



# THE CITY PLAN

## ABOUT THE COVER

The Brazos River flows through the heart of Waco and has played an important part in the development of our city. Twelve bridges span the river within Waco's corporate limits. The four bridges pictured on the cover are unique based on their structure; their unique role in the history of Waco; or both. Two of the bridges are historic; while, two are contemporary. These unique bridges provide links both in space and in time. They connect us to one another and to our future. They remind us as a city that we are building on the foundation of those who came before us to create a brighter future for all Wacoans.

**Historic Waco Suspension Bridge** – Completed in 1870, this cable suspension bridge was the first to span the Brazos River. The cables were provided by John Roebling & Son, who a year later completed construction of the Brooklyn Bridge. In its early years the bridge was a crossing point for cattle drives that connected to the Chisolm Trail.

**Waco Steel Bridge** – Constructed in 1901, this 450 foot single-span Pennsylvania truss bridge was the longest bridge of its kind in the southwest. Today, the bridge remains the longest and oldest single-span vehicular truss bridge still in use in the United States.

**US Interstate 35 (Jack Kultgen Freeway) frontage road bridges** – Completed in 2014, these bridges were the second and third extradosed bridges in the United States and the first in Texas. An extradosed bridge employs a structure that is described as a cross between a girder bridge and a cable-stayed bridge. This structure was selected for its elegant form to serve as signature bridges for the city of Waco.

**Sheila and Walter Humphrey Pedestrian Bridge** – Opened at the beginning of the 2014 Baylor Football season, this striking contemporary structure is built on a curve and spans 760 feet across the Brazos River between the campus which is home to buildings dating back to 1887 and the new state of the art McLane Stadium.



To the citizens of Waco:

On behalf of the City Council and the City Plan Commission, we are pleased to release *The City Plan: Waco Comprehensive Plan 2040*. This plan is built on the goals and objectives of the *Comprehensive Plan 2000* as well as those of nine recently completed plans. The drafting of each of these documents involved extensive citizen participation, as did the drafting of *The City Plan*. As a result, the plan reflects the views of thousands of Wacoans over time and truly presents a shared vision for our city's future.

The guiding principle of *The City Plan* is sustainable development. Historically, comprehensive plans have focused on the physical development of a city; however, this plan emphasizes the strong relationship between the physical, economic and cultural environments of our community.

*The City Plan* is intended to serve as a tool to be used by you, the citizens of Waco, in devising projects, programs and policies to achieve our shared vision. Planning, if it is to be effective, must be an ongoing process capable of responding to the changing needs of a dynamic city. *The City Plan* is your plan. With your continued support and participation, it will provide an excellent guide for Waco's future.

Sincerely,

Kyle Deaver  
Mayor

Jose Villanueva  
Chair, City Plan Commission

# THE CITY PLAN

Waco Comprehensive Plan 2040

# ACKNOWLEDGEMENTS

TO ALL OF THE CITIZENS OF WACO WHO PARTICIPATED IN THE PLANNING PROCESS.

## THE CITY COUNCIL

January, 2013 – September, 2016

### Mayors

Malcolm P. Duncan, Jr  
Kyle Deaver

### Council Members

Wilbert Austin, District I  
Alice Rodriguez, District II  
John Kinnard, District III  
Toni Herbert, District IV  
Dillon Meek, District IV  
Kyle Deaver, District V  
Jim Holmes, District V

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January 2013 – September 2016

### Chairmen

Joshua Carter  
Jose Villanueva

### Commission Members

LaRaine DuPuy  
Norma Johnson  
Peter Ellis  
Reggie Richardson  
Daniel Tagle Jr.  
John Campbell  
Andrew Lopez  
Joe Mayfield  
David Sterling

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## Commission Members continued

Peter Goetzinger  
Libby Cain  
Sandra Marquez  
Chris Gutierrez

## CITY OF WACO

### City Management

Dale Fisseler, P.E., City Manager  
Wiley Stem III, Deputy City Manager  
Cynthia Garcia, Assistant City Manager  
Jack Harper II, Assistant City Manager  
Deidra Emerson, Assistant City Manger

### Planning Department Staff

Clint Peters, AICP, Director of Planning  
Chris Evilia, AICP, MPO Director  
Bill Falco, Plan Coordinator  
Chelsea Phlegar, Planner  
Beatriz Wharton, Senior Planner  
Felix Landry, AICP, Senior Planner  
Gaynell Benson, Staff Assistant  
Doris Sandberg, Staff Assistant

### Municipal Information

Graphics: Jose Zuniga

The following City of Waco departments provided valuable technical support for the drafting of The City Plan:

Budget, Finance and Audit  
Building Inspection  
City Attorney's Office  
Fire Department  
Housing and Economic Development  
Parks and Recreation  
Police Department  
Public Works

Solid Waste Management  
Utilities  
Waco-McLennan County Health District  
Waco Transit

## CONSULTANTS

*Economic Development Strategic Plan:*  
W.E. Upjohn Institute – Mohr Partners

*Water Master Plan:*  
The Wallace Group – Freese and Nichols

*Wastewater Master Plan:*  
Walker Partners – HDR – rjn group – Burgess & Niple

*Comprehensive Plan Fiscal Impact Analysis:*  
RPS – Willdan Financial Services

*Waco Metropolitan Area Master Thoroughfare Plan:*  
Renaissance Planning Group

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Waco Comprehensive Plan 2040



introduction



# Introduction

## History of Comprehensive Planning in Waco

The City Plan is the fifth comprehensive plan prepared by the City of Waco. The first, in 1958, concentrated on improvements to city infrastructure and the City's role in the development process. The second plan was completed in 1968 and focused on creating "a new image for Waco" by revitalizing downtown and developing the Brazos River corridor. The 1983 Comprehensive Plan emphasized building on the "new image for Waco" and continuing the emphasis on quality. The fourth plan, completed in 1999, reflected a community vision to improve the quality of life for all citizens; preserve Waco's unique character and natural resources; and promote excellence in education through economic development and orderly growth.

## Guiding Principle

The guiding principle of The City Plan is sustainable development. Sustainable development consists of development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

## Economic and Cultural Emphasis

Historically, most comprehensive plans have primarily focused on the physical development of a city or region; however, this plan endeavors to also recognize the relationship between the physical, economic and cultural environments. Recognizing this relationship will allow Waco to guide development in a manner that will complement the current level of commitment within the community to reduce the number of persons living in or near poverty through strategies developed by the Prosper Waco initiative. This program strives to develop and implement comprehensive sustainable strategies to reduce poverty through initiatives in the economic, educational and health sectors. The City Plan does not propose to duplicate this initiative, but rather to be a plan that recommends the development of a built environment that will facilitate the implementation of these strategies. The City Plan's support of this unprecedented initiative is evident in the selection of the Upjohn Institute to inform the preparation of the economic development component of the plan. The *Economic Development Strategic Plan for the City of Waco* (prepared in 2014) recommends strategies for expanding opportunities for all Wacoans to benefit from economic prosperity.

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## Revitalization of Greater Downtown Waco and Surrounding Neighborhoods

The high priority assigned to development in Greater Downtown Waco and the surrounding neighborhoods embodies The City Plan's emphasis on sustainable development. Simply put, making use of existing infrastructure and services conserves increasingly scarce resources and contributes to the revitalization of Waco's historic neighborhoods.

These neighborhoods house an income, ethnic and age diverse population. The same qualities that characterize a vibrant urban environment that appeals to young professionals and empty nesters also provide a better quality of life for households living on modest incomes as demonstrated in the following scenarios:

- **From a transportation perspective**, a system that includes sidewalks, bike lanes, and public transportation provides households living on limited incomes with more affordable and convenient options to access healthcare, education, childcare, jobs and entertainment; while creating opportunities for a healthier lifestyle through walking, running and cycling. This same transportation system creates neighborhoods that offer the diversity and vitality of an urban environment which appeals to many young professionals and empty nesters.
- **From a land use perspective**, neighborhood centers that combine commercial and mixed density residential development create the population density required to support public transit and provide affordable, mixed income housing opportunities. Adding the development of employment centers in or near these neighborhoods will bring jobs within walking or biking distance of residents. The revitalization of existing neighborhood centers will encourage restoration of older homes and the construction of compatible infill development contributing to the stabilization of the neighborhood and the creation of a more income diverse population.

## Preservation of Rural Character

Greenfield residential developments (residential development on previously undeveloped land with no existing infrastructure) will continue to play a significant role in the housing market. The City Plan recognizes this role and provides recommendations that encourage more sustainable and livable greenfield developments. One of the initial

attractions of rural developments is the natural character of the land that surrounds them; however, as current rural development patterns continue, rooftops and roads replace much of the natural character and open space, and a previously enjoyable commute becomes longer and more congested. This type of traditional rural development is neither sustainable nor desirable in the long term. An alternative approach involves clustering development on smaller lots, while preserving the remainder of the land as open space with potential for agricultural use, developed parks, outdoor recreation, or the land may be left in a natural state. Potential advantages of cluster development include the following:

- Maintains the rural character that attracts residents to the area through the preservation of agricultural land and open space.
- Reduces infrastructure requirements including streets, water and sewer lines, and stormwater drainage systems; and eases stress on services such as fire/police protection, waste collection, schools, libraries, and parks. Less infrastructure and services can lead to lower development costs, lower housing costs, and more efficient use of public funds.
- Creates a stronger sense of community.
- Facilitates the population density required to operate a rural transit system and provides better access and overall service to residents.

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goals & objectives

# Chapter 1: Goals and Objectives

The seven goals included in this chapter reflect the guiding principle of The City Plan to create a built environment that will contribute to the economic, cultural and environmental sustainability of Waco and its extraterritorial jurisdiction (ETJ). Together these goals provide a vision that will guide the City in setting objectives, establishing policies and developing strategies that will shape Waco's future. The objectives provide guidance that will move the City toward the realization of these goals.

Rather than conducting a visioning and goal setting process specifically for The City Plan, these goals and objectives were drafted by beginning with those included in the Comprehensive Plan 2000 and incorporating the goals and objectives from nine recently completed planning documents identified at the end of this chapter. The planning process that produced each of these documents involved extensive public participation, as did the drafting of The City Plan. This process ensured that these goals and objectives reflect the views of thousands of Wacoans over time and truly represent a shared vision for our city's future. The following lists recent plans and studies that were incorporated into these goals and objectives:

- *Economic Development Strategic Plan – Upjohn Associates (2014)*
- *Poverty Solutions Steering Committee Report (2012)*
- *Near Northside Master Plan (2011)*
- *Grow Greater Waco: Challenge Greater Waco II – Next Level Plan for Economic and Community Development (2010)*
- *Imagine Waco: A Plan for Greater Downtown (2010)*
- *Future Land Use Study for McLennan County (2007)*
- *Waco Metropolitan Area Thoroughfare Plan (2007)*
- *Downtown Development Guidelines: Development & Design Guidelines for the Brazos River Corridor & Downtown (2006)*
- *Community Visioning Project (2005-2014)*
- *Elm Avenue Improvement Plan (2002)*

## Goal 1 Economic Development: Create an economic environment that stimulates investment in sustainable development while providing employment opportunities at all skill levels through fully engaging the region's human, educational and financial resources.



Image 1.1: A view of the Waco skyline

### Objectives:

- 1.01 Reassess and revise as necessary the City's economic development and incentive policies to ensure that they advance the goals and objectives of the comprehensive plan.
- 1.02 Provide quality housing, neighborhoods and community facilities and services to attract and retain business and industry.
- 1.03 Encourage and develop employment opportunities for all segments of Waco's population.
- 1.04 Increase educational opportunities for all Waco citizens through the utilization of continuing education; work-study programs; financial assistance; general educational development (GED) programs; customized training; and night and weekend curricula.
- 1.05 Implement an employer driven workplace readiness skills training program.
- 1.06 Ensure that local economic development efforts take into consideration the long term availability of water, both locally and regionally.
- 1.07 Develop new recreational, cultural and tourism opportunities in the form of attractions and events that will enhance Waco's appeal as a destination for visitors, residents and businesses.

- 1.08 Enhance Waco's prominence as a center for healthcare and human services in the Central Texas region through support of local and regional hospital and healthcare facilities.
- 1.09 Develop target industry career fairs.
- 1.10 Extend the activities of the Consortium of Employers to include shared training needs.
- 1.11 Encourage employers to locate in the inner city to directly alleviate the transportation barrier faced by many residents.
- 1.12 Improve the City's delivery of economic development services.
- 1.13 Develop an education pathway for Wacoans, and particularly for African Americans, to enter and complete college.
- 1.14 Support the creation of a Cultural District in Greater Downtown Waco to attract residents, businesses and tourists to the area.
- 1.15 Work with Baylor University's John F. Baugh Center for Entrepreneurship and Free Enterprise and McLennan Community College's Small Business Development Center to provide technical assistance and training for persons wishing to start or expand a business in Greater Downtown Waco and the adjacent neighborhoods as a means of bringing jobs to people as recommended in the *Economic Development Strategy Plan for the City of Waco*.

## Goal 2 Growth Management: Promote sustainable patterns of growth that will provide opportunities for coordinated, well-planned new development, while strengthening Waco's existing neighborhoods.

### Objectives:

- 2.01 Consider existing neighborhoods, natural features and efficient use of limited resources in determining appropriate locations for future residential and nonresidential development.
- 2.02 Develop strategies to arrest and reverse deterioration within transitional neighborhoods and to maintain and preserve stable neighborhoods.

- 2.03 Develop comprehensive density strategies to ensure that infrastructure systems will be adequate to accommodate future growth and development.
- 2.04 Recognize the benefits and cost savings of utilizing existing infrastructure and services in the city's core and adopt development strategies that encourage infill development.
- 2.05 Plan for continued development in Waco's extraterritorial jurisdiction (ETJ) that improves McLennan County's overall quality of life and economic viability through maintenance of the ETJ's rural character and preservation of open space.
- 2.06 Develop financing strategies to equitably distribute the costs of serving growth in the City and the ETJ.
- 2.07 Implement programs to encourage infill development within Greater Downtown Waco and older residential neighborhoods.
- 2.08 Support and encourage public/private partnerships and creative initiatives for greater downtown such as public art; walking museums; street vending; and the creative use of vacant structures and outdoor spaces as venues for the arts.
- 2.09 Continue proactive planning efforts for the development of the Brazos River Corridor and Greater Downtown Waco. (Reference *Development & Design Guidelines for the Brazos River Corridor & Downtown; For All Our Lifetimes: A Vision for the Brazos & Bosque Rivers; Imagine Waco: A Plan for Greater Downtown; and Near Northside Master Plan*)
- 2.10 Develop the Brazos River Corridor as a center for quality recreation, convention, tourism, housing and office facilities.
- 2.11 Encourage residential infill development in the Brazos River Corridor.
- 2.12 Promote the development of quality office facilities within Greater Downtown Waco.
- 2.13 Devise an economic development strategy consistent with the City's desire to manage growth.

- 2.14 Develop strategies to encourage reinvestment within areas of the city that are historically and/or culturally significant, such as Greater Downtown Waco.
- 2.15 Schedule regular comprehensive plan review and update capital recovery mechanisms to recoup new development infrastructure costs.
- 2.16 Ensure future economic stability through continued recruitment of new business and industry in the context of planned development, and by locating them within priority areas that are supportive of the Comprehensive Plan's growth management objectives.
- 2.17 Reinforce the neighborhood concept in both a sociological and physical sense through new residential developments that feature elements such as linkages between neighborhoods and walkways to schools, parks, neighborhood shopping areas and other destinations.
- 2.18 Explore design alternatives for residential subdivisions, including neo-traditional clustering and coving concepts and their applicability within Waco and its ETJ.

**Goal 3 Transportation: Provide a multimodal transportation network that effectively and economically serves the community's existing and projected travel needs through optimizing mobility while decreasing dependency upon the automobile.**



Image 1.2: Downtown Waco Transit Station

**Objectives:**

- 3.01 Maintain a continuous, coordinated transportation planning process that addresses long-term needs while facilitating short-term problem solving.
- 3.02 Identify and plan for various roadway types based on how they are expected to function and upon expected build-out traffic volumes.
- 3.03 Promote compatibility between roadway alignments / improvements and the environment, character and land use patterns of the community.
- 3.04 Continue systematic preventive maintenance, reconstruction and improvement of existing streets.
- 3.05 Implement traffic calming strategies to slow vehicular circulation, particularly within residential neighborhoods and the downtown area.
- 3.06 Continue to coordinate transportation planning by working through the Metropolitan Planning Organization with the Texas Department of Transportation, the Heart of Texas Council of Governments, McLennan County and neighboring cities.
- 3.07 Encourage non-automotive transportation options including, but not limited to sidewalks, bicycle lanes, pedestrian and bicycle paths/trails, public transit and water transportation.
- 3.08 Encourage residential development in close proximity to schools, colleges, universities, childcare centers and major employers.
- 3.09 Encourage city employers to pursue travel reduction initiatives such as car and van pooling, flexible work schedules and telecommuting that decrease dependency on single-occupancy vehicle trips.
- 3.10 Continue to examine the role of the Waco Regional and TSTC Waco Airports in the context of long term development planning.
- 3.11 Ensure that the City of Waco is in a position to actively participate in the location decisions of any future high-speed and/or commuter rail routes.

**Goal 4 Utility Infrastructure: Ensure that the infrastructure for the supply, treatment and distribution of water; collection, treatment and recycling of wastewater; and management of stormwater is constructed, maintained and operated to meet the needs of sustainable patterns of growth.**



Image 1.3: Waco Metropolitan Area Regional Sewerage System (WMARSS)

**Objectives:**

- 4.01 Continue to develop plans and implement appropriate strategies to ensure an adequate water supply for Waco and its environs.
- 4.02 Continue cooperative efforts to protect and improve water quality in the Lake Waco watershed.
- 4.03 Anticipate future water and sewer service demands and develop a plan for those anticipated demands.
- 4.04 Encourage the timely, efficient provision of services to developing and redeveloping areas by private/franchise utilities such as telephone, gas, electricity and fiber. Utility lines should be placed underground, and providers should use shared conduits, wherever possible.
- 4.05 Continue monitoring and programming for the repair, replacement and upgrading of aging infrastructure systems.

- 4.06 Develop guidelines, ordinances and funding mechanisms to ensure that stormwater runoff; potential non-point source pollution problems; and development density will not adversely affect floodplains or other natural areas.
- 4.07 Develop a long range conservation plan to address water availability for Waco and its certificate of convenience and necessity (CCN) area to ensure that there is at least a 50 year water supply.
- 4.08 Coordinate planning with McLennan County and other jurisdictional entities such as water and utility districts to ensure long term provision of adequate utility services for Waco’s residences and businesses.

**Goal 5 Housing: Encourage residential development that is compatible with the natural and built environment while meeting the diverse needs of the housing market throughout Waco and its environs.**

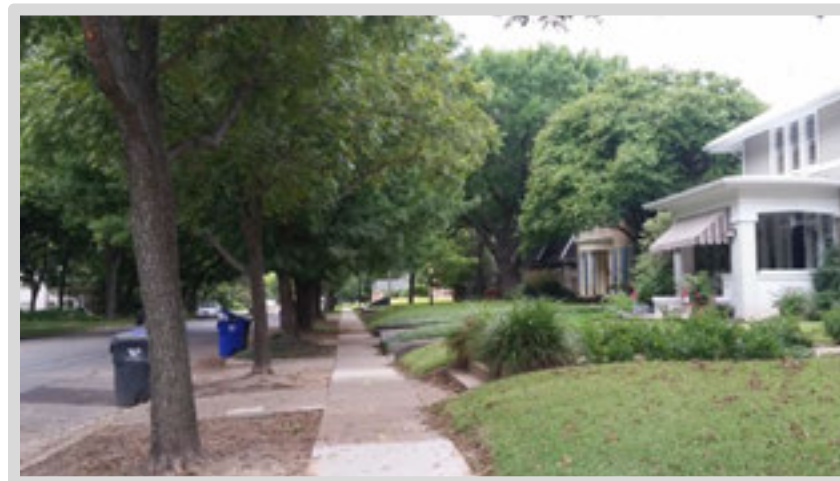


Image 1.4: Example of a walkable Waco neighborhood

**Objectives:**

- 5.01 Establish Waco as a full life-cycle city that uses preservation, rehabilitation, redevelopment and development guidance as components of a comprehensive housing strategy.
- 5.02 Provide appropriate housing to accommodate all age groups.

- 5.03 Provide opportunities for home ownership.
- 5.04 Expand progressive housing options for individuals with serious mental illness or addiction.
- 5.05 Increase safe, affordable, accessible housing by requiring a portion of low income housing tax credits be reserved for individuals with disabilities – similar to existing credits for senior citizens.
- 5.06 Identify “special need” populations and plan development that offers a variety of amenities such as single level, ramped entries and wide doorways.
- 5.07 Support neighborhood beautification projects as a means of encouraging reinvestment within established residential areas.
- 5.08 Preserve and stabilize existing neighborhoods. Promote initiatives and incentives to encourage compatible “infill” development of vacant residential lots and redevelopment of substandard housing units in existing neighborhoods.
- 5.09 Protect and retain the city’s existing affordable housing stock and encourage the development of additional affordable housing units that are architecturally compatible with the neighborhoods in which they are constructed.
- 5.10 Encourage diverse, innovative and affordable housing developments.
- 5.11 Develop and expand programs to assist owner-occupants with economic hardships that may be incurred during efforts to meet housing code requirements.
- 5.12 Promote neighborliness and reduce polarization within the community by encouraging economically and racially balanced residential development. Consider development incentives that advance a mix of housing types and lot sizes.

**Goal 6 Community Livability: Recognize Waco’s identity and manage growth and change to maintain and enhance community character in the way we address the economic, social and environmental needs of a diverse population.**

**Objectives:**

- 6.01 Make the performing and visual arts an integral part of community development.
- 6.02 Strengthen efforts to preserve and maintain Waco’s places of historical and cultural significance.
- 6.03 Encourage the preservation and planting of street trees throughout the city.
- 6.04 Develop and maintain a system of parks and recreational facilities to meet the diverse needs of a growing population.
- 6.05 Identify and secure sites for new parks in areas projected for future development.
- 6.06 Co-locate public facilities with other municipal facilities or with those of other quasi-governmental jurisdictions such as independent school districts, colleges and universities.
- 6.07 Use natural areas such as floodplains and wetlands along creeks to provide open space and create connectivity between neighborhoods and the Brazos River Corridor.
- 6.08 Target residential developments with amenities to meet the needs of a diverse population such as community centers, senior centers, safe walking trails and sidewalks, playgrounds and community gardens.
- 6.09 Strengthen urban design standards to enhance the visual appeal of the city’s streetscape, landscape, signage, right-of-ways and public spaces.
- 6.10 Initiate projects designed to improve the appearance of the Interstate 35 (IH-35) corridor.

- 6.11 Make pedestrian walkways more people oriented by adding features such as street trees, lighting, public art, wayfinding, exercise stations and water fountains.
- 6.12 Strengthen the enforcement of City codes and regulations pertaining to property maintenance, upkeep and appearance.
- 6.13 Identify and remove barriers to participation by people in poverty in sports, music programs and other recreational and cultural opportunities.
- 6.14 Incorporate public safety principles into design standards.
- 6.15 Provide for needs of children and the physically challenged in the design of public places and facilities.
- 6.16 Encourage the provision of healthcare facilities and other services for all citizens regardless of age, income or state of health.
- 6.17 Maintain a continuous, coordinated planning process that involves citizens, stakeholders, City Council, City boards/commissions, City departments and other public and private entities in policy development and decision making.
- 6.18 Implement a system of oversight and management that addresses the upgrading of deteriorating commercial and industrial areas within the city.
- 6.19 Continue proactive planning efforts in the redevelopment of Greater Downtown Waco to preserve the heritage, character and image of the city, while creating an environment that is conducive to revitalization.
- 6.20 Promote public and private reinvestment in Greater Downtown Waco to ensure its long-term economic viability and preserve its heritage and urban character as a site of social interaction, commerce and entertainment.
- 6.21 Continue to strengthen ordinances and guidelines for Greater Downtown Waco that address historic preservation; traditional town form; context sensitive streets and mixed use structures; thereby, promoting downtown as a center for commerce, while preserving its historical and architectural character.

- 6.22 Use the City Center Waco and the Downtown Public Improvement District to coordinate downtown enhancement and preservation efforts with merchants and property owners.
- 6.23 Elm Avenue should establish its own identity within the context of the community.  
  
Improvements in the Elm Avenue area should support the needs of adjacent neighborhood residents, as well as attract people from other areas of Waco.
- 6.24 Provide adequate security and appropriate lighting within the Brazos River Corridor to encourage night-time, as well as daytime activities.
- 6.25 Develop a unifying theme or other visual concept for consistent streetscape treatment of appropriate thoroughfare rights-of-way, medians and intersections.
- 6.26 Continue developing a system of easily accessible, highly visible libraries to serve the ultimate population of Waco.
- 6.27 Promote the public education system and encourage citizen involvement in public schools.
- 6.28 Support the designation of Greater Downtown Waco as a Texas Commission on the Arts recognized Cultural District and the adoption of a Cultural Plan to grow the arts and promote Waco’s cultural identity.

**Goal 7 Environment: Create a sustainable community for people through the conservation of natural resources and preservation of rural areas, while encouraging development and redevelopment of livable towns and cities.**



Image 1.5: Karem Park, example of a floodplain used as a greenbelt or open space park

**Objectives:**

- 7.01 Conserve and protect ecologically sensitive areas through adoption of density guidelines that encourage the preservation of natural vegetation and slopes.
- 7.02 Conserve natural areas of vegetation along floodplains within heavily forested areas; within park and open space areas; and around lakes through the use of tools such as scenic easements, development standards and regulatory and/or monetary incentives.
- 7.03 Encourage public enjoyment and provide public access to open space and natural areas.
- 7.04 Establish and maintain high standards for ground and surface water quality.
- 7.05 Restrict development in flood-prone areas.
- 7.06 Develop conservation and design standards for developments in or adjacent to areas characterized by constrained geologic, slope, or soil conditions.
- 7.07 Increase the city's green infrastructure to manage stormwater; stop the spread of invasive plants; restore native vegetation; protect sensitive natural areas; and preserve animal habitat.
- 7.08 Respect areas with steep slopes and/or scenic views and provide public access to scenic overlook points wherever possible.
- 7.09 Encourage and promote water conservation through use of native plant materials and xeriscape techniques.
- 7.10 Promote the community's sustainability programs.
- 7.11 Reduce energy use in city facilities and city infrastructure.
- 7.12 Utilize recycling and other solid waste management techniques that are fiscally practicable, feasible and environmentally responsible.
- 7.13 Increase awareness of and support for sustainable practices in the private sector.

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economic development



# Chapter 2: Economic Development

## 2.1 Introduction

This Economic Development component of The City Plan is drawn from the *Economic Development Strategic Plan for the City of Waco* prepared by the Upjohn Institute and Mohr Partners in 2014. The Upjohn Strategic Plan is intentionally focused on reducing poverty, increasing labor force participation and increasing area income. This decision was made not because traditional economic development planning is unimportant, but because this need is effectively being addressed by others in the community.

Approximately 50 percent of Waco’s population has an income below what is considered a livable wage (equal to 200 percent of the federal poverty level). This condition is not consistent with the long term social and economic sustainability of our community.

According to the Upjohn Strategic Plan, the core of the economic development challenge facing Waco is twofold:

- First, too many of the city’s residents do not have the sufficient skill sets to meet the talent needs of the region’s core employers, making it difficult for them to find and keep well-paying jobs. Moreover, many of these individuals face other challenges as well, including lack of quality childcare, reliable transportation, and perhaps most importantly, lack of job-readiness skills.
- Second, many of the region’s businesses only demand low-skilled positions that pay relatively poorly and offer limited career advancement. In addition, the quality of the area’s workforce could influence the investment decisions of future employers that may view the Waco area as a low-cost, competitive location for only low-skilled assembly and the warehousing of products.

The City Plan’s economic development strategy is based not only on how it positively affects the community, but also how it affects businesses that the city hopes to retain and attract. To this end, it is also important to look at capital resources in the form of real estate and public infrastructure needed to support targeted businesses and to examine

how the community can assist them in meeting their labor force requirements.

While The City Plan does not directly address many of the conditions contributing to poverty in Waco, it can play a vital role in addressing those conditions through changes in the built environment. These changes include increased emphasis on infill development and a multimodal transportation system that will improve access for persons with modest incomes to basic needs such as jobs, childcare, fresh food, healthcare, parks, recreational facilities and decent affordable housing. These changes to the built environment will be addressed in more detail in the Growth Management, Transportation, Housing and Livability components of The City Plan.

## 2.2 Economic Landscape

Total employment in the Waco Metropolitan Statistical Area (MSA) grew by only 1.0 percent in 2013, a gain of 1,100 jobs. During the past 10 years the MSA has recorded only a 0.3 percent annual rate of employment growth. In comparison, employment for Texas grew a strong 2.9 percent last year and has maintained a robust 1.8 percent annualized rate for the last 10 years.

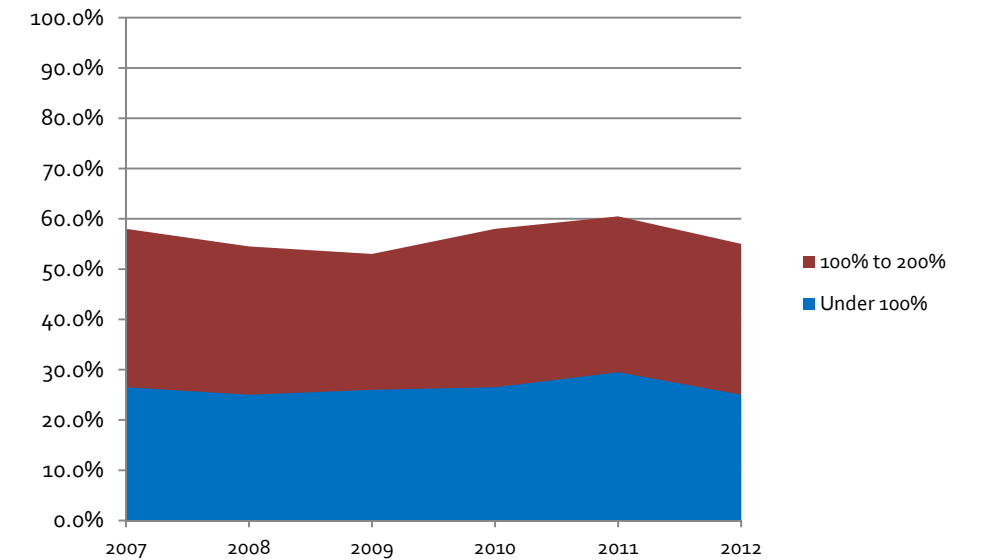
Relative to 10 peer cities in the state (Abilene, Amarillo, Bryan, College Station, Lubbock, Odessa, San Angelo, Temple, Tyler, and Wichita Falls), Waco’s employment trends are only slightly below average (see Map 2.1 for the 10 peer cities). Employment in the 10 peer city MSAs increased by 1.8 percent in 2013 and by 1.2 percent average annual rate during the past 10 years. Numerous studies have shown that small metropolitan areas nationwide face stubborn economic development challenges due to their size. In short, Waco’s moderate economic performance is largely due to urban structure that cannot easily be changed.

Although employment growth is the most commonly used indicator of local economic performance, per capita income is considered a better overall indicator than employment growth. The Bureau of Economic Analysis’s Regional Price Parities (RPP) estimate the area’s relative cost of living to the nation as a whole. In 2012, Waco’s RPP was estimated to be 91.6, indicating the area’s cost of living was nearly 10 percent below that of the nation. The housing cost index for the Waco MSA is an extremely low 76.6.

While per capita income is a good measure of the general economic well-being of area residents, it does not address the issue of poverty. In the

city of Waco, nearly 30 percent of its residents are living below the poverty level, and more than 50 percent are living below 200 percent of the poverty level (Chart 2.1).

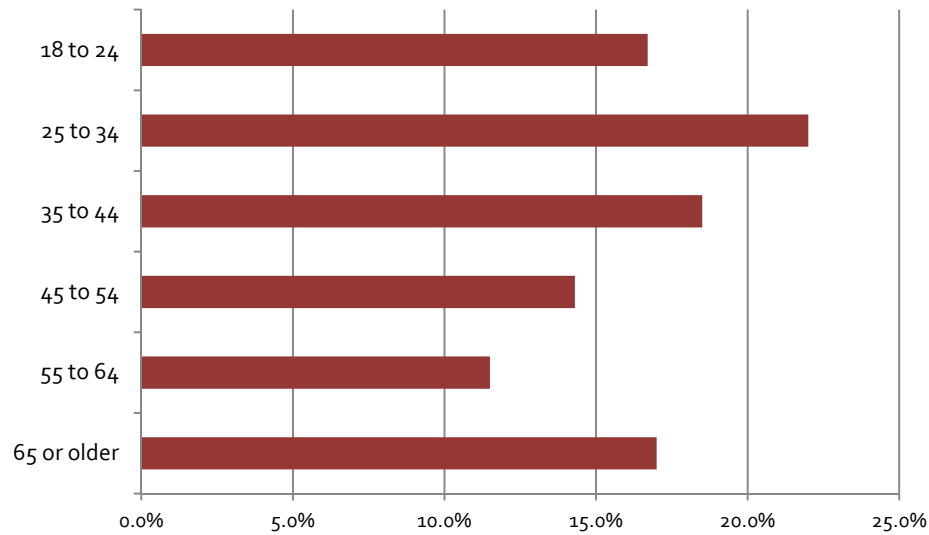
**Chart 2.1: Percent of City of Waco Population Living Up to 200% Poverty Level, 2007-2012 (excluding students)**



Source: US Department of Commerce; Bureau of the Census – American Community Survey (2012)

Persons who are struggling economically are all ages, as shown in Chart 2.2. However, it is concerning that nearly 40 percent of persons living within 200 percent of the federal poverty guidelines are under 35 years of age. With the right assistance, it is possible for these individuals to work their way out of poverty. Unfortunately, research shows that individuals who are delayed in establishing career paths face a difficult time catching up with their age group. It is crucial that an employment pathway out of poverty is established to help individuals move forward.

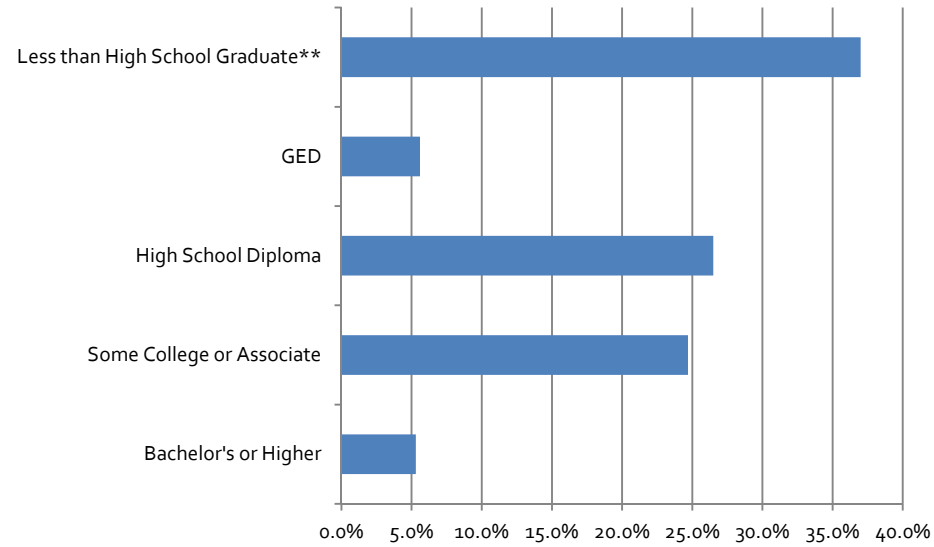
**Chart 2.2: Age Characteristics of City of Waco Population Living in Poverty\***



Source: US Department of Commerce; Bureau of the Census – American Community Survey – 2010 to 2012  
 \*Poverty defined as 200% of Federal Guidelines

It has been repeatedly shown that education matters for income growth. More than 36 percent of the individuals who are living in poverty conditions did not complete high school (Chart 2.3). High school completers (high school diploma or general educational development [GED] holders) account for 31 percent of the persons living within 200 percent of the federal poverty guidelines. What is disturbing is that nearly a quarter of the city’s impoverished population completed some college or has an associate’s degree. It is very likely that most of the individuals who are struggling in poverty are non-completers.

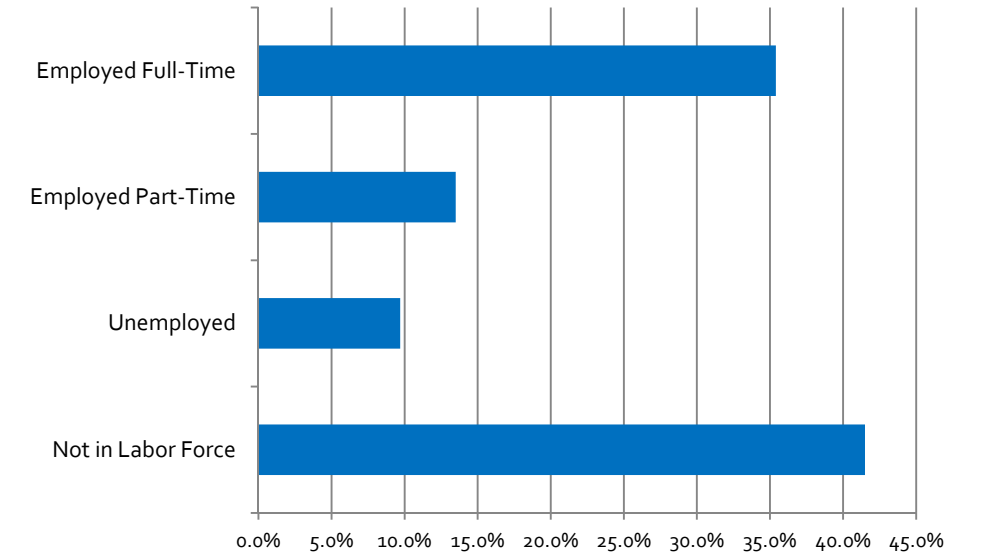
**Chart 2.3: Educational Characteristics of City of Waco Population Living in Poverty\***



Source: US Department of Commerce; Bureau of the Census – American Community Survey – 2010 to 2012  
 \*Poverty defined as 200% of Federal Guidelines  
 \*\*Or GED equivalent

More than 36 percent of the persons living within 200 percent of the federal poverty level are working full time (Chart 2.4). Another 18 percent are working part time, many of whom are likely looking for full-time employment. Less than 10 percent are unemployed. Of the 41 percent impoverished population who are not in the labor force, it is likely that many are retired, physically and/or economically disabled, or at home raising children. Still, a large portion may want to work, but are simply discouraged.

**Chart 2.4: Labor Force Characteristics of City of Waco Population Living in Poverty\***



Source: US Department of Commerce; Bureau of the Census – American Community Survey – 2010 to 2012  
 \*Poverty defined as 200% of Federal Guidelines

Overall, nearly 15 percent of households living in the city of Waco earn less than \$10,000 annually, and nearly 40 percent earn less \$25,000. Only by creating more better-paying jobs and developing the pathways to these jobs can these statistics be improved.

### 2.3 Labor Demand Concerns

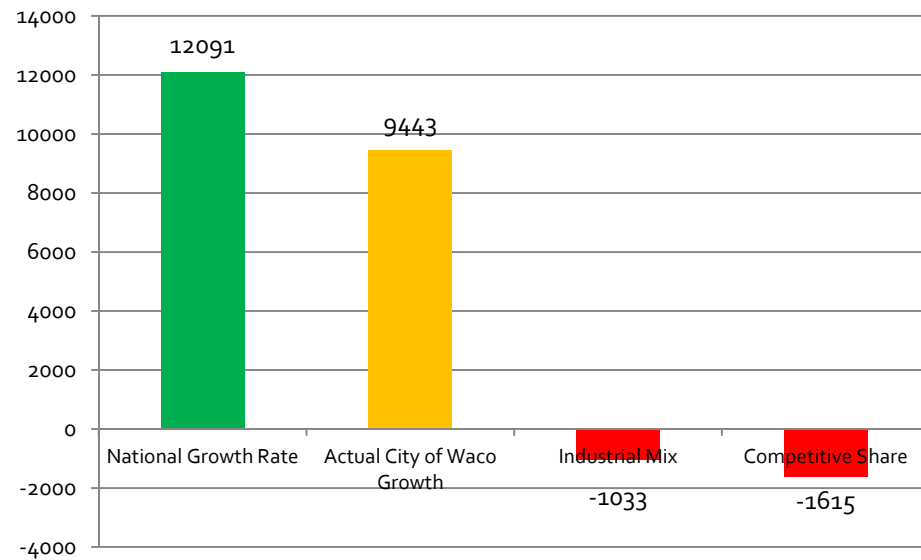
As shown in Chart 2.5, if all of the Waco MSA’s industries had grown at the overall national rate from 2009 to 2014, the MSA’s total employment would have increased by 12,000 jobs during the five-year period; however actual employment in the MSA increased by only 9,440 jobs. The difference in the Waco MSA’s actual employment growth and the growth it would have achieved if it grew at the national rate can be separated into two factors:

1. The national increase or decrease in the employment in the industries located in the area (industrial mix).
2. The area firms’ performance relative to their national rivals (competitive share).

An area’s industrial mix has a strong influence on the type of occupations and job offerings that are available for its residents. At the same time,

however, the quality of an area’s workforce will influence the type of employers that are attracted to the region. This interdependence of supply and demand can make it difficult for an area to attract better paying, higher-skilled jobs as shown in Chart 2.5. This pattern appears to be common among Waco’s peer cities and may be due to the previously referenced urban structure of small metropolitan areas.

**Chart 2.5: Area Employment Change Relative to National Growth – 2009 to 2014**



Source: Moody’s Analytics and Mohr Economic Development Services

This does not need to be the case, however. Waco is home to three institutions of higher learning: Baylor University, Texas State Technical College (TSTC), and McLennan Community College (MCC). Each of these institutions generates highly trained individuals. Evidence suggests that many of their graduates move elsewhere to get better paying jobs, and the presence of these institutions has not attracted many employers seeking high-skilled workers.

## 2.4 Labor Supply Concerns

Taking a closer look at the city’s unemployed, nearly 35 percent are below 24 years of age, and 60 percent are below age 35. For the approximately 1,200 young adults below 25 years of age who are unemployed, it is extremely important for them to start their careers. With each passing year of being unemployed, the likelihood that they will have a rewarding and well-paying career diminishes. Well-paying jobs offer the clearest pathway out of poverty. The first step in becoming employed is to look for work; however, this is not easy if you

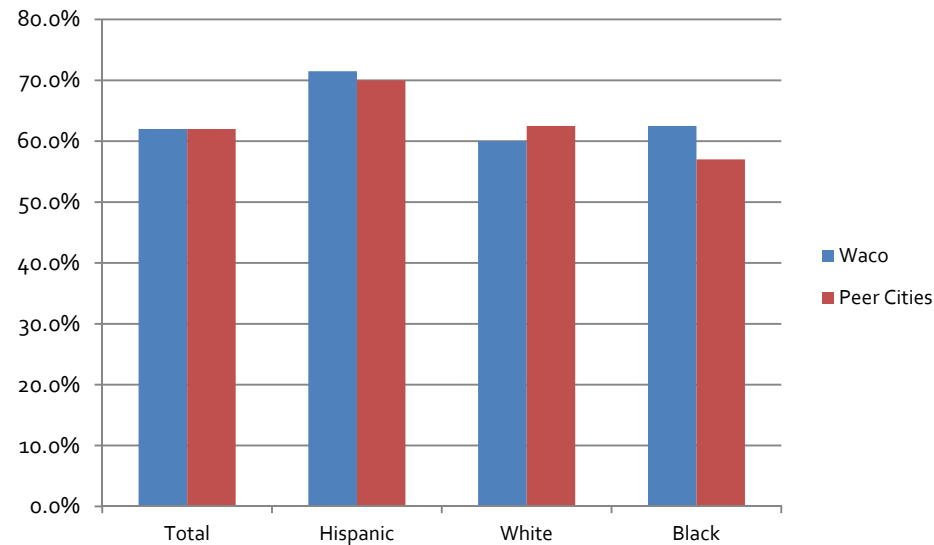
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are surrounded by individuals who are unemployed, who are discouraged, or lack the resources, as is the case in some inner-city neighborhoods.

The good news is that in the city, Waco labor participation rates are relatively strong. This is especially true for the city’s Hispanic population. More than 70 percent of the city of Waco’s Hispanic working-age adults are in the labor force-either employed or looking for work (Chart 2.6).

**Chart 2.6: Labor Participation Rates by Race**

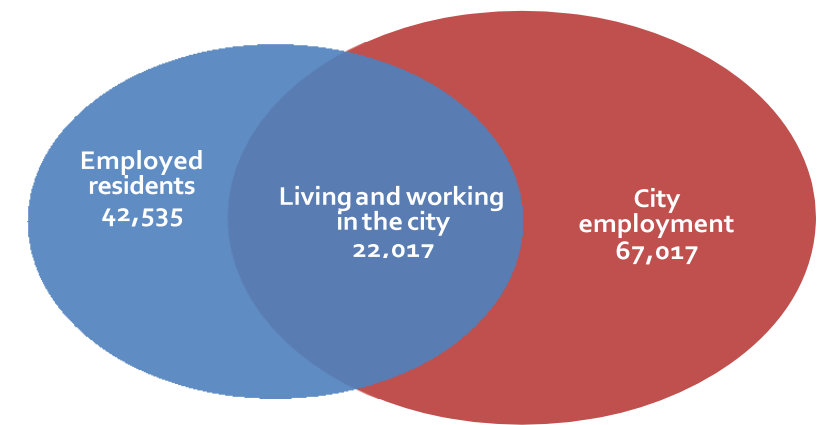


Source: US Department of Commerce; Bureau of the Census – American Community Survey – 2008 to 2012

## 2.5 Transportation and Access to Jobs

As shown in Chart 2.7 only 52 percent of Waco’s employed residents, 22,017 persons, work in the city. Moreover, 67 percent of the jobs in the city are filled by commuters, totaling 45,000 individuals. In short, there is a lot of traffic every weekday as people get to and from work.

**Chart 2.7: Metropolitan Waco Commuting Patterns**



Source: W.E. Upjohn Institute – Economic Development Strategic Plan for the City of Waco, Texas, page 23

Still, large portions of the city’s residents do not have access to a car. 2,341 working-age adults (7.2 percent) aged 35-64 do not have access to a vehicle. As shown in Map 2.2, the lack of a car is a major issue for individuals living in certain inner-city neighborhoods, denoted by census tracts 1, 4, 7, 11, 12, 14, and 23.02. Being without a car not only limits employment opportunities, it also makes it very difficult to conduct daily demands such as grocery shopping, getting young children to daycare and running errands.

In the 2040 Waco Metropolitan Transportation Plan, the Waco Metropolitan Planning Organization (MPO) identified seven employment clusters, as shown in Map 2.3. In Table 2.1, it is shown that more than 60,000 individuals work in these clusters. One-third of the residents living in the city’s core economically disadvantaged neighborhoods work in these clusters (also shown in Table 2.1). Collectively, approximately 1,600 residents from these economically disadvantaged neighborhoods work in these clusters, primarily in clusters 1 and 4.

One of the major transportation challenges facing the city of Waco is that inner-city residents work throughout the city, making it difficult to design a fixed-route bus system that could address their transportation needs. As shown in Table 2.1, very few residents live and work in the same census tract.

**Table 2.1: Employment in Waco Employment Clusters**

Employment Cluster	Total Employed in Cluster	Residents in Poorest Neighborhoods*	Cluster Employment Percent	Residential Employment Percent
1	14,174	565	4.0%	11.7%
2	3,056	75	2.5%	1.6%
3	3,511	87	2.5%	1.8%
4	21,417	494	2.3%	10.2%
5	2,962	77	2.6%	1.6%
6 & 7	14,983	304	2.0%	6.3%

\*Census Tracts 1, 2, 4, 12, 19, and 33

Source: US Department of Commerce; Bureau of the Census – Census on the Map Primary Jobs, 2011

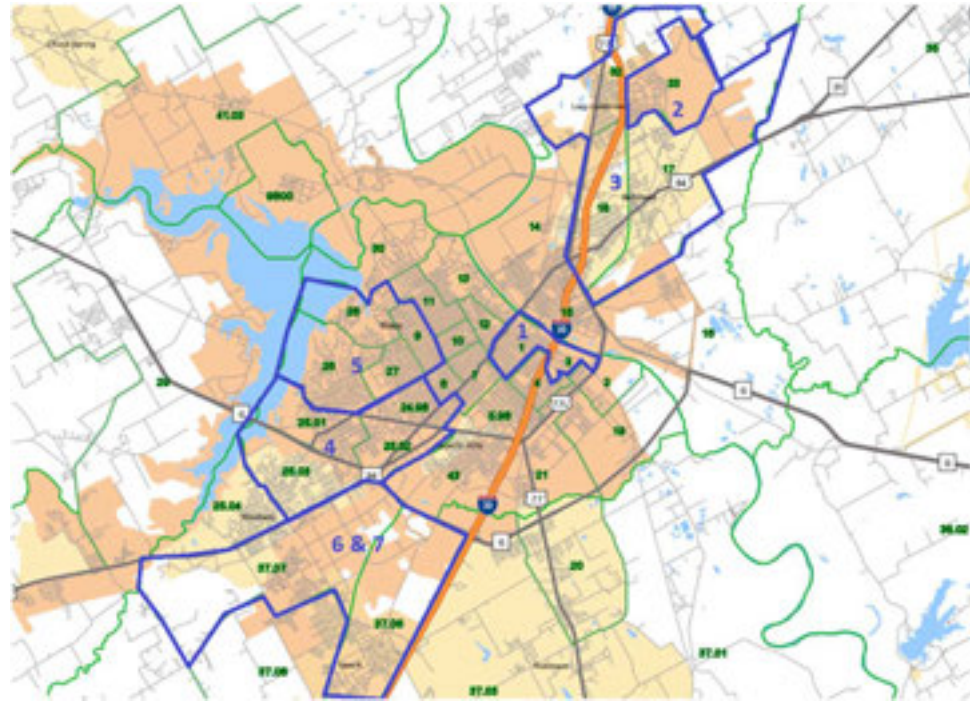


Image 2.1: Employment Clusters

## 2.6 Observations from the Waco Community

The Upjohn /Mohr Team conducted 90 interviews with community stakeholders focusing on workforce employment, education and a vision for Waco’s future. The interviewees identified the following challenges to seeking and retaining employment:

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- Transportation (by an overwhelming majority)
- Limited or little education, training or skills
- Few high-paying jobs available
- Lack of access to quality, affordable childcare

The following opportunities for economic growth were further highlighted by this same group:

- Market Waco’s location between Dallas and Austin on the Interstate 35 (IH-35) corridor and downtown and riverfront development.
- Capitalize on and expand the quality of its educational institutions (Baylor, MCC and TSTC). The Greater Waco Advanced Manufacturing Academy (GWAMA) and the Baylor Research and Innovation Collaborative (BRIC) are viewed as portals to job creation and an educated and skilled workforce.

The interviewee’s vision for the future focused on the following:

- The level of poverty for the Waco MSA has been significantly reduced.
- Neighborhood service centers offer employment and social service resources to residents.
- Industries that offer entry-level jobs with career ladders for advancement are accessible to economically disadvantaged individuals.
- Safe, affordable housing is available for low to moderate income households.
- A multimodal transportation system is in place that meets the needs of a diverse population.
- Quality, affordable childcare is available and accessible to all residents.

## 2.7 Framing an Economic Development Strategy: Why Waco?

The city has a number of assets that create opportunities for Waco to be a place where businesses would find it advantageous to locate and to expand. First and foremost, the city has a stable and predictable political system. The local government system is based in a Council-Manager form of government. The city council is engaged in the process of governance; they meet regularly and are representative of the population. The mayor has both a deep knowledge base as well as a

proactive vision of growth and change shared by council and the management team.

During Upjohn’s interviews and focus groups with community stakeholders, however, some voiced their concern that inclusion is not yet at the desired levels, and that some stakeholders are brought into the process later than desired.

Second, Waco has lower costs of living and lower costs of doing business as compared to the national average.

Third, the Waco region has a significant share of educational assets, including MCC, TSTC, and Baylor University. MCC and TSTC offer very specific training in applied areas to associate degrees. They also offer employer-specific training to meet the needs of both new and incumbent workers.

Fourth, Waco has a good location to provide production-related services to regions nearby. A number of major metropolitan areas are within a six-hour drive time of the Waco market. With Waco’s location on the I-35 corridor, it is well positioned to provide services to the cities of Dallas and Fort Worth to the north, and Austin, San Antonio, and across the border to the south. Transportation access within the United States and to both Canada and Mexico make it an advantageous site for distribution services and warehousing.

Finally, the benefits of the close proximity of Fort Hood Military Base should not be ignored. After finishing their service, individuals may wish to remain in the region with access to military-based services such as health care. While remaining in the region, they will likely bring a set of both soft and hard skills to potential employers.

## 2.8 Using Place as Part of the Economic Development Strategy

In considering an economic development strategy for disadvantaged workers within the Waco area, two approaches are considered: the first is **jobs to people** and the second is **people to jobs**. Other than retail (food, accommodations, and traditional retail), most development in Waco has occurred on green space outside of the urban core. While these employers with large footprints can hire a significant number of employees, it is difficult for those in the disadvantaged communities to gain access to these jobs due to their location outside of the urban core. There are two strategies being considered for the implementation of a “people to jobs” approach. First, some large employers have worked

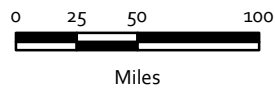
with the transit system to provide dedicated service to their facilities and at times that correspond to employment schedules. Second, Waco Transit is conducting a strategic plan that may allow for the repositioning of assets to also make employment one of the goals of the system, along with medical and retail.

## 2.9 Potential Employment Centers

City planning staff conducted a survey of potential employment center sites located in or close to areas with a poverty rate greater than 30 percent. These sites were analyzed based on a number of criteria including size, vacancy, proposed land use designation, existing zoning, floodplain, and availability of utilities. The sites ranged in size from 1.3 to 55.2 acres, with the mean size being approximately 4 acres. All properties were considered large enough to accommodate an employment center. Eight (8) out of 13 sites surveyed were designated as Office-Industrial in the proposed land use plan, with 3 of remaining sites being Mixed Use Flex, all of which would accommodate an employment center. Similarly, 9 of the 13 sites were zoned Industrial and 2 were Commercial. Water and sewer were available to all of the properties.

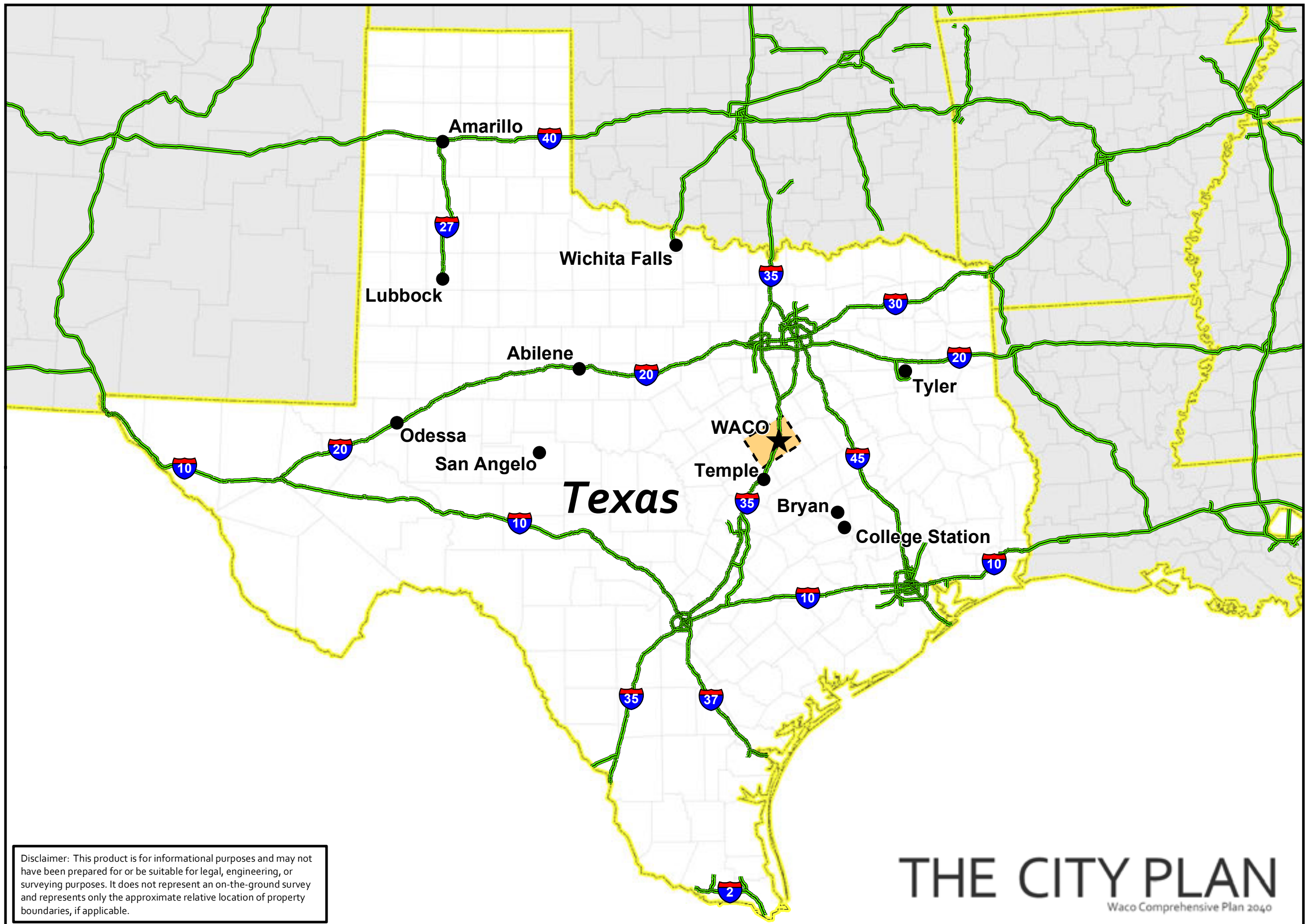
It was the observation of Mohr Partners, who assisted Upjohn in the preparation of the *Economic Development Strategic Plan*, that significant available real estate is both affordable and well positioned. However, these sites would not yet be considered potential sites for industrial prospects. Mohr Partners defined a "site" as one that is ready to be developed with infrastructure in place or fully prepared to be in place (and is available for purchase). However, the sample survey of property conducted by staff reinforces that an abundance of suitable sites is available. Map 2.3 shows the location of the 13 sites identified by staff.

Waco Metropolitan Area



July 2016

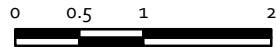
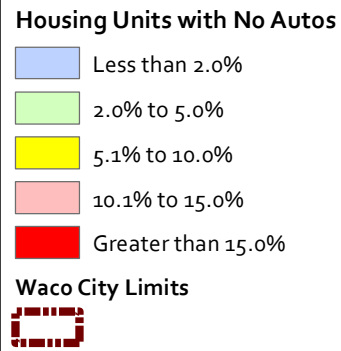
Map 2.1: Waco Peer Cities



Disclaimer: 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, if applicable.

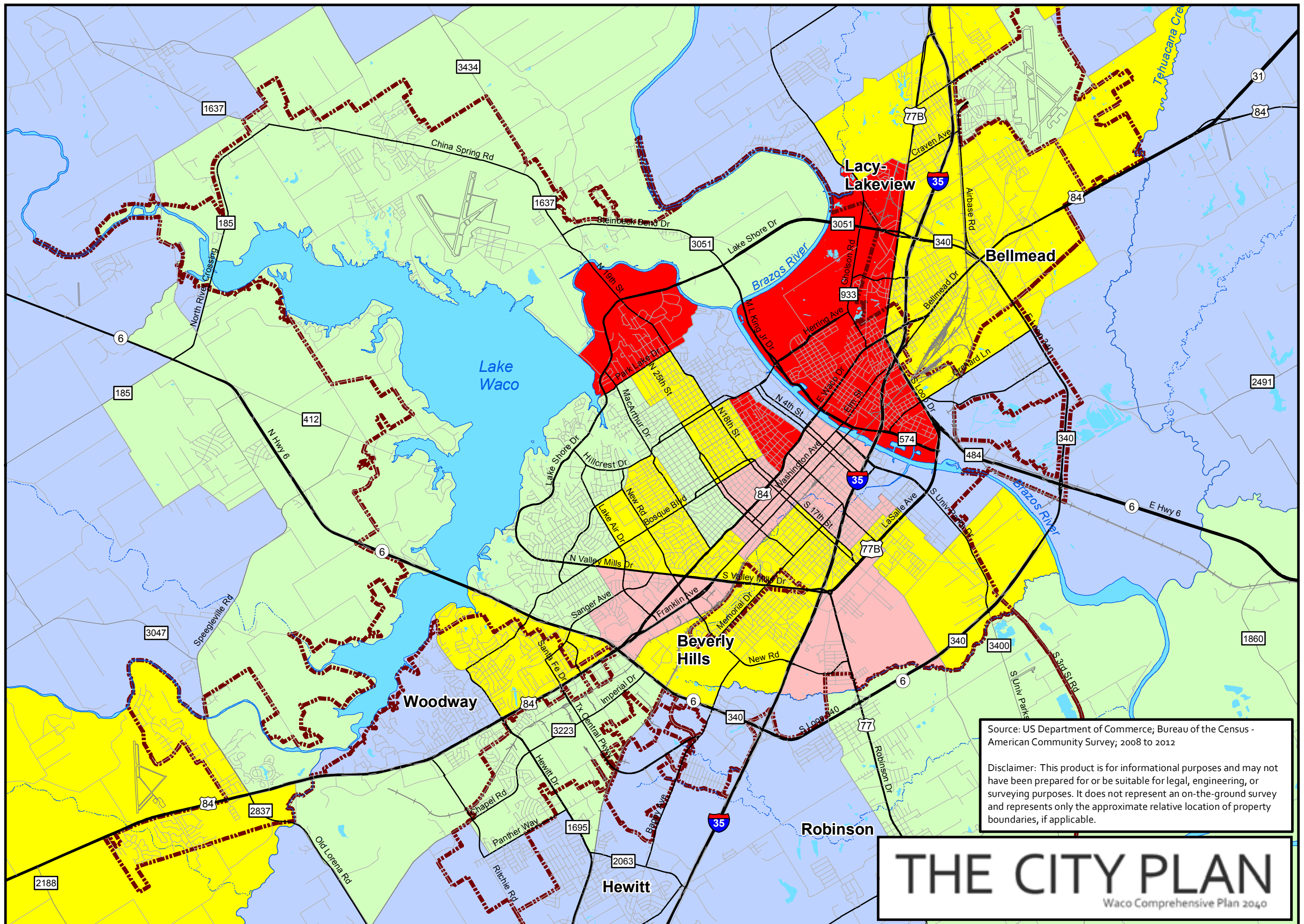
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July 2016

**Map 2.2:  
Percent of Housing Units with  
No Automobile Access  
by Census Tract**

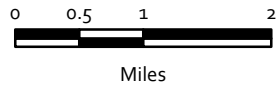


Source: US Department of Commerce; Bureau of the Census - American Community Survey, 2008 to 2012

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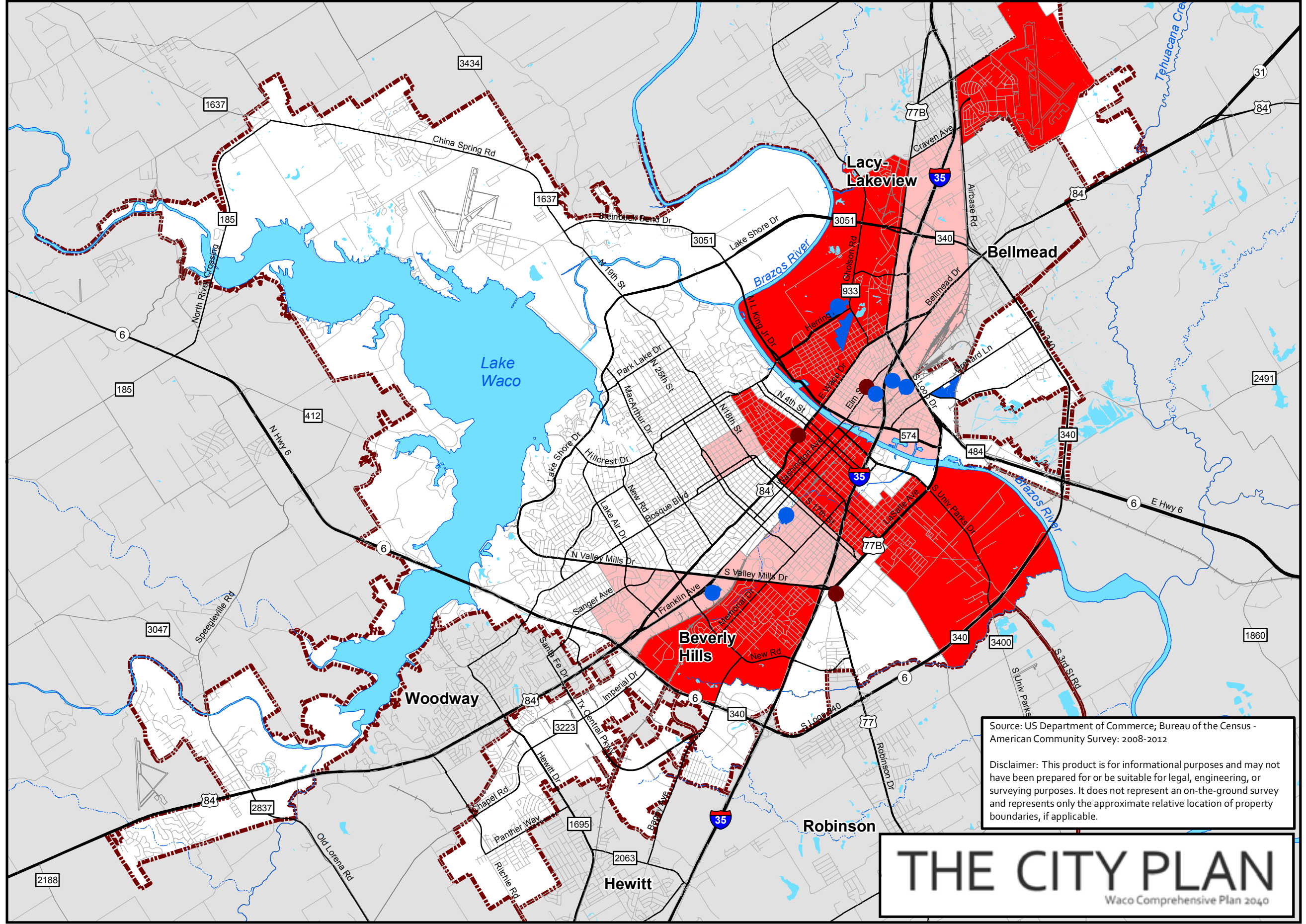
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- Land Use Category**
- Office Industrial
  - Mixed Use
- Percent Below Poverty**
- Less than 30%
  - 30.0% to 40.0%
  - Greater than 40%
- Waco City Limits**
- Waco City Limits
  - Outside Waco City Limits



July 2016

**Map 2-3:  
Potential Employment Centers  
and Persons Living Below  
Census Defined Poverty Level**



Source: US Department of Commerce; Bureau of the Census - American Community Survey: 2008-2012

Disclaimer: 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, if applicable.

**THE CITY PLAN**  
Waco Comprehensive Plan 2040



Waco Comprehensive Plan 2040



growth management

# Chapter 3: Growth Management

## 3.1 Introduction

Given Waco’s strategic location in the state, its outstanding educational institutions, a diverse economic base, and an enviable supply of water, there appears to be little question that the city is destined to grow. The question is not whether Waco will grow, but what form will this growth take. It is important that Waco grow in a manner that is economically, environmentally and culturally sustainable. See Map 3.1 for a map of the Waco city limits and the surrounding area.

The trend in population growth between the 2000 and 2010 census reflects a loss of population in the city’s center, with the largest gains in the unincorporated areas of the county (see Table 3.1 and Chart 3.2). If this trend is projected to the year 2040, the result will likely be a city center characterized by the blight that is left behind following a dramatic exit of residents. Consequently, rural areas have been increasingly impacted by the spread of development (Map 3.2). This pattern of development is in no sense sustainable; however, this trend does not have to define the future of greater Waco. Based on this trend and with an assumed average annual population growth rate of 0.7 percent, the Metropolitan Planning Organization (MPO) created a more sustainable growth scenario for use in *Connections 2040*, the Waco Metropolitan Transportation Plan (Map 3.3).

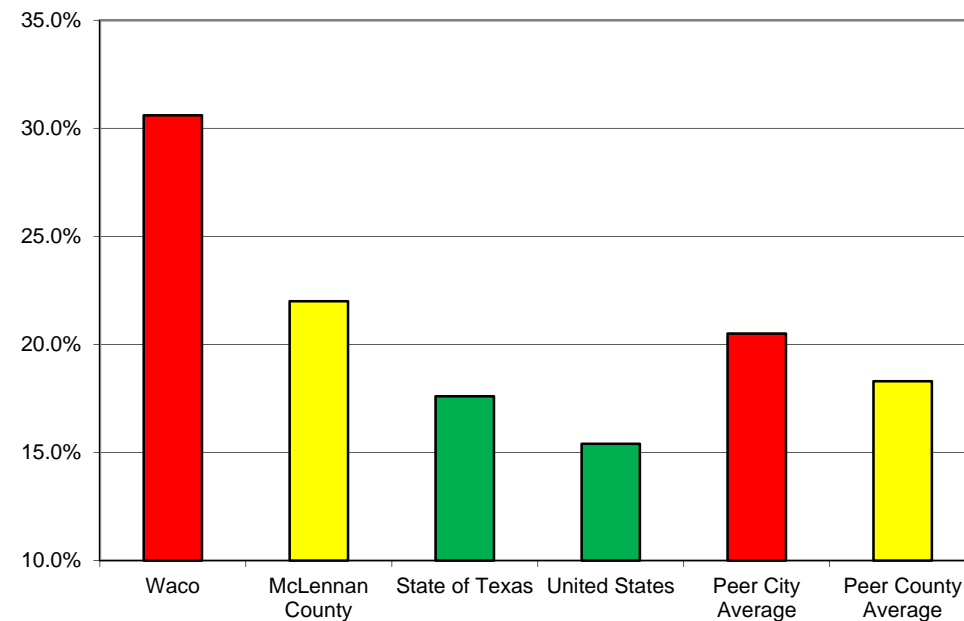
As a result of input received from citizens through a number of recent planning initiatives, including The City Plan, a more aggressive development scenario was drafted. This scenario attempts to achieve a balance in population growth in both the rural and urbanized areas of Waco and its extraterritorial jurisdiction (ETJ) based on an assumed annual population growth rate of 1.07 percent (Map 3.4). This higher growth rate factors in more recent development trends and provides a projection that can be used to design infrastructure to accommodate potential growth for Waco and its ETJ; provide public officials and developers with real data on the cost of extending services; and support the adoption of measures to encourage sustainable patterns of development. Therefore, The City Plan was developed using an assumed average annual growth rate of 1.07 percent.

## 3.2 Challenges

The land use plan forms the core of The City Plan. It is where all of the components of the comprehensive plan are brought together to create a visual composite of existing and projected development that reflects the guiding principles, goals and objectives of the community. This land use plan is influenced by the same issues that are confronting most, if not all, municipalities. Based on recent plans and surveys, the following issues are of particular importance to the citizens of Waco:

- Poverty:** Waco has a significantly higher poverty rate than the state, the nation and its peer cities (Chart 3.1). The land use plan contributes to the creation of a built environment that will facilitate local efforts to reduce Waco’s high rate of poverty by encouraging a density of development and a mix of land uses that supports public transit, bike lanes and pedestrian facilities and expand options for the provision of affordable housing. The plan also facilitates the “jobs to people” program recommended by Upjohn through designating properties in and near low to moderate income neighborhoods as potential job center sites.

**Chart 3.1: Percent of Persons living below the Census Defined Poverty Level**



Source: US Department of Commerce: Bureau of the Census – American Community Survey 2008 to 2013

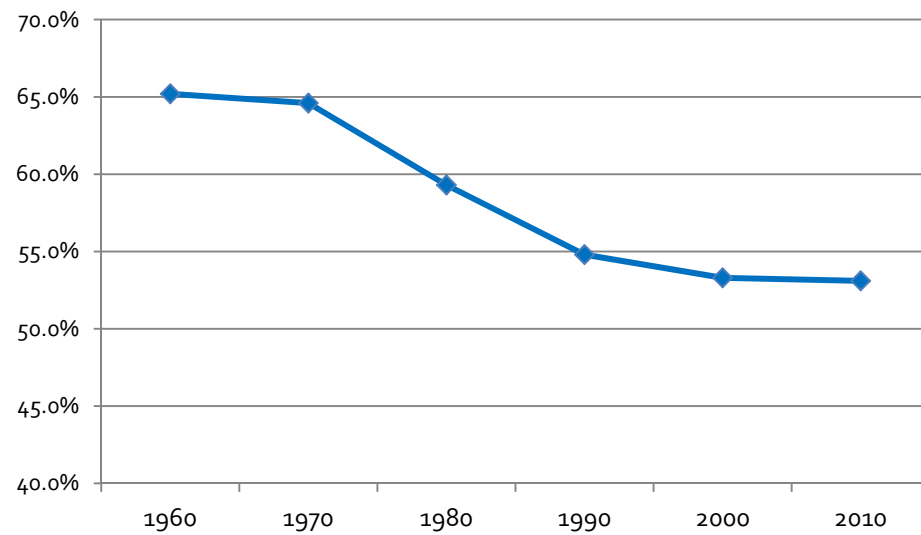
- Aging Infrastructure:** As demonstrated in the utilities and transportation components of The City Plan, Waco’s roads, water lines, sewer lines, and stormwater drainage system are in need of major repair and replacement. Strategically applied new land use designations that allow a mix of uses and densities will create efficiencies in the provision of services and provide new opportunities for inner-city development resulting in increased revenues available to fund the repair and replacement of aging infrastructure.
- Increasingly Dispersed Development:** Given the limited capacity and deteriorated condition of existing infrastructure, the City cannot afford to provide subsidies to encourage development at suburban densities in rural areas. The City Plan proposes a new land use categories be applied to rural areas (within and outside the city limits) that will provide the option of large lot, single-family residential development or clustered single-family residential. Clustered single-family development provides a density bonus in addition to reducing the cost of constructing and maintaining infrastructure. The result will be to preserve the rural character that attracts residents to these areas and reduce development costs for the City and the developer.

**Table 3.1: Population Change – City of Waco and McLennan County: 1970 to 2010**

	1960	1970	1980	1990	2000	2010
City of Waco	97,808	95,326	101,261	103,590	113,726	124,805
McLennan County	150,091	147,553	170,755	189,123	213,517	234,906

Source: US Department of Commerce; Bureau of the Census

**Chart 3.2: Change in City of Waco Percentage of County Population – 1970 to 2010**



Source: US Department of Commerce; Bureau of the Census

- Increasing Demand for Services and Facilities:** In order to continue to improve the quality of life for all Wacoans and to attract and keep an educated workforce, it is important that we provide those amenities that improve the city's livability. Amenities such as parks, libraries, zoos, museums, convention centers, attractive streetscapes, and a multimodal transportation system all contribute to a city's livability. While these facilities are addressed in more detail in other components of the plan, it is the land use plan that examines them in the context of sustainable patterns of development. The land use plan can lead to better informed decisions as to the need, general location, accessibility, and compatibility of a facility. Each of these decisions contributes to the ability of the facility to create synergy that will serve as a catalyst for additional investment in the community.
- Declining Fiscal Resources:** Finally, all of these issues must be addressed in a climate where assistance from state and federal sources is declining; while federal and state mandates are placing increasing demands on local budgets. Waco, like other cities, must be diligent in making more efficient use of existing resources and in seeking new sources of funding. The proposed land use plan encourages more compact, mixed use development through the creation and application of new land use categories. Studies have shown that this pattern of

development can increase the ratio of revenues generated to cost of infrastructure and services required to serve a property.

### 3.3 The Land Use Plan

The land use plan offers a new, more sustainable strategy to guide Waco's future development. The process of drafting the plan began with translating the *Imagine Waco: A Plan for Greater Downtown* vision map into a workable land use plan. This was accomplished by combining some of the mixed use categories contained in the downtown plan with existing land use categories. The mixed use categories offer greater flexibility in design and facilitate development patterns necessary to support a more urban lifestyle. Working out from Greater Downtown Waco, the plan builds on existing development patterns; other recently completed plans; and innovative development strategies being implemented by other communities to achieve more sustainable patterns of growth. The resulting land use plan will meet the needs of inner city development as well as those of the surrounding rural environments. Some of the factors that influenced the assignment of land use designations to the city and its extraterritorial jurisdiction are identified in Table 3.2.

#### Land Use Categories

##### Rural Residential



The purpose of the Rural Residential land use category is to encourage low density, low impact residential development within the city's extraterritorial jurisdiction that will provide more open space, preserve farmland and maintain the existing rural character. Large lot single family residential and cluster developments are permitted.

##### Suburban Residential



The purpose of the Suburban Residential land use category is to provide for large lot, single-family residential and cluster developments in areas generally characterized by large, undeveloped tracts of land that are located near the city's edge and within its corporate limits.

##### Urban Residential



The purpose of the Urban Residential land use category is to provide for single-family residential homes on small lots, zero lot line homes, duplexes, and townhouses at a maximum density of 10 units per acre, where a full range of services can be provided. A limited range of compatible low intensity uses are also permitted to provide services to neighborhood residents.

##### Medium Density Residential Office Flex



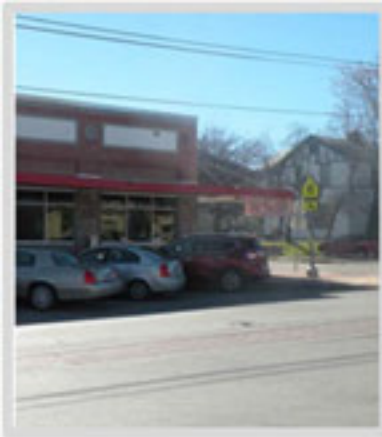
The purpose of the Medium Density Residential Office Flex is to provide a mix of apartments, condos, and townhouses at a maximum density of 25 units per acre, as well as a limited amount of office and neighborhood commercial. These areas are walkable and accessible to transit and provide an excellent buffer between low density residential neighborhoods and more intense land uses or arterial streets.

**Office Industrial Flex**



The purpose of Office Industrial Flex is to provide a mixture of compatible office and industrial uses with limited high density residential and commercial ranging from large campus settings to the adaptive reuse of existing structures. These areas have access to arterial or collector roads; transit and bicycle routes; and a network of sidewalks. This land use category is particularly suited to bringing jobs closer to where people live.

**Mixed Use Flex**



Mixed Use Flex is walkable because of its mix of uses and interconnected street network. Access to arterial or collector roads is important. It may be a center, a main street or integrated into a neighborhood. Uses include retail, office, and low to high density residential in the form of small lot single family residences, live/work units, duplexes, townhouses, and apartments.

**Mixed Use Core**



The Mixed Use Core incorporates a diverse mix of residential and employment uses and serves as a significant source of employment and essential services. The land use mix is predominately multi-family and office with supportive retail. Because this district is unique to the city's core, it often plays a significant role in the arts, entertainment and historic preservation. This development type is highly walkable and easily accessible via multiple modes of transportation. Since floor area is at a premium, mixed-use core may require structured parking.

**Industrial**



public transit is important.

The Industrial land use category is intended to provide for a wide variety of nuisance-free industrial uses and compatible related uses. Large sites, height restrictions and generous setbacks characterize these developments. Industrial facilities will be designed to maintain long-term quality and economic vitality of development and to maintain a compatible relationship with adjacent uses. Direct access to arterial roads and

**Institutional**



The Institutional land use category applies to educational and medical facilities located on large campuses.

**Open Space**



The Open Space land use category applies to parks, recreational areas, airport runway clear zones, undeveloped flood zone (1 percent per year risk), existing agricultural uses, and largely undeveloped properties. Small, odd shaped, developed parcels located in the flood zone assume the land use designation of adjacent properties with development subject to City of Waco and FEMA policies and regulations.

**Table 3.2: Land Use Category Location Considerations**

Vacant vs. developed land
Protection of environmentally sensitive potentially unstable areas such as the floodplain or escarpment zones
Existing and proposed multimodal transportation system including roadways, bicycle and pedestrian facilities, and transit routes
Existing and proposed location of utilities infrastructure including water, wastewater and stormwater
Access by all residents and visitors to employment centers, childcare, healthcare, recreation, shopping and entertainment

**3.4 Land Use Plan Analysis**

**Waco Corporate Limits**

The proposed land use plan for the City of Waco is shown on Map 3.5. As demonstrated in Chart 3.3, approximately 20 percent of the land area within the corporate limits of Waco is designated as either a mixed use or flex category. These categories offer more opportunities for mixed use developments that will contribute to the creation of a more connected and vibrant urban environment. The Suburban Residential land use category, which accounts for 18.3 percent of the corporate limits, also offers more opportunities for mixing residential densities while providing open space and protecting the rural environment that characterizes the areas near the edge of Waco's corporate limits. The decision to add a Suburban Residential land use category to the land use plan was based on the findings of an independent fiscal impact analysis of the recommendations contained in The City Plan. One of the findings of the analysis was that the current practice of permitting residential development at urban densities in areas located near the edge of Waco's corporate limits is not fiscally sustainable. Suburban Residential addresses this finding by providing a needed transition from the Rural Residential to the Urban Residential land use categories.

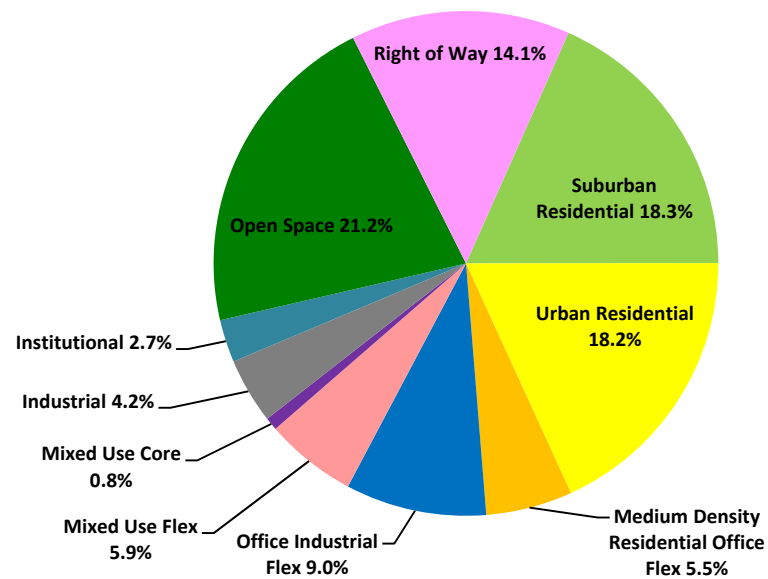
Chart 3.4 compares 2040 population growth estimates to the total population that could be accommodated within Waco corporate limits under the existing and proposed land use plans. As shown in Chart 3.4, using The City Plan's assumed average annual growth rate of 1.07 percent, the 2040 population would reach approximately 150,000 residents. As a comparison, if a 3.0 percent average annual growth rate were to occur (an extremely high rate experienced by the fastest

growing cities in the state), the 2040 population would reach approximately 300,000 residents.

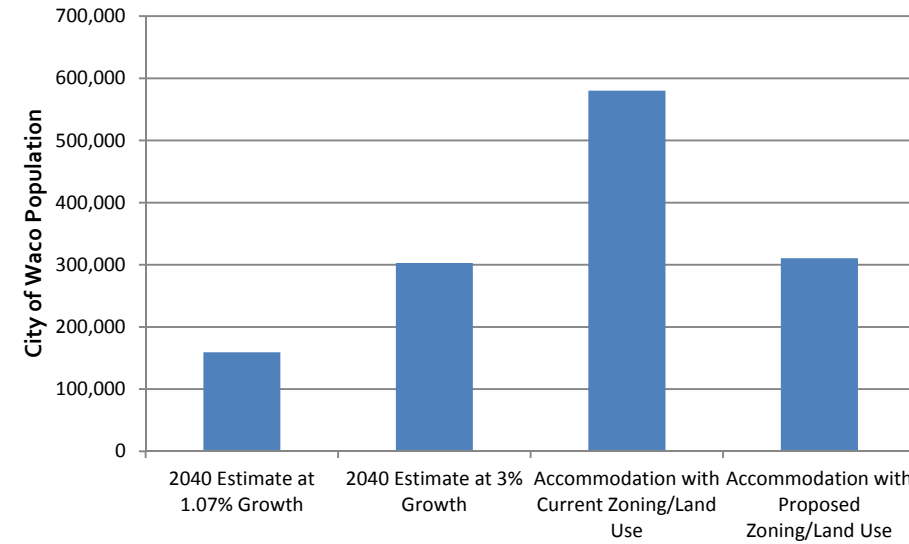
The zoning permitted under the current land use plan would accommodate almost 600,000 residents, which is double the population predicted under the most optimistic (i.e., 3.0 percent growth) population. Comparatively, the zoning permitted under the proposed land use plan (see Map 3.5) would accommodate approximately 300,000 residents, which is double the population projected at the more realistic growth rate of 1.07 percent. See Appendix A for a summary of permitted zoning under each land use designation.

It is generally considered desirable to provide for more growth than is projected in order to offer a reasonable choice for future residents; however, an oversupply of land within a category can have negative impacts on property values, especially for any properties that have development challenges. This is particularly true within the inner-city where challenges exist with older housing stock, platting issues, and difficulties in determining property ownership.

**Chart 3.3: Percent of City Land by Proposed Land Use Designation**



**Chart 3.4: Population Accommodation: Current Zoning and Proposed Land Use Plan compared to Population Growth Estimates**

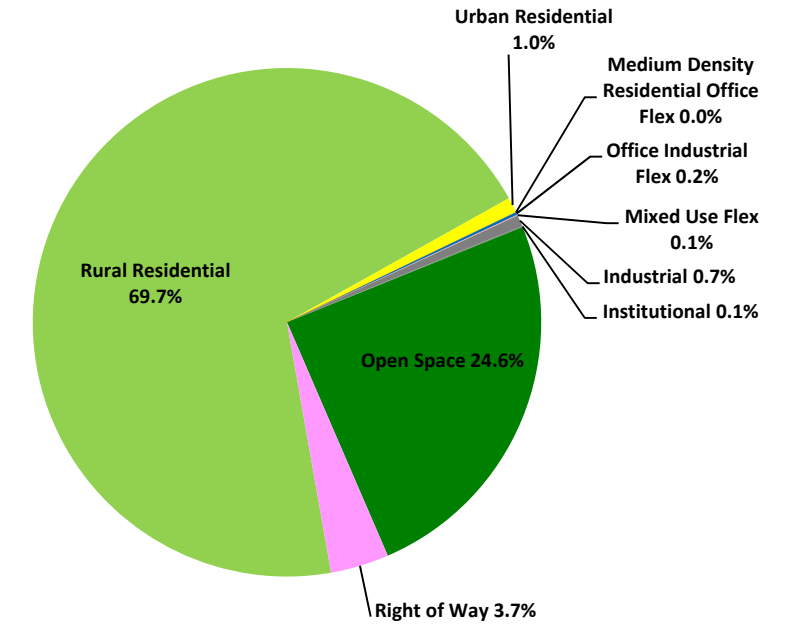


Estimated population within Waco Corporate Limits assuming no annexations

**Waco Extraterritorial Jurisdiction (ETJ)**

The proposed land use plan for the ETJ is identified on Map 3.6. This plan seeks to maintain rural character; encourage low density and/or low impact development; and minimize the need for new infrastructure. Approximately 70 percent of the land within Waco’s ETJ is designated as Rural Residential with the second largest category of Open Space accounting for almost 25 percent (Chart 3.5). Approximately 98 percent of the land designated as Open Space in the ETJ is within the designated floodplain. This provides excellent opportunities for cluster development that protects the floodplain and minimizes infrastructure requirements. Since there is no zoning in a city’s ETJ in Texas, the primary means of influencing land use are subdivision regulations, impact fees and annexation.

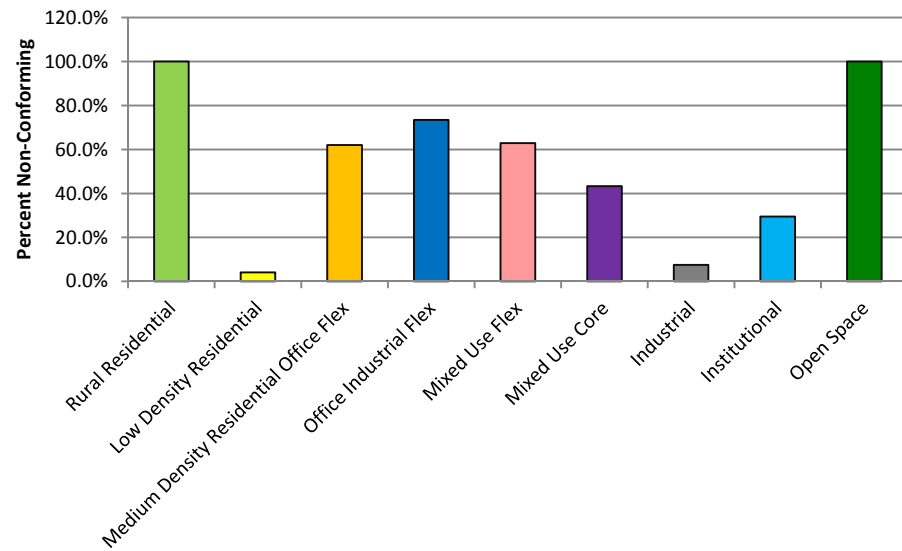
**Chart 3.5: Percent of ETJ Land by Proposed Land Use Designation**



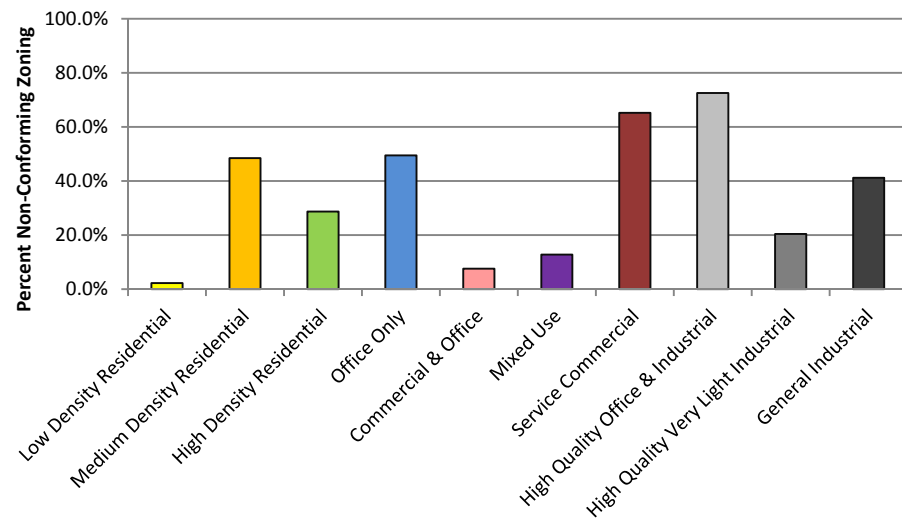
Unlike zoning designations, land use designations have limited impact on how a property may be developed. Changes in the land use designation for a property can, however, affect whether or not the zoning is in conformance with the comprehensive plan. The results of an analysis of the nonconforming status of existing zoning under the current and proposed land use plans indicate that there are relatively large percentages of nonconforming zoning under both plans, as shown in Charts 3.6 and 3.7.

Historically, inconsistencies between the land use plan and zoning designations have been addressed through the initiation of zoning changes by the City of Waco. These changes have generally been initiated in response to a request by a citizen to bring the zoning on a specific property into conformance with the land use plan. These requests may be expanded by the City to cover other properties in the surrounding area that are of the same nonconforming status. The City of Waco may want to consider the initiation of zoning changes for nonconforming properties independent of citizen requests.

**Chart 3.6: Proposed Land Use Designations compared to Existing Zoning**



**Chart 3.7: Current Land Use Designations compared to Existing Zoning**



### 3.5 Inconsistencies between Development Proposals and the Land Use Plan

At times, the City will likely encounter development proposals that do not directly reflect the purpose and intent of the land use pattern shown on the Land Use Plan. Review of such development proposals should include the following considerations:

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- Will the proposed change enhance the site and the surrounding area?
- Is the proposed change a better use than that recommended by the Land Use Plan?
- Will the proposed use impact adjacent residential areas in a negative manner?
- Will the proposed use be compatible with, or enhance, adjacent residential areas?
- Are uses adjacent to the proposed use similar in nature in terms of appearance, hours of operation, and other general aspects of compatibility?
- Does the proposed use present a significant benefit to the public health, safety and/or welfare of the community?
- Would the proposed use contribute to the City’s long term economic, environmental and/or cultural wellbeing?

Development proposals inconsistent with the Land Use Plan should be examined within the context of the environment such as physical changes and economic trends. It is, however, incumbent upon the applicant to provide evidence that the proposal meets the aforementioned considerations and supports community goals and objectives, as set forth in The City Plan.

### 3.6 Priority Growth Areas

The designation of general priority growth areas can be helpful in the application of growth management implementation strategies to Waco and its ETJ. While some of these strategies may apply city-wide, some may be more area specific. For example, the location of a proposed capital improvement project within a given priority area might be one of many factors considered in whether to include the project in the City’s Capital Improvement Program. The following descriptions of priority growth areas provide an explanation of the factors that were considered in the identification of the priority growth areas as shown in Map 3.7.

**Priority 1 Area:** Development in this area is considered most supportive of The City Plan’s guiding principle of sustainable development in that it makes more efficient use of existing infrastructure and city services; contributes to the stabilization of inner-city neighborhoods; reinforces the Prosper Waco initiative to reduce poverty; contributes to the continued development of a vibrant mixed-use core; and enables the development of a multi-modal transportation system.

**Priority 2 Area:** These areas are characterized by a mix of developed and undeveloped tracts of land; some of which are experiencing a

relatively high rate of growth. They are within Waco’s corporate limits and the City’s current municipal service areas. Access to infrastructure and the existing land use patterns make the more remote tracts of undeveloped land suitable for sustainable, low impact development that would make use of existing infrastructure and preserve the rural character of the area through large lot single-family residential and cluster development. Land located in close proximity to major thoroughfares would lend itself to mixed use development, which could eventually provide the density necessary to support a more sustainable, multimodal transportation system.

**Priority 3 Area:** These areas are generally located outside of, but adjacent to, Waco’s corporate limits; are in relatively close proximity to water and sewer, and are adjacent to areas that are experiencing relatively high rates of growth. Because these areas are largely undeveloped, they lend themselves to the creative use of sustainable, low impact development that will preserve the rural character of the area and minimize the resource required to provide city services. If developed, the cost of extending infrastructure should be shared by the developer and sustainable development practices should be employed.

**Priority 4 Area:** This area is identified as potentially developing within the last decade (2030-2040) of the planning horizon for the water and wastewater master plans. Because the area is located adjacent to and within the drainage basin of Lake Waco and the difficulty of providing the area with public sewer, it is recommended that development be deferred until that time.

Note: Growth beyond the four designated priority areas and within Waco’s ETJ will be guided by the ETJ Land Use Plan and adopted development policies, guidelines and ordinances that are applicable to the ETJ.

### 3.7 Development Nodes

Growth centers, urban villages, and neighborhood nodes are just some of the terms used to describe areas that lend themselves to concentrated, mixed use development and/or redevelopment. One such area that was identified in *Imagine Waco a Plan for Greater Downtown* is located at the intersection of Colcord Avenue and North 15<sup>th</sup> Street. These areas are characterized by a mix of commercial and medium density residential land uses that are compact in form; pedestrian and bicycle friendly; connected to surrounding land uses; and transit oriented. In the inner city, the opportunity for this type of development generally exists in older neighborhood commercial areas that are in need

of restoration and infill development. In areas beyond the inner city, this concept may be applied to relatively undeveloped areas located at key roadway intersections where the opportunity exists to encourage the construction of new buildings and infrastructure that will achieve those same characteristics described above and connect with the surrounding area. Map 3.8 identifies the potential locations for development nodes proposed within the corporate limits of Waco.

### General Location Criteria

The locations for development nodes were selected based on the following criteria:

- A mix of urban and suburban environments
- Geographically dispersed throughout the city
- Located in areas that are representative of a range of demographic characteristics
- Basic infrastructure and services either exist or are located in relatively close proximity

### Site Specific Criteria

Development node locations were selected based on the degree to which a site either possess or has the potential to develop the following characteristics:

- A mix of commercial and mixed density residential land uses
- Compact in form (as opposed to auto oriented strip development)
- Bike and pedestrian friendly environment
- Connectivity to surrounding area/neighborhood
- Supports transit oriented development
- Includes structures that are built to an urban form and/or possess historical or architectural significance
- Potentially eligible for designation as a reinvestment zone for Tax Increment Financing
- Current condition of property and buildings discourages investment and contributes to the destabilization of the surrounding area

### Short Term vs. Long Term Status

The short term vs. long term designation of potential development nodes is based on the application of the above criteria to the various sites balanced with the intent to select locations that vary in character. Certainly, the market will play a significant role in this process and

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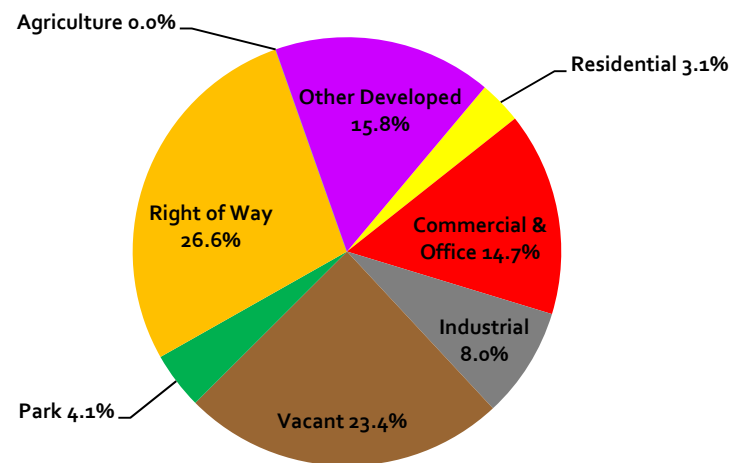
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priorities should remain flexible in order to take advantage of opportunities for development.

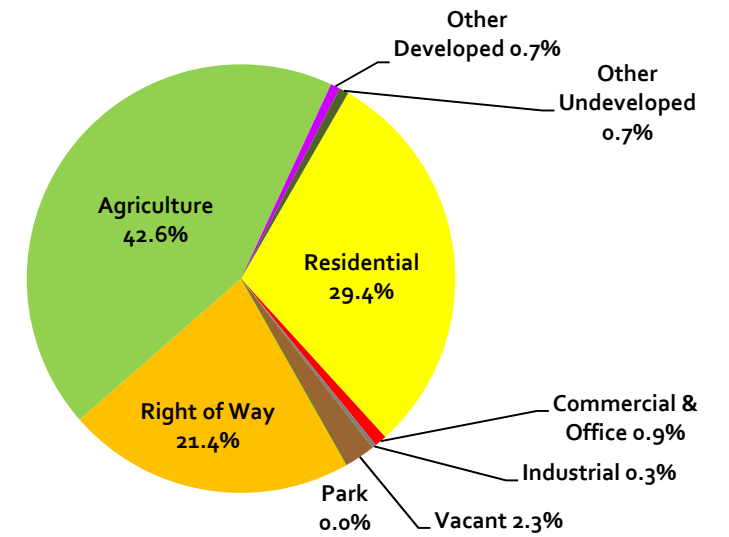
### Analysis

Each node will provide a mix of land uses at a walkable scale that will support public transportation, bicycling and walking as viable modes of transportation. 17 sites were selected as potential locations for development nodes based on the previously described criteria. 12 could be considered intercity and 5 were suburban. The combined population of these nodes (9,475) accounts for 7.6 percent of Waco's population with an average density that is almost twice that of the city as a whole. Charts 3.8 and 3.9 compare 2013 land uses within the Downtown (urban) and South Bosque (suburban) nodes.

**Chart 3.8: 2013 Land Uses within Downtown Development Node**

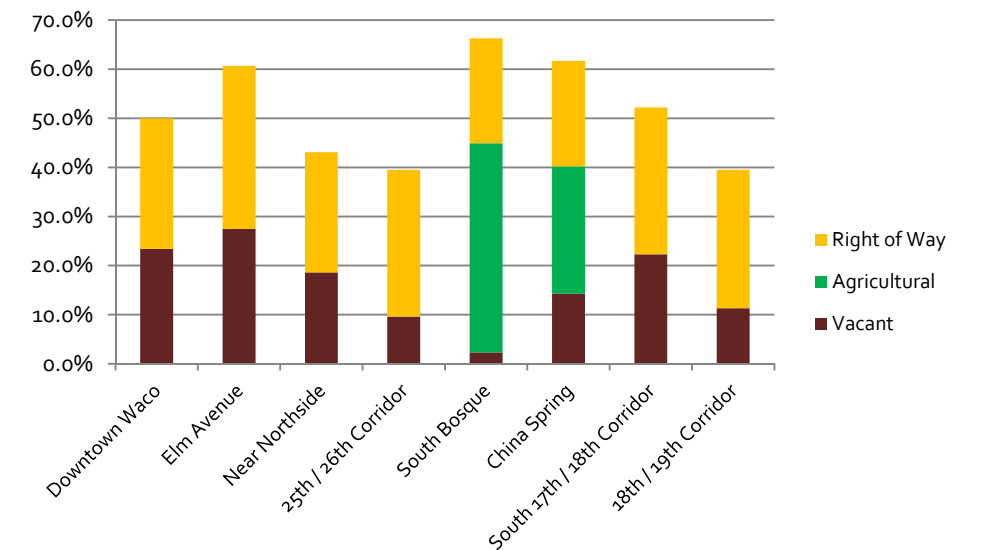


**Chart 3.9: 2013 Land Uses within South Bosque Development Node**

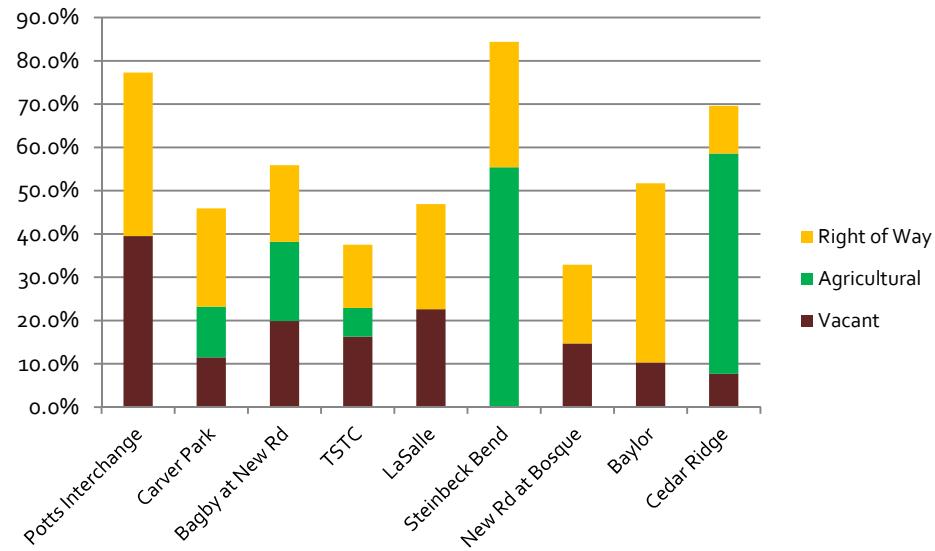


Each node was evaluated based on the percent of the property classified as right-of-way, agricultural and vacant. Charts 3.10 and 3.11 show the percent of right-of-way was significant for all of the sites; whereas the urban sites included a large percentage of vacant property and the suburban properties were dominated by agricultural uses. In both cases, it would appear that there is ample room for infill or greenfield development to be built to urban standards.

**Chart 3.10: Percent of Land Undeveloped by Development Node – Short Term Priorities: 2013**

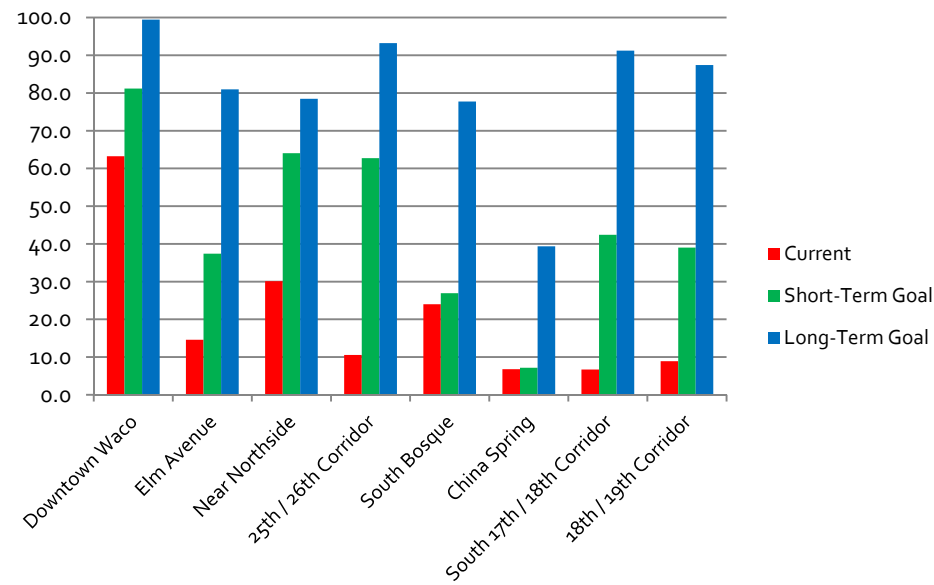


**Chart 3.11: Percent of Land Undeveloped by Development Node – Long Term Priorities: 2013**

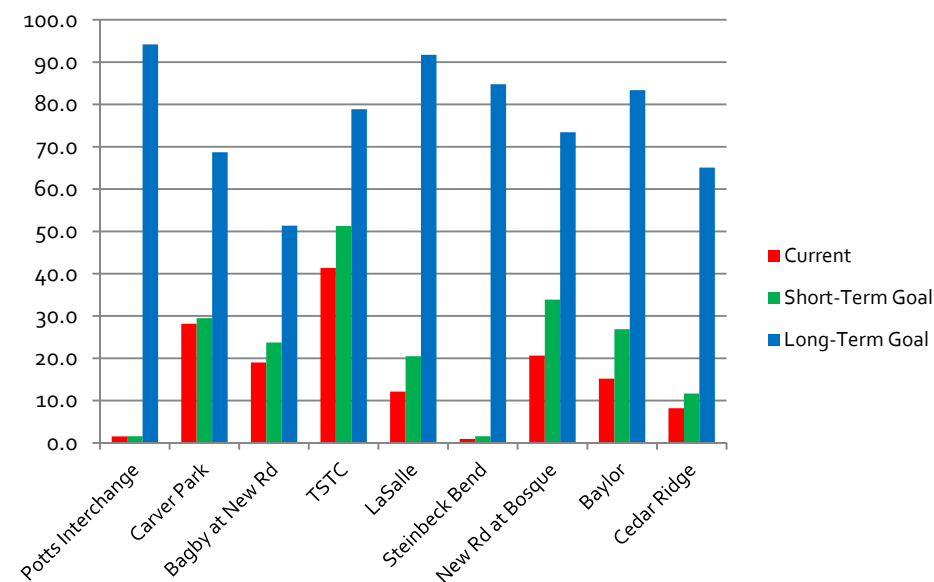


Finally, each of the nodes was evaluated for walkability. A walkability score was calculated for each site based on presence of sidewalks in good condition, connectivity, and acres of residential or employment land uses. Good sidewalks were defined as those whose condition and usable width could adequately accommodate a wheelchair. Walkability scores were calculated based on current conditions; a short term goal that assumed two-thirds of the vacant or agricultural land developed and existing sidewalks improved to “good” condition; and finally a long term goal that assumed construction of sidewalks at all appropriate locations. The results shown in Charts 3.12 and 3.13 indicate that the Downtown, Near Northside, 25<sup>th</sup>/26<sup>th</sup> St. Corridor, and TSTC sites showed significant improvements in the short term; whereas all site significantly improved with the achievement of long term conditions.

**Chart 3.12: Walkability Scores by Development Node – Short Term Priorities**



**Chart 3.13: Walkability Scores by Development Node – Long Term Priorities**



### 3.8 Implementation Strategies





As stated at the beginning of this chapter, with Waco’s strategic location, diverse economic base, outstanding educational institutions and an enviable supply of water, Waco is destined to grow. We are at a crossroads in the development of our community. We have the opportunity to manage that growth and create a more livable city that can be sustained over the long term or we can choose to allow the trend of declining population in the city’s core and uncontrolled growth throughout the county to continue. These recommended growth strategies for implementation of the goals and objectives of this plan are intended to create a more livable and sustainable Waco.

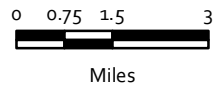
- Incentivize sustainable development practices in the city limits and ETJ through changes in the zoning and subdivision ordinances that provide greater flexibility in project design and bonuses for projects that are developed in accordance with The City Plan. Provide flexibility in project design based on specified design criteria that could be applied through the administrative process.
- Incentivize clustering on sites designated as Rural Residential or Suburban Residential within the Land Use Plan by offering a density bonus for preserving open space including farm land, 100 year floodplain, existing tree cover, wildlife habitat and parks and recreation facilities.
- Revise design criteria for incentives including residential tax abatement; the sale of City-owned and tax foreclosed property; and down payment and closing cost assistance, to better reflect the goals and objective of The City Plan. Strengthen design criteria to ensure development contributes to long term stability of neighborhoods.
- Continue to expand the use of Public Improvement Districts (PIDs) and Tax Increment Financing (TIF) Reinvestment Zones to stimulate infill development within designated PID and TIF districts. Explore the expansion of existing districts or creation of new districts.
- Evaluate potential expansion of policies dealing with connection (tap) fees for water and sewer service. Currently these fees only cover parts and labor. Consider increasing fees to cover investment in water supply, treatment, and distribution required



to serve new development. Conversely, consider offering a reduced fee for infill development.

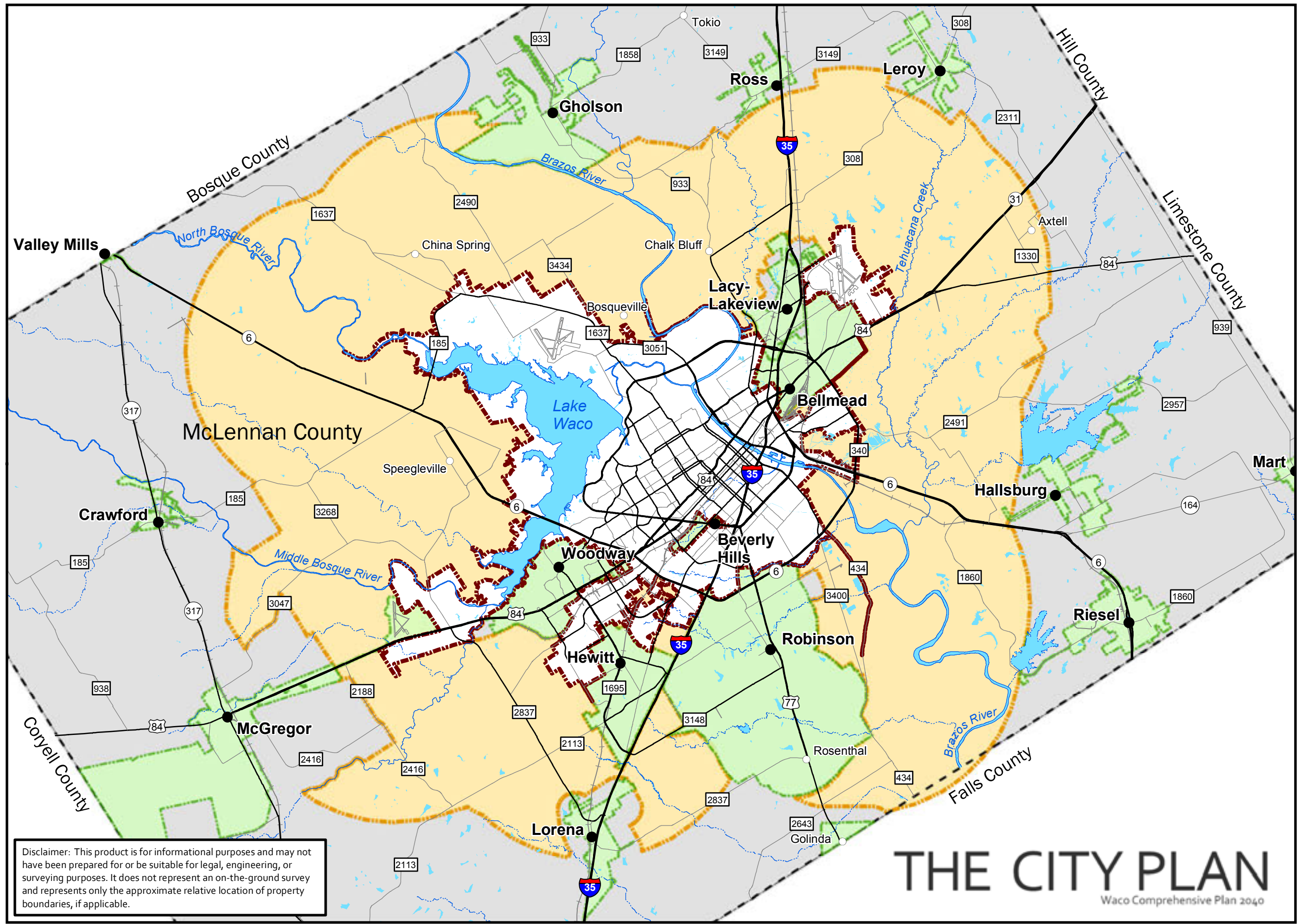
- Adopt a parkland dedication ordinance to ensure that the costs of land and improvements are appropriately shared by the beneficiaries. This would involve dedication of parkland or payment of a fee in lieu of land.
- Consider the adoption of impact fees as a means of ensuring new development pays an equitable share of the costs associated with the construction and expansion of public infrastructure needed to service new development. "Impact fees are a one-time charge applied to new development to pay costs of construction or expansion of water & sewer and roadway facilities outside boundaries of the development that are needed because of the new development." Impact fees shift some of the costs of financing public facilities from the general taxpayer to the direct beneficiaries of these facilities.
- Adopt a stormwater utility fee to ensure that construction and maintenance costs are appropriately shared by the beneficiaries of stormwater infrastructure. Single-family residences are generally charged a flat fee. Owners of property other than single-family residences would pay a fee that is based on the amount of impermeable surface located on their property. Credits could be offered for approved on-site green stormwater infrastructure. The revenue from these fees would be used to maintain and expand the stormwater system. These fees will provide funding for the provision of services and construction of infrastructure such as creek maintenance and regional stormwater detention facilities.
- Review and evaluate the City's plans, policies, ordinances and regulations to ensure that they are supportive of the goals, objectives and guiding principle of The City Plan.
- Develop Capital Improvements Programs that support achievement of the goals and objectives of The City Plan. Consider adopting a set of weighted criteria that would give priority to those projects that reinforce The City Plan's guiding principle of sustainability. Utilize "whole life" costing to ensure that the costs of sustaining a capital improvement over its life span are considered in the decision making process.
- Enforce and encourage connectivity in the design of both rural and urban development as a means of improving livability and encouraging more sustainable forms of development. Utilize measures such as the redesign of aging and deteriorated streets to conform to design criteria identified in the MPO's *Thoroughfare Plan*.
- Continue to implement the recommendations and development strategies from *Imagine Waco: A Plan for Greater Downtown* and extend them to smaller neighborhood commercial areas. Assist in the preparation of conceptual plans similar to the *Near Northside Master Plan* and the *Elm Avenue Improvement Plan*.
- Prior to annexation, the City should coordinate with property owners in developing a service plan for the logical extension of infrastructure and services to a proposed development. Once service plan commitments have been established, the City should verify funding sources (both public and private) for implementation of the plan. Sources may include, but not be limited to, the following: special taxation districts, water and sewer impact fees, transportation impact fees, community facilities agreements, capital improvement program budgets, and other sources deemed appropriate for the specific annexation.

-  Waco City Limits
-  Other City Limits
-  Waco ETJ
-  Outside City Limits and ETJ



July 2016

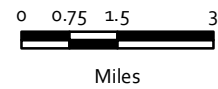
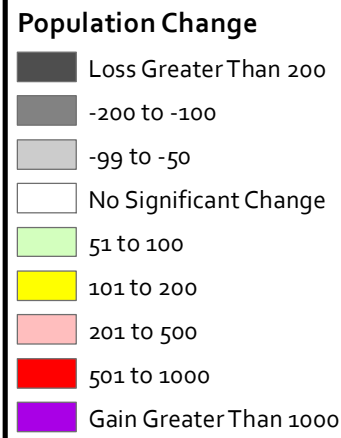
**Map 3.1: City of Waco and Extraterritorial Jurisdiction**



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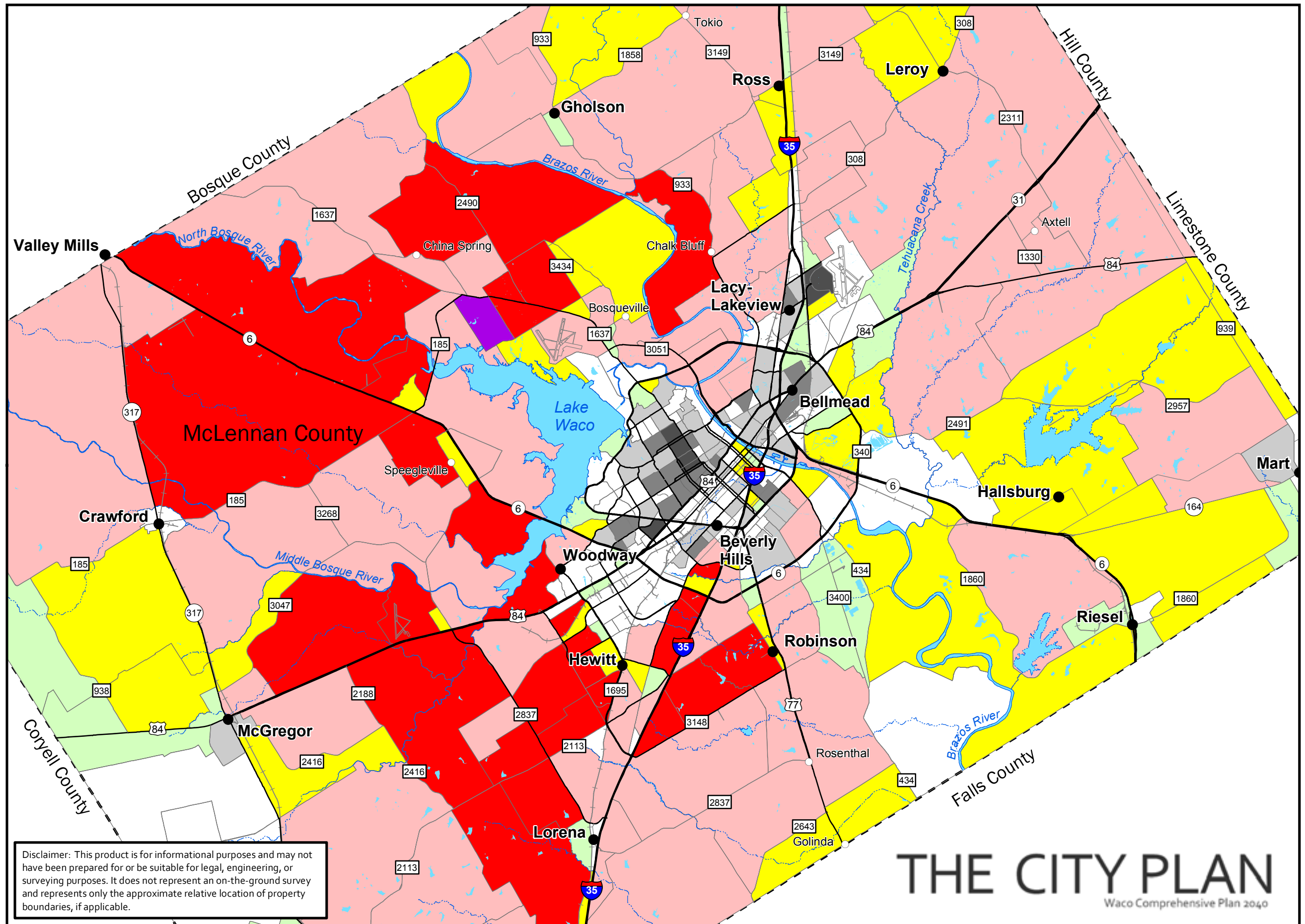
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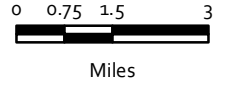
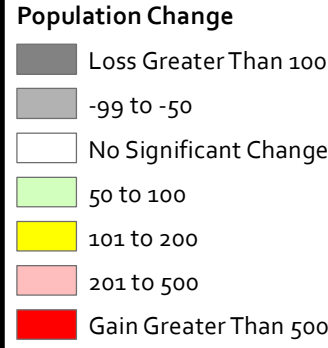
**Map 3.2: Projected Population Change:  
2010 to 2040 - Trend Scenario  
Traffic Analysis Zones**



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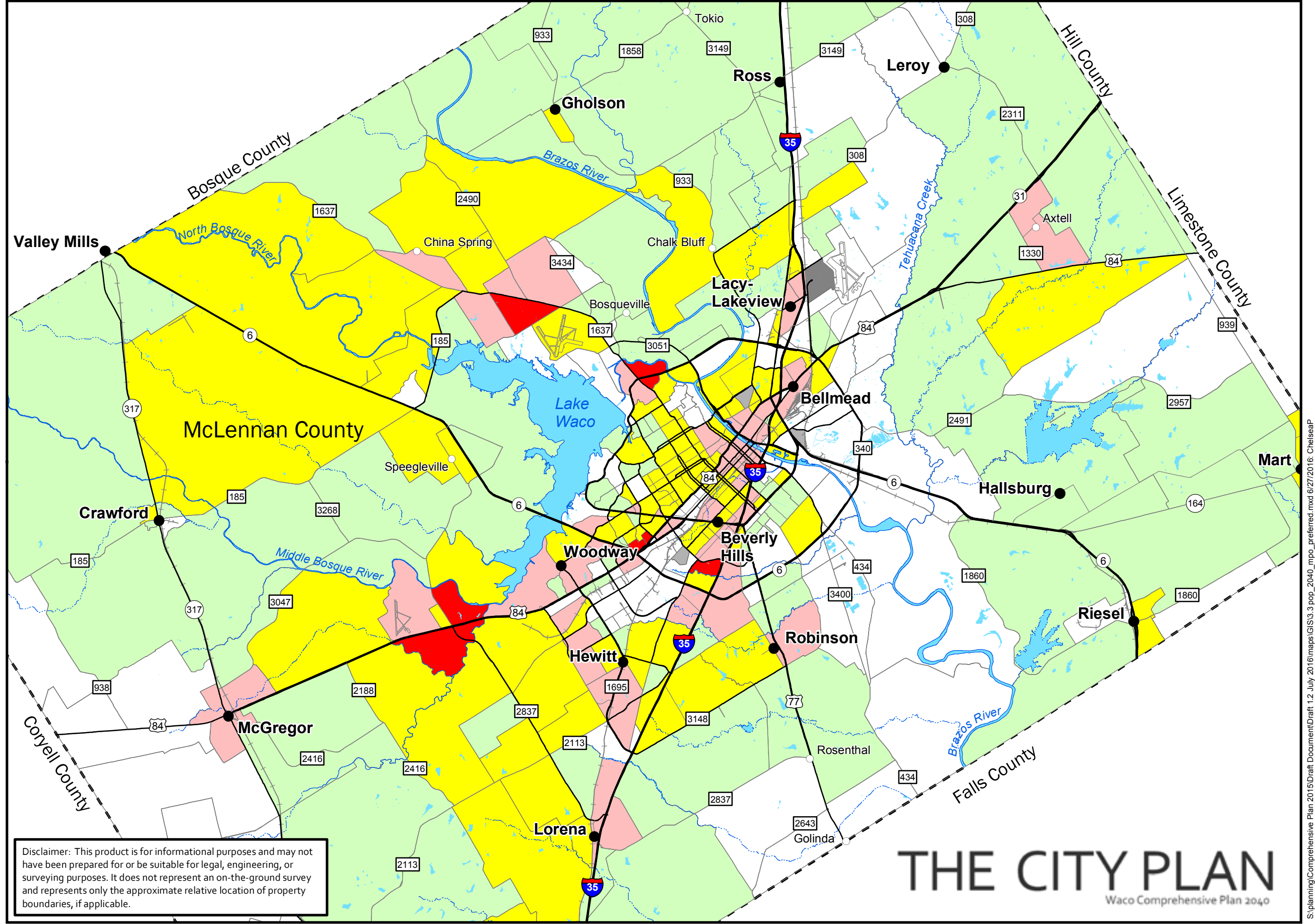
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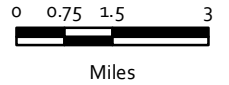
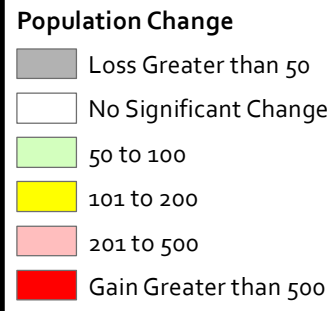
**Map 3-3: Projected Population Change:  
2010 to 2040 - MPO Adopted Scenario  
Traffic Analysis Zones**



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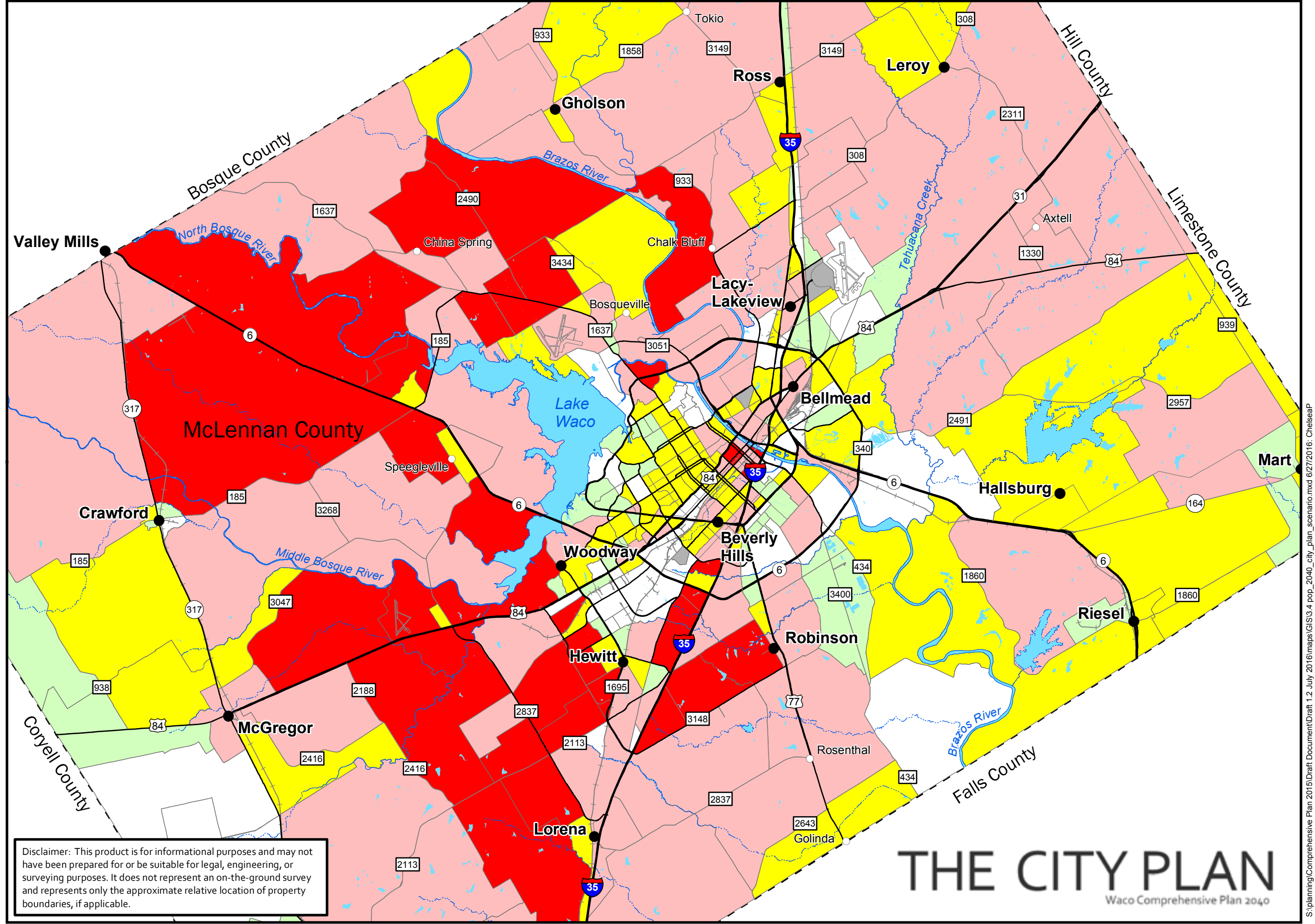
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**Map 3-4: Projected Population Change:  
2010 to 2040 - City Plan Adopted Scenario  
Traffic Analysis Zones**



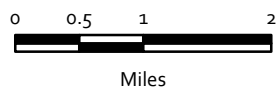
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- Land Use Designations**
- Suburban Residential
  - Urban Residential
  - Med Density Res Office Flex
  - Office Industrial Flex
  - Mixed Use Flex
  - Mixed Use Core
  - Industrial
  - Institutional
  - Open Space

- Waco City Limits**
- 
- Outside Waco City Limits**
- 

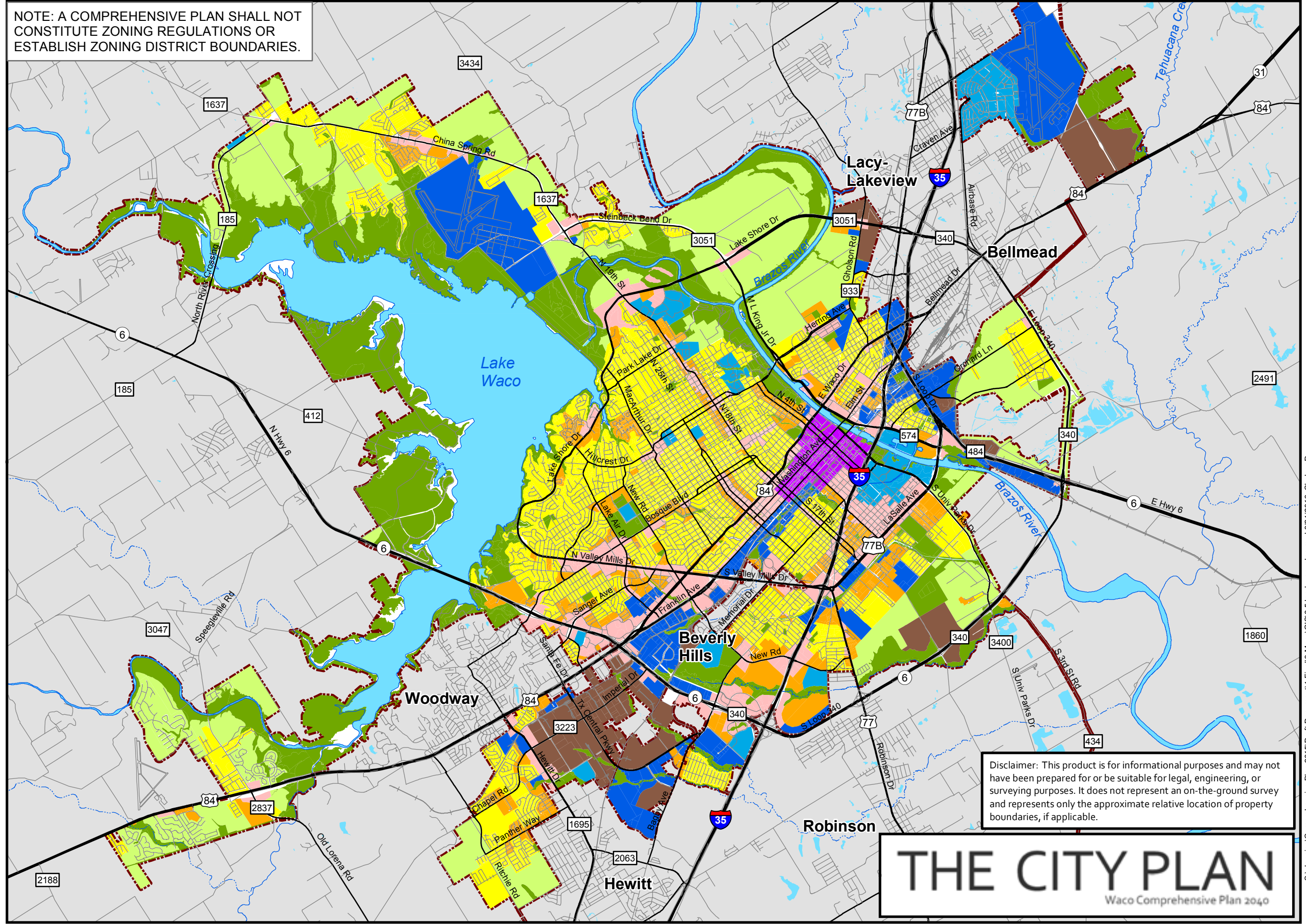


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**Map 3-5:  
Land Use Plan  
Designations within  
Waco Corporate Limits**



NOTE: A COMPREHENSIVE PLAN SHALL NOT CONSTITUTE ZONING REGULATIONS OR ESTABLISH ZONING DISTRICT BOUNDARIES.



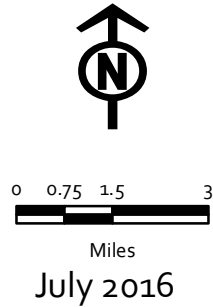
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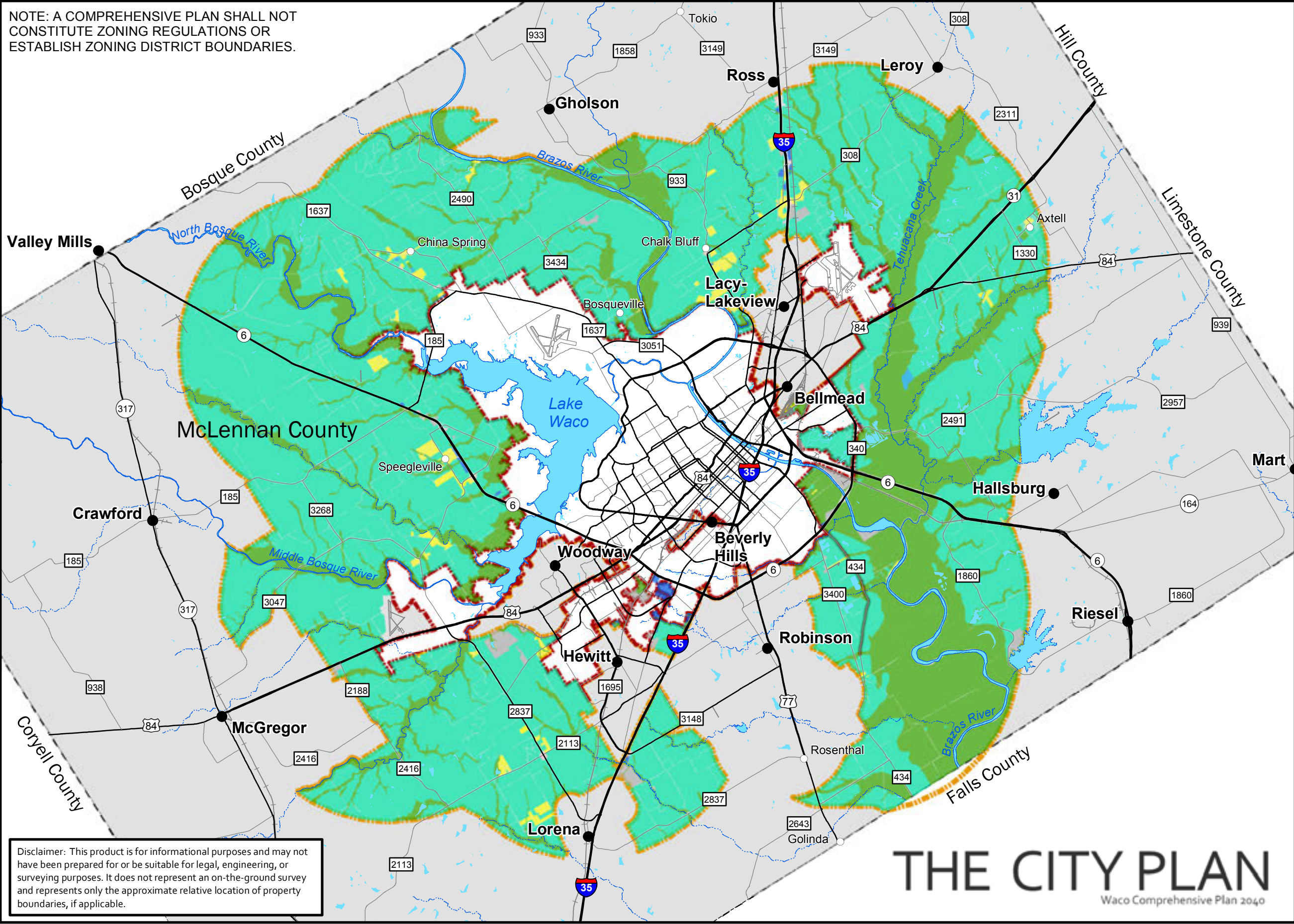
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- Land Use Designations**
- Rural Residential
  - Urban Residential
  - Med Density Res Office Flex
  - Office Industrial Flex
  - Mixed Use Flex
  - Industrial
  - Institutional
  - Open Space
  - Waco City Limits
  - Waco ETJ Limits
  - Outside Waco City Limits & ETJ

NOTE: A COMPREHENSIVE PLAN SHALL NOT CONSTITUTE ZONING REGULATIONS OR ESTABLISH ZONING DISTRICT BOUNDARIES.



**Map 3.6:  
Land Use Plan Designations  
Waco Extraterritorial Jurisdiction**

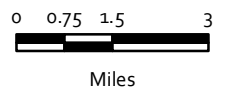


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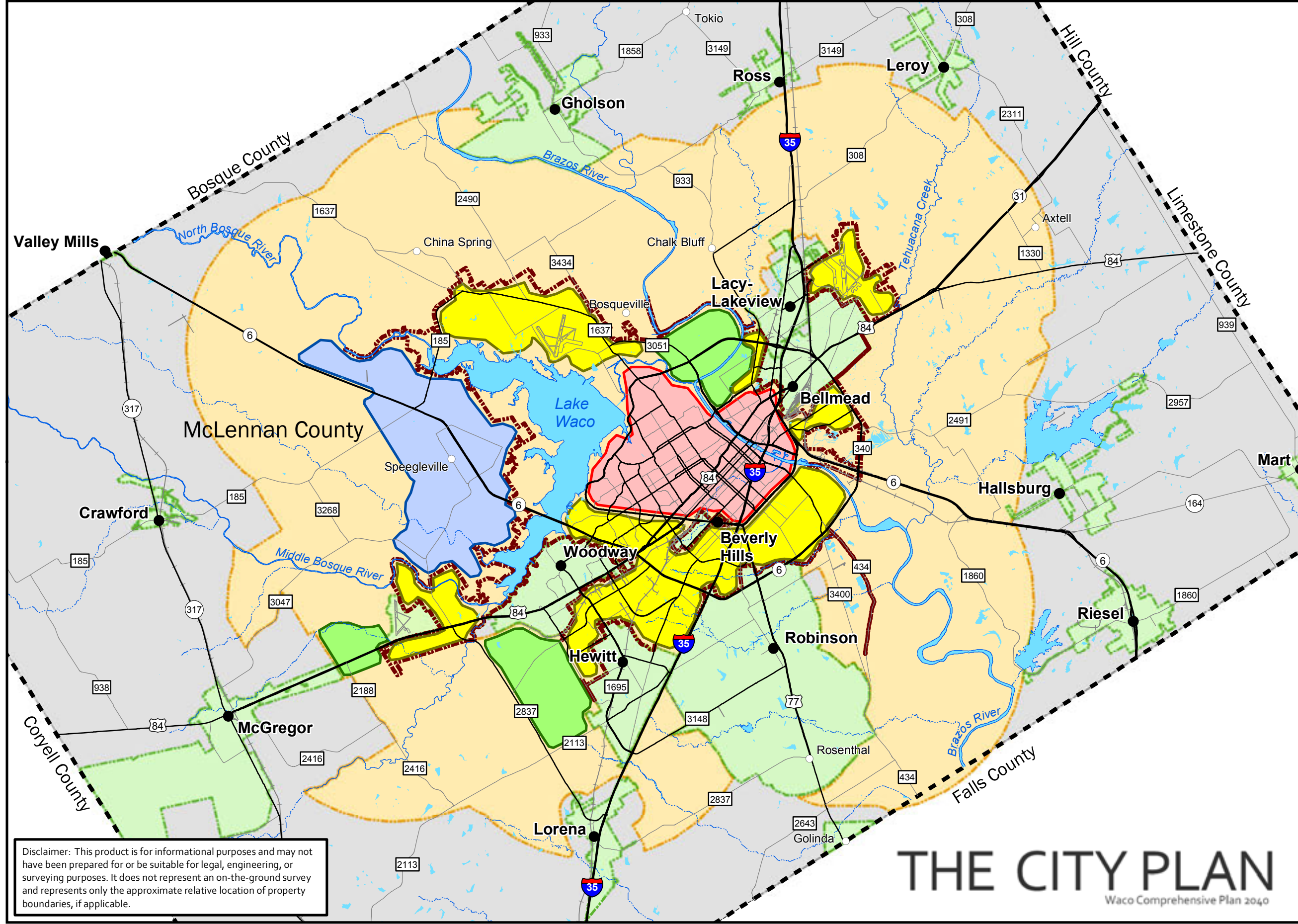
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- Growth Areas**
- Priority**
- 1 (Red)
  - 2 (Yellow)
  - 3 (Light Green)
  - 4 (Light Blue)
- Waco City Limits**
- Beyond ETJ (Red dashed line)
  - Other City Limits (Green dashed line)
  - No Priority (Orange dashed line)
  - Outside Waco City Limits (Grey dashed line)



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**Map 3-7:  
Growth Area  
Recommendations**



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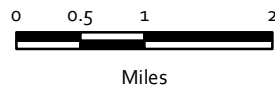
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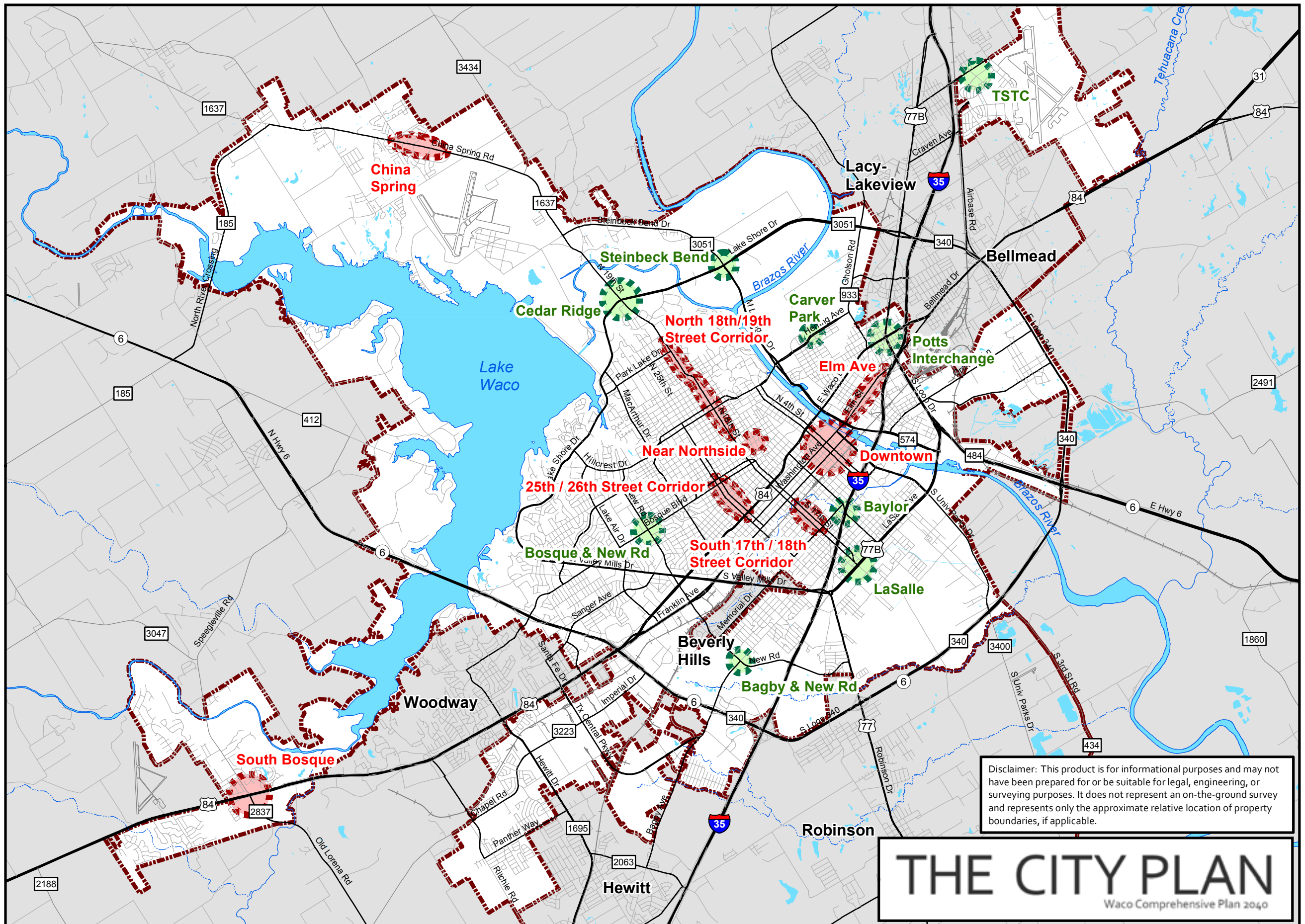
**Development Nodes**

- Priority**
- Short Term
  - Long Term
- Waco City Limits**
- Outside Waco City Limits**



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**Map 3.8:  
Proposed Development Nodes**



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transportation

# Chapter 4: Transportation

## 4.1 Introduction

Transportation planning for the Waco Metropolitan Area is performed by the Waco Metropolitan Planning Organization (MPO). MPOs are federal programs required for all census defined urbanized areas with a population greater than 50,000. The MPO jurisdiction covers all of McLennan County and is governed by a 20-member Policy Board composed of elected officials or staff representing the municipalities within the County, two members of the McLennan County Commissioners Court and the District Engineer of the Texas Department of Transportation (TxDOT). The primary purposes of the MPO are as follows:

- Identify the long-range transportation needs for the Waco region
- Identify regionally significant projects to address those needs
- Identify appropriate uses for Federal and State Highway and Public Transportation Funds

The MPO produces 3 primary planning documents to guide these efforts:

- Regional Master Thoroughfare Plan (Thoroughfare Plan)
- Metropolitan Transportation Plan (MTP)
- Transportation Improvement Program (TIP)

The following sections describe each of these documents in more detail and provide an overview of their primary recommendations.

## 4.2 Regional Master Thoroughfare Plan

The *Waco Metropolitan Area Master Thoroughfare Plan* provides a resource to help local, regional, and state transportation agencies accommodate anticipated future growth in McLennan County with an adequate transportation network that serves all roadway users and that complements community character and economic vitality. The purpose of the Thoroughfare Plan is to establish guiding principles and policies for the development of an efficient, safe countywide roadway network that accommodates all roadway users among the growing residential and employment population of McLennan County, and that enhances the desired character and function of current and future development. The guiding principles of the plan include the following:

- Maintain and improve **regional mobility** of people and goods.
- Improve multimodal **local accessibility** to, from and within communities.
- Ensure **public safety** for all roadway users.
- Expand multimodal **travel choices** for people and freight.
- Increase suburban connectivity
- Promote **urban vitality**, especially in areas that need revitalization.
- Support **community character**, rural enterprises, and the natural environment.

The Thoroughfare Plan is not constrained to any financial limitations and therefore identifies the ultimate thoroughfare need for the Waco Metropolitan Area under a full buildout scenario. Roadway projects identified within the MTP and TIP are intended to conform to design guidelines identified within the Thoroughfare Plan. An additional intent is for all roadway reconstructions identified within the City of Waco Capital Improvement Program (CIP) to be retrofitted in conformance with the same design guidelines.

### Thoroughfare Hierarchy

Thoroughfares across the United States are defined through a consistent classification of expressways, arterials, collectors and local streets. Each facility is characterized by a mix of local access versus through mobility. Table 4.1 provides the general characteristics for each classification type. The adopted thoroughfare network is identified within Map 4.1.

### Context Sensitive Solutions

One of the most important concepts incorporated within the Thoroughfare Plan is the Context Sensitive Solutions (CSS) approach. This approach is intended to create a network of thoroughfares that support all users and that enhance community character. Inherent in this concept is that roadway corridors are considered to be valuable public spaces that enhance the vitality and attractiveness of all types of places, from urban downtowns and suburban neighborhoods to rural villages. The desired result of the CSS planning method is a roadway network that is safe and attractive for motorists, transit riders, bicyclists, and pedestrians of all ages and abilities.

**Table 4.1: Thoroughfare Classification Characteristics**

Classification	Level of Mobility	Level of Accessibility	System Relationships
Interstate or Expressways	Connects urban and rural service, connects urban subregions, connects urban areas	No direct land access unless frontage roads are provided. Used for long trips at high speed.	Other Interstates or Expressways, principal arterials.
Principal Arterials	Connects two or more subregions, compliments expressways in high volume corridors	No direct land access except for major traffic generators. Used for medium to long distance trips at moderately high speeds. Access is subordinate to traffic movement.	Expressways, other principal arterials and high volume minor arterials and collectors.
Minor Arterials	Connects adjacent subregions or activity centers within a subregion. Provides intra-community continuity. Ideally does not penetrate into neighborhoods.	Land access restricted to major and minor traffic generators in industrial and commercial uses. Used for moderate to short length trips at moderate speed.	Limited expressway interaction, principal arterials, other minor arterials, or facilities that place more emphasis on land access than higher classifications.
Collectors	Connects neighborhoods and connects land uses with the arterial system.	Unrestricted land access to neighborhoods, commercial or industrial areas. Used for collection and distribution to arterial facilities at moderate to low speeds.	Arterials, other collectors, local streets and private driveways providing direct land access.
Local Streets	Connects facilities within neighborhoods, or land uses within transportation facilities.	Unrestricted land access. Used for collection and distribution to collector facilities at low speeds.	Collectors, other local facilities and private driveways providing direct land access.

### Thoroughfare Design Guidelines

Appropriate roadway design characteristics are defined by the surrounding community and neighborhood context as well as the

intensity, density, and mix of adjacent land uses. In order to apply a Context Sensitive Solutions approach to thoroughfare planning, the MPO stratified the County into a few broadly defined Area Types that reflect urban, suburban and rural settings. The four general Area Types provide overarching land use contexts to identify typical roadway functions and overall dimensions such as right-of-way, lane width, and design speed. The Area Types are identified in Map 4.1 and defined within Table 4.2 below. The design guidelines further describe in detail numerous design elements as to which are considered appropriate or not appropriate for each area type. The geographic extent of the area types are shown on Map 4.1 along with the adopted thoroughfare network.

**Table 4.2: Thoroughfare Plan Area Type Definitions**

Area Type	Land Use Characteristics	Street Function
City Center	Balanced mix of high density residential and employment uses	Strong orientation towards pedestrian and transit activity. Emphasis on public spaces such as parks, plazas, and squares.
Urban Area	Generally residential orientation. Commercial and civic activity focused along major corridors and/or neighborhood and community centers.	High levels of connectivity with collectors and local streets. Pedestrians, bicyclists and transit riders travel on a network of major and minor corridors.
Suburban Area	Single family residential orientation. Commercial and civic activity usually limited to commercial or retail centers.	Encouragement of low speed, local travel. Pedestrians and cyclists navigate a network of on-road and off-road facilities. Transit riders travel along major corridors featuring pedestrian connections to local neighborhoods.
Rural Area	Predominantly agricultural with scattered residential development. Little or no commercial activity.	Encouragement of moderate to low speed vehicle use. Bicyclists travel on paved shoulders or shared lanes. Pedestrians navigate on off-road trails.

The Regional Master Thoroughfare Plan was adopted by the Waco MPO Policy Board in July, 2012 and the Waco City Council in January, 2013.



**Image 4.1: Urban Principal Arterial.** The primary function of Urban Principal Arterials is multi-modal accessibility with lower mobility and capacity needs for motor vehicles. Urban Principal Arterials typically include two (or occasionally 3) lanes for through motor vehicle traffic in each direction, on-street parking, and bicycle lanes. Pedestrian traffic is accommodated on a sidewalk, typically separated from the vehicular and bicycle traffic using a landscaped furniture zone. The opposing lanes of through traffic are separated by a landscaped median.



**Image 4.2: Two-Lane Urban Collector.** Urban Collectors typically include one lane for through motor vehicle traffic in each direction with parallel or angled parking. Turn lanes and bicycle lanes are optional based on the existing right-of-way constraints and the context of the street. The sidewalk corridor nearly always includes a paved furniture zone where trees in tree grates, light poles, and other street furniture are placed. The sidewalk corridor is often wider than other thoroughfare types, taking up more of the available right-of-way.

### 4.3 Metropolitan Transportation Plan

*Connections 2040*, which is the Waco Metropolitan Transportation Plan, is the 25-year plan that outlines the mobility needs for the Waco Metropolitan Area. The MTP serves as the blueprint from which future mobility projects are developed and reflect the policies and priorities of the Waco MPO Policy Board. The MTP is required by federal law to include all projects which intend to utilize federal highway or transit dollars during the 25-year planning period as well as all other regionally significant transportation projects, regardless of mode or their source of funding. The MTP, however, must also be constrained against a realistic estimate of available resources. Only those projects that can be realistically funded during the 25-year planning period may be included in the MTP. The MTP is required to be updated at least every five years and was last adopted in January of 2015.

### Primary Mobility Challenges

The MTP identified four significant mobility challenges through the 2040 planning horizon:

- Dispersion of population and employment to suburban and rural areas
- Concentration of poverty within the urban core
- Limited financial resources
- Preservation of good air quality

It is important to note that these challenges overlap considerably with many of the issues identified for The City Plan for the City of Waco. The guiding principles of the MTP, identified below, focused on addressing these challenges.

- Maintain Existing Transportation Facilities
- Address Serious Safety and Security Problems
- Maximize the use of Existing Transportation Facilities
- Preserve the Region’s Air Quality and Environment
- Support the Region’s Economic Development Efforts

The recommendations identified within the MTP were categorized within six strategies intended to address the four primary mobility challenges and at least one of the five guiding principles.

1. Strategic Highway Expansions to Address Increases in Mobility Demand
2. Maintain Existing Infrastructure in State of Good Repair
3. Improve Connectivity to Essential Services
4. Reduce Transportation Related Injuries and Fatalities
5. Maximize System Efficiency
6. Improve Regional Livability

Many of the more significant project recommendations of the MTP, with a focus on those physically proposed within the City of Waco and ETJ, are highlighted in the subsequent subsections of this chapter.

### 4.4 Transportation Improvement Program

The Transportation Improvement Program is in many ways similar to the City’s CIP in that it is the program which implements the priorities of the MTP. The TIP covers a four-year timeframe and projects identified within the TIP represent phases of work ready to proceed to one of the following phases of implementation:

- Engineering or Design
- Right of Way Acquisition
- Construction

Similar to the MTP, the TIP must be constrained fiscally. Unlike the MTP, however, projects within the TIP must have a formal commitment of funding from either the State of Texas or a local source.

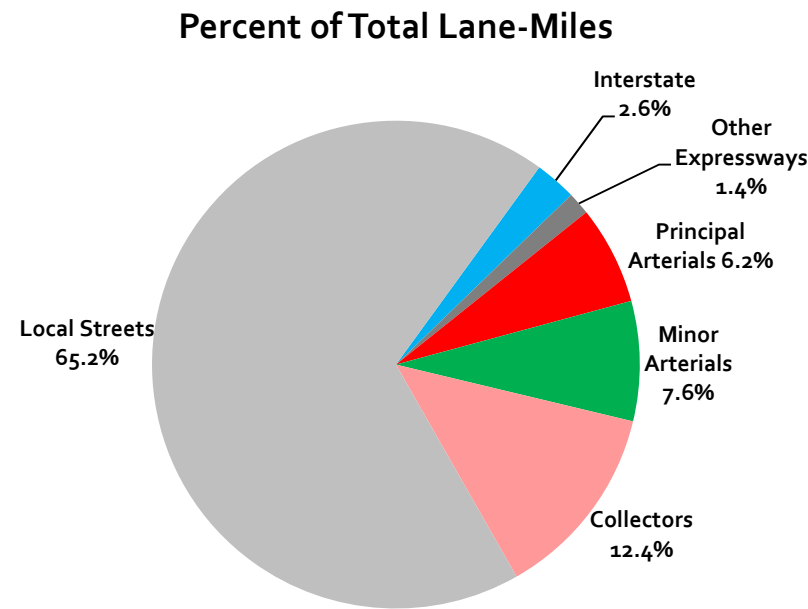
## 4.5 Roads and Highways

### 4.5.1 Arterials and Expressways

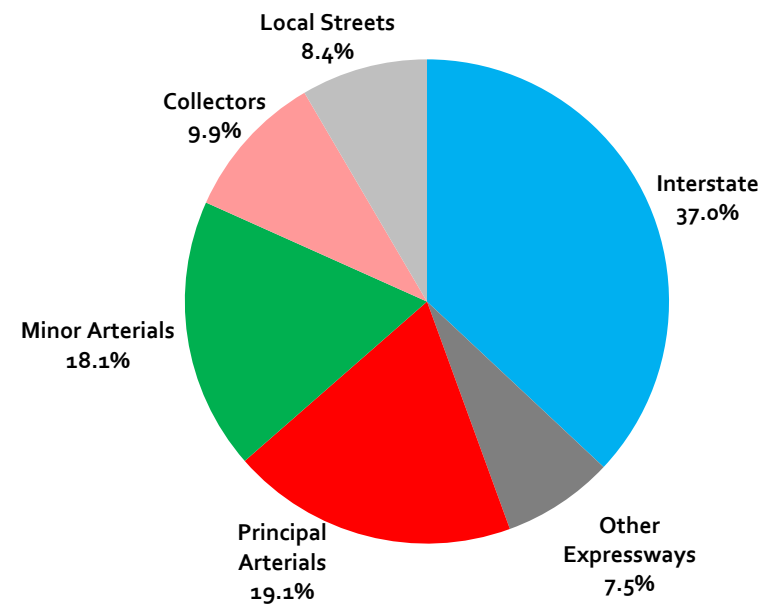
The Waco Metropolitan Area contains 6,870 lane miles of public roadways. Of this amount, the State of Texas maintains 1,786.0 lane miles or 26 percent of the regional highway system. Municipal Governments or McLennan County maintain 5,084.4 lane miles or 74 percent of the system. Despite the preponderance of lane miles being maintained by local or county governments, 78 percent of the daily vehicle miles traveled (VMT) occur on the State Highway system. Of this amount, more than one-third of the total daily VMT for all of McLennan County occurs on Interstate 35 (Chart 4.1).

As a result, nearly all of the more significant roadway work proposed within the Waco region is identified as part of the state highway system and furthermore on roadways classified as expressways or arterials.

**Chart 4.1: 2010 Percentage of Lane Miles and Vehicle Miles Traveled by Roadway Classification: Waco Metropolitan Area**



**Percent of Total Vehicle Miles Traveled**

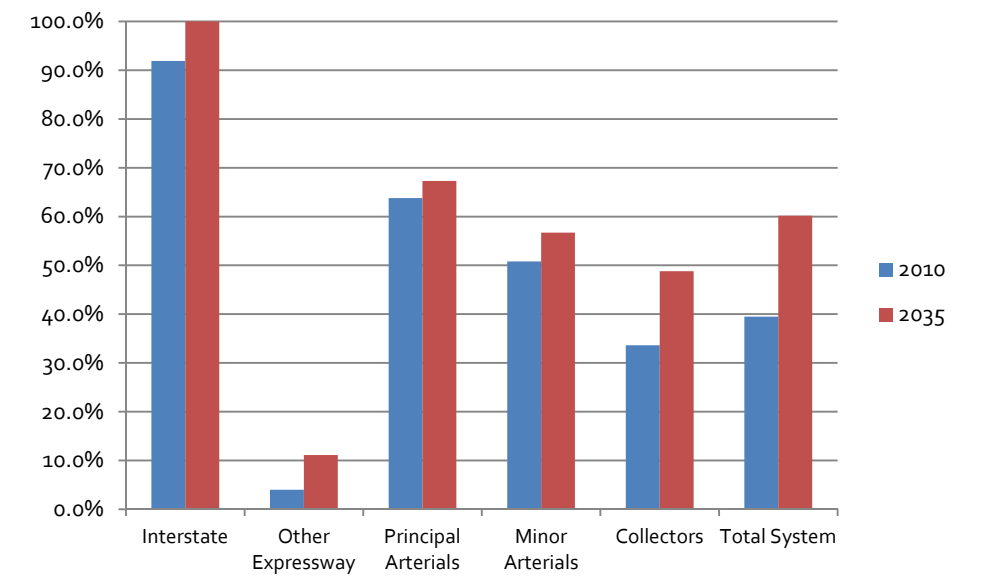


The MTP analyzed the following aspects of the highway system to help identify the most important and effective improvements in reducing delay and crashes.

- 2010 Traffic Conditions
- Projected 2035 Traffic Conditions
- Current Pavement and Bridge Condition
- 2013 Crashes and Crash Severity

The Waco MPO / TxDOT travel demand model demonstrated that congestion is forecasted to significantly increase over the next 20 years as shown in Chart 4.2 with three out of five lane-miles exceeding marginal levels by 2035. The challenge with congestion is two-fold: 1.) The cost of adding sufficient capacity is generally cost-prohibitive under the current fiscal reality and 2.) New capacity generally attracts new development, which leads to new congestion in the future. The MPO noted that much of the arterial system within the urban core is significantly underutilized. Thus if forecasted new residential and employment were to locate within the urban core, as is the goal of The City Plan, instead of on greenfield sites beyond the existing highway network, it is very likely that the existing arterial system could more than adequately accommodate the resulting increase in traffic volumes. In addition, this would limit the need for new highway capacity which the region has limited ability to afford.

**Chart 4.2: Percent of Lane-Miles with Marginal or Unacceptable Congestion Levels by Roadway Classification – Waco Metropolitan Area: 2010 and 2035**



In addition to the issue of congestion, Table 4.3 documents that nearly 4,700 crashes, 777 of them involving a serious injury or fatality, were observed in McLennan County during 2013. Using figures from the National Safety Council, the economic impact of crashes in 2013 was over \$169 million or approximately \$721 for every county resident.

**Table 4.3: McLennan County Crashes and Severity by Roadway Classification: 2013**

Classification	Total Crashes	Percent Injury or Fatality
Interstate	1,103	14.1%
Other Expressways	225	12.4%
Principal Arterials	1,029	17.7%
Minor Arterials	1,348	19.1%
Collectors	661	21.6%
Local Streets	712	17.8%
Total System	4,673	17.3%

Source: Texas Department of Transportation; Crash Records Information System

Unfortunately nearly all crashes are the result of driver behavior and not because of highway deficiencies.

#### 4.5.2 Regionally Significant Highway Projects

The MTP identifies the most regionally significant mobility projects that the Waco Region is anticipating sufficient financial resources to construct or implement by the year 2040. The following list includes those MTP project recommendations impacting the City of Waco or its Extraterritorial Jurisdiction (ETJ). These recommendations are identified on Map 4.2.

##### Interstate Highway 35

- North Loop 340 to South Loop 340
- Widen to 8 main lanes
- Reconstruct main lanes, frontage roads and on/off ramps

##### FM 1637 (China Spring Road)

- FM 3051 (Steinbeck Bend Dr) to FM 185
- Widen to 4 lanes

##### Loop 340

- Brazos River to SH 6 / Marlin Hwy

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- Widen to 4 lanes

##### Loop 340 (cont'd)

- IH-35 to US 77
- Construct Frontage Roads
- Construct overpass at Old Robinson Rd

##### US 84 at FM 2837 / Speegleville Road

- Construct overpass and extend US 84 frontage roads

##### State Highway 6

- McLaughlin Rd to FM 185
- Widen to 4 lanes

##### Franklin Avenue

- Lake Air Dr to New Rd
- Eliminate existing frontage roads
- Relocate main lanes to frontage roads and widen to 6 lanes
- Reconstruct interchange at New Rd

##### One-Way to Two-Way Conversions

- Franklin Ave: 4th St to 17th St
- Washington Ave: 5th St to 18th St
- 4th and 5th Streets: IH-35 to Herring Ave

##### Road Diets

- Current – 4 lanes with no center turn lane
- Proposed – 2 travel lanes with center turn lane and bicycle lanes
- Sanger Ave: Valley Mills Dr to Harvey Ln
- N 18th and N 19th Streets: Live Oak Ave to College Dr

The MPO staff also identified several other highway priorities during the development of the MTP that could not be included due to fiscal constraint. These projects are, nevertheless, considered important priorities in order to address forecasted mobility needs but will require funding outside of traditional state or federal sources. The following list identifies these projects that are also identified on Map 4.2.

##### North Loop 340

- SH 6 / Marlin Hwy to Williams Rd (Bellmead)
- Widen to 4 lanes

##### West Loop 340

- IH-35 to US 84 (Waco Dr)
- Construct continuous frontage roads

- Widen main lanes to 6 lanes

##### Speegleville Road

- SH 6 to US 84
- Widen to 4 lanes

##### Hewitt Drive (FM 1695)

- US 84 to Sun Valley Rd (FM 2063)
- Widen to 6 lanes

##### Steinbeck Bend Drive (FM 3051)

- China Spring Rd to Lake Shore Dr
- Widen to 4 lanes

##### Loop 574

- Extension from LaSalle Ave to Marlin Hwy
- Construct 4 lane boulevard
- Reconstruct existing interchange of LaSalle Ave at Marlin Hwy

##### Chapel Road

- Woodgate Dr to Old Lorena Rd (FM 2837)
- Widen to 4 lanes

##### Ritchie Road

- Panther Way to Hewitt Dr (FM 1695)
- Widen to 4 lanes

##### Texas Central Parkway

- US 84 to Imperial Dr
- Widen to 4 lanes

##### MacArthur Drive

- Park Lake Dr to Hillcrest Dr
- Perform Road Diet

#### 4.5.3 City of Waco Roadway System

##### Pavement Management

Whereas the MTP focuses on more macro level mobility needs, the City of Waco operates and maintains a system of arterial, collector and residential roadways comprised of approximately 635 centerline miles. In the 1960s the City developed a visionary pavement management system that stated three basic purposes:

1. Establish a sufficiency rating system that provides a priority basis for reconstruction, geometric modifications, safety, and structural adequacy of the network.
2. Establish a priority rating for maintenance functions.
3. Collect and record physical characteristics of the roadways.

Over the years this system has been used to maintain the city's roadway network; however, at the direction of the City Council the Public Works Department has been tasked to identify and implement a new and modern system that, at a minimum:

1. Enhances reliability and takes the information we have to the next level,
2. Minimizes subjectivity in rating pavements,
3. Allows accurate prediction for best timing on pavement repairs and funding levels required for rehabilitation,
4. Incorporates a computerized model that analyzes "what if" funding scenarios to target expenditures to maximize benefit,
5. Provides decision makers the data needed to select performance standards of the network.

In order to meet expectations, the Public Works Department intends to implement the services of an automated road analyzer to collect pavement condition and road asset data in order to provide a safe, accurate, reliable and cost effective understanding of the condition of the network. The service will include a complete review of the roadway inventory, define a pavement distress data dictionary, collect pavement data using the road analyzer, develop a rating system for all roadways based on a scale from zero (0) for a failed pavement to 100 for a pavement in perfect condition, and develop a two-year project maintenance plan.

A pavement management software package will also be identified that makes use of the City's GIS system to accurately manage inspections, maintenance, repairs, and deferred maintenance in order to optimize investments in the roadway network.

### Traffic Operations

The City of Waco currently operates 200 traffic signals at major intersections. Under state law, the City of Waco has responsibility for all signals within the city limits, including those located on the state highway system. Signals at high volume intersections, such as Valley Mills Drive and Waco Drive, operate 24 hours a day. Of the remaining signals, most others operate between 6:00am and 2:00am and then in flash mode during the overnight hours due to low traffic volumes. The

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exceptions to this are those intersections which have sight distance limitations whereby flash mode may create a hazardous condition.

There are several challenges with the current system which will need to be addressed during the planning horizon of The City Plan. The first and most important challenge is that many of the signals are more than 40 years old and nearing the end of their useful life. In addition, due to their age, many signals are not compatible with new technologies and are not synchronized to or communicate with other signals.

In addition to signals, the City of Waco also maintains approximately 1,800 streetlights. While the majority of streetlights are maintained by TXU Electric or TxDOT, the locations of all streetlights are regulated by the City of Waco.



Image 4.3: Example of an urban roadway system with multiple transportation options

The following list includes those recommendations identified by the Traffic Department as priorities for traffic operations:

- Replacement of all signals greater than 40 years in age
- Upgrade of all traffic signals to be compatible with the latest communication technology
- Synchronization of all signals via the City's traffic management center
- Retrofit all signals with crosswalks to meet the standards of the Americans with Disabilities Act (ADA)
- Develop a standard policy regarding the installation of streetlights

## 4.6 Public Transportation

Public transportation services are provided by the City of Waco through Waco Transit Inc. which is operated under management from RATP / McDonald Transit. Waco Transit operates nine fixed routes providing access to most portions of the City of Waco and extends into the neighboring communities of Bellmead, Beverly Hills, Lacy-Lakeview, Hewitt and Woodway. Waco Transit also operates the Downtown Area Shuttle (DASH), the Baylor Shuttle and the limited evening service for work/training (LINK). The DASH operates between Downtown Waco and the Baylor University campus during the Fall and Spring semesters and the LINK service circulates three times daily between Downtown Waco, the town of Marlin and then to Sanderson Farms located southeast of the TSTC campus. The Baylor Shuttle provides circulator service within the campus of Baylor University and points immediately adjacent to campus.

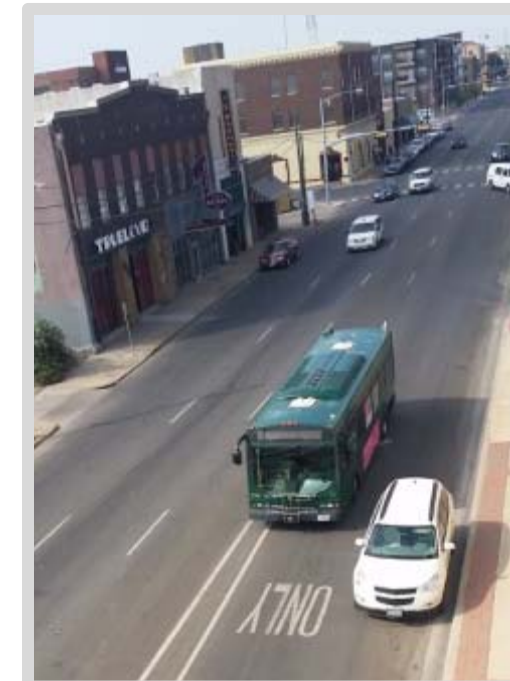
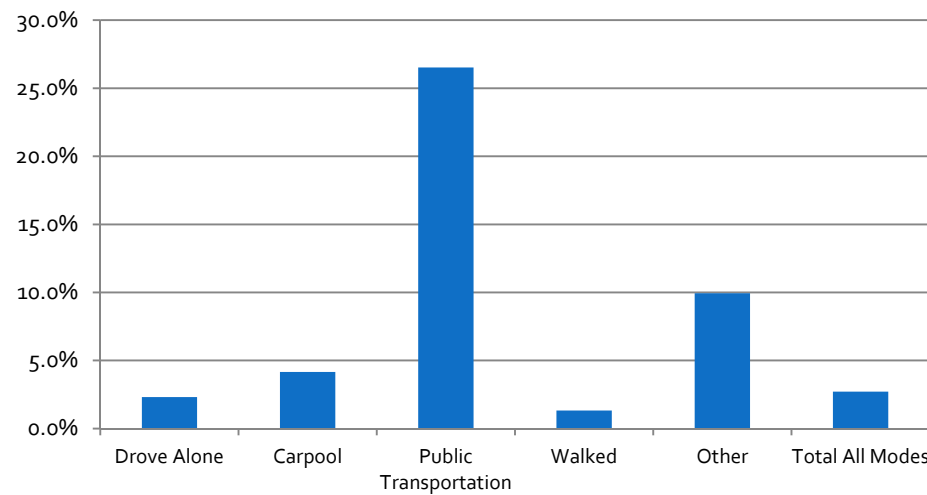


Image 4.4: The Downtown Area Shuttle (DASH)

In addition to fixed route services, Waco Transit also operates 2 demand response systems: the first system provides ADA paratransit service for persons unable to utilize the fixed route system; the second system provides rural public transportation to portions of McLennan County beyond the fixed route service area. Map 4.3 shows the fixed route system and the geographic service areas for the demand response services.

Outside of IH-35 recommendations, the most significant mobility recommendation identified within the MTP was a complete realignment of the Waco Transit fixed route system. Several limitations exist with the current system most notably in that the system operates on one hour loops and requires a transfer in Downtown Waco in order to travel by transit from northeast to southwest across the system. Chart 4.3 shows that most modes of transportation within the Waco region have relatively few persons that have a commute time greater than one hour. The very notable exception is for those utilizing public transportation where more than one in four commuters have a one-way commute time in excess of an hour.

**Chart 4.3: Percent of McLennan County Workers with Travel Times to Work Greater than 60 minutes by Mode**



Source: US Department of Commerce; Bureau of the Census – American Community Survey: 2008 to 2012

As noted in Chapter 2 on Economic Development, for those dependent upon public transportation, the significant commute time is a serious barrier to employment.

The goal of the proposed realignment is to not only increase the frequency and duration of service but to also reduce the transit time from the furthest portions of the system to less than 1 hour. Including capital and operational costs, the MTP recommendation is estimated to cost close to \$300 million and involves the following work:

- Establishment of a central Bus Rapid Transit (BRT) line upon which all other routes would feed into at one of eight transfer locations.

- The BRT line would operate parallel to Waco Dr or Franklin Ave between Bellmead and Woodway
- The BRT line would operate on 15 minute headways and stop only at one of the eight transfer locations
- Realign all other routes into feeder routes that operate on loops no greater than 30 minutes in duration
- Discontinue the existing flag stop service and transition to a dedicated stop system
- Improve pedestrian access to each proposed stop and transfer location to meet ADA requirements
- Extend the hours of operation until at least 11:00pm
- Refurbishment of the Downtown Intermodal Center

The first part of the work identified for the transit realignment involves a BRT feasibility study which will be conducted by the MPO and Waco Transit during FY 2016. A conceptual map of the proposed realignment is shown on Map 4.4.

## 4.7 Non-Motorized Transportation

### 4.7.1 Bicycle Transportation

Despite the presence of three institutions of higher education and a large percentage of population living in poverty, bicycling is not a significant mode of transportation for commuting purposes. According to the 2010 Census, 0.3 percent of all workers over age 16 use a bicycle as their primary mode of travel to school or work. The majority of these users resided either within or in close proximity to Baylor University. A significant factor in this condition is the lack of bicycle facilities and their interconnectedness into a network. As of 2014, the City of Waco had only 18 miles of dedicated facilities for bicycles, many of which were stand alone and did not connect to any other bicycle facilities. Added to this constraint are a number of barriers, such as IH-35, Loop 340, the Brazos River or Lake Waco which provide few, if any, safe crossing for bicyclists. Map 4.5 identifies the current facilities dedicated to bicycles and the more significant barriers to bicyclists.

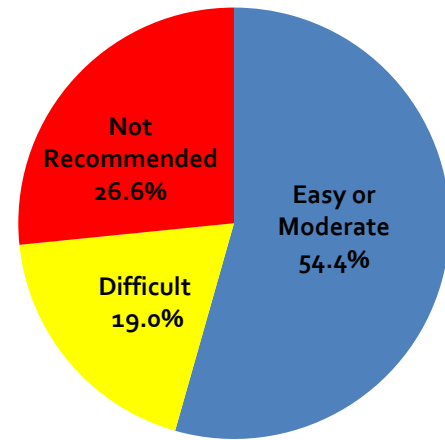


Image 4.5: Example of a bicycle lane

Since dedicated non-recreational bicycle facilities are currently rare, most bicyclists use the existing roadway network for mobility. Thus, to estimate bicycle friendliness for the Waco region, the MPO staff evaluated the existing arterial and collector network for bicycle suitability. The staff scored each facility based upon a scoring system developed by the Federal Highway Administration. This system estimates the level of comfort for a given facility for a novice rider. Chart 4.4 shows that although much of the main roadway system would be considered relatively acceptable for a novice rider, significant portions of the existing system would either be difficult or not recommended due to a combination of traffic volumes, roadway condition, lane widths or traffic speed. An important note is that expressway or interstate main lanes were not evaluated as bicycles are prohibited on these facilities. Map 4.6 shows the bicycle suitability scores for the City of Waco. More detail regarding the scoring system used by the MPO can be found within *Connections 2040*, the Waco Metropolitan Transportation Plan.



**Chart 4.4: Bicycle Suitability for Novice Riders on Arterial & Collector Roadways - 2014**



As bicycling is a relatively inexpensive form of transportation and permits users to cover significantly greater distances than by walking, the MPO staff identified over 280 miles of improvements to create a viable network of facilities with which novice riders would feel comfortable using (Map 4.7). These distances are increased significantly when combined with the bicycle racks attached to the front of each Waco Transit Bus. The resulting multimodal network would greatly enhance the mobility within and between each of the proposed development nodes identified in Section 7 of Chapter 3. The primary goals of these nodes are to attract a significant portion of future population and employment growth into an area that supports non-motorized or public transportation modes.

In addition to bicycle enhancements proposed for existing roadways within the MTP, the following recommendations are included for multi-purpose bicycle and pedestrian facilities (Map 4.7):

- Completion of Brazos Riverwalk between the Lake Waco Dam and LaSalle Ave
  - Priority recommendation is to construct in phases providing connection between the Waco Mammoth National Monument and the existing terminus at Brazos Park East
- Convert the former MKT rail line through East Waco to a multi-purpose bicycle/pedestrian trail
- Convert Mary Avenue to a multi-purpose bicycle/pedestrian trail from South 8<sup>th</sup> Street to South 32<sup>nd</sup> Street

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- Extend Cotton Belt Trail eastward from current terminus to vicinity of Ritchie Rd

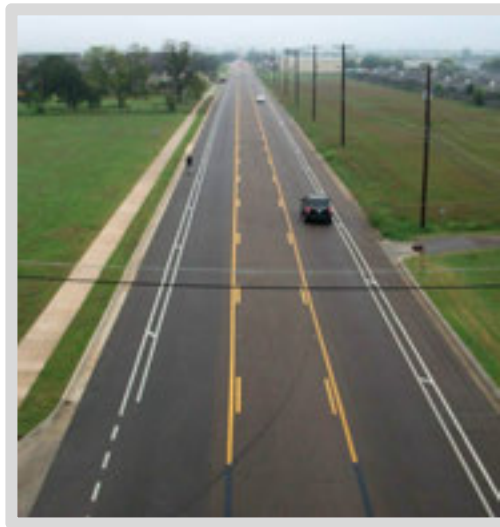


Image 4.6: Panther Way reconstruction providing example of a road diet cross-section with bicycle lanes.

### 4.7.2 Pedestrian Transportation

Walking, as a mode choice, to work or school is used significantly more often than bicycling within the Waco Metropolitan Area. Even so, only 1 out of 40 commuters use this mode as their preference. As a general rule, this mode is used primarily by persons residing in close proximity to either Downtown Waco or Baylor University. These areas have a more complete sidewalk network and basic services are in closer proximity to residential areas.

Areas developed prior to 1950, such as Downtown Waco and the Baylor University campus, contain most of the pedestrian facilities. Beyond these areas the sidewalk network is scattered and basic services are generally well beyond 0.25 mile from residential areas. Surveys indicate that most people are reluctant to walk if a trip distance exceeds 0.25 mile.

Within the past decade the City of Waco has adopted an ordinance requiring the construction of sidewalks for new commercial development or reconstruction of certain developments depending upon specific criteria. New residential developments are also required to install sidewalks along collector streets either identified by the City's sidewalk plan or by the Department of Traffic Services. Although this has served to increase the coverage of sidewalks beyond Downtown Waco and Baylor, the network remains patchy at best.

The City of Waco has 358.5 miles of public access sidewalks as of 2013. Assuming that for each mile of city street the potential exists for 2 miles of sidewalks, this translates to approximately 28 percent sidewalk coverage with the City (635 centerline miles of city streets). Another challenge for pedestrians is that a significant portion of the existing network is also old and poorly maintained. The result is that slightly more than 40 percent of the network is rated as "poor" with poor being defined as the inability to accommodate a wheelchair. When condition is taken into account, sidewalk coverage by facilities in "good" condition is reduced to 16 percent.

The MPO staff identified 239 miles of pedestrian corridors in three levels of priority for the Waco Region (Map 4.8). The first priorities were to connect elementary and some secondary schools to nearby neighborhoods, correct a safety problem or complete a short gap in the existing system. Second priorities were to extend the system to connect to retail corridors and remaining secondary schools. Third priorities were to make final connections necessary to support an expanded public transportation network and to improve walkability in the development nodes identified in Section 7 of Chapter 3. Due to fiscal constraints, the MPO staff could only identify funding for priorities 1 and 2 within the MTP. In addition to the corridors identified within the MTP, the City of Waco has also produced a sidewalk plan identifying corridors where the construction or reconstruction of sidewalks is required. This plan also serves as a guide for the construction of new sidewalks as city funds become available. The MPO staff used the Waco plan as a starting point for the development of a regional sidewalk network; however, The City Plan goes further as it is not required to be fiscally constrained as is the MTP.

In addition to pedestrian corridor improvements proposed within the MTP, the following recommendations are included for policies intended to expand facilities for pedestrian access:

- Retrofit existing stormwater channels to incorporate more permeable groundcover and pedestrian walkways
- Require future stormwater channels to be constructed such that pedestrian walkways may be incorporated into the easement
- Retrofit existing sidewalks and crosswalks to meet accessibility standards of the Americans with Disabilities Act
- Explore strategies by which sidewalks can be adequately maintained
- Limit circumstances in which variances to sidewalk requirements may be permitted

## 4.8 Aviation

The City of Waco operates and maintains Waco Regional Airport, a full-service commercial and general aviation airport located approximately 5 miles northwest of Downtown Waco. Waco Regional Airport is currently served by one airline with scheduled service, Envoy Air dba American Eagle which operates between five and six flights daily to Dallas / Fort Worth International Airport. In addition to Envoy, Waco Regional Airport is also served regularly by a number of charter flights for specialized destinations.

Waco Regional Airport is also a full service airport for general aviation providing 24 hour refueling and tiedown services, 18 executive hangars, 50 light aircraft hangars, major airframe and power plant maintenance and repair services.

## 4.9 Passenger Rail

The City of Waco is not currently served by any passenger rail services with the closest service being approximately 20 miles west at McGregor via Amtrak's Texas Eagle. The Texas Department of Transportation is currently conducting a study of several passenger rail options between Oklahoma City and Mexico approximately following IH-35. These options include commuter rail, enhancement of the existing Amtrak service up to 95 mph, higher speed service up to 120 mph and high speed service at 150 mph or greater. This study, titled Texas Oklahoma Passenger Rail Study (TOPRS), will identify those services that meet a minimum feasibility criteria established by the Federal Railroad Administration for federal funds. A more detailed study will be conducted subsequently for those services that exceed the minimum feasibility criteria.



Image 4.7: The Trinity Railway Express in Downtown Dallas, an example of commuter passenger rail. The TRE service operates between Downtown Dallas and Downtown Fort Worth and makes 10 stops along its 30 mile route. The advertised one-way travel time is 1 hour for an average speed of 30mph. In a more suburban or rural setting, commuter rail would make fewer stops and be able to travel up to 79 mph. Commuter rail is one possible service option that could be recommended by the Texas Oklahoma Passenger Rail Study.

*Imagine Waco: A Plan for Greater Downtown*, along with the MTP identified a passenger rail line through Downtown as a priority along with a station in the vicinity of Waco Transit's Downtown Intermodal Terminal. Several of the service options being studied by the TOPRS study include these recommendations. A draft of the final report was pending as of July, 2016.

One of the opportunities a passenger rail depot at the Waco Transit Center presents is the possibility of a transit-oriented development (TOD). With the hub of the public transportation services and the Greyhound station for Waco already located at the Downtown Intermodal Center, the addition of passenger rail creates the opportunity to provide services catering to the users of these transportation modes. Additionally, the convergence of four modes of transportation within walking distance of Downtown Waco creates a seamless transfer opportunity between each of these modes. As a result, the TOD enhances the viability and attractiveness of passenger rail and transit as transportation modes and vice-versa.

In addition to the investments already made by the City of Waco at the intermodal center, the following recommendations would enhance the possibilities of attracting passenger rail into Downtown Waco and the creation of a TOD:

- Purchase or lease of property within general vicinity of the Waco Transit Intermodal Center

- Solicit proposals for development of the site similar to the Brazos Commons
- Improvements in pedestrian and bicycle access to the site
  - Enhancement of connection to Downtown
  - Addition of bicycle lockers
- Provision of additional long-term parking
- Establishment of a zoning overlay district to ensure compatible development with the immediate vicinity
- Explore establishment of a "Quiet Zone" through Downtown and East Waco
  - Study to identify signal infrastructure needs to eliminate need for trains to sound their horns at intersections with roadways
  - Quiet Zone to minimally extend from South 18<sup>th</sup> Street to US Business 77

**Hwy Classifications**

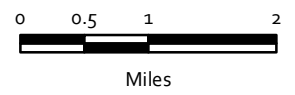
- Interstate
- Other Freeways
- Principal Arterials
- Minor Arterials
- Collectors

**Waco City Limits**



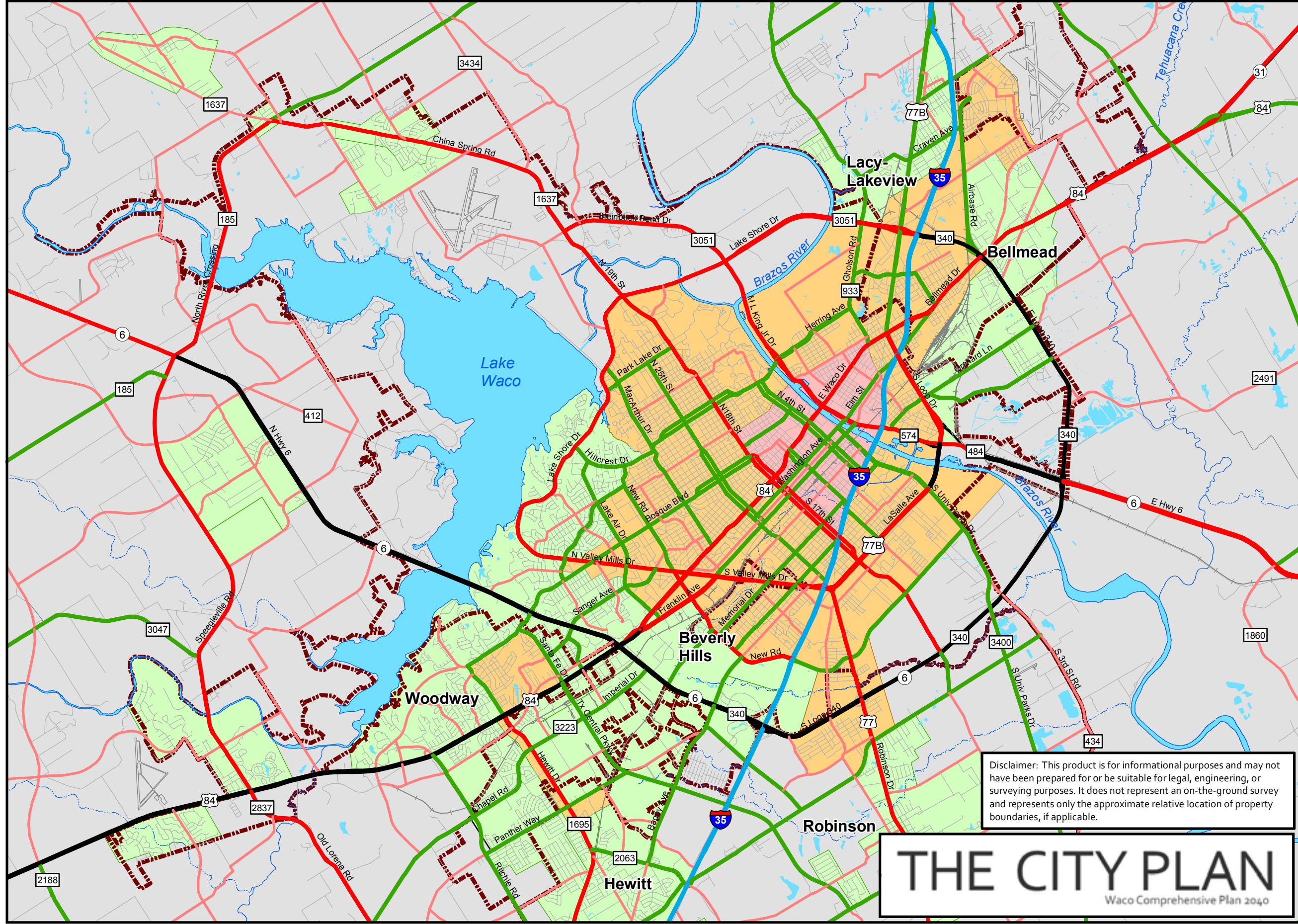
**Context Area Types**

- City Center
- Urban
- Suburban
- Rural



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**Map 4.1:  
Regional Thoroughfare Plan and  
Context Area Types**



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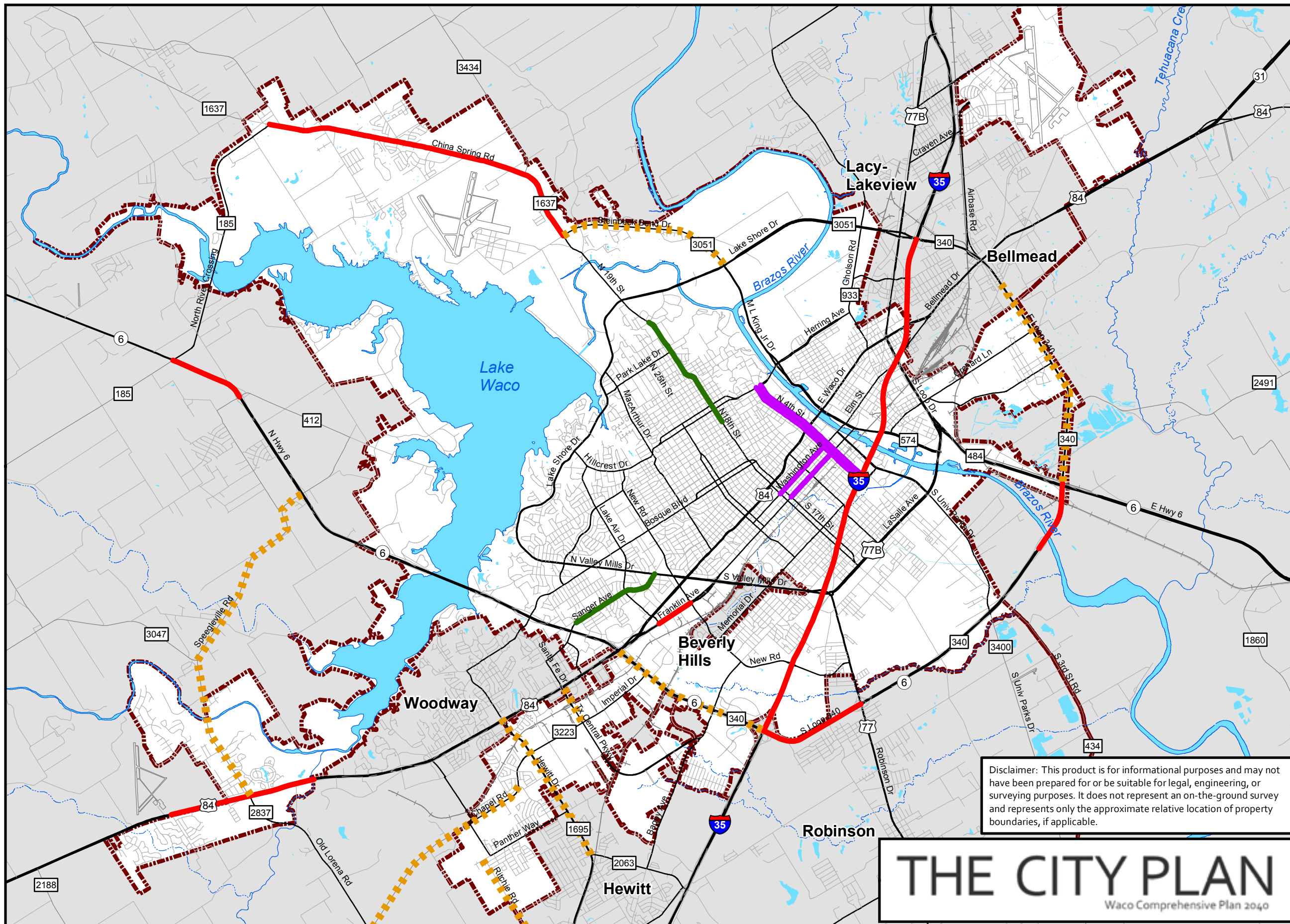
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- MTP Funded Projects**
- Mobility (Red line)
- Road Diet (Green line)
- One-Way Conversion (Purple line)
- Other Significant Projects**
- (Yellow dashed line)
- Waco City Limits**
- (Red dashed line)
- Outside Waco City Limits**
- (Grey area)



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


**Map 4.2:  
Regionally Significant  
Highway Projects**



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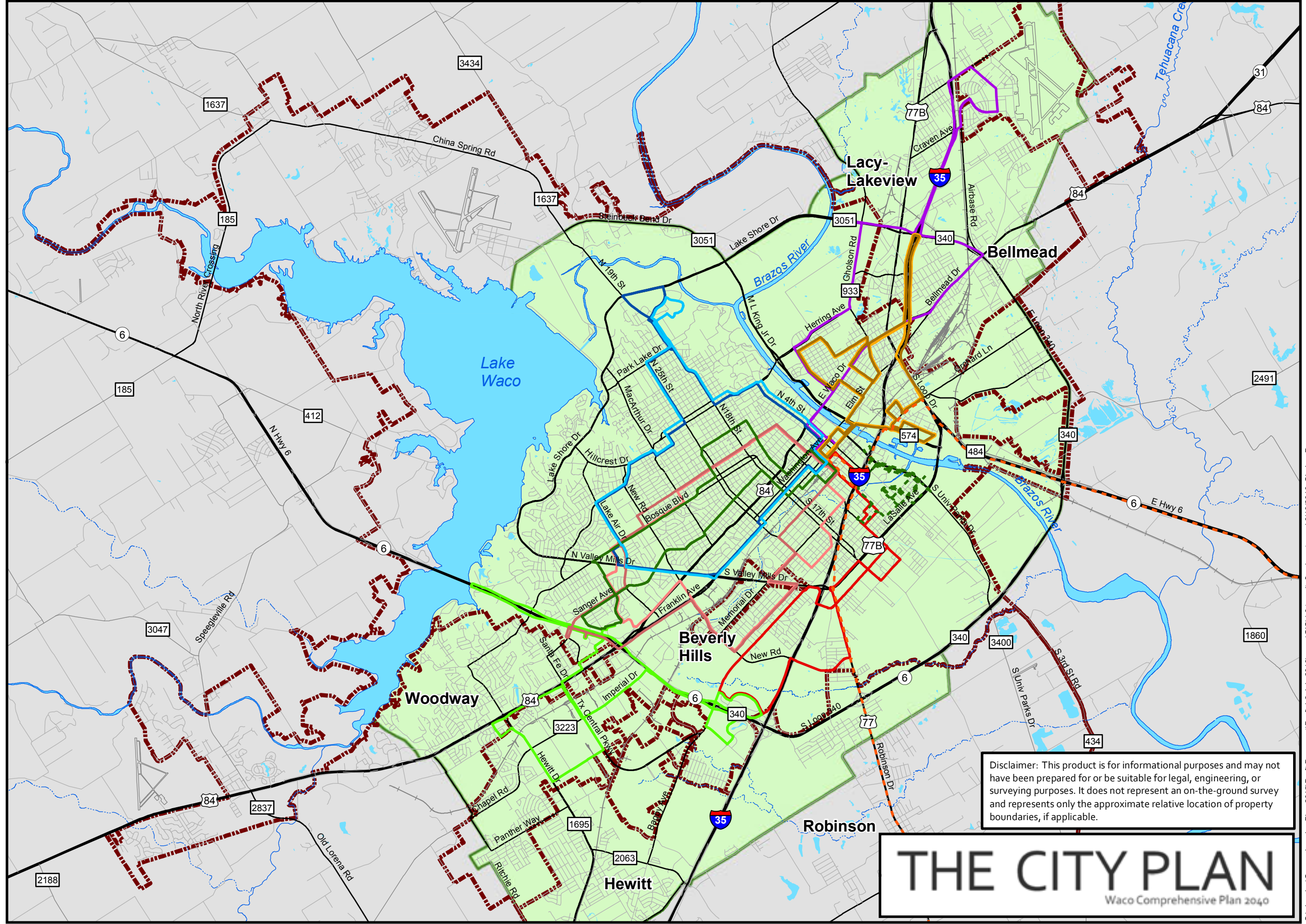
-  Baylor Shuttle
-  LINK Shuttle
-  Route 1 - MCC / Valley Mills
-  Route 2 - Valley Mills / MCC
-  Route 3 - VA / Colcord
-  Route 4 - Colcord / VA
-  Route 5 - TSTC / Bellmead
-  Route 6 - Hwy 6 Loop
-  Route 7 - E Waco Even Hours
-  Route 7 - E Waco Odd Hours
-  Route 8 - Bosque / Sanger
-  Route 9 - South Terrace
-  ADA Service Area
-  Rural Demand Response Area
-  Waco City Limits



0 0.5 1 2  
Miles

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**Map 4-3:  
Fixed Route System  
Waco Transit**



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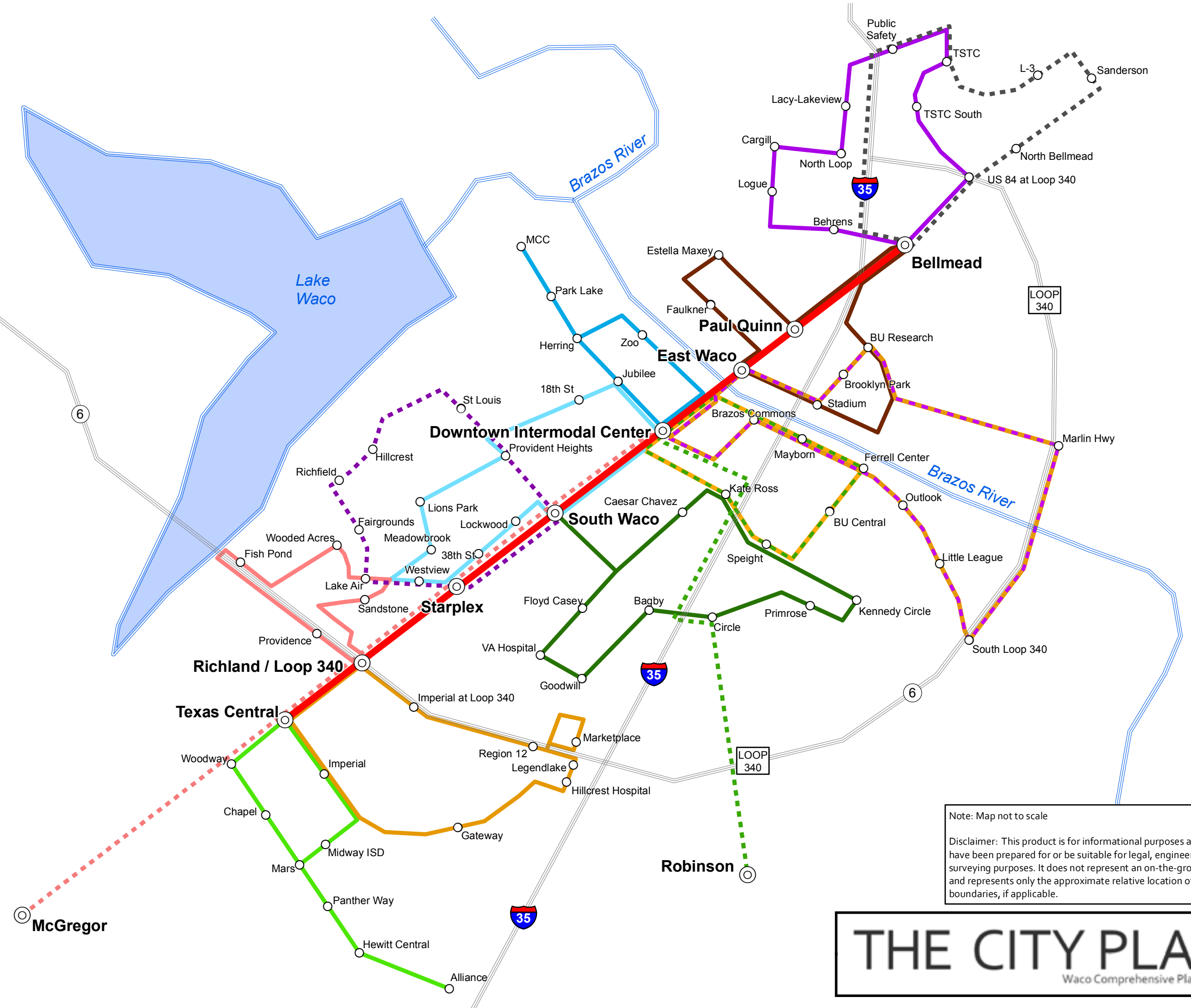
- Central Corridor
- Satellite Routes**
- East Waco
- Hewitt
- Hillcrest
- MCC / North Waco
- McGregor
- North Industrial
- Robinson
- South Loop 340
- South Waco
- Sanger Heights
- Texas Central
- TSTC
- Western Heights
- University

- Stop Type**
- Basic
- Transfer



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**Map 4-4:  
Conceptual Realignment  
Waco Transit  
Fixed Route System**

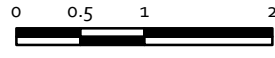


Note: Map not to scale  
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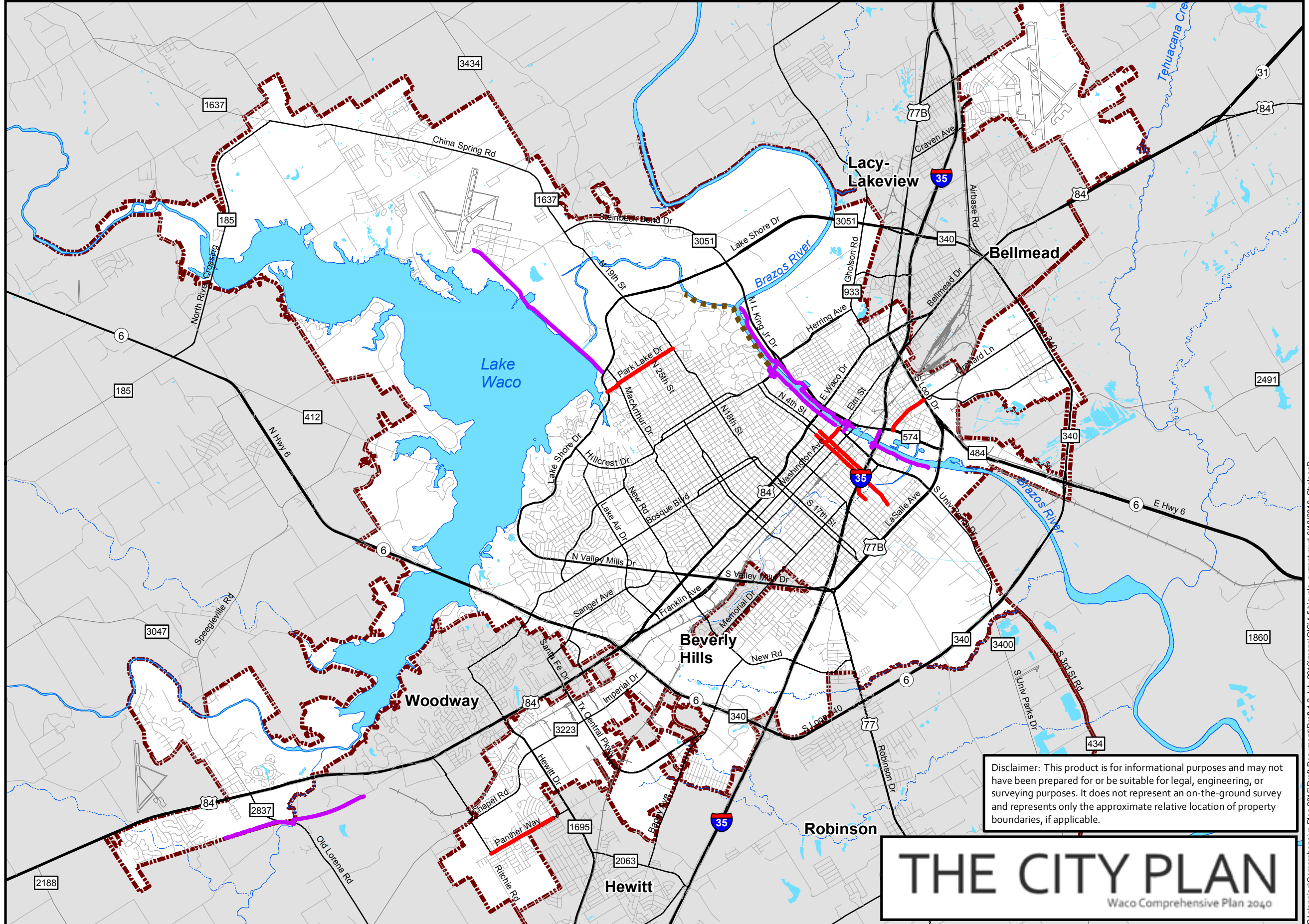
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-  Bike Lanes
-  Multi-Purpose Trail
-  Unimproved Trail
-  Waco City Limits
-  Outside Waco City Limits



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**Map 4-5:  
Existing Bicycle Facilities**



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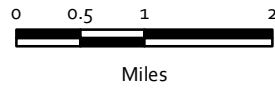
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**Bicycle Rating**

- Easy
- Moderate
- Difficult
- Not Recommended
- Bicycles Prohibited\*
- Under Construction

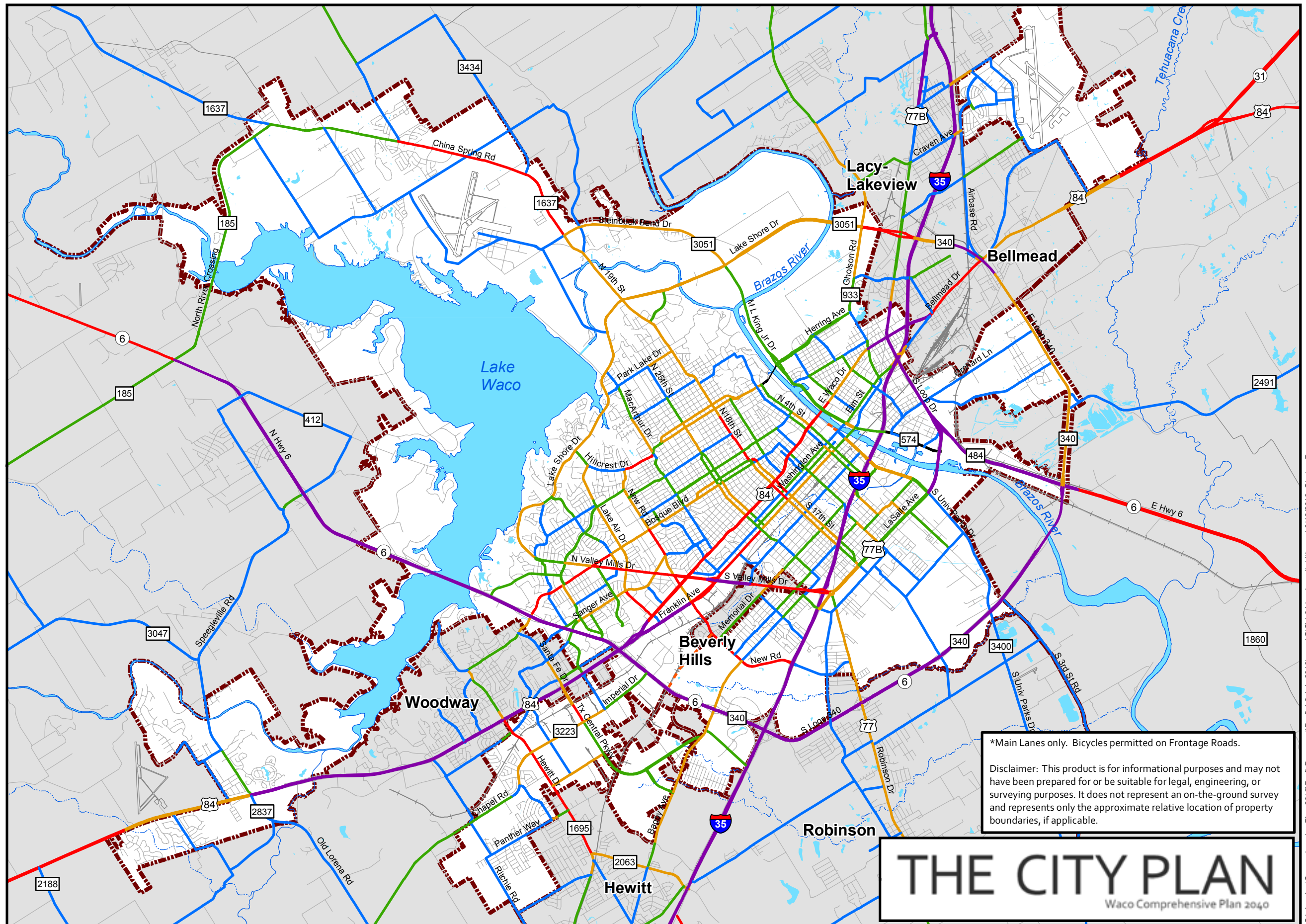
**Waco City Limits**

- Waco City Limits
- Outside Waco City Limits



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**Map 4-6:  
Bicycle Suitability Ratings  
for Arterial & Collector Highways**










\*Main Lanes only. Bicycles permitted on Frontage Roads.

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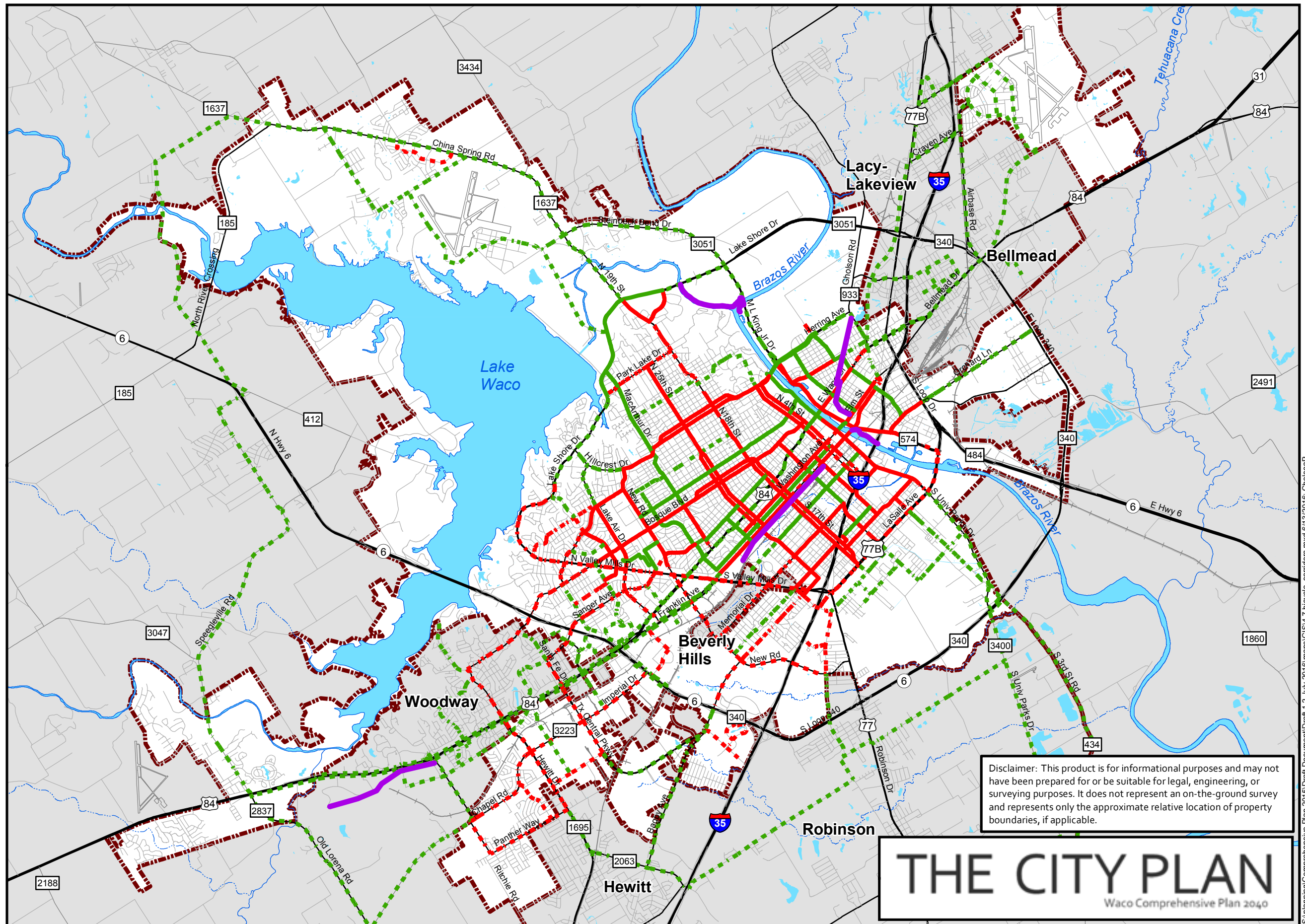
- Proposed Multi-Purpose Trail**  

- Bicycle Facility Type & Priority**
-  Bike Routes Short Term
  -  Bike Routes Long Term
  -  Bike Lanes Short Term
  -  Bike Lanes Long Term
- Waco City Limits**  

- Outside Waco City Limits**  




0 0.5 1 2  
 Miles

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**Map 4-7:  
 Bicycle Corridor  
 Recommendations**



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**Pedestrian Priority**

Short Term

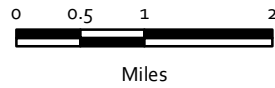
Long Term

Unfunded

**Waco City Limits**

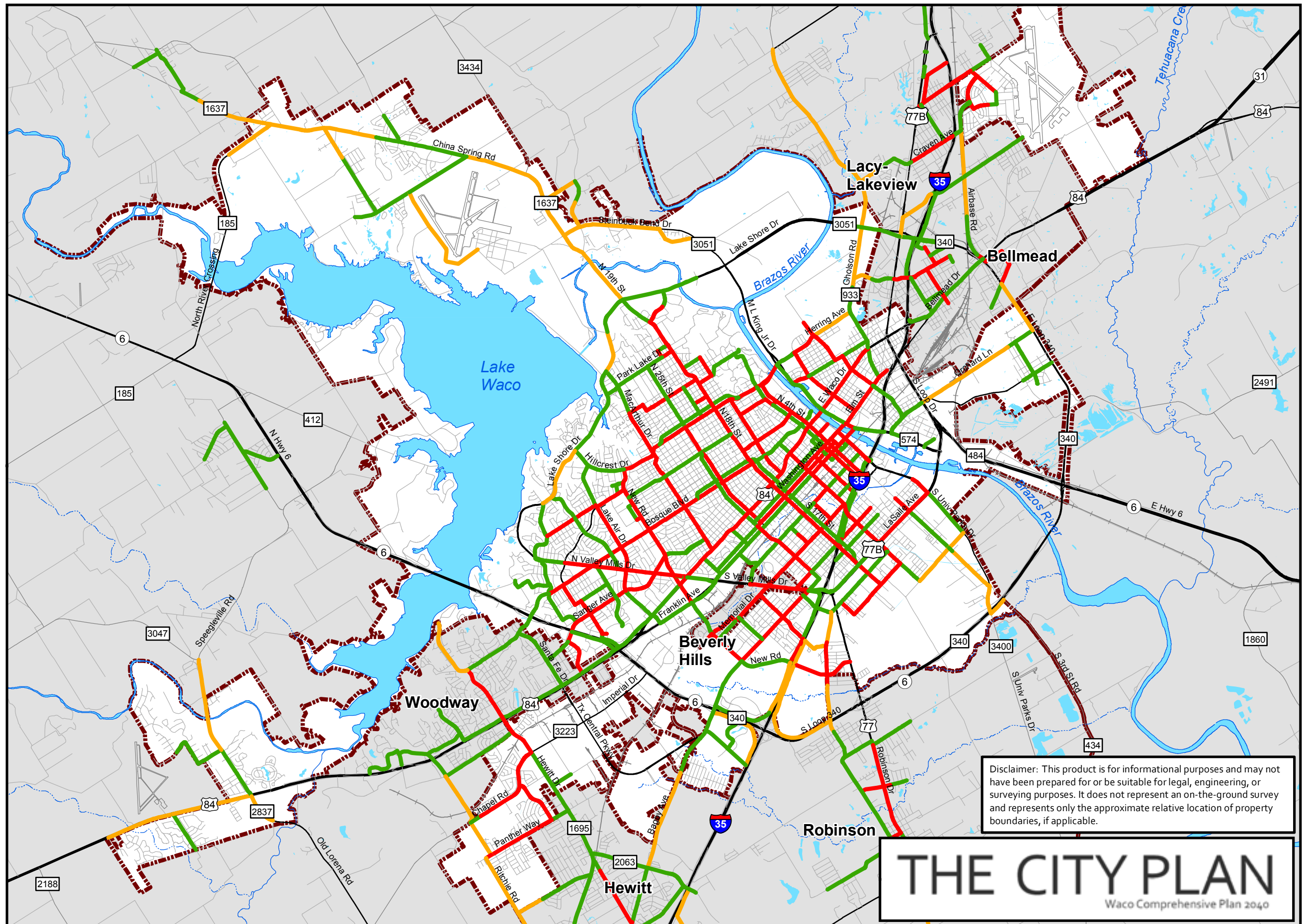


**Outside Waco City Limits**



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**Map 4-8:  
Pedestrian Corridor  
Recommendations**



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