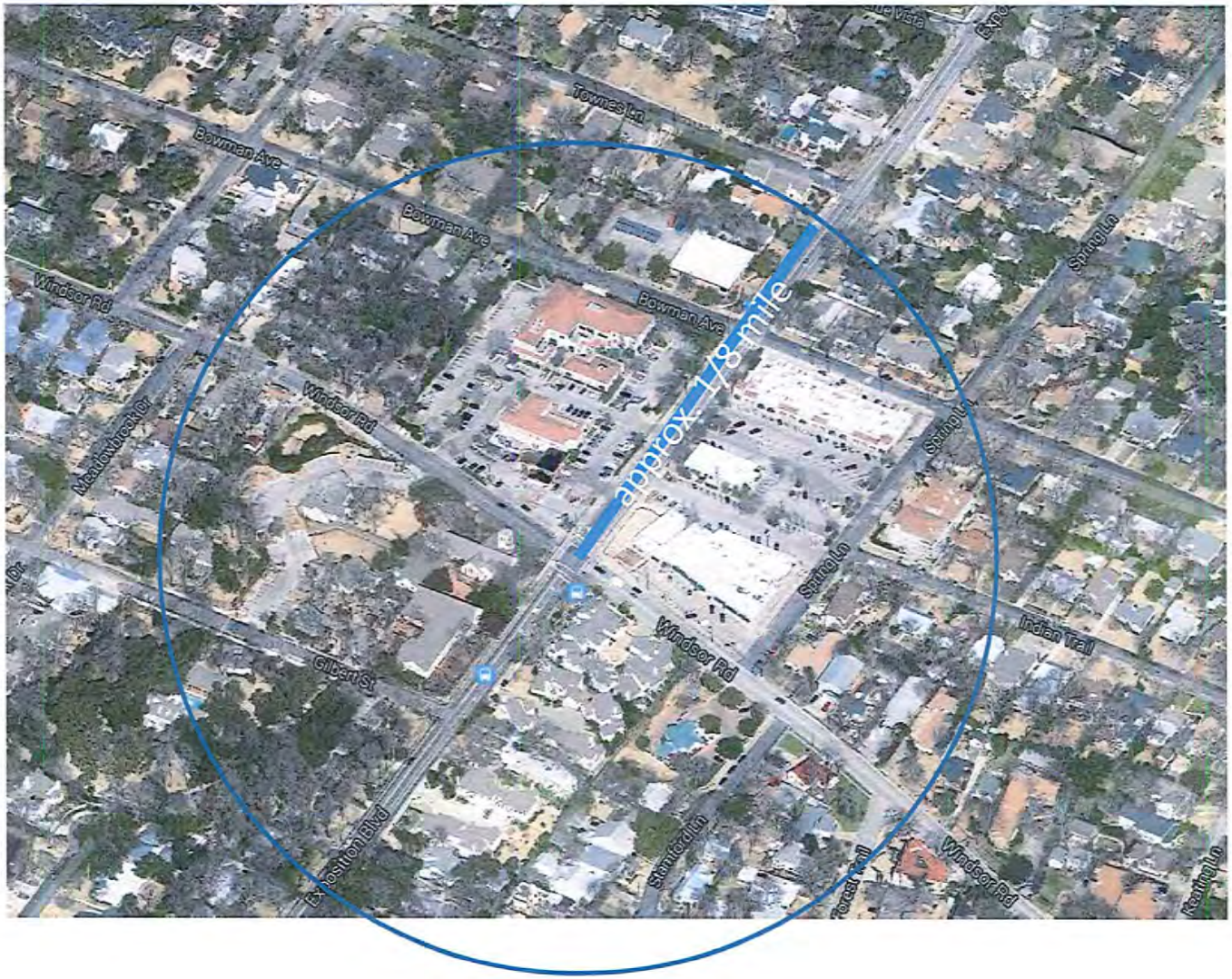


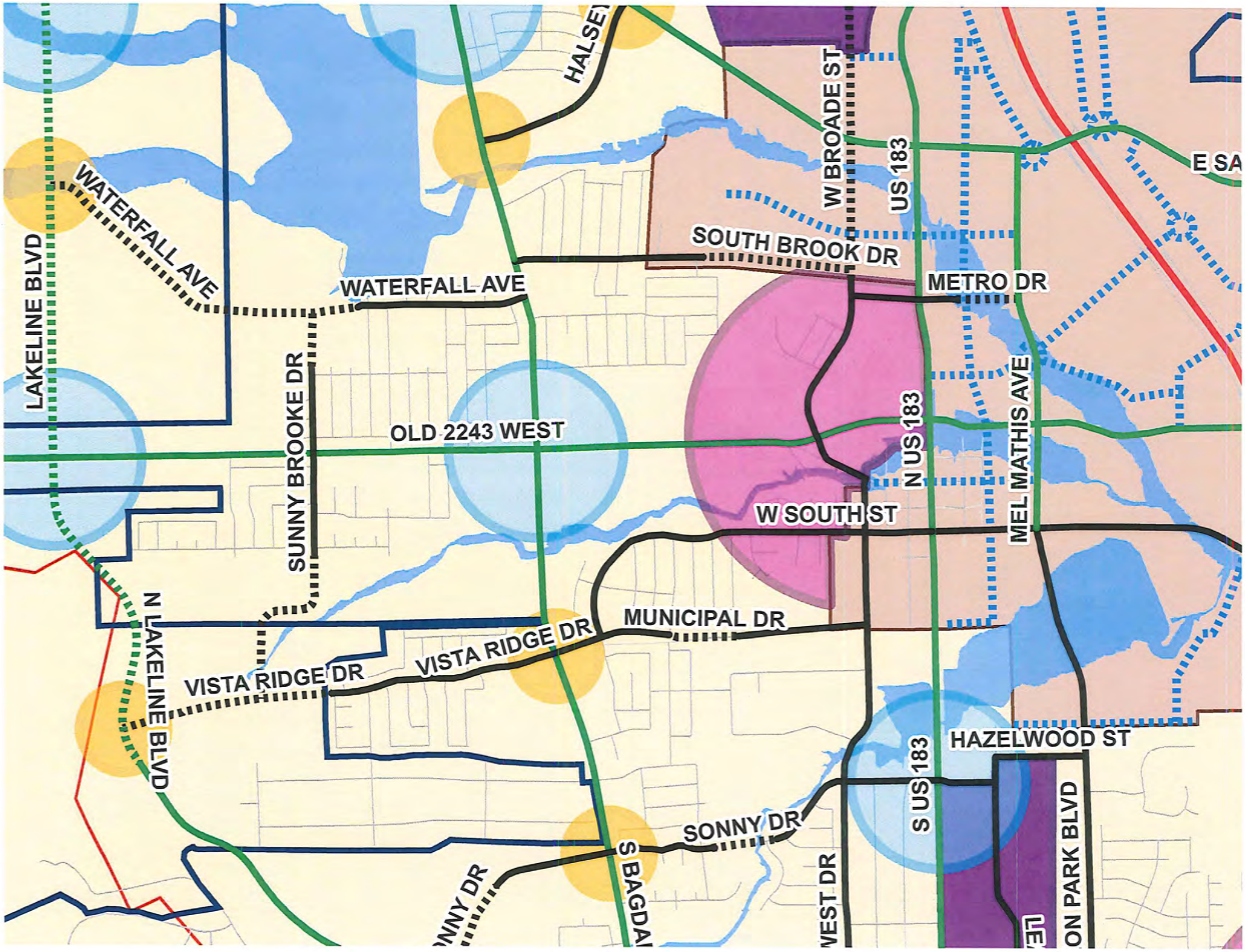
Palo Duro Dr
Big Spring Dr
Big Thicket Dr
Big Bend Dr
Main St
Discovery Blvd
183A Toll Rd
183A Frontage Rd
Medical Pkwy
1890 Ranch Shopping Center
Academy Sports & Outdoors
C-bar Ranch Trail
1431
183A
185
approx. ½ mile
Starwood Dr
Scott & White Emergency Hospital
Spanish Oak St
E Spanish Oak St
Quest Pkwy
Heritage Park
Cenizo Path
Peyton Pl

Community Center



Neighborhood Center




HALSE
W BROADE ST
US 183
E SA
WATERFALL AVE
LAKELINE BLVD
SOUTH BROOK DR
METRO DR
WATERFALL AVE
SUNNY BROOKE DR
OLD 2243 WEST
N US 183
MEL MATHIS AVE
W SOUTH ST
N LAKELINE BLVD
MUNICIPAL DR
VISTA RIDGE DR
VISTA RIDGE DR
HAZELWOOD ST
S US 183
SONNY DR
S BAGDA
ONNY DR
WEST DR
ON PARK BLVD

FY 2013-2014 Comprehensive Plan Implementation Priorities

Priority 1 - Adopt Future Land Use Node Plan

Unlike a conventional land use plan, the Leander comprehensive plan does not identify a specific land use category for every parcel of land within the City's planning boundary. The land use plan approach in the comprehensive plan assumes the predominate land use pattern is single family residential neighborhoods and that other land uses will be concentrated in activity nodes at major intersections. These nodes vary in size and intensity depending upon location and the characteristics of the transportation intersections. The node types include Town Center, Community Center and Neighborhood Center. Each node will have different characteristics depending upon the surrounding land uses, but should achieve a mix of uses conducive to providing a variety of housing types, commercial services, employment opportunities and civic and open spaces that will serve the surrounding residential neighborhoods. In addition to the nodes, the land use plan identifies a 2,300 acre area as a Transportation Oriented Development District (TOD) which will be developed following traditional town planning principles and will achieve the highest intensity of uses in the city.

The node plan illustrated within the current comprehensive plan provides general goals for each type of node, but the plan does not provide specific guidance for appropriate zoning and land use regulations within each node type and between the nodes and surrounding neighborhoods.

The results of completing this action item would be:

1. An adopted future land use plan based upon the node concept
2. A definition of appropriate uses, densities, zoning districts and design characteristics for each node type
3. A set of recommended amendments to the Composite Zoning, Subdivision and other ordinances to implement the node plan

The process for completing this action item would be:

1. Conduct an initial workshop with P&Z to review the node plan in the comprehensive plan and to further define the definitions for the nodes and the locations of each type
2. Staff takes P&Z feedback and develops a preliminary map of node locations and definitions of each node type
3. Conduct a joint workshop with the Planning and Zoning Commission and City Council to present preliminary node definitions and locations and receive feedback
4. Staff conducts a public workshop to present the node concept and draft definitions and receive community input

5. Staff prepares a proposed future land use plan and map based upon the node definitions determined by Council and P&Z including community input and presents to P&Z for review and feedback
6. Staff incorporates P&Z comments and presents to City Council for review and feedback
7. Staff incorporates Council comments and schedules the future land use plan for formal public hearings and adoption

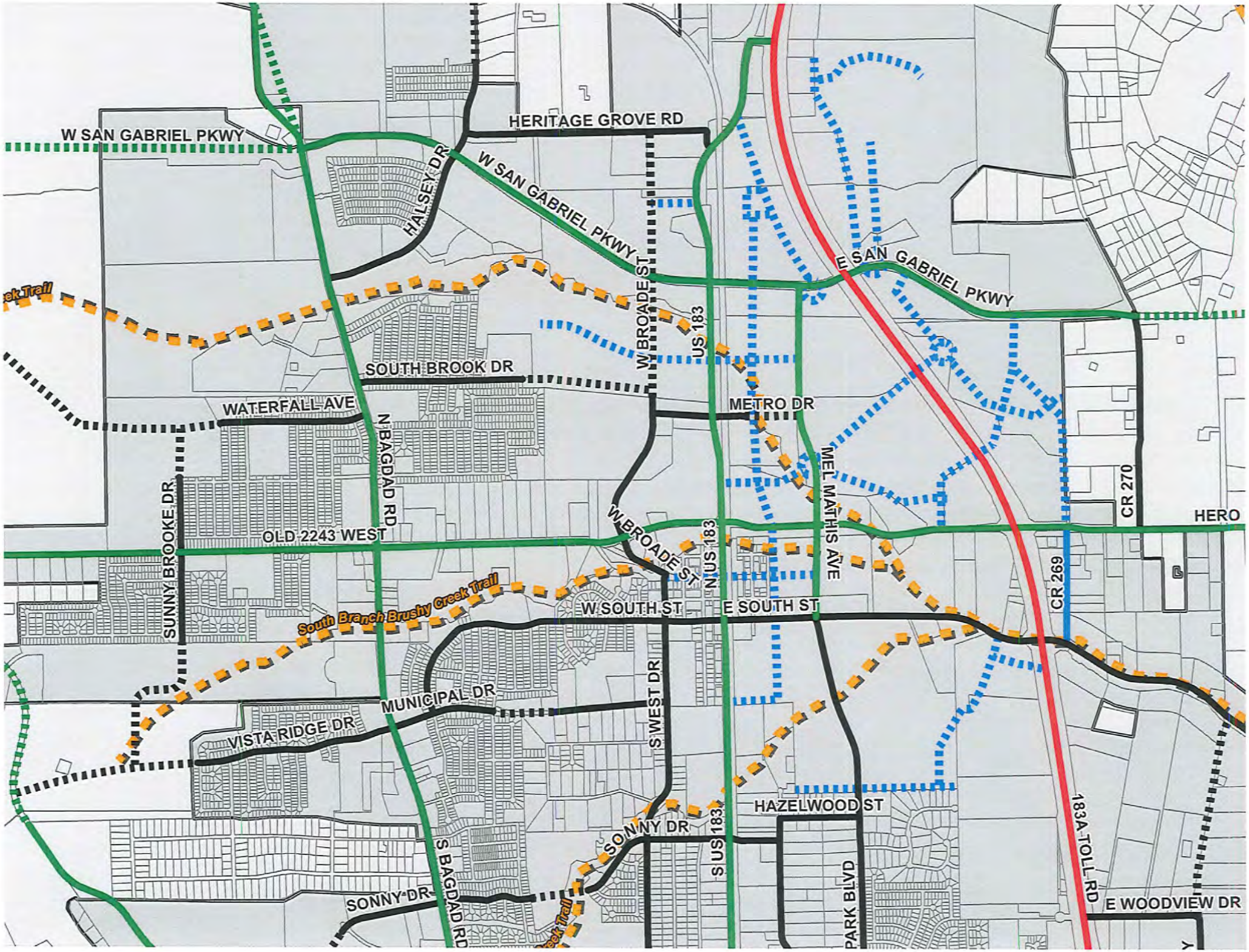
Proposed time frame:

1. November 2013 - workshop with P&Z
2. February 2014 - hold joint workshop with P&Z and City Council
3. March 2014 - conduct public workshop
4. April 2014 - present draft land use plan and map to P&Z
5. May 2014 - present revised draft land use plan and map to Council
6. June/July 2014 - conduct public hearings on future land use plan
7. August 2014 - adopt future land use plan

Executive Summary

February 20, 2014

Agenda Subject:	Comprehensive Plan Implementation – Priority #2: Update the Roadway Plan to Incorporate all Planned Pedestrian and Bicycle Corridors.
Background:	One of the goals of the Comprehensive Plan is to "Promote street, sidewalk and trail connectivity." Currently, the Roadway Plan only identifies trail corridors that are within the right-of-way of existing and planned City streets. The intent of this action item is to expand the Roadway Plan to include pedestrian and bicycle corridors that may not be within a street right-of-way, such as corridors along creeks and rivers and other non-vehicular connections.
Origination:	City of Leander Planning Department
Financial Consideration:	None
Recommendation:	This agenda item provides an opportunity for staff to present a preliminary draft of the updated transportation plan for Commission and Council review and feedback..
Attachments:	1. Proposed Transportation Plan 2. Proposed Transportation Plan Matrix 2. Adopted work plan for this item
Prepared By:	Tom Yantis, AICP Development Services Director 02/13/2014


W SAN GABRIEL PKWY
HERITAGE GROVE RD
HALSEY DR
W SAN GABRIEL PKWY
E SAN GABRIEL PKWY
W BROADE ST
US 183
SOUTH BROOK DR
WATERFALL AVE
METRO DR
N BAGDAD RD
MEL MATHIS AVE
CR 270
HERO
SUNNY BROOKE DR
OLD 2243 WEST
W BROADE ST
N US 183
CR 269
South Branch Brushy Creek Trail
W SOUTH ST
E SOUTH ST
S WEST DR
MUNICIPAL DR
VISTA RIDGE DR
HAZELWOOD ST
SONNY DR
S US 183
183A TOLL RD
S BAGDAD RD
PARK BLVD
SONNY DR
E WOODVIEW DR

ROADWAY PLAN ROW, SIDEWALKS, TRAILS & CROSS SECTIONS**

TOLLWAY	SEGMENT	PROPOSED ROW***	PROP. PAVEMENT CROSS SECTION****	PROPOSED TRAILS & SIDEWALKS			
				N	S	E	W
183A	All	Existing	Tollway & Frontage			10'	10'
MAJOR ARTERIAL							
A1	All	82'	54'	6'	10'		
A2	All	110'	2 @ 27'	8'	6'		
Bagdad Road	S City Limits to Old 2243 West	Existing	Existing			6'	8'
Bagdad Road / CR 279	Old 2243 West to CR 280	100'	66'			10'	6'
CR 175	All	90'	2 @ 24'			8'	6'
CR 279	CR 280 to N ETJ Limits	82'	54'			8'	6'
Crystal Falls Parkway	Lakeline Boulevard to US 183	Existing	Existing	8'	6'		
E Crystal Falls Parkway	US 183 to CR 177	110'	2 @ 27'	8'	6'		
Hero Way	Inside TOD	TOD	TOD	10'	6'		
Hero Way	TOD boundary to RM 2243	110'	2 @ 27'	8'	6'		
Old 2243 West / Nameless Road	1,000' W of Lakeline Boulevard to US 183	100'	66'	10'	6'		
	RM 1431 to 1,000' W of Lakeline Boulevard	82'	54'	6'	10'	10'	6'
Lakeline Boulevard	S City Limits to Crystal Falls Parkway	Existing	Existing			6'	6'
	Crystal Falls Parkway to San Gabriel Parkway	90'	2 @ 24'			8'	6'
Mel Mathis Avenue	RM 2243 to US 183A	TOD	TOD			22'	22'
Ronald W Reagan Boulevard	All	Existing	Existing			10'	10'
RM 2243	Hero Way to E ETJ	110'	2 @ 27'	6'	10'		
San Gabriel Parkway	1,000' W of Bagdad Road to Ronald W Reagan Boulevard	110' / TOD	2 @ 27' / TOD	6'	10'		
	1,000' W of Bagdad Road to Nameless Road	110'	2 @ 27'	6'	10'		
SH 29	All	Existing		6'	10'		
US 183	All	Existing / TOD	Existing / TOD			10'	6'
COLLECTOR***				(See ******)			
Broade Street	Commercial Portion	70'	45'			8'	6'
	Residential Portion	60'	37'			8'	6'
C1	All	60'	37'	8'	6'		
C2 (CR 280)	All	64'	41'	8'	6'		
C5 (CR 267)	All	64'	41'			6'	8'
C6 (CR 268)	All	64'	41'	10'	6'		
C7	All	70'	45'	8'	6'		
C11	Osage Drive to C10	60'	37'	5'	5'		
CR 175	RM 2243 to CR 177	64'	41'	8'	6'		
CR 270	All	60'	37'			10'	6'
CR 281	All	60'	37'	6'	8'		
Crystal Falls Parkway	Lakeline Boulevard to Crystal Falls Golf Club	Existing	Existing				
E Crystal Falls Parkway	Ronald W Reagan Boulevard to E City Limits	70'	45'	8'	6'		
Halsey Drive	South of C2	70'	45'			6'	6'
	North of C2	60'	37'			6'	6'
Hazelwood Street	All	60'	37'	6'	6'		
Heritage Grove Road	All	64'	41'	8'	6'		
Horizon Park Boulevard	E Crystal Falls Parkway to RM 2243	64'	41'			TOD	TOD
Horizon Park Boulevard	McCarthur Drive to E Crystal Falls Parkway	Existing	Existing				
Journey Pkwy	Ronald W Reagan Boulevard to Sam Bass Road	70'	45'	6'	8'		
Lakeline Boulevard	San Gabriel Parkway to CR 281	90'	2 @ 18'			8'	6'
Leander Drive	All	60'	37'			6'	6'
McCarthur Drive	All	Existing	Existing				
Metro Drive	All	70'	45'	8'	6'		
Municipal Drive	Bagdad Road to Northern Trail	Existing	Existing	6'	6'		
	Northern Trail to West Street	60'	37'	6'	6'		
Osage Drive	Outlook Ridge Loop to US 183	Existing	Existing	5'	5'		
	Outlook Ridge Loop to RM 1431	70'	37'	5'	5'		
Raider Way	E Woodview Dr to RM 2243	64	41			6'	8'
	183A to E Woodview Dr	70'	45'			6'	8'
RM 2243	N East Street to Hero Way	70'	45'	8'	6'		
Sonny Drive	West Drive to US 183	Existing	Existing	6'	6'		
	Lakeline Boulevard to West Drive	64'	41'	6'	6'		
South Street (East & West)	All	Existing	Existing	6'	6'		
South Brook Drive	All	60'	37'	6'	6'		
Sunny Brooke Drive	All	60'	37'			6'	6'
Travisso Parkway	RM 1431 to Nameless Road	Varies Min of 100'	Varies Min of 2 @ 24'	8'	8'	8'	8'
Vista Ridge Drive	Lakeline Boulevard to Bagdad Road	64'	41'	6'	6'		
Waterfall Avenue	All	60'	37'	6'	6'	6'	6'
West Drive	N of Crystal Falls Parkway	60'	37'	6'	6'		
E Woodview Dr	All	70'	45'	8'	6'		

* Table reflects ultimate road section. Existing roads may or may not conform to ultimate section.

** Streets, sidewalks and trails in TOD to follow Transect Plan and Smart Code. Street alignments subject to adjustment.

*** Except 2 @ 41' section, increase ROW width within 300' of intersection of arterials by 15' with appropriate transition to provide for right turn lane. Additional ROW and pavement shall be provided as necessary to match section of opposite streets at intersections. ROW width may be altered to accommodate drainage or as determined appropriate by the City Engineer.

**** Measurements are to lip of gutter. Pavement sections subject to modification by City Engineer.

***** Additional collector streets required as necessary in accordance with the Transportation Criteria Manual for projected traffic and land use.

****** Width and location of sidewalks and trails to comply with requirements of Parks, Recreation & Open Space Master Plan and Composite Zoning Ordinance.

SECONDARY TRAILS			
		Proposed	Proposed
Trail	Segment	ROW	Trail Width
Brushy Creek - North Branch	Nameless Rd. to Convergance w/North Branch	*	8' - 10'
Brushy Creek - South Branch	Lakeline Blvd. to Convergance w/North Branch	*	8' - 10'
Brushy Creek - Main Branch	Convergance of N & S Branches to Southern ETJ	*	8' - 10'
Mason Creek	Lakeline Blvd. to Bagdad Rd.		Existing
	Bagdad Rd. to Brushy Creek Main Branch	*	8' - 10'
San Gabriel River Trail	Bagdad Rd. to Georgetown's Garey Park	*	8' - 10'
Sandy Creek	Future Sandy Cr. Community Park to Nameless Rd.	*	8' - 10'
Nameless Valley Ranch Trail	Crystal Falls W. PEC to Sandy Cr. Tail	*	8' - 10'
* Wiidth determined by the Parks & Recreation Director on a site-by-site basis. Minimum width 25'. Land must be above the top bank and suitable for trail construction.			

FY 2013-2014 Comprehensive Plan Implementation Priorities

Priority 2 - Update the Transportation Plan to Incorporate All Planned Pedestrian and Bicycle Corridors

Another goals of the Comprehensive Plan is to "Promote street, sidewalk and trail connectivity." Currently, the Transportation Plan only identifies trail corridors that are within the right-of-way of existing and planned City streets.

The intent of this action item is to expand the Transportation Plan to include pedestrian and bicycle corridors that may not be within a street right-of-way, such as corridors along creeks and rivers and other non-vehicular connections.

The results of completing this action item would be:

1. An updated Transportation Plan that identifies all planned transportation corridors including vehicular, bicycle and pedestrian
2. A set of recommended ordinance amendments (if any) to implement the changes to the Transportation Plan

The process for completing this action item would be:

1. Staff conducts a workshop with P&Z to discuss proposed updates to the Transportation Plan
2. Staff receives feedback from P&Z and incorporates that feedback into a draft transportation plan update
3. A joint workshop with Council and P&Z is conducted to review the draft plan
4. Based upon P&Z and Council direction, staff conducts a public workshop to present the proposed revisions to the Transportation Plan and receive feedback
5. Staff presents feedback from public workshop to P&Z and Council and receives final direction on Transportation Plan update
6. Staff incorporates final revisions and schedules the Transportation Plan update for public hearings and adoption

Proposed time frame:

1. November 2013 - staff presents draft plan to P&Z
2. February 2014 - staff presents draft plan with P&Z feedback to Council
3. March 2014 - staff conducts public workshop
4. April 2014 - staff presents to P&Z and council final recommendations incorporating public feedback
5. April/May 2014 - staff schedules Transportation Plan for public hearings and adoption

Executive Summary

February 20, 2014

Agenda Subject: Comprehensive Plan Implementation – Priority #3: Review City Ordinance Provisions Related to the Protection of Trees, Riparian Corridors, Natural Features and Resources

Background: One of the goals in Section 4.8 of the Comprehensive Plan is to "Enhance protective measures for areas of unique environmental quality." The plan goes on to identify two specific objectives, 1) adopt standards for the protection of significant trees, and 2) adopt standards and practices to protect significant riparian corridors. In addition, it is the City's goal to foster the conservation of natural resources including water conservation.

The City's subdivision and zoning ordinances do provide some protections for significant trees and provide regulations for development within flood plains which include the riparian corridors. The City has a water conservation ordinance that regulates water use, however the City's development ordinances do not currently limit the amount of turf grass areas for new development, a major source of water consumption for irrigation. This action item would provide an opportunity to review and potentially modify those existing regulations.

Origination: City of Leander Planning Department

Financial Consideration: None

Recommendation: This agenda item provides an opportunity for staff to present the results of a survey of other jurisdictions' ordinances related to the subject matter and get feedback from Commission and Council on potential revisions to existing ordinances.

Attachments:

1. Existing City ordinances
2. Survey results
3. Adopted work plan for this item

AGENDA ITEM # 3c

Prepared By: Tom Yantis, AICP
Director of Development Services 02/12/2014

Existing City Ordinances Related to Protection of Trees, Riparian Corridors, Natural Features and Resources

Tree Preservation

Composite Zoning Ordinance, Article VI - Site Standards

(b) - General

(3) Significant Trees greater than eight (8) inches in caliper shall be preserved to the greatest extent reasonably possible. Significant Trees removed during construction shall be supplanted with Replacement Trees if required by the landscape requirements of this section.

(c) - Landscape Requirements

(4) Significant trees removed during construction shall be replaced based on a replacement ratio (inches removed to inches planted) as follows:

(i) Replacement trees shall not be required for the removal of trees less than eight (8) inches in caliper or for the removal of any trees if developed as single-family or two-family.

(ii) For every one caliper inch of existing significant tree eighteen (18) inches and larger that is not retained during construction in healthy condition, two caliper inches of significant tree shall be planted as replacement for projects (other than single-family or two-family development meeting above requirements).

(iii) For every one caliper inch of existing significant tree between eight (8) and eighteen (18) inches that exceeds 50% of total caliper inches that is not retained, one caliper inch of significant tree shall be planted as replacement for projects (other than single-family or two-family development meeting above requirements).

(iv) Existing hardwood trees less than the size required for replacement and greater than or equal to two inches in caliper, and existing hardwood trees between 8" and 18" to an extent greater than 50% of the total caliper inches that are retained during construction in healthy condition may be counted toward replacement requirements as well as toward planting requirements.

(v) A fee in lieu of planting replacement trees of not less than one hundred fifty dollars ($150) per caliper inch may be paid by the applicant, or planting replacement trees in remote locations may be approved, if replacement plantings are not feasible on the site.

(vi) Removal of Significant Trees larger than eighteen (18) inches in caliper for other

than single-family or two-family development, or other than such trees included in an alternative tree preservation plan as described in (vii) below, requires approval of the Commission.

Riparian Corridors

A riparian zone or riparian area is the interface between land and a river or stream. Riparian is also the proper nomenclature for one of the fifteen terrestrial biomes of the earth. Plant habitats and communities along the river margins and banks are called riparian vegetation, characterized by hydrophilic plants. Riparian zones are significant in ecology, environmental management, and civil engineering because of their role in soil conservation, their habitat biodiversity, and the influence they have on fauna and aquatic ecosystems, including grassland, woodland, wetland or even non-vegetative. In some regions the terms riparian woodland, riparian forest, riparian buffer zone, or riparian strip are used to characterize a riparian zone. The word "riparian" is derived from Latin ripa, *meaning river bank.*

source: Wikipedia

Subdivision Ordinance Section 41. Drainage Improvements

(a) Purpose. The drainage improvement provisions contained herein are deemed necessary for the following reasons:

(1) Waterways and their associated watersheds within the City's territorial jurisdiction represent significant and irreplaceable recreational and aesthetic resources and contribute directly to the City's public health.

(2) The continued economic growth of the City is dependent on an adequate quality and quantity of stormwater runoff, a pleasing natural environment, recreational opportunities in close proximity to the City as well as the protection of people and property from the hazards of flooding.

(3) All watersheds within the City's jurisdiction, and especially those with abrupt topography, sparse vegetation, and thin and easily disturbed soil, are vulnerable to flooding due to unregulated development activities.

(4) All watersheds within the City's jurisdiction are undergoing development or are facing development pressure.

(5) If watersheds within the City's jurisdiction are not developed in a sensitive and innovative manner, their water resources, natural environment, and recreational characteristics may be irreparably damaged.

(6) The City should regulate all drainage within the City's jurisdiction for the public benefit and safety, including both the existing and future generations of citizens of the City, as well as for downstream users of the each waterway within the City's territorial jurisdiction.

(b) Policy.

(4) In general, drainage improvements shall be designed and constructed in a manner which promotes the development of a network of both natural and built drainageways throughout the community and so as to:

(i) Retain natural flood plains in a condition that minimizes interference with flood water conveyance, flood water storage, aquatic and terrestrial ecosystems, and ground and surface water.

(ii) Reduce exposure of people and property to the flood hazards and the nuisances associated with inadequate control of stormwater runoff.

(iii) Systematically reduce the existing level of flood damages.

(iv) Ensure that corrective works are consistent with the overall goals of the City.

(v) Minimize erosion and sedimentation problems and enhance water quality.

(vi) Protect environmental quality, social well-being and economic stability.

(vii) Plan for both the large flooding events and the smaller, more frequent flooding events by providing both major and minor drainage systems.

(viii) Minimize future operational and maintenance expenses.

(ix) Reduce exposure of public investment in utilities, streets and other public facilities (infrastructure).

(x) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the public.

(xi) Acquire and maintain a combination of recreational and open space systems utilizing flood plain lands.

Natural Features

Subdivision Ordinance Section 2 - Purpose.

(c) The provisions contained herein are designed and intended to encourage the development of a quality urban environment by establishing standards for the provision of parks, open space, storm water drainage, transportation, public utilities and facilities, and other needs necessary for insuring the creation and continuance of a healthy, attractive, safe and efficient community that provides for the conservation, enhancement and protection of its human and natural resources. Through the application of this Ordinance, the interests of the public as well as those public and private parties, both present and future, having interest in property affected by these regulations are protected by the granting of certain rights and privileges.

(d) This Ordinance is designed and intended to achieve the following purposes, and shall be administered so as to:

(7) Prevent pollution of the air, streams, and ponds; to assure the adequacy of drainage facilities; to safeguard both surface and groundwater supplies; and to encourage the wise use and management of natural resources throughout the municipality in order

to preserve the integrity, stability, and beauty of the community and the value of the land.

(8) Preserve the natural beauty and topography of the municipality and ensure appropriate development with regard to these natural features.

(14) Provide a healthy environment for the present and future citizens; an environment designed to reasonably secure safety from fire, flood and other dangers; and to provide that land be subdivided in a manner to attain such goals and benefits for the community.

Conservation - Water

Composite Zoning Ordinance, Article VI - Site Standards

(a) - Purpose.

(4) The City experiences frequent droughts; therefore, it is the purpose of this Section to encourage the use of drought resistant vegetation.

(b) - General.

(1) Installation: All landscape materials shall be installed and maintained according to generally accepted landscape practices for the region. Low water demanding landscapes, are encouraged and should include plants recommended by the Lower Colorado River Authority's Texas Hill Country Landscape Option Specifications, a copy of which is available in the City Planning Department.

(2) Maintenance: The owner of landscaped property shall be responsible for the maintenance of all landscape areas. Said areas shall be maintained so as to present a healthy, neat and orderly appearance at all times and shall be kept free of refuse and debris. All planted areas shall be provided with a readily available water supply and watered as necessary to ensure continuous healthy growth and development. Landscape irrigation systems shall not be mandatory with low water demanding landscapes, which are encouraged. Maintenance shall include the removal of dead plant material and its replacement if that material was used to meet the requirements of this section.

(c) Landscape Requirements.

(1) A minimum percentage of the total lot area of property on which development occurs, after the effective date of this ordinance, shall be devoted to landscape development in accordance with the following schedule. Such percentages may include setback areas. The maximum landscape that may be planted in turfgrass for commercial development (listed in subsections (i) through (iv) below) is fifty (50) percent.

(12) Soil Depth (New residential and non-residential)

All new landscapes (non-residential and residential) are required to have a minimum of six inches (6") of soil depth in areas planted with turfgrass. This six-inch (6") minimum soil depth will consist of 75 percent soil blended with 25 percent compost. The soil/compost blend shall be incorporated into the top two inches of the native soil. The six-inch (6") depth requirement does not apply to the area between the drip line and trunk of existing trees, shrub beds or wildscape areas. Areas with existing native vegetation that remain undisturbed shall be exempt from the soil depth provision of this section; provided that native soil and vegetation in such area is fenced during construction and protected from disturbance and compaction during the construction process.

(13) Mulch (all non-residential properties). All exposed soil surfaces of non-turf areas within the developed landscape area must be mulched with a minimum two-inch layer of organic material. Examples of organic material include pine bark, shredded cedar, composted leaves, and shredded landscape clippings. Native/wildscape areas are exempt.

(14) WaterWise Landscape Principles. These principles shall be an integral component of the landscape design and plan. Homebuilders shall be required to offer a WaterWise landscape option in any series of landscape options offered to home buyers. The seven basic principles of WaterWise landscaping include:

(i) Proper planning and design
(ii) Proper soil preparation (compost-improved topsoil)
(iii) Practical turfgrass selection of drought resistant-species
(iv) Appropriate plant selection. The plants set forth in Exhibit "C" shall not be offered as part of a WaterWise landscape option.

City Code of Ordinances - ARTICLE 13.09 WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN

Sec. 13.09.001 Declaration of policy, purpose and intent

(a) In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of extreme drought, periods of abnormally high water usage, system contamination, or extended reduction in ability to supply water due to equipment failure, water supply shortage or other water supply emergency conditions, the city hereby adopts the following regulations and restrictions on the delivery and consumption of water ("the plan").

(b) When it appears that the city's system-wide water demand or water supply warrants the implementation of conservation measures, such measures shall be ordered within the city as provided in this article. The voluntary or mandatory conservation program will be implemented by the directive of the city manager as provided in this article.

(c) Water uses regulated or prohibited under this article are considered to be nonessential and continuation of such uses during times of water shortage or other emergency water supply condition is deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in section 13.09.015 of this article.

Sec. 13.09.009 Permanent water conservation measures

(a) A person may not:

(1) Fail to repair a controllable leak, including a broken sprinkler head, a leaking valve, leaking or broken pipes, or a leaking faucet;

(2) Operate a permanently installed irrigation system with:

(A) A broken head;

(B) A head that is out of adjustment and the arc of the spray head is over a street or parking lot; or

(C) A head that is misting because of high water pressure; or

(3) During irrigation, allow water:

(A) To run off a property and form a stream of water in a street for a distance of 50 feet or greater; or

(B) To pond in a street or parking lot to a depth greater than one-quarter of an inch.

(b) Irrigation of apartment common areas shall comply with the following requirements, in conjunction with drought control measures:

(1) Hours. Irrigation of common areas of apartments may only occur between the hours of 7:00 p.m. and 10:00 a.m. Irrigation of apartment common areas is allowed between the hours of 10:00 a.m. and 7:00 p.m. if irrigation of [with] reclaimed water during that time is necessary to meet LCRA regulation requirements.

(2) Exceptions. The provision does not apply to the following:

(A) Hand watering.

(B) Irrigation of new lawns for a period of thirty days from planting or the date of installation.

(C) Irrigation by commercial gardens of licensed plant nurseries, provided the owner or licensee or his or her representative is personally on the premises at the time watering is taking place.

(D) Irrigation system testing after mowing to identify broken heads, after repairs to flush lines, to property align sprinkler heads, or to locate a reported leak. A test run may not exceed two minutes and the individual conducting the test must be present to observe system performance.

(E) Syringing to cool down hot spots showing visible signs of stress. If syringing is performed by one station, syringing must be performed manually. On large irrigation

projects, syringing may be performed by hand-held remote irrigation controllers or computerized central control for no more than three minutes, with the individual running the controllers present and observing the controllers while they are running.

(F) Landscape irrigation audits, where the application rate and efficiency of an irrigation system is being tested by aligning heads and placing cups across the turf area and the amount of water caught in the cups is measured. Testing run times of pop-up spray heads are limited to five minutes. Testing run times of impact and rotor heads are limited to fifteen minutes. The auditor performing the test must be present and must observe sprinkler performance.

There are additional provisions based upon drought stage that limit the frequency and timing of outdoor watering when a drought stage is declared by the City Council.

	Tree Preservation Provisions						
City Name	**Applicability** (Commercial/Residential, City Limit, ETJ, etc.)	**Protected Tree Size**	**Protected Tree - Species Exemptions**	**Significant Stand of Trees Protected (Cluster) Size or Defintion**	**Heritage Size**	**Replacement Ratio for protected trees** (diameter to caliper replacement)	**Fee in lieu for protected diameter inches removed**
City of Cedar Park	City limits and ETJ	16"DBH	Cedar and invasive sp.	40" total dia. In 10" radius	26"DBH	1:1 protected, 2:1 heritage	$100/inch and $200/inch
City of Frisco	C/R. Landscape Req. are in the ZO which only applies to City Limit.	6" and Up.	Willow, Cottonwood, Hackbedrry, Bois D'arc, Mesquite, Mulberry, Chinaberry.	All trees in the floodplain are protected. Outside of the floodplain protected species are may be removed with approval. Different levels of mitigation apply for various sizes of trees.	20.1" although we don't use the term Heritage. 300% mitigation.	100% for 6"-12"; 150% for 12.1"-20"; 300% for 20.1" and greater	$175 per Caliper inch
City of Georgetown	City and ETJ; protected non-residential only; heritage both residential and non-residential	12" or greater DBH	Hackberry, China Berry, Ashe Juniper, Chinese Tallow and Mesquite	No longer protect clusters	26" or greater DBH Live Oak, Post Oak, Shumard Oak, Bur Oak, Chinquapin Oak, Monterey Oak, Bald Cypress, American Elm, Cedar Elm, Pecan, Walnut, Texas Ash, or Southern Magnolia	1:1 for 40% of total diameter inches; increase to 2:1 for 26+ inch (non Heritage Tree species); Heritage Trees are 3:1 for 100% of inches	$150/Protected Tree inch removed; $200/Heritage Tree inch removed (both calculated at 1:1)
City of Hutto	City Limits only; all new development	minimum 12 inches diameter at breast height (DBH)	American Sweetgum, Arizone Ash, Bois d'Arc, Boxelder Maple, Bradford Pear, Brasilian Pepper, Cedar, Chinaberry, Chinese Parasol Tree, Chinese Pistache, Chines Tallow, Cottonwood, Elephant Ear, Eucalyptus, Euonymus, Hack berry, Honey Locust, Honeysuckle, Japenese Zelkova, Juniper, Lelnad Cypress, Lombardy Poplar, Mesquite, Mimosa, Monkey Puzzle, Mulberry, Olive, Paulownia, Red-Tipped Photinia, Silver Maple, Sycamore, Tree of Heaven, Vitex	NA	minimum 24 inches diameter at breast height (DBH)	1:1 replacement required. City Council must approve.	A fee-in-lieu equal to the cost of tree replacement and planting is allowed.
City of Kyle	Commercial and Residential	Protected tree. Trees with a circumference of 28 inches or greater.	ligustrum, mesquite,hackberry, cedar, chinarberry	n/a	Trees with a circumference of 75 inches or greater.	Trees over 28" in circumference but less than 75" in circumference that are not located in areas specified by the ordinance shall be replaced on-site at a ratio of two and one-half trees per tree removed and shall be credited toward the number of trees required for site development: Rremoval of specimen trees, which for the purposes of these requirements are trees with 75" circumference or greater, must be specifically approved by thePS&Z.	
City of Leander	Commercial, inside the City Limits	8" and greater	Hackberry, mountain juniper, cedar, bois d'arc, cottonwood, chinaberry or sycamore.	N/A	18" and greater	1:1 for 8" to 18"; 2:1 for 18" and greater	$150 per caliper inch (double for trees over 18")
City of Round Rock	Commercial	8" diameter at 4.5' above grade	Hackberry, Chinaberry, Ash Juniper, Osage Orange, Chinese Tallow.	N/A	Varies by species. Live Oak - 36", Cedar Elm 25", Pecan-34", Post Oak-24", Shumard Oak-21", Burr Oak-32", Sycamore 37"	8"-20" - 1/1, 20" to Monarch - 2/1, Monarch-3/1	$150.00 per replacement caliper inch.
	Residential	Undeveloped SF - 20" diam -- Developed SF Monarch only	Same	N/A		Same	Same

	Landscape Provisions		Water Conservation				Other Environmental Provisions		
City Name	**Provisions for Removal of Invasive Species**	**Species Diversification Requirements**	**Limits on Amount of Turf Grass**	**Irrigation System Requirements**	**Rainwater Harvesting**	**Grey Water Use**	**Riparian Corridor Protections**	**Design Standards for Stormwater Ponds**	**Notes/Comments**
City of Cedar Park	none	1 new species / 10 trees	no	auto, drip or hose bib	no	no	no	For the Stormwater ponds we follow the COA Drainage Criteria Manual and defer to TCEQ on water quality within the Edwards Aquifer contributing zone (~95% of the City).	
City of Frisco	None	Tree plantings shall not include 45% of the same tree species (page 124)	The Landscape Water Allowance limits the amount of non native turf. (page 132)	Efficient irrigation is required to meet the Estimated Landscape water Allowance. Smart weather based or moisture sensor controller are mandatory.(page 133) Also have a separte irrigation ordinance No. 08-12-103.	Instead of an Interior parking lot landscape requriement, and area equal to 5% of the parking surface is required to be Water Resource Zone in tow options (bioretention or Pervious pavers). Page 129,132.	Grey water is not part of our ordinance. If someone one wanted to use employ a greywater system we would give them credit for the Water Resource Zone (WRZ) requirement.	The Riparian Corridor is protected and buffered (see 139)	The biorention areas in the WRZ can count toward detention requirments. The goal is minimize detention ponds, but using bioretention strips.	Our ordinance received an 2012 ASLA Merit Award.
City of Georgetown	Prohibited Species must be removed at development, unless located in approved natural area.	When more than 5 trees or 10 shrubs required, no more than 25% of same species	None currently. Ordinance proposed.	None currently. Ordinance proposed.	Sell and distribute rain barrels	Program available for certain commercial/industrial properties	Salamander ordinance establishes stream buffers.	Yes, see UDC 11.04	UDC establishes impervious cover limits. Separate non-UDC ordinances for floodplain and salamander habitat protection.
City of Hutto	Allowed and encouraged. No permit required. Called "nuisance trees" in UDC.	N/A/. Size and location are regulated, but species may be from any of the native species list in UDC.	n/a	required	No particular regulations.	No particular regulations.	Setbacks required based on the type of corridor ranging from 25' to 125'. Also, cannot build over riparian easements.	n/a	
City of Kyle	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
City of Leander	none	none	Commercial projects are limited to 50%	none	Encouraged	none			
City of Round Rock	Exempt (invasive) trees can be removed with mitigation.	For non-street tree plantings, no more than 20% shall be of the same species.	No turf grass permitted in parking lot islands	Automatic underground irrigation (including drip) for all required landscaping	Encouraged	City is providing / expanding water reuse system for use in landscape where available.	Give mitigation credit for 3" to 8" trees that are preserved.	See Zoning Ordinance **Section 46-195(i)(2).**	
	Same		None	None	Encouraged		Same	Same	

FY 2013-2014 Comprehensive Plan Implementation Priorities

Priority 3 - Review City Ordinance Provisions Related to the Protection of Trees, Riparian Corridors, Natural Features and Resources

One of the goals in Section 4.8 of the Comprehensive Plan is to "Enhance protective measures for areas of unique environmental quality." The plan goes on to identify two specific objectives, 1) adopt standards for the protection of significant trees, and 2) adopt standards and practices to protect significant riparian corridors. In addition, it is the City's goal to foster the conservation of natural resources including water conservation.

The City's subdivision and zoning ordinances do provide some protections for significant trees and provide regulations for development within flood plains which include the riparian corridors. The City has a water conservation ordinance that regulates water use, however the City's development ordinances do not currently limit the amount of turf grass areas for new development, a major source of water consumption for irrigation. This action item would provide an opportunity to review and potentially modify those existing regulations.

The results of completing this action item would be:

1. A comprehensive report of existing City regulations related to tree protection
2. A comparison of the City's tree protection regulations with other surrounding communities and best practices
3. A set of recommended ordinance revisions (if any) related to tree protection
4. A report on the City's existing regulations that impact riparian corridors
5. A map of the City limits and ETJ that identifies all riparian corridors
6. A comparison of the City's riparian corridor protections to those of surrounding communities and best practices
7. A set of recommended ordinance revisions (if any) related to the protection of riparian corridors
8. A comparison of the City's water conservation regulations with other surrounding communities and best practices.
9. A set of recommended ordinance revisions (if any) related to water conservation
10. A process to identify any other significant natural features that may warrant additional protections

The process for completing this action item would be:

1. Staff prepares a report on existing City regulations for trees, riparian corridors, water conservation and other natural features and compares those regulations to surrounding communities and best practices

2. Staff presents the report to P&Z and Council in a workshop and receives recommendations on possible modifications to existing ordinances
3. Based upon P&Z and Council direction, staff conducts a public workshop to present the report on existing regulations and suggestions from P&Z and Council on proposed modifications and receives feedback
4. Staff presents feedback from public workshop to P&Z and Council and receives final direction on ordinance revisions
5. Staff prepares ordinance revisions and schedules public hearings and adoption

Proposed time frame:

1. November 2013 - hold a workshop with P&Z to prioritize ordinance sections for review
2. February 2014 - conduct a joint workshop with P&Z and Council to present the staff report
3. March 2014 - conduct public workshop to present report findings and gather feedback
4. March 2014 - present feedback from public workshop to P&Z and Council
5. May 2014 - complete ordinance revisions (if any) and schedule for adoption
6. June/July 2014 - ordinance revisions adopted (may do in separate batches)