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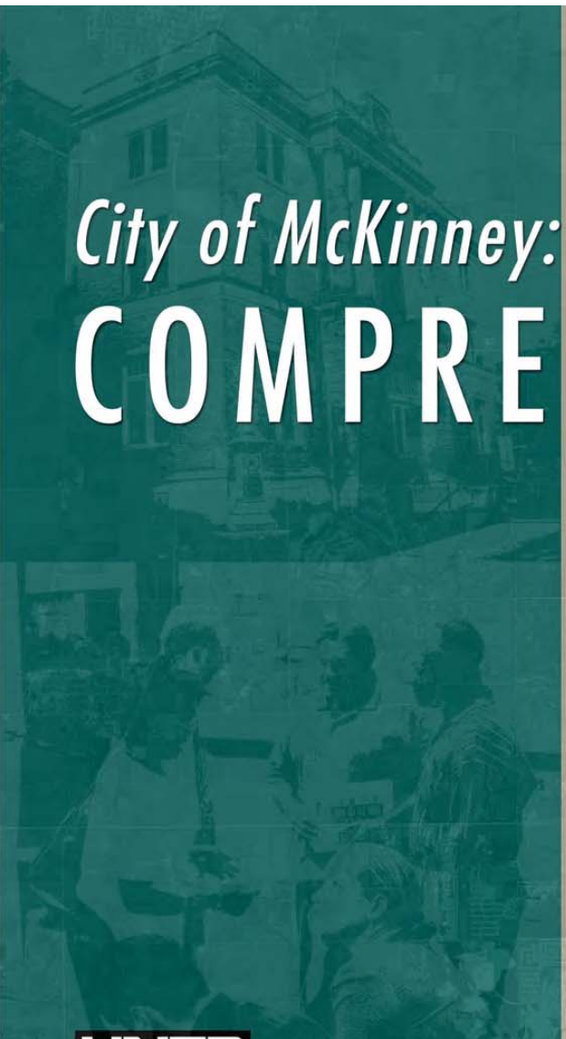
City of McKinney:
COMPREHENSIVE PLAN
McKINNEY, TEXAS



HNTB
URBAN DESIGN + PLANNING

Planning, Civil Engineering, Urban Design, Transportation Planning, Landscape Architecture & Consensus Development
DALLAS, TEXAS

ADOPTED ON 22 MARCH 2004
AMENDED OCTOBER 2005
APRIL 2006
MARCH 2008
JUNE 2008
JANUARY 2010
DECEMBER 2012
JULY 2013
MAY 2015
JUNE 2015

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Acknowledgements

The successful development of the 2004 McKinney Comprehensive Plan was made possible by individuals who contributed their time and expertise for the expressed purpose of making McKinney a better community for future generations. The City of McKinney would like to express its appreciation to those individuals and residents who provided invaluable time, input, and assistance in the development of this plan.

In Memory
Gabe Nesbitt, Councilmember

Citizens of McKinney

McKinney City Council

Bill Whitfield, Mayor
Thad Helsley, Mayor Pro Tem
Scott Lewis, Councilmember
Gilda Garza, Councilmember
Pete Huff, Councilmember
Brian Loughmiller, Councilmember
Gabe Nesbitt, Councilmember
Don Dozier, former Mayor
Dr. Brad Wysong, former Councilmember

McKinney Planning and Zoning Commission

Bill Cox, Chairperson
Don Day, Vice-Chairperson
Flo Henry, Commissioner
Eric Zepp, Commissioner
Travis Ussery, Commissioner
Herb Trenham, Commissioner
Randy Pogue, Commissioner
Greg Brewer, former Commissioner
Michael Carr, former Commissioner
Kelley Stone, former Commissioner
Dr. Rudy Churner, former Commissioner

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EXHIBIT A

Table of Contents

EXHIBIT A

Table of Contents: Figures and Tables

EXHIBIT A

EXHIBIT A

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EXHIBIT A

Executive Summary

Introduction

The 2004 McKinney Comprehensive Plan is a document developed from community input and the leadership of McKinney to guide decision making for McKinney's future growth and development. The document is a guide for decision makers — City Staff, the City's elected and appointed leadership, McKinney residents, and investors in the community — regarding City policies and issues related to land use, transportation, urban design, parks and recreation, and infrastructure. The Comprehensive Plan reflects the vision of what McKinney residents want their community to be and how it should be achieved.

Work on the 2004 McKinney Comprehensive Plan began in January 2003 and culminated in March 2004. The Plan is an update of the previous plan, the 1990 McKinney Comprehensive Plan. A Joint Committee (the McKinney City Council and Planning and Zoning Commission) reviewed the progress and deliverables for the 2004 Plan and provided insight and direction during the Plan's development. The orderly development of the McKinney Comprehensive Plan process was broken down into five distinct phases:

Phase 1 Community Vision
Phase 2 Status of McKinney
Phase 3 Community Needs Assessment and Goal Setting
Phase 4 Comprehensive Plan Elements
Phase 5 Implementation

Early in the 2004 Plan process, the community's goals and objectives were identified through stakeholder interviews and a review of existing documents. The goals and objectives were further enhanced by the Joint Committee to provide direction during the Plan's development.

The report outline and highlights of the 2004 McKinney Comprehensive Plan are noted in the Executive Summary. These highlights include the land area being considered, existing conditions, demographics, community input, goals and objectives, future land use plan, future land use plan modules, economic development and fiscal impact, and work plans.

The McKinney Comprehensive Plan reflects the vision of what McKinney residents want their community to be and how it should be achieved.

Report Outline

The McKinney Comprehensive Plan report is broken down into thirteen sections that are listed below:

Section 1	Introduction
Section 2	Planning Process
Section 3	Goals and Objectives
Section 4	Existing Conditions
Section 5	Alternative City Form Scenarios
Section 6	Economic Development and Fiscal Impacts
Section 7	Land Use Element
Section 8	Transportation Element
Section 9	Parks, Recreation and Open Space Element
Section 10	Water / Wastewater Element

Section 11	Urban Design Element
Section 12	Educational Facilities and Services Element
Section 13	Implementation

The first four sections provide general information about the purpose of the Comprehensive Plan, the planning process for McKinney, the development of the Comprehensive Plan's goals and objectives, and the existing conditions influencing growth and development in McKinney. Section 5 examines the different forms of city development that could shape McKinney's future built landscape and how a preferred plan — the option selected that includes aspects of most city form alternatives — is used to fashion the Future Land Use Plan and Future Land Use Plan Module Diagram. Section 6 qualifies the fiscal realities of the Comprehensive Plan by performing a fiscal analysis of the Plan in its goal of providing a sustainable and affordable community. Sections 7 through 11 explore the five major elements that will influence McKinney's future growth and development based on community values and existing conditions. Section 12 is intended to aid in the coordination of each school district's capital facilities planning with the City of McKinney's Comprehensive Plan. Section 13, the final section of the Comprehensive Plan, deals with the responsibilities for adopting, implementing, amending, updating, and monitoring the Plan and lists the work plans needed to move the Comprehensive Plan forward.

The McKinney Comprehensive Plan concentrates on an area of approximately 115.8 square miles, with the City of McKinney having 65.8 square miles and McKinney's ETJ capturing the remaining 50 square miles. This combined land area accounts for 13.1% of Collin County.

Land Area Considered

The McKinney Comprehensive Plan is focused on the growth and development of McKinney and the community's role in the greater North Texas region. The Comprehensive Plan is focused on those areas within the McKinney city limits as well as within the City's extra-territorial jurisdiction (ETJ). The McKinney Comprehensive Plan concentrates on an area of approximately 115.8 square miles, with the City of McKinney having 65.8 square miles and McKinney's ETJ capturing the remaining 50 square miles. This combined land area accounts for 13.1% of Collin County.

Existing Conditions

Located in the center of Collin County, Texas — one of the fastest growing counties in Texas and the nation — the McKinney area is crisscrossed by three major regional highways (SH 121, US 75, and US 380), one railroad line (owned by Dallas Area Rapid Transit), and contains the only major general aviation airport in Collin County — McKinney National Airport. In the Dallas-Fort Worth area, McKinney is located in the northeastern quadrant approximately 30 miles north of downtown Dallas on US 75 and roughly 35 miles northeast of Dallas-Fort Worth International Airport on SH 121. These two regional highways form a 'growth triangle' that has defined regional growth patterns in recent decades with McKinney at the northern apex of the triangle. Communities along each corridor have experienced strong population and employment growth during the last three decades. The first waves of this growth reached the McKinney area twenty-five years ago.

Changing Demographics

According to the 2010 Census, McKinney's population jumped from 54,369 people to 131,117 between 2000 and 2010, an increase of 76,748 people. During this same period, McKinney's annual average population growth rate was 14.1%, far exceeding the 2.3% for the Dallas-Fort Worth area. McKinney's share of population in Collin County climbed to 16.8% in 2010, up from its 11.1% share in 2000.

The latest population estimates from the City of McKinney indicate that McKinney has 155,142 people as of January 1, 2015.

Based on information from the 2008-2010 American Community Survey (ACS), the population of McKinney is dominated by adults from 25 to 44 years of age with a large percentage of the population in professional and management occupations. Educational attainment and median household income for McKinney were well above the averages for the nation and the Dallas-Fort Worth area, but just slightly below Collin County averages. Just less than half of McKinney's adult population had received some form of college degree. Between 2000 and 2010, McKinney's median household income increased nearly 23% and was close to matching the average in Collin County.

Community Input

Soliciting public input and incorporating the public's values into the Comprehensive Plan provided the basis for developing the plan further. To generate greater community involvement in the Comprehensive Plan, several communication tools were used. These included the following:

- Joint Committee meetings
- Public input sessions following monthly Joint Committee meetings
- Stakeholder interviews
- Telephone survey
- Citizen survey questionnaire
- Three community meetings at different locations in the City from April 7th through April 11th
- Stakeholder group meetings in September and October
    - Industrial
    - Commercial
    - McKinney Independent School District
    - Developers and property owners in the ETJ
    - East McKinney residents
    - Eldorado / Stonebridge Ranch residents
- McKinney Project Office staff by professional planners and urban designers with HNTB
- Write-ups for the City of McKinney's *McKinney City Times*
- McKinney Comprehensive Plan web page

Other means of getting the word out about McKinney's Comprehensive Plan process included presentations before community organizations (McKinney Community Development Corporation and McKinney Economic Development Corporation) and conducting interviews with reporters from the local newspapers.

Goals and Objectives

In the first months of the Comprehensive Plan process, the Joint Committee agreed to an initial set of draft goals and objectives. The development of the initial set of draft goals and objectives came about through a combination of stakeholder interviews and a review of existing documents, such as: the City Core Values - S.P.I.R.I.T., Core Businesses (Mission), McKinney Vision 2012: Guiding Principles, McKinney Vision 2020; Guiding Principles, Strategic Goals 2007 and 2008, and previous long range plans. Many of the ideas expressed in these existing documents were

incorporated as appropriate into the initial draft goals and objectives. These initial draft goals and objectives provided direction as the Comprehensive Plan process moved forward and were utilized in developing the alternative city form scenarios that resulted in the draft Future Land Use Plan and draft Future Land Use Plan Module Diagram. The draft goals and objectives were adjusted by the Joint Committee again in September 2003 based on additional community input.

Listed below are the fourteen goals agreed to by the Joint Committee that guided the development of the McKinney Comprehensive Plan:

The rapid pace of growth in McKinney requires a plan that provides flexibility to changing market conditions, while maintaining a clear direction for the community's desired growth.

- Goal A Economic development vitality for a sustainable and affordable community
- Goal B Preservation of Historic McKinney
- Goal C Attractive hometown that promotes McKinney's Character
- Goal D Leisure and recreational opportunities
- Goal E Financially sound city government
- Goal F Utility and infrastructure systems (water supply, wastewater treatment, storm drainage, etc) adequately serving existing and future residents, businesses, and visitors
- Goal G A multi-modal transportation network that is clean, safe, and efficient
- Goal H Attractive urban design elements (gateways, corridor treatments, edges, and view sheds)
- Goal I Public safety services consistent with community values
- Goal J A managed traffic flow and thoroughfare system
- Goal K Land use compatibility and mix
- Goal L Protection of environmental resources of McKinney
- Goal M Affordable city services that enhance the quality of life
- Goal N Well planned future

Future Land Use Plan, Future Land Use Plan Module Diagram, Supporting Text

The rapid pace of growth in McKinney requires a plan that provides flexibility to changing market conditions, while maintaining a clear direction for the community's desired growth. McKinney's future land use system is a solution to the problems faced in trying to plan for all areas of a community that is experiencing rapid growth. Components of the Plan include the Future Land Use Plan, the Future Land Use Plan Module Diagram, and supporting text indicating the desired use of the land. This three tier system for guiding McKinney's growth and development requires that each part be used in conjunction with the other two parts.

The Future Land Use Plan is a graphic illustration of the general land use mix desired for McKinney and its ETJ. This map includes bold and pastels colors, with the bold noting areas with limited or no development while pastel colors characterize areas with significant development or zoning. The Future Land Use Plan Module Diagram presents the same geographical area, but breaks this area down into sixty-one (61) planning areas, or modules. Module types are denoted by one of twelve (12) dominant land use types containing a variety of acceptable secondary land uses. The percentage land use mix in each module is acceptable based on locational criteria noted in the supporting text. In addition to providing locational criteria for the future land use plan modules, the supporting text includes an overview, land use table, land use description, and community form for each module section.

Economic Development and Fiscal Impact

A unique aspect of the McKinney Comprehensive Plan is the development of the Development Simulation Model (DSM). The DSM used as part of the City of McKinney Comprehensive Plan provides three separate analyses to be used in the development of the Future Land Use Plan and in making land use decisions in the future — Build-Out Scenario Comparison, Ten-year Cash Flow, and Cost/Benefit Potential Comparison. This model provides a clear, comparative link between future land use and its resulting impact on public finances allowing Staff, as well as elected and appointed officials, to make informed decisions that benefit the City of McKinney.

Implementation

To ensure that the goals of the Comprehensive Plan are realized requires a program for implementation. Nine (9) work plans were identified to achieve compliance with the goals and objectives expressed in McKinney's Comprehensive Plan. Listed below are the identified work plans:

1. Display side-by-side for public review and reference in the McKinney City Hall Council Chamber and the Development Services lobby the Future Land Use Plan and the Future Land Use Plan Module Diagram
2. Review and modify City's codes and ordinances for compliance with the McKinney Comprehensive Plan document
3. Refine module / land use implementation process
4. Refine and tweak fiscal impact / economic development system
5. Prioritize the top three items in the Urban Design Element that need implementation and provide schedule
6. Initiate Parks and Recreation gateway plan
7. Initiate sector plans
8. Develop intergovernmental support for promoting the Collin County Multimodal Transportation Corridor
9. Update the library master plan

As a living document, the Comprehensive Plan has seen many amendments since 2004, including:

- October 2005
- April 2006
- March 2008
- June 2008
- January 2010
- December 2012
- July 2013
- May 2015
- June 2015

EXHIBIT A

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Section 1: Introduction

This section summarizes the organization of the Plan, establishes the purpose of the McKinney Comprehensive Plan, defines the planning area, and provides a brief overview of the unique history of McKinney, Texas. The Introduction sets the stage for the information included in the Plan such as goals and objectives, physical data, fiscal analysis, and the plan elements that define future growth directions and opportunities.

1.1 Introduction of McKinney Comprehensive Plan

The McKinney Comprehensive Plan is intended to direct the long-term physical development and growth of the City for the next five to ten years. At that point the Plan will need to be updated after evaluating the changes that have occurred in the planning area under the Plan. The Plan communicates McKinney's vision for the community as defined by the stakeholders and is also a long-range statement of public policy guiding that vision. The Plan allows McKinney the ability to:

- Balance the level of service with the community's values and desires,
- Coordinate public and private investment,
- Respond to growth and development pressures by an approved method for evaluating impacts on the City's fiscal structure,
- Minimize the impacts associated between residential and commercial uses, and
- Provide a rational and reasonable basis for making decisions about community development

The McKinney Comprehensive Plan is a statement of community values, ideals, and vision defining McKinney's future development and growth.

McKinney's Comprehensive Plan establishes a basis for continued planning activities designed to produce the best possible decisions about a community's future. The framework for other planning activities, ranging from urban design plans to public health and safety regulations are developed from the ideas expressed in the Comprehensive Plan document for McKinney.

McKinney's Comprehensive Plan is divided into thirteen sections. Each section is designed to accomplish specific objectives of the planning process, and each section deals with the specifics of the topic. The planning process will be described in detail in the following section. The sections are listed below:

Executive Summary
Section 1 Introduction
Section 2 Planning Process
Section 3 Goals and Objectives
Section 4 Existing Conditions
Section 5 Alternative City Form Scenarios
Section 6 Economic Development and Fiscal Impact
Section 7 Land Use Element
Section 8 Transportation Element
Section 9 Parks, Recreation and Open Space Element
Section 10 Water / Wastewater Element
Section 11 Urban Design Element
Section 12 Educational Facilities and Services Element
Section 13 Implementation
Definitions

1.2 Purpose

The McKinney Comprehensive Plan is a multi-purpose document developed to serve the citizens of McKinney, its elected and appointed officials, and the City Staff on a daily basis. The purpose of the Comprehensive Plan is to serve as:

1. A community statement about the direction and form of McKinney's future development and growth,
2. A guide for decision makers within the City of McKinney,
3. An educational resource, and
4. A tool for managing McKinney's economic, social and physical development to achieve the quality of life desired by its citizens

Community Statement

The Comprehensive Plan is a statement of community values and ideals leading to a singular vision.

The Plan is a statement of community values and ideals leading to a singular vision. It organizes a wide variety of elements that make-up the comprehensive picture of McKinney. The Comprehensive Plan document allows this picture or vision to be viewed by all.

Guide for Decision Makers

For McKinney's elected and appointed officials, as well as City Staff, the Comprehensive Plan provides guidance. The window of opportunity for making informed decisions is limited, and the plan provides information while that opportunity is present. The comprehensive plan provides direction for decision making on matters such as community values, fiscal opportunities or cost, and assists in their day-to-day administrative roles.

As a guide for decision makers the Comprehensive Plan should be consulted on a frequent basis. The Comprehensive Plan can assist City Council and Staff in planning for new facilities, reviewing staffing levels, and evaluating the levels of City services. Development of the annual City budget should also include a review of the goals and objectives of the Comprehensive Plan. Ordinance updates, policies and special studies should reference the Comprehensive Plan to ensure that the vision of the Plan is being considered. It should be noted that in many cases these activities will be done to implement the Plan in order to achieve that vision. The Comprehensive Plan should also serve as the basis for the Capital Improvements Program (CIP).

All development related applications should be reviewed in the context of the Comprehensive Plan. Annexations, zoning cases, and development agreements in particular should work to further the ideas espoused by the Plan. Cases which are not discretionary such as site plans and plats should also be evaluated for their conformance to the Plan. Recommendations for ordinance changes should be considered so that these development projects are more in line with the Plan .

Education Resource

Given that the Plan can be viewed by everyone in the community, the Plan is also able to serve as an educational tool. Education occurs as the citizens and community leaders plan for the organized development of achieving McKinney's goals. The Plan uses text, diagrams, charts, photographs, and graphic maps to address the many issues facing the future of McKinney.

By making our plans for physical development public, the Plan satisfies a basic but key educational requirement. By laying out a physical plan for the City, its residential and commercial areas, its roads and bridges, its water and sewer system, its parks and schools, the Plan sets the course for future decisions and actions. Residents can make informed choices about where to establish their homes. Owners of land understand the potential future uses for their property as well as property in the surrounding area. It also assists local government in understanding where services and facilities are needed. This resource is provided through:

A. An informed group of citizens is important in providing for effective public participation and discussion on these issues. The Plan serves as an information resource in order to allow every citizen to participate fully.

B. The public participation process served to crystallize the views and vision of the citizens/stakeholders in graphic form that depicts relationships in the planning area. The phone survey, individual meetings, and public meetings led to the development of the goals and objectives which serve as the vision for the community.

The Comprehensive Plan is a dynamic guide to help citizens and community leaders plan for McKinney's future.

Tool for Managing McKinney and Achieving High Quality of Life

Consequently, the McKinney Comprehensive Plan becomes a tool for managing the growth and maturity of the City to achieve the quality of life desired by its residents. Since the adoption of McKinney's last Comprehensive Plan (May 1990) the City has experienced rapid growth, compelling McKinney to complete a new Comprehensive Plan. This Plan revises and updates all elements toward future growth projections. This Comprehensive Plan provides direction for future services needed to support planned growth, including new roads, water lines, sewer lines, parks, and public facilities.

To function as an active working document, the Comprehensive Plan is designed to be flexible and provide latitude for more detailed analyses; however, decisions should be consistent with the goals, objectives, and policies established in the McKinney Comprehensive Plan. The Plan is a dynamic guide to help citizens and community leaders plan for McKinney's future.

Unique to this Plan is the degree to which the fiscal impact of development has been incorporated into the Plan. As a result of discussion occurring in the community as the update was being planned, City Council directed Staff to include a fiscal modeling component in the Plan. To this end, the City hired Insight Research Corporation to develop this component.

Insight Research Corporation created a Development Simulation Model (DSM) that could measure fiscal impacts of each land use decision. The input provided by this model helps to ensure that each change to the Future Land Use Plan allowed for a balanced tax base. The Comprehensive Plan's emphasis on financial responsibility provides the City with additional information that can be a basis for making future land use decisions.

1.3 Texas Municipalities

In the McKinney Comprehensive Plan, as in all comprehensive plans created in the State of Texas, the desire is to assist communities to plan for quality and orderly development. The authority regarding the development of the McKinney Comprehensive Plan is given to Texas municipalities through Chapter 213 of the Texas Local

Government Code. Chapter 213 states the purpose of a municipal comprehensive plan as follows:

> *"The powers granted under this chapter are for the purpose of promoting sound development of municipalities and promoting public health, safety, and welfare."*

Legislation suggests that the parts covered in a comprehensive plan provide for the long-term development of the community. The Comprehensive Plan for McKinney uses this legislation to define plans for future land use, future land use modules, transportation, parks and recreation, urban design, water, wastewater and educational facilities and services. The McKinney Comprehensive Plan titles these coordinated sets of plans "elements," with each element being specific to its name and content.

The McKinney Comprehensive Plan will have the support of City development regulations and ordinances. These items and others will be developed and adopted to provide an additional level of detail toward the implementation of this plan. This Comprehensive Plan provides the foundation for making changes and gives direction to the establishment of new regulations that implement the vision, goals, plans, and policies of the McKinney Comprehensive Plan.

1.4 Planning Area

The City of McKinney is the county seat for Collin County. Collin County is one of the fastest growing counties in Texas and the nation. In the last two decades McKinney has shared in this rapid growth. McKinney, located on the northeastern quadrant of the Dallas-Fort Worth Metroplex, is approximately 30 miles north of downtown

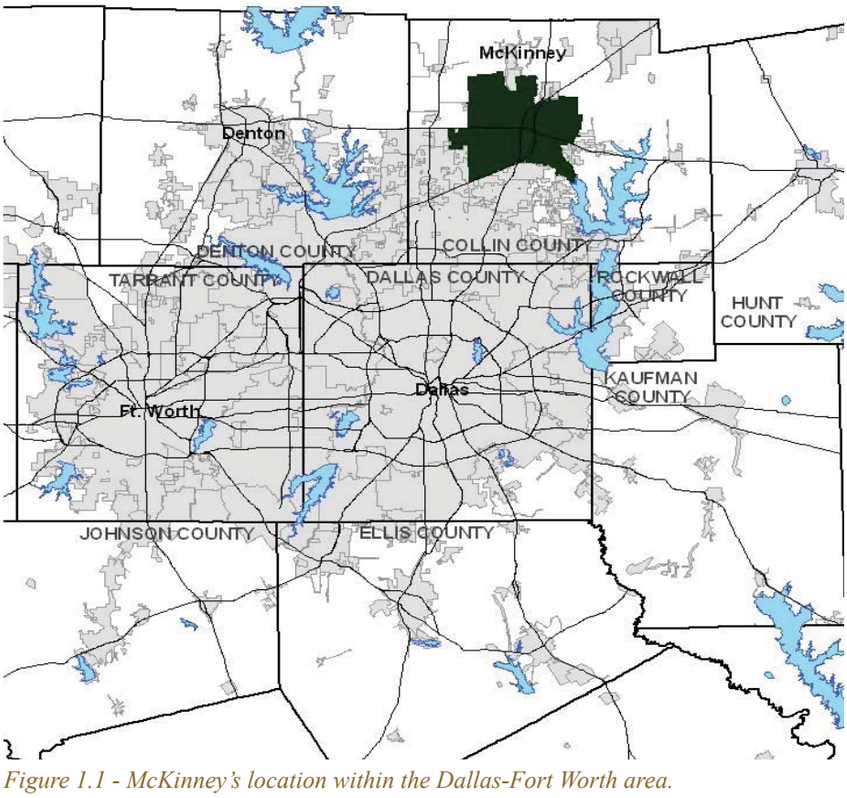


Figure 1.1 - McKinney's location within the Dallas-Fort Worth area.

Dallas on US 75 (Central Expressway / Sam Johnson Highway) and approximately 35 miles northeast of DFW International Airport on SH 121 (Sam Rayburn Tollway). Figure 1.1 shows McKinney's location in the Dallas-Fort Worth area. McKinney is located at the northern apex of a triangular regional growth pattern defined historically by these two roadways. In the last three decades communities along each roadway have experienced strong population and economic growth.

McKinney is surrounded by many other cities: Frisco and Prosper to the west; Celina, Weston, and Melissa to the north; Princeton and Lowery Crossing to the east; with Fairview and Allen to the immediate south. In addition, the City of New Hope is surrounded by the City of McKinney's extraterritorial jurisdiction (ETJ). Figure 1.2 shows the general vicinity map for the City in relationship to surrounding communities.

The planning area for the Comprehensive Plan includes both the City of McKinney's current incorporated area and land within McKinney's ETJ. As of January 2015, McKinney's incorporated area includes 65.8 square miles or 42,112 acres. McKinney's ETJ includes 50 square miles or 32,000 acres. Together the total area that is being included in the Comprehensive Plan covers roughly 115.8 square miles or 74,112 acres. This area covers 13.1% of Collin County's 886 square miles. Figure 1.2 defines the land currently in the City's incorporated boundary and ETJ.

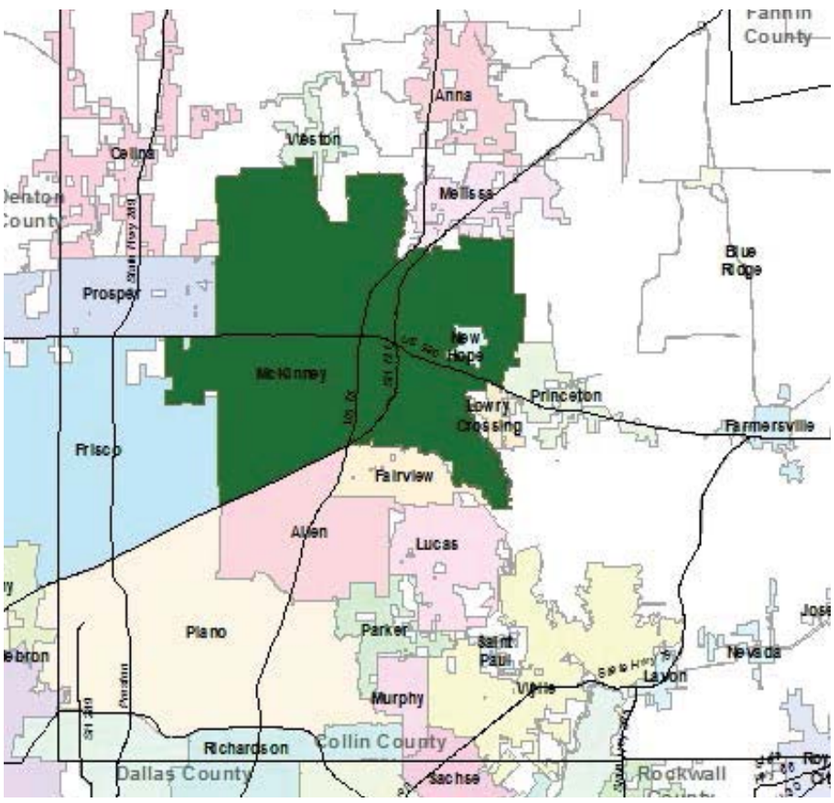
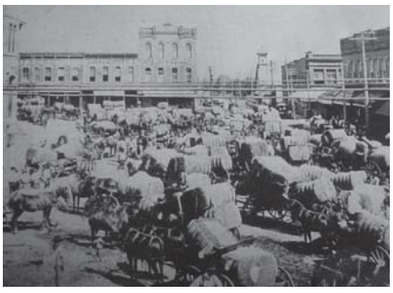


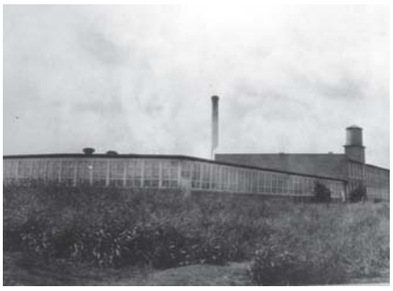
Figure 1.2 - McKinney and surrounding communities in Collin County.

1.5 Historical Overview

McKinney has been blessed with a rich and wonderful past. This past provides the symbols for a community that is much more than a suburb of Dallas. Today, McKinney is a city of two halves — one centered about a historic town square with all key roads leading to the square, and the other half a growing high-quality planned community with all the current amenities. The choices and opportunities are abundant.



Cotton market, 1896. Farmers bring cotton to town, where buyers sit in second floor windows to bid.



Texas Textile Mills, est. 1910. Largest manufacturer of denim west of the Mississippi. Closed operations in 1969.

Agricultural Roots

As noted earlier, McKinney serves as the county seat of Collin County. Collin County was established in 1846 and McKinney in 1848. Both City and county were named for Mr. Collin McKinney, a patriot, land surveyor, legislator, and one of the fifty-six (56) signers of the Texas Declaration of Independence.

The cultivation and processing of locally grown crops fueled much of McKinney's late nineteenth- and early twentieth-century growth and prosperity. During this period, Collin County emerged as one of the leading agricultural centers in Texas. Cotton prevailed as the county's largest and most significant farm product; however, corn, wheat, and oats were also grown in large quantities. Although crop production in the McKinney area continues today, its role in the local economy diminished after World War II.

McKinney's cotton-processing structures played a significant role in the City's history and development during the late nineteenth and early twentieth centuries. Much of the area's vast agricultural potential was realized through the construction and operation of these facilities. Their establishment aided the City's commercial development because area farmers came to McKinney to sell their crops and then purchased goods at downtown stores. These property types also laid the foundation for the City's industrial development and supported the establishment of a textile mill.

Town Square

The Town Square is one of the symbols that people throughout North Texas recognize as being McKinney. The original town site presented a cardinal-point grid plan with a courthouse square near the City's center, a popular town plan throughout Texas. The majority of the state's county seats, especially those of the same vintage as McKinney, are arranged similarly. The square was the sole public space set aside in the original City plan. Anticipating that property near the City's center would be in great demand for business purposes, the city's surveyors made lots facing onto the courthouse square long and narrow, measuring 25 by 100 feet. Such a layout enabled merchants to erect buildings with storefronts for displaying their goods to passerby and room within to conduct business and stock their merchandise. George

The town square was laid out on a cardinal grid with the courthouse in its center. The square was the sole public space set aside in the original town plan.

McKinney town square, late 1880s.

White and Ethelred Whitley, who surveyed the new town site, divided the remainder of the City's blocks into equally sized lots that were reserved for residential use.

Arrival of the Railroad

The arrival of the railroad in 1872 greatly stimulated economic growth and brought new wealth to McKinney. The railroad enticed several industrial enterprises, such as a textile mill, grain elevators and a flour mill, to locate in the community. It also influenced much of McKinney's physical growth and settlement patterns within the City. In addition, the railroad linked the once physically and socially isolated community with the rest of the nation, thus allowing new ideas, people, and goods to arrive in McKinney.

Post World War II

The McKinney Comprehensive Plan of 1964 was the first to propose the loop road around downtown (US 75). This event, along with post WW II population growth and a desire for a decentralized growth pattern away from urban centers, changed the image of McKinney. Prior to US 75, commercial growth was focused in downtown and along SH 5 and Highway 24 (current US 380). With the arrival of US 75, growth began to look further west.

McKinney transitioned into a growing suburban community. This happened at first with residential neighborhoods developing between the historic district and US 75. Then development began to occur west of US 75.

With the establishment of the Eldorado and Stonebridge Ranch planned communities, the focus on suburban development became greater. Eldorado is a 1,105-acre community established in 1980. Stonebridge, originally zoned in 1986, is even larger with 4,750 acres. Both of these developments have been tremendously successful due to the overall quality and response to working with the natural environment. Some of the most visually attractive land in McKinney is within these two premier communities. The infrastructure which was constructed by both of these developments allowed smaller neighborhoods to develop around them. In the 1990s, growth had continued and tremendous growth is occurring in the areas north of US 380 and west of US 75, primarily along Wilmeth Road and Lake Forest Drive.

The new century has brought many new opportunities for the community. McKinney is now one of the largest municipalities in Collin County. The strong commercial and residential growth north of Dallas is influencing development decisions. Plano is almost completely developed and will be experiencing redevelopment. The communities currently experiencing rapid growth are Frisco, McKinney, and Allen.

Craig Ranch, a new planned community in McKinney sited near the intersection of Frisco, Allen, and McKinney on SH 121, is one of the latest large developments. This development is targeting a new and emerging segment in the development marketplace - new urbanism. New urbanism style developments create buildings that draw from historic precedents. These precedents for Craig Ranch include a focus on public space, pedestrian scaled streets, mixed use development (residential above commercial), and architectural standards that are influenced by historic Texas models. Mr. Andres Duany with his company was the master planner for this development in 2001. This development and many others show the range of live and work options that McKinney offers its residents.

Kenyon Grocery, ca. 1930s. later Bergvall & Son, located at 119 S. Tennessee. First grocery to have air conditioning in McKinney.

The arrival of the railroad in 1872 greatly stimulated economic growth and brought new wealth to McKinney. It enticed industrial enterprises to locate here, influence physical growth and settlement patterns, and linked the community with the rest of the nation.

EXHIBIT B

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Section 2: Planning Process

The McKinney Comprehensive Plan has been developed through a process creat ed specifically for the City. The structure of the planning process allowed for the orderly development of the Comprehensive Plan, from kick-off meetings and public involvement to analyzing alternative plans and the final adoption by elected City Officials.

The Comprehensive Plan process was designed to be inclusive, not simply allowing for but soliciting public input through each phase of the project. The strength of the process is realized in a plan which captures the vision of the community.

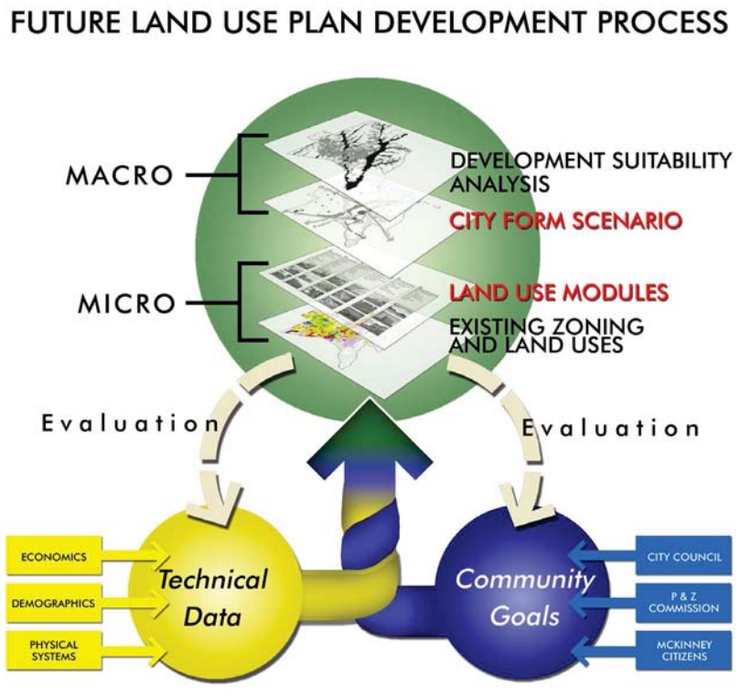
The decision to update the 1990 Comprehensive Plan was made in the summer of 2002. As a first step, City Staff began to develop the first rough drafts of the criteria for the Plan — anticipated outcomes, timeline, RFQ for services, etc. It was determined that the City Council and the Planning and Zoning Commission would serve as the Joint Committee for the Plan, which was anticipated to be developed during 2003. HNTB was the firm selected to develop the Plan.

With the selection of HNTB, a project work program-flow chart was created. Key elements of the process were monthly Joint Committee meetings and public input meetings.These meetings were designed to inform the Joint Committee and the community on issues associated with the Plan as well as the progress being made, to receive comments and direction, and to approve draft chapters of the Plan.

The Comprehensive Plan process was designed to be inclusive, not simply allowing for but soliciting public input through each phase of the project.

2.1 Comprehensive Plan Process - Five Phases

Like most projects, the 15-month McKinney Comprehensive Plan process had a life cycle of its own. This cycle of events included an initial period of collecting data, interviewing community stakeholders, and defining the community's goals and objectives — the foundation for developing the Plan. With the base established,



McKinney's future land use plan development process.

the main ingredients driving the Plan were analyzed and then refined for the eventual selection by the Joint Committee of a draft preferred plan. The draft preferred plan dictated the various elements of the Plan. The final stages of the Plan process focused on documenting the implementation of the Plan through City policy, including the eventual approval of the McKinney Comprehensive Plan document by McKinney's Planning and Zoning Commission and the document's adoption by the McKinney City Council.

The McKinney Comprehensive Plan process was broken down into five distinct phases:

Phase 1 Community Vision
Phase 2 Status of McKinney
Phase 3 Community Needs Assessment and Goal Setting
Phase 4 Comprehensive Plan Elements
Phase 5 Implementation

The Community Vision phase established the internal structure for conducting the overall plan process. This structure included hosting kick-off meetings, establishing meeting schedules throughout the plan process, gathering base data, conducting stakeholder interviews with community leaders and concerned citizens, creating a communications program, and developing preliminary goals and objectives for the Plan.

The comprehensive plan elements developed guidelines, policies, and programs to address issues critical to McKinney's growth and helped achieve community goals and objectives.

The Status of McKinney phase examined the opportunities and constraints existing in the community and what this meant for growth and development of McKinney. Opportunities and constraints included both natural and man-made features that positively or negatively impact the community. A final goals and objectives statement by the Joint Committee was desirable during the Status of McKinney phase to move the project forward. Both the Community Vision phase and Status of McKinney phase helped form the base for developing the Plan.

The phase titled Community Needs Assessment and Goal Setting took the information gathered during the first two phases to identify community needs. During this phase of the process, goals and objectives as well as the local issues tied to community planning and growth management were refined through citizen input and the involvement of McKinney's elected and appointed officials. Alternative city form scenarios and similar development plans were presented for public consideration and comment. The result was an approved draft preferred plan by the Joint Committee that provided direction for developing the various elements making up the Comprehensive Plan.

Based on the selected draft preferred plan, the Comprehensive Plan Elements phase of the planning process involved the steps that developed guidelines, policies, and programs to address issues critical to McKinney's growth and helped achieve community goals and objectives.

The Implementation phase was the final stage in the Comprehensive Plan process. This last phase was the culmination of the 15-month long Plan process where City policy was developed to guide McKinney's future development. This was the phase where 'pen met paper' as adoption drawings and the adoption report were developed in final draft form for review, public input, and refinement for the ultimate approval and adoption of the final document.

2.2 Communication and Public Input

An important component of the Plan process was establishing a method of communication to inform McKinney residents and to solicit public input during the development of the Plan. During the Comprehensive Plan project various communication tools were used to get the message out to the public about the project and to foster community participation. In addition, several avenues were available to solicit public input and incorporate the public's values into the Comprehensive Plan. Methods used to promote and to solicit public input into the Comprehensive Plan project included the following:

- Joint Committee meetings (12 meetings)
- Public input sessions following Joint Committee meetings (12 sessions)
- Stakeholder interviews (establish goals and objectives)
- Phone survey
- Citizen surveys (establish goals and objectives)
- Community meetings (3 meetings)
- Stakeholder group meetings
- McKinney Project Office (from January 2003 to October 2003)
- McKinney City Times newsletter (7 issues)
- McKinney Comprehensive Plan web page (http://compplan.mckinneytexas.org/)

Joint Committee Meetings

Throughout the Comprehensive Plan process (from January 2003 through early Spring 2004), there were twelve (12) monthly Joint Committee meetings held. Committee meetings, made up of members of the McKinney City Council and McKinney Planning and Zoning Commission, were used to introduce or update committee members regarding the progress of the Comprehensive Plan process. Committee members would ask questions, voice concerns, and provide City Staff and HNTB planners guidance for the Plan's development. Joint Committee meetings were open for the public to attend.

Public Input Sessions

Following the Joint Committee meetings, public input sessions were conducted for citizens to become involved. The twelve (12) public input sessions allowed residents to ask questions of City Staff and HNTB planners and provided a means for citizens to express their concerns and desires for McKinney's development.

Stakeholder Interviews

At the onset of the Comprehensive Plan process, approximately one hundred (100) stakeholder interviews were conducted with elected and appointed City Officials, concerned citizens, neighborhood leaders, and representatives from the business community and educational districts. Stakeholder interview questions consisted of many of the same questions found in the citizen survey on the City's Comprehensive Plan web page. Interviews were conducted in private with the individuals knowing that their comments were not for City or public review. These discussions lasted about half an hour for each of the one hundred (100) people interviewed.

Information obtained from these interviews helped HNTB planners gain a better grasp of the values and current issues facing the community. This is a standard process for the planning team to get a quick cross-section of community input.

Public presentation during a montly Joint Committee meeting (McKinney City Council and McKinney Planning & Zoning Commission).

Public input sessions

Approximately 100 stakeholder interviews were conducted with elected and appointed city officials, concerned citizens, neigh borhood leaders, and representatives from the business community and educational districts.

Phone Survey

The City of McKinney retained Raymond Turco & Associates, a public opinion research firm, to conduct a scientifically accurate attitudinal survey of City residents to ascertain their viewpoint on issues involving City planning and City services. The surveys were conducted over the phone between March and April of 2003. This opinion survey was conducted to serve as a major public involvement component of the City's Comprehensive Plan update. The questionnaire was designed to examine residents' attitudes about City services, quality of life, proposed public improvements, economic development, and City initiatives.

The information gathered in the report allowed elected officials and City Staff to better understand attitudes and desires of its citizenry regarding this important subject area. The results of the survey were presented during a Joint Committee presentation. The results of the survey provided City Leaders the assurance that a broad cross-section of the community had provided input in the development of the goals and objectives. A copy of the community survey is included in the appendix of this Plan.

Community Meetings

During the second week of April 2003, three community meetings were held in different sections of McKinney. These meetings were held to let citizens view the work produced to date on the Comprehensive Plan and to encourage public input. Items displayed for public review included the Joint Committee-endorsed goals and objectives, alternative city form scenarios, and maps of McKinney. A PowerPoint presentation gave those attending a step-by-step briefing of the Comprehensive Plan process and the work conducted to date.

Meetings were designed to foster public input, either through direct questions and answers or by asking residents to physically give their preference on the maps to the city forms they preferred for their neighborhoods and the City as a whole. During the community meetings, City Staff were in attendance to record public comments.

Stakeholder Group Meetings

As a result of direction by the Joint Committee in August, HNTB and City Staff conducted a series of focused stakeholder meetings to solicit input midway through the Comprehensive Plan update process. Staff tried to coordinate a series of meetings with 6 to 12 people who had interest or expertise in a particular aspect of the community and its development — east side residents, west side residents, retail developers, industrial developers, the McKinney Independent School District, and property owners in the ETJ. The input from these groups was reviewed by Staff and incorporated into the goals and objectives, the draft Future Land Use Plan and the draft Future Land Use Plan Module Diagram as appropriate. An update was provided to the Joint Committee in October 2003.

McKinney Project Office

From January 2003 to October 2003, a McKinney Project Office was established. Three planners with HNTB's Dallas Urban Design and Planning division were relocated to office in the City of McKinney's Planning Department. The presence of HNTB planners was done to help facilitate internal communications between McKinney City Staff and HNTB planners and to have available to McKinney residents project members to answer questions or take comments related to the Comprehensive Plan.

McKinney City Times Newsletter

Throughout the 15-month long period, the *McKinney City Times* newsletter ran seven stories regarding the Comprehensive Plan process. The stories contained information ranging from the Comprehensive Plan's initial kick-off to the community meetings in April 2003 and from the Joint Committee's endorsement of the draft preferred plan to the adoption of the Comprehensive Plan's final report. Besides text, the newsletter provided colorful maps and photos showing the progress being made in the Plan process.

McKinney City Times newsletter

McKinney Comprehensive Plan Web Page

In January 2003, a McKinney Comprehensive Plan web page was created by City Staff from Public Information and Planning. The web page was linked from the City's home page on the Internet. The web page provided updates and a range of information regarding meetings, maps, plan process, glossary of terms, project timeline, draft goals and objectives, the citizen survey questionnaire, draft chapters, contact information, and background information regarding HNTB and its planning staff.

McKinney Comprehensive Plan web page

Other communication tools used to get the word out ranged from the time-tested 'word-of-mouth' means to more sophisticated tools of today — cable channel interviews and email distribution list. In addition, the City developed an official Comprehensive Plan logo and generated news releases for the local media. Both McKinney City Staff and planners with HNTB were available for interviews to reporters from the *McKinney Courier-Gazette*, the *McKinney Messenger*, and *The Dallas Morning News*.

With many of the mediums listed above, both telephone numbers and email addresses were made available so McKinney residents could ask questions or provide community input for the Comprehensive Plan to planners. Several additional means were used in the Plan process to seek community participation and gather the values citizens have associated with McKinney.

Section 3: Goals and Objectives

This section sets out the goals and objectives that form the basis of the Plan and will serve as a guide for implementation. The fourteen (14) goal statements in this Plan are broad in scope and long-range in commitment. The Plan's different elements (including Land Use, Transportation, Parks, Recreation and Open Space, Water/ Wastewater, Urban Design, and Educational Facilities and Services) are designed as vehicles to achieve the community's goals and objectives.

3.1 Process

Goals and objectives were developed utilizing existing city plans and documents, stakeholder interviews, and community survey results.

A comprehensive effort was undertaken to solicit input from residents, business leaders, community advocates, City Staff, and political officials — or commonly referred to as stakeholders, to provide input into the goals and objectives. A review of existing documents, such as the City Core Values - S.P.I.R.I.T., Core Businesses (Mission), McKinney Vision 2012: Guiding Principles, McKinney Vision 2020: Guiding Principles, Strategic Goals 2007 and 2008, and previous long-range plans occurred. These goals were reviewed to determine if they were appropriate for a long-range planning document. The ideas expressed in these existing documents were incorporated into the Comprehensive Plan Goals and Objectives as appropriate.

Existing City Goals

As a prelude to starting the process of updating the Comprehensive Plan, existing and past documents were reviewed to provide direction. One set of documents included previous element plans — the 1990 Comprehensive Plan, park and open space plans, thoroughfare plans and special studies. A second set of documents which comprise the City of McKinney Strategic Plan Elements was also reviewed. A complete listing of these documents can be found in the appendix.

Stakeholder Interviews

At the onset of the Comprehensive Plan process, approximately one hundred (100) stakeholder interviews were conducted with elected and appointed City Officials, concerned citizens, neighborhood leaders, and representatives from the business community and educational districts. Stakeholder interview questions consisted of many of the same questions in the citizen survey found on the City's Comprehensive Plan web page. Interviews were conducted in private, with the individuals knowing that their comments were not for City or public review. These discussions lasted about 30 minutes for each of the one hundred (100) people interviewed.

Information obtained from these interviews helped planners with HNTB gain a better grasp of the values and current issues facing the community. This is a standard process for the planning team to get a quick cross-section of community input.

Phone Survey

At the beginning of the planning process, the City hired an outside consultant to conduct a community-wide phone survey. This survey was statistically valid and included over four hundred (400) individuals. The surveys were conducted over the phone between March and April of 2003. Raymond Turco & Associates conducted the survey.

Questions on the survey included citizens concerns in the areas of personal values, appreciation for their community, and the City's delivery of service. The results of the survey were presented during a Joint Committee presentation. The results of the survey provided City leaders the assurance that a broad cross-section of the community had provided input in the development of the goals and objectives.

3.2 Development of Goals and Objectives

The initial draft of the goals and objectives was presented to the Joint Committee in January 2003. The committee directed HNTB and City Staff to utilize the draft goals and objectives in developing the alternative city form scenarios which led to the development of the draft Future Land Use Plan and the draft Future Land Use Plan Module Diagram. Changes were made to the draft goals and objectives as a result of additional community input in September 2003.

Goals are qualitative statements regarding McKinney's vision for its future.

3.3 Comprehensive Plan Goals and Objectives

Goals

Goals are qualitative statements regarding McKinney's vision for its future. The goals serve as the vision for the community. Many of the goals are broad in nature, but they can also be more focused on a particular component of the community.

Objectives

Objectives are actions and activities relating to the implementation of the goal.

Objectives are actions and activities relating to the implementation of the goal. The objective is a means of measuring the progress toward completing or attaining the goal. The following goals are clearly the identified needs of the community:

A. Economic Development Vitality for a Sustainable and Affordable Community
B. Preservation of Historic McKinney
C. Attractive Hometown that Promotes McKinney's Character
D. Leisure and Recreational Opportunities
E. Financially Sound City Government
F. Utility and Infrastructure Systems (Water Supply, Wastewater Treatment, Storm Drainage, etc) Adequately Serving Existing and Future Residents,Businesses, and Visitors
G. A Multi-modal Transportation Network that is Clean, Safe, and Efficient
H. Attractive Urban Design Elements (Gateways, Corridor Treatments, Edges, and View Sheds)
I. Public Safety Services Consistent with Community Values
J. A Managed Traffic Flow and Thoroughfare System
K. Land Use Compatibility and Mix
L. Protect Environmental Resources of McKinney
M. Affordable Services that Enhance the Quality of Life
N. Well Planned Future

Goal A
Economic Development Vitality for a Sustainable and Affordable Community

Objectives:
A1 Balanced development pattern
A2 Regional employment center
A3 Balanced commercial development along major highway corridors
A4 Commercial and industrial development at the Collin County Regional Airport
A5 Business and industrial parks
A6 Retention and expansion of existing businesses
A7 Retention and expansion of regional medical provider, government center, and higher education center
A8 Thriving retail development
A9 Sports and entertainment

Goal B
Preservation of Historic McKinney

Objectives:
B1 Downtown emphasizing historic appearance and aesthetics
B2 Appropriate infrastructure
B3 Convenient parking and access
B4 Emphasis on McKinney's historic and cultural resources
B5 Infill development for Historic McKinney
B6 Gateway Park

Goal C
Attractive Hometown that Promotes McKinney's Character

Objectives:
C1 Public and private open space (softscape)
C2 Attractive and distinctive neighborhoods
C3 Creeks and lakes of a high environmental quality
C4 Homes and buildings complying with City standards and codes
C5 Well-maintained system of public spaces through City streets, pedestrian sidewalks, and parks
C6 Attractive residential screening, buffering, and entryways
C7 Neighborhood enhancement through the use of schools/parks sites
C8 Single-loaded residential streets along creek corridor, both public and private

Goal D
Leisure and Recreational Opportunities

Objectives:
D1 Strategically appropriate parks and open spaces
D2 Recreational programs for citizens of all ages
D3 Playing and practice fields for active / team recreation
D4 Passive recreation opportunities
D5 Recreational venue as a regional economic attraction (related to item A9)

Goal E
Financially Sound City Government

Objectives:
E1 Balanced tax base
E2 High-quality City services

E3 Diverse commercial tax base
E4 Financial policies with high financial reserves
E5 Cost-effective delivery of City services
E6 Debt service
E7 Community communication (that is understandable)
E8 Bond rating

Goal F
Utility and Infrastructure Systems (Water Supply, Wastewater Treatment, Storm Drainage, etc.) Adequately Serving Existing and Future Residents, Businesses, and Visitors

Objectives:
F1 High levels of service for public utility infrastructure systems
F2 Development utilizing existing infrastructure and utilities
F3 Well-planned new infrastructure
F4 Infrastructure and utility efforts coordinated with other entities
F5 Underground utility lines
F6 Continual upgrade of infrastructure
F7 Enforcement of existing annexation policy

Goal G
A Multi-modal Transportation Network that is Clean, Safe, and Efficient

Objectives:
G1 Collin County Regional Airport as a regional and corporate jet airport facility
G2 Railroad tracks providing freight service
G3 Potential Dallas Area Rapid Transit light rail line
G4 A network of hike and bike trails that links into the Collin County trail plan and provides linkages to residential areas, employment centers, commercial districts, and public facilities
G5 McKinney serving as a hub for transportation activity in Collin County
G6 Inter-agency relations expanded and strengthened (TxDOT, NCTCOG, etc.)

Goal H
Attractive Urban Design Elements (Gateways, Corridor Treatments, Edges, and View Sheds)

Objectives:
H1 McKinney's natural features - including slopes, woodlands, and floodplains - serving as gateways into the community
H2 A hierarchy of gateway types that enhance various development patterns, communities, districts, crossings, and points of interest
H3 Important local vistas preserved as significant view sheds that capture the image of McKinney
H4 SH 5 as an attractive north-south entry into central McKinney
H5 SH 121 corridor as an attractive edge through appropriate urban design
H6 US 75 as an attractive corridor through appropriate urban design
H7 US 380 as an attractive corridor through appropriate urban design
H8 Enhance thoroughfare landscaping

Goal I
Public Safety Services Consistent with Community Values

Objectives:
I1 Appropriate levels of service of public safety to all areas of the City

I2 Professional police services
I3 Professional fire and EMS services
I4 Professional animal control
I5 Professional health inspection
I6 Professional building inspection services

Goal J
A Managed Traffic Flow and Thoroughfare System

Objectives:
J1 Chosen levels of service for public thoroughfare systems
J2 Efficient and desirable connections / movements / signalization
J3 A thoroughfare network system connecting into adjoining communities' thoroughfare network grids
J4 A thoroughfare network system corresponding to the natural contours and physical features of the landscape
J5 Enhance thoroughfare landscaping (item H8)

Goal K
Land Use Compatibility and Mix

Objectives:
K1 Land use patterns that complement one another
K2 Land use patterns that optimize and balance the tax base of the City
K3 A mix of land uses that provides for various lifestyle choices
K4 Land use patterns that address appropriate transition and mix of uses
K5 Diverse land uses in a geographic area
K6 Consider real estate market forces

Goal L
Protect Environmental Resources of McKinney

Objectives:
L1 Recognition of McKinney's local natural resources
L2 City programs that foster joint public-private partnerships toward the preservation of environmental resources

Goal M
Affordable City Services that Enhance the Quality of Life

Objectives:
M1 City services consistent with community values
M2 City programs and services that make residents aware of opportunities
M3 Joint partnerships with other public entities and private entities provide residents and neighborhoods expanded services beyond the standard levels of service

Goal N
Well Planned Future

Objectives:
N1 A Comprehensive Plan that shapes tomorrow
N2 Detailed area studies to support the Comprehensive Plan
N3 A Comprehensive Plan updated as needed based on growth

3.4 Summary

The Plan uses these goals and objectives during the development of each specific element, such as Land Use, Parks, Recreation, and Open Space, Urban Design, etc. The HNTB team also used these goals to test alternative land use and roadway scenarios during the planning process. The citizens of McKinney used these goals and objectives to review future development patterns and new opportunities to increase the overall quality of life.

The goals and objectives of the Plan are produced to serve the public interest. Individual proposals for development may, at times, be in conflict with the literal application of the goals and objectives. Additionally, situations will be presented where the various goals and objectives are in conflict. Therefore, all goals and objectives may not be met in all instances, and their application will reflect a weighing of the issues involved in resolving the conflicts naturally arising in individual circumstances.

The goals and objectives will serve as the basis of the development of strategies designed to implement the Plan.

Section 4: Existing Conditions

Today's McKinney, enjoyed by people who live and work in the community, has been influenced by several factors and events throughout the decades. Since 1848, when it was designated the county seat for Collin County due to its central location, McKinney has capitalized on its geographic assets as well as the enterprise of its residents. The community's location in the Blackland Prairie Belt, its role in county government, and its placement on the railroad line allowed it to become a center for government, agriculture, and trade at the start of the 20th century. Today, McKinney is benefiting from its proximity to the explosive growth in northern Dallas and its direct highway connections to Dallas/Fort Worth International Airport via SH 121 (Sam Rayburn Tollway). Since 2004, McKinney has been recognized as being one of the fastest growing communities in one of the fastest growing counties in the nation.

To get a sense of McKinney's future growth, planners, City Officials, and residents need to understand McKinney's growth characteristics, its existing conditions, and how the community ranks against comparable areas and broader averages. The information gathered provides a foundation for the following:

- *Understanding the socioeconomic make-up of McKinney*
- *The dissemination of officially recognized data in an organized manner*
- *The comprehension of the dynamics influencing local and regional socio-economic growth and how this compares to other geographic areas*
- *Understanding the limitations and opportunities to future growth*
- *The solicitation of public input*
- *City Administrators and Staff to base decisions that will impact neighborhoods and the community as a whole*
- *The eventual establishment of guidelines and policies that will direct City growth, management, and fiscal accountability*
- *Elected City Officials to make both short-term and long-term decisions*

The information gathered at the initial stages of the project provided this basis for clarification and understanding throughout the remainder of the project.

McKinney's 2015 population estimate was 155,142, up 24,025 persons from the 2010 Census and 100,773 persons from the 2000 Census.

4.1 Population

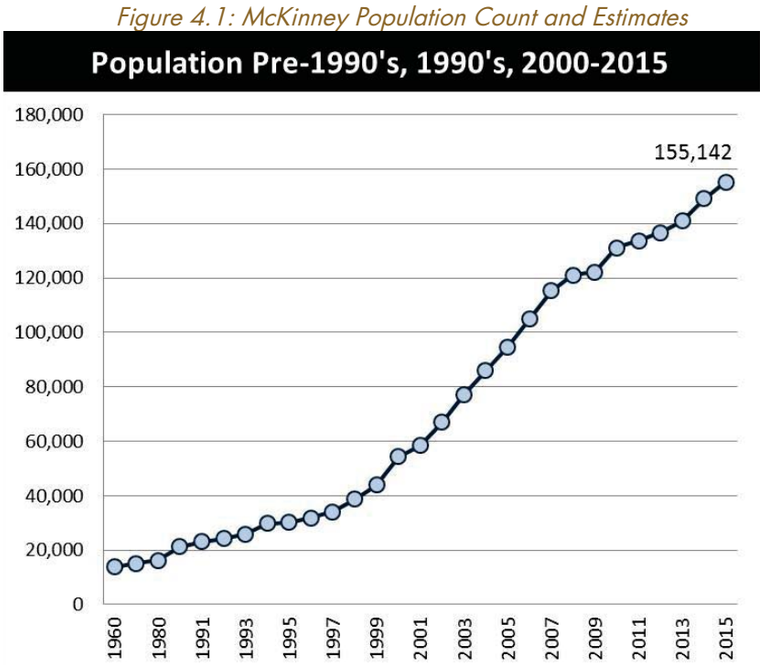
Population is one of the most assessable and commonly used measures used to judge the viability of a community. The rise and fall of a city's population growth trend says much about a community's economic health, life cycle, and attractiveness. Population (measured using absolute numbers) can be expressed as a head count or listed in a ranking of communities. At the local level absolute numbers play an important role in the delivery of goods and services for both the public sector and the private sector, such as particular retail developments locating within a given area of population.

Since 1990, the City of McKinney has been experiencing high population growth. This remarkable population growth is expressed by the following Census statistics:

- *Between 1990 and 2000, McKinney's population rose from 21,283 to 54,369, an increase of 33,086 people.*

- *Between 1990 and 2000, the annual average population growth rate of McKinney was 15.5%, surpassing Dallas-Fort Worth's 2.9%.*

Figure 4.1: McKinney Population Count and Estimates



Source: United States Census Bureau, 1960-1990, 2000, and 2010; City of McKinney annual population estimates, 1991-1999, 2001-2009, and 2011-2015.

Between 1990 and 2000, McKinney captured 2.9% of the Dallas-Fort Worth area's absolute population growth of 1.1 million people.

- *As of the 2000 Census, McKinney's share of Collin County's population rose to 11.1%, up from the 8.1%share recorded in the 1990 Census.*
- *McKinney's population estimate for year 2015 was 155,142 — up 24,025 persons from the 2010 Census and 100,773 persons from the 2000 Census.*

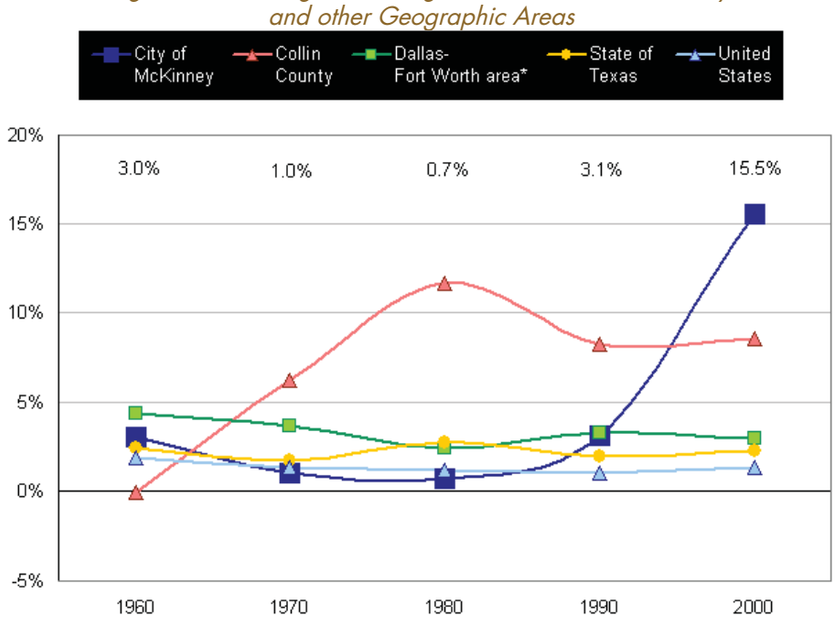
4.1 Population Growth

Up until the last thirty years, the City of McKinney has experienced low to moderate growth, either keeping pace with or trending just below national, state, and metropolitan population growth. From 1950 to 1980, the City of McKinney's population grew from 10,560 to 16,256 respectively (approximately 54%), adding 5,696 people during this thirty year period.

As of 2012, McKinney captures 2.7% of the Dallas-Fort Worth area's absolute population growth of 1.3 million people.

During the 1980s, the first wave of growth from the Dallas metropolitan area hit McKinney. In the years between 1980 and 1990, the City added 5,027 new residents, almost as many as previously added between 1950 and 1980. The population change occurring between 1980 and 1990 resulted in an annual average population growth rate of 3.1%. This was three times the growth rate experienced by the United States during the same period and slightly below the 3.3% average annual population growth rate for the Dallas-Fort Worth area. Since 1990, McKinney has experienced high population growth, sharing in the strong growth of the Dallas-Fort Worth area. Between 1990 and 2000, McKinney captured 2.9% of the Dallas-Fort Worth area's absolute population growth of 1.1 million people. The 2000 Census indicated that McKinney's population more than doubled since the 1990 Census jumping from 21,283 in 1990 to 54,369 in 2000. This growth provided an annual average population growth rate of 15.5%., far surpassing growth rates reported at the national, state, metropolitan, and county levels, during the same period.

Figure 4.2: Average Percentage Growth Rate of McKinney and other Geographic Areas



Source: United States Census Bureau
**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area*

As the county seat for Collin County, McKinney — like many county seats throughout Texas — tends to be the historic center of government, business, trade, and population within the county. As noted above, McKinney's population growth had been uneventful until recent decades, affected by the low population growth experienced by Collin County during the first half of the twentieth century. During this period

Table 4.3: Population, City of McKinney and Collin County from 1850 to 2000, Annual Average Percentage Growth Rate

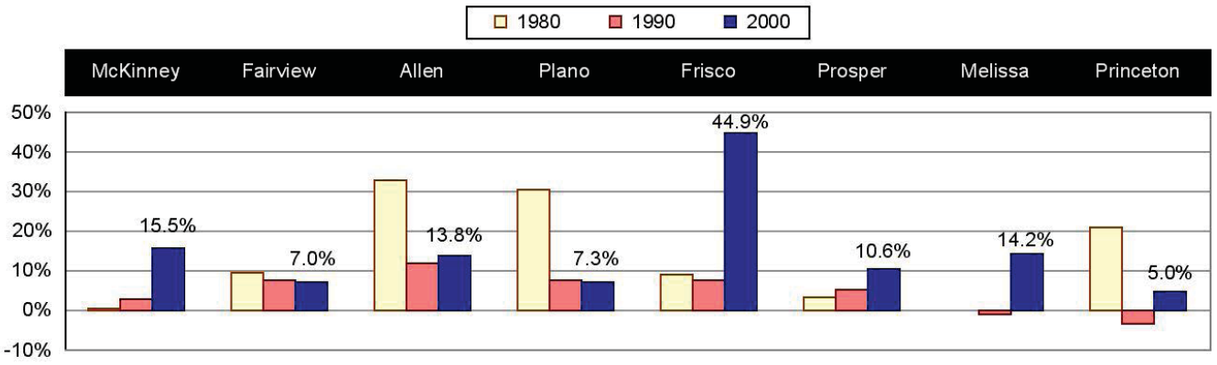
	City of McKinney			Collin County	
Year	Population	Annual Average Percentage Growth Rate	Percentage Share of Collin County's Population	Population	Annual Average Percentage Growth Rate
1850	315		16.2%	1,950	
1860	No report	N/A	N/A	9,264	37.5%
1870	503	N/A	3.6%	14,013	5.1%
1880	1,479	19.4%	5.7%	25,983	8.5%
1890	2,489	6.8%	6.8%	36,736	4.1%
1900	4,342	7.4%	8.7%	50,087	3.6%
1910	4,714	0.9%	9.6%	49,021	-0.2%
1920	6,677	4.2%	13.5%	49,609	0.1%
1930	7,307	0.9%	15.8%	46,180	-0.7%
1940	8,555	1.7%	18.1%	47,190	0.2%
1950	10,560	2.3%	25.3%	41,692	-1.2%
1960	13,763	0.3%	33.4%	41,247	-0.1%
1970	15,193	0.1%	22.7%	66,920	6.2%
1980	16,256	0.7%	11.2%	144,576	11.6%
1990	21,283	3.1%	8.1%	264,036	8.3%
2000	54,369	15.5%	11.1%	491,675	8.6%

Source: United States Census Bureau

Population growth rates in McKinney are a solid indication that the region's growth is once again being registered in the county seat of Collin County.

Collin County's population growth rate ranged from low to declining. From 1970 to 1990, McKinney's importance as the center for business, trade, and population in Collin County changed. This was due to the northern expansion of the Dallas area and the high growth of Plano and Allen in southwest Collin County.

Figure 4.4: Annual Average Percentage Population Growth Rate of McKinney and Selected Neighborhing Communities



Source: United States Census Bureau

From the 1970s to today, the cities of Plano, Allen, and Frisco in southwest Collin County have been in the path of strong regional growth. This is the result of strong employment and population growth experienced in the Dallas metropolitan area as well as the region's historic growth trends along Preston Road, US 75, and the Dallas North Tollway north from Dallas. During the last three decades, these three cities have made both local and national headlines for their high growth rates and increase in absolute population numbers. This shift in county population was notable. Records from the 1960 Census show McKinney's percentage share of Collin County's population was 33.4%, the highest since the City and county were created, while Plano's share was 9.0%. By 1990, McKinney's share of the county population dropped to 8.1% while Plano's share rose to 48.8%, according to the 1990 Census. Still, from the 1990s onward, impressive population growth rates in McKinney are a solid indication that the region's growth is once again being registered in the county seat of Collin County. As of the 2000 Census, McKinney's percentage share of Collin County's population has rebounded to 11.1%.

4.2 Population Estimates and Forecast

Each spring the North Central Texas Council of Governments (NCTCOG) publishes its annual regional population estimates for the 16 county region centered around the Dallas-Fort Worth area. Population estimates are based on Census data plus housing permits in each city with over 1,000 persons in the NCTCOG region.

Figure 4.5: Population Estimates for McKinney, Collin County, and the Dallas-Fort Worth area

	City of McKinney	Collin County	Dallas-Fort Worth Area*
2000 (Census 4/01/00)	54,369	491,675	5,030,828
2001 (Revised 1/01/01)	58,438	518,100	5,131,250
2002 (Revised 1/01/01)	66,990	549,450	5,271,500
2003 (Revised 1/01/01)	76,907	577,100	5,417,150
2004 (Revised 1/01/01)	85,865	N/A	N/A

Source: United States Census Bureau, 2000. North Central Texas Council of Governments, Collin County and the Dallas-Fort Worth area for 2001 through 2003 estimated population; City of McKinney for 2001 through 2004 estimated population.

**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area.*

Information provided by NCTCOG includes population estimates for the total 16 county region, totals for the nine county Dallas-Fort Worth urban area (Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties), each county, and each city over 1,000 population within each county.

Recent estimates produced by NCTCOG were released June 2008. McKinney's population estimate submitted to NCTCOG for January 1, 2008, was 120,978, up 5,780 people from the year before. The January 1, 2009, figure submitted to NCTCOG by the City of McKinney showed the estimated population to be 122,083 people, up 1,105 people from the year before.

In addition to its annual population estimates, every five years NCTCOG develops its 30-year demographic forecast for the urbanized Dallas-Fort Worth area (an area that includes Collin, Dallas, Denton, Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties). Under review of the Demographic Forecast Task Force, the four-step process provides small area household and employment projections that counties and cities use for infrastructure planning and resource allocations.

The NCTCOG's most recent forecast goes out to the year 2040. NCTCOG's 2040 forecast was completed in 2011. NCTCOG population forecast for the year 2040 shows McKinney with 203,964 persons. Based on the average annual population growth in McKinney from 1995 to 2009, the City of McKinney Staff adjusted NCTCOG's base 2040 forecast population figures for use in the completion of the updated land use assumptions for the 2012-2013 impact fee update. The adjusted population forecast shows McKinney's population ranging from 280,000 to 300,000 people by the year 2040.

McKinney's age distribution reflects a community dominated by young to median age adults.

Figure 4.6: Age Distribution for McKinney, Collin County, and the Dallas-Fort Worth area

	City of McKinney	Collin County	Dallas-Fort Worth Area*	State of Texas	United States
Under 5 years	10.1%	8.6%	0.8%	7.8%	6.8%
5 to 9 years	9.3%	8.4%	7.9%	7.9%	7.3%
10 to 14 years	7.4%	7.6%	7.6%	7.8%	7.3%
15 to 19 years	6.9%	6.3%	7.2%	7.8%	7.2%
20 to 24 years	6.5%	5.2%	7.1%	7.4%	6.7%
25 to 34 years	18.1%	17.8%	16.8%	15.2%	14.2%
35 to 44 years	18.3%	20.1%	17.2%	15.9%	1.6%
45 to 54 years	10.7%	13.7%	12.6%	12.5%	13.4%
55 to 59 years	3.4%	4.3%	4.2%	4.3%	4.8%
60 to 64 years	2.4%	2.7%	3.1%	3.4%	3.8%
65 to 74 years	3.5%	3.1%	4.5%	5.5%	6.5%
75 to 84 years	2.3%	1.6%	2.7%	3.3%	4.4%
85 years and over	0.1%	0.5%	0.9%	1.1%	1.5%
Median age (years)	**30.6**	**32.9**	**32.1**	**32.3**	**35.3**

Source: United States Census Bureau, 2000.
**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area.*

4.2 Age Distribution

The age distribution of a community provides some insight into the makeup of the local population. It can be one measure to gauge the life cycle of a town or city, whether it is attractive to young families starting out, maturing adults with greater leisure time, senior citizens with demands that cater to their interests, or young single adults looking for places to meet and enjoy the world before them.

McKinney's age distribution reflect a community dominated by adults ranging from 25 to 44 years of age and a stronger than average distribution of children ages nine years and younger. The dominance of this range of adult population and its correlation to the age group below nine years of age is a strong indicator of McKinney's attractiveness to young families. According to the 2000 Census, the age groups ranging from 25 to 44 years of age captured 36.4%of McKinney's total population. This is several percentage points higher than the national average of 30.2%and closely aligns with Collin County's 37.9%share. This age range is typically identified as either getting established with careers or identified as having roots that are firmly settled. The 2000 Census also reports the age distribution for children nine years and younger capture 19.4%of McKinney's total population. Among this age group, McKinney had the highest percentage share of the five geographic areas compared. The next highest percentage share among this age distribution was Collin County with 17.0%of the total population. In addition, the City of McKinney had the lowest median age among the five geographic areas with a median age of 30.6 years. This was several years lower than the median age of 35.3 years for the United States and a couple of years lower than the regional median ages, which ranged from 32.1 years for the Dallas-Fort Worth area to 32.9 years for Collin County.

What these 'family dominant' age groupings mean for McKinney now is a greater emphasis in providing services and attractions that cater to family needs, especially those with children. This can be either through public-sector services, such as new playgrounds and elementary schools, or by attracting private-sector investments, ranging from childcare facilities to age specific retail shops and entertainment venues. The public-sector can help generate private-sector investments wanted by McKinney's family dominant age groups. Another consideration for McKinney in following this family dominant age groupings will be their needs and impacts five, ten, and twenty years into the future. Ten years into the future the need for additional playgrounds might give way to the need for more soccer fields and softball diamonds for active teenagers and greater job opportunities for stay-at-home parents making the return to the work force.

McKinney's family dominant age groupings also will have long-term impacts on the local school districts. As children grow into young teenagers and then into young adults, the need for more elementary schools will give way to demands for middle schools and high schools. Over time, there could be a shift in priorities for school districts and the city to cater to the needs of this young but maturing age group.

4.3 Ethnicity / Race

The ethnic and racial makeup of a community helps define what is special about its citizens as well as what its citizens have in common with one another. It can be a reflection of a region's people or the economic attraction of a particular area.

According to the 2000 Census, the majority of the citizens of McKinney were white, accounting for 78.4%of the population. In McKinney, this ethnic/racial group ac-

Figure 4.7: Ethnic/Racial Distribution

	City of McKinney	Collin County	Dallas-Fort Worth Area*	State of Texas	United States
White	78.4%	81.4%	69.5%	71.0%	75.1%
Black or African American	7.2%	4.8%	13.8%	11.5%	12.3%
American Indian and Alaska Native	0.5%	0.5%	0.6%	0.6%	0.9%
Asian	1.5%	6.9%	3.7%	2.7%	3.6%
Native Hawaiian and Other Pacific Islander	0.1%	0%	0.1%	0.1%	0.1%
Some Other Race	10.2%	4.3%	9.9%	11.7%	5.5%
Two or More Races	2.1%	2.1%	2.4%	2.5%	2.4%
Hispanic**	18.2%	10.3%	21.5%	3.2%	12.5%

Source: United States Census Bureau, 2000.
**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area.*
***Hispanic is listed separately as an ethnic category.*

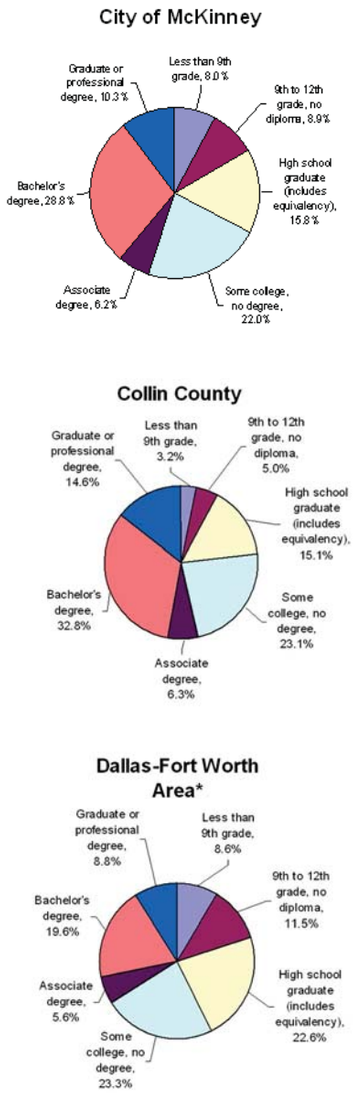
counted for a larger share of the population than that recorded for in the Dallas-Fort Worth area, the State of Texas, and the nation. Collin County, with 81.4%, had a higher percentage share of its population fall into the white ethnic/racial category. In McKinney, the population share of the white category rose from the 75.9% captured in the 1990 Census. The 'Some other race' category captured the next largest percentage share of McKinney's population with 10.2% (as a category, Some other race was filled in by Census respondents who thought the other racial categories did not apply to their own situation). The next largest share was recorded by Black or African American with 7.2%. The category Black or African American actually dropped from the 12.9% share of McKinney's population recorded in the 1990 Census. The Asian category, with 1.5% of the City's population, captured a lower percentage share of the McKinney's population as compared to other geographic areas, especially when compared to Collin County's share, in which Asian persons accounted for 6.9% of the county's population. Other ethnic/racial categories for McKinney seem to reflect the percentage distribution found for other geographic areas. Of McKinney's total population, 18.2% fell into the Hispanic ethnic category. This category rose from the 16.9% share of McKinney's population accounted for in the 1990 Census. This ethnic category is listed separately because this population crosses into the other ethnic/racial categories yet retains common cultural influences.

Among the six racial/ethnic categories, the City of McKinney's breakdown is similar to Plano's breakdown in White (78.3%), American Indian (.4%), and Hawaiian (.0%), but is less than Plano in the category of Asian (10.2%). In addition, the City of Allen's share of White (87.1%) is higher than that captured in McKinney and Plano. McKinney's share in the category Black or African American is slightly higher than that captured in Allen (4.4% and Plano (5.0%) and much higher in the category 'Some other race' than Allen (2.4%) and Plano (3.9%). In the category Hispanic, McKinney accounted for a larger share of this ethnic group than Allen (7.0%) and Plano (10.1%).

4.4 Income Levels

Income levels offer a way to measure the wealth of a community. Usually another larger geographic area, such as a state or metropolitan area, is used to see how a community measures in a wider comparable area average. In addition, measur-

*Figure 4.9: Educational Attainment, (population 25 and over), City of McKinney, Collin County, Dallas-Fort Worth area**



Source: United States Census Bureau, 2000.
**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area.*

ing the change in median household income levels over time can highlight some type of adjustment occurring in a local economy, whether it is through a change in growth patterns, industrial make-up, or some other unseen socio-economic factor.

According to the 2000 Census, median household income levels rose significantly in McKinney during the 1990s. McKinney's median household income more than doubled from 1990 to 2000, jumping from $27,236 to $63,366. This was a result of a significant amount of individuals with higher incomes moving into McKinney tied in with new housing opportunities. In Census Tract 305.03 (which includes much of Stonebridge Ranch), the median household income was $102,274, while in Census Tract 306.01 (which includes much of Eldorado), the median household income was $102,367. Both of these Census tracts captured a large portion of McKinney's new residential developments between 1990 and 2000. This rise in McKinney's percentage increase in median household income compares favorably to similar 2000 figures for Collin County, the Dallas-Fort Worth area, the State of Texas and the nation. This rise also brings McKinney closer to Collin County's actual figure. In the 1990 Census, McKinney's median household income was slightly ahead of the State of Texas and well below the other geographic areas mentioned above. However, by the 2000 Census, McKinney trailed only Collin County's median household income of $70,835.

Figure 4.8: Median Household Income

	City of McKinney	Collin County	Dallas-Fort Worth Area*	State of Texas	United States
2000	$63,366.00	$70,835.00	$47,418.00	$39,927.00	$41,994.00
1990	$27,236.00	$46,020.00	$32,825.00	$27,016.00	$30,056.00
Less than $19,000	11.5%	8.0%	11.9%	23.6%	22.1%
$20,000 to $39,999	19.4%	16.0%	24.9%	26.5%	25.3%
$40,000 to $59,999	16.0%	16.6%	19.8%	19.0%	19.7%
$60,000 to $74,999	12.5%	12.6%	11.2%	9.8%	10.4%
$75,000 to $99,999	15.1%	16.3%	11.7%	9.5%	10.2%
$100,000 to $149,999	14.9%	17.8%	9.6%	7.2%	7.7%
$150,000 to $199,999	5.4%	6.3%	2.9%	2.1%	2.2%
$200,000 or more	5.2%	6.3%	3.1%	2.2%	2.4%

Source: United States Census Bureau, 2000.
**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area.*

Approximately 53% of McKinney's median households incomes were at or above $60,000. Of the total median household income levels from $75,000 and above, McKinney was above the Dallas-Fort Worth metropolitan area, state, and national figures, but for median household income levels $40,000 and below McKinney was slightly above the levels for Collin County.

4.5 Educational Attainment

A strong indicator of the human resources of a community is measured through the educational levels of its citizens. The character of a city can be defined by the educational attainment of its citizens, whether that is expressed through achievement levels, set expectations, or accountability. Educational achievement can also be used as an enticement for attracting businesses or some other type entity to a community by demonstrating the human resources and knowledge base an area has to offer. A high level of educational attainment for a community is usually desirable but hard to achieve.

According to the 2000 Census, the City of McKinney could boast that its residential population has reached a high level of education when compared to other geographical areas. 45.3% of the population of McKinney 25 years and over had received some form of college degree, being either associate, bachelor's, or graduate degree. McKinney's educational attainment was above the United States and Dallas-Fort Worth area averages but slightly below the attainment levels for Collin County. In the United States, only 30.7% had attained some form of college degree, while in the Dallas-Fort Worth area 34.0% of the population 25 years and over had some type of college degree. In Collin County, 53.7% of the population 25 years and over had attained some type of college degree.

McKinney's high level of educational attainment is reflected in its occupational and industry characteristics. A large percentage of McKinney's civilian population 16 years and over is employed in management, professional, and related occupations that tend to require a higher level of educational achievement. Likewise, a greater percentage of McKinney's population is employed in industries requiring higher levels of professional skills and trades obtained through two-year, four-year, and graduate level degree programs, including information; finance, insurance, and real estate; and manufacturing.

4.6 Occupational Characteristics

Occupations represent the type of work employees perform. Occupations group together similar job functions that can be found and measured across most industries. It is another important way to measure the human resources of a community's citizens. It is helpful in gauging whether an area is predominantly blue collar, white collar, or a mix of the two. The occupational make-up also measures the different level of skills of its citizens.

Management, Professional, and Sales Occupations make up 70.6% of employed McKinney residents.

Figure 4.10: Occupation Percentage Makeup of Residents

	City of McKinney	Collin County	Dallas-Fort Worth Area*	State of Texas	United States
Management, professional, and related occupations	43.7%	51.7%	36.0%	33.3%	33.6%
Service occupations	2.3%	8.7%	12.4%	14.6%	14.9%
Sales and office occupations	26.9%	7.6%	28.9%	27.2%	26.7%
Farming, fishing, and forestry occupations	0.2%	0.2%	0.2%	0.7%	0.7%
Construction, extraction, and maintenance occupations	7.5%	5.9%	10.1%	10.9%	9.4%
Production, transportation, and material moving occupations	9.3%	5.8%	12.4%	13.2%	14.6%

Source: United States Census Bureau, 2000. (Employed civilian population 16 years and over)
**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area.*

According to the 2000 Census, a large number of McKinney residents fell into two occupational categories - Management, Professional, and Related Occupations and the Sales and Office Occupations. These two occupational categories are best described as 'white collar' occupations, and, of the total number of employed McKinney residents age 16 years and over, 70.6% fell into these two categories. McKinney was above the 64.9% recorded for the Dallas-Fort Worth metropolitan area and well above the 60.3% for the nation, which serves as a basis for comparison. In the Service Occupations category, McKinney's percentage share of 12.3% nearly matched the 12.4% captured for the Dallas-Fort Worth metropolitan area, while the national level was higher at 14.9% in this occupational category. These three occupational categories combined make up almost 83.0% of McKinney's employed adult resident population. McKinney's percentage share in construction related and production, transportation, and material moving related occupations was higher in comparison to Collin County due to growth and expansion in the area, but it was below those of the Dallas-Fort Worth area due to the large percentage share of management and professional occupations.

4.7 Industrial Characteristics

Manufacturing, Information, Finance, Insurance, and Real Estate capture 31.8% of employed McKinney residents.

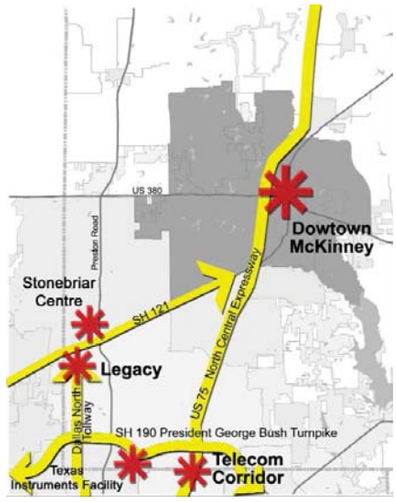
Industrial characteristics classify employer's type of business as opposed to occupations, which represents the types of work an employee performs. The industrial characteristics of a city's residents provides insight into the lines of business its citizens are employed in. Various industries can go through different stages of growth, whether it is expanding, staying flat, or declining. The rise and fall of a particular industry can filter down and impact people's lives, whether they live in the community where the industry is based or a bedroom community. The following information was gathered by the United States Census Bureau in its 2000 Census. Locally, Census data captures the industry employment characteristics of McKinney's residents (place of residence) as opposed to Texas Workforce Commission data that presents regional non-agricultural industrial employment breakdowns by where an establishment is located (place of work).

According to the 2000 Census, a larger percentage of employed McKinney residents age 16 years and over were employed in Manufacturing, Information and Finance, Insurance, and Real Estate than compared to the nation or the Dallas-Fort Worth area. The three industrial categories captured 31.8% of employed McKinney residents age 16 years and over. The percentage share of McKinney's residents employed in Information and Finance, Insurance, and Real Estate was less than that for Collin County as a whole. From the 1980s to the early 2000s, Collin County cities such as Allen, Frisco, and Plano enjoyed strong growth driven by the development and expansion of the information systems and telecommunications industries. During that time these three cities dominated the population and industry makeup of Collin County.

Figure 4.11: Industry Makeup of Residents

	City of McKinney	Collin County	Dallas-Fort Worth Area*	State of Texas	United States
Agriculture, forestry, fishing and hunting, and mining	0.7%	0.9%	0.7%	2.7%	1.9%
Construction	6.8%	5.4%	7.8%	8.1%	6.8%
Manufacturing	16.4%	14.2%	13.1%	11.8%	14.1%
Wholesale trade	4.2%	4.5%	4.4%	3.9%	3.6%
Retail trade	11.6%	12.5%	12.2%	12.0%	11.7%
Transportation and warehousing, and utilities	2.9%	3.1%	6.4%	5.8%	5.2%
Information	6.6%	8.0%	4.7%	3.1%	3.1%
Finance, insurance, real estate, and rental and leasing	8.8%	10.3%	8.6%	6.8%	6.8%
Professional, scientific, management, adminstrative, and waste management services	11.9%	15.0%	11.5%	9.5%	9.3%
Educational, health and social services	15.0%	14.3%	15.6%	19.3%	19.9%
Arts, entertainment, recreation, accomodation and food services	7.8%	5.9%	7.1%	7.3%	7.9%
Other services (except public administration	4.1%	3.8%	4.9%	5.2%	4.9%
Public administration	3.1%	2.3%	2.9%	4.5%	4.8%

Source: United States Census Bureau, 2000. (Employed civilian population 16 years and over)
**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area.*



Regional Economic Center, Collin County

McKinney's location in the Dallas-Fort Worth area places it at the far end in proximity to major drivers of transportation and warehousing employment. These drivers include Dallas-Fort Worth International Airport, Alliance Airport, and the major war house districts in the metropolitan area, such as along Stemmons Freeway in Dallas, LBJ Freeway near Garland, SH 360 in the Mid-Cities, and South Loop 820 in Fort Worth. As a result, McKinney's percentage share of its residents employed in this industry category is low compared to county, metropolitan, state, and national averages. Still, continued expansion of Collin County Regional Airport, future roadway improvements to US 75, US 380, and SH 121 (Sam Rayburn Tollway), and continued growth of the Dallas-Fort Worth area could influence this category going forward.

4.8 Travel Time to Work

The mean travel time to work for employed McKinney residents was 27.3 minutes.

Travel time to work is one measure that helps demonstrate the traveling patterns of residents not working at home for a given location. Travel time to work can provide information about the time spent commuting to work and how this impacts resident's quality of life. It can be an indicator as to whether a community is self-sufficient by providing attractive jobs for its residents or whether it functions as a bedroom community.

Of those workers not working at home, a large share of McKinney residents either work within the City of McKinney or commute to work in nearby business centers, such as the Telecom Corridor in Richardson, the Central Expressway (US 75) corridor

in Allen and Plano, the Dallas North Tollway corridor and Legacy in west Plano, and the newer commercial developments around Stonebriar Mall in Frisco. The travel times of the employed McKinney residents reflects closely the traveling patterns of the employed population in the Dallas-Fort Worth area.

According to the 2000 Census, the mean travel time to work for McKinney residents was 27.3 minutes, a few minutes below the 30 minutes for employed residents of Allen and slightly below the 27.5 minutes for residents of Plano as well as employed residents of the metropolitan area. McKinney residents shaved off approximately one minute in travel time compared to their neighbors in Collin County, which recorded 28.4 minutes.

Figure 4.12: Travel Time to Work (workers who did not work at home)

	City of McKinney	Collin County	Dallas-Fort Worth Area*	State of Texas	United States
Less than 10 minutes	14.1%	9.2%	10.0%	13.7%	14.4%
10 to 14 minutes	15.5%	12.0%	12.4%	14.8%	15.0%
15 to 19 minutes	10.1%	13.6%	14.9%	16.5%	15.8%
20 to 24 minutes	10.6%	14.0%	14.9%	14.3%	14.5%
25 to 29 minutes	5.4%	5.9%	6.1%	5.4%	5.8%
30 to 34 minutes	15.5%	16.6%	16.9%	14.7%	13.2%
35 to 44 minutes	8.2%	8.6%	7.1%	5.6%	5.9%
45 to 59 minutes	12.1%	11.9%	9.9%	7.8%	7.4%
60 to 89 minutes	6.4%	6.4%	5.5%	4.7%	5.2%
90 or more minutes	2.0%	1.8%	2.3%	2.5%	2.8%
Mean travel time to work (minutes)	**27.3**	**28.4**	**27.5**	**25.4**	**25.5**

Source: United States Census Bureau, 2000.
**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area.*

68.3% of McKinney's owner-occupied housing units were built sometime after 1990.

4.9 Housing Characteristics - Age of Housing

The age of housing structures within a given area presents one particular glimpse of the housing choices for residents and potential residents. It can also serve as a representation of the economic activity of a given area, the dynamics of a local housing market, and serve as an indicator into the life cycle and make up of a local housing inventory. The information below was gathered and processed by the United State Census Bureau during the 2000 Census and represents only owner-occupied housing units.

According to the 2000 Census, despite the fact that the City of McKinney has a large inventory of older housing structures east of US 75, 68.3% of the owner-occupied housing units in McKinney were built between 1990 and 2000. Compared to other geographic areas, McKinney's share of recently built housing units is impressive. Allen recorded less than 61% of their owner-occupied housing units built between 1990 and 2000 while Plano accounted for approximately 44%. A majority (50.8%) of the owner-occupied housing units in Plano were built between 1970 and 1990, according to the 2000 Census. In comparison, the percentage share

of owner-occupied housing units built after 1990 in Collin County was 49.4%, in the Dallas-Fort Worth area was 25.2%, and nationally was 19.2%. The large share of McKinney's owner-occupied housing inventory in recently developed structures indicates a dramatic influx of new residents and building and is a harbinger of future growth and service needs for the community.

Figure 4.13: Year Structure Built - Owner-Occupied Housing Units

	City of McKinney	Collin County	Dallas-Fort Worth Area*	State of Texas	United States
Built 1999 to March 2000	13.0%	7.9%	4.1%	3.7%	2.5%
Built 1995 to 1998	35.3%	24.5%	12.0%	11.2%	8.5%
Built 1990 to 1994	20.0%	17.0%	9.1%	8.4%	8.2%
Built 1980 to 1989	10.6%	26.5%	23.1%	21.2%	15.8%
Built 1970 to 1979	3.6%	15.8%	18.4%	19.6%	17.6%
Built 1960 to 1969	5.5%	4.7%	13.0%	12.9%	13.1%
Built 1950 to 1959	5.3%	1.6%	11.7%	11.9%	13.4%
Built 1940 to 1949	2.4%	0.8%	4.1%	5.5%	6.8%
Built 1939 or earlier	4.3%	1.6%	4.5%	5.6%	14.2%
Median	**1995**	**1990**	**1979**	**1977**	**1971**

Source: United States Census Bureau, 2000.
**Dallas-Fort Worth area includes those counties that make up the nine-county metropolitan area.*

EXHIBIT E

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Section 5: Alternative City Form Scenarios

Relationship to Planning Process

The development of alternative city form scenarios is a specific task used during the planning process. This process of using alternatives to describe the options that can be used is an important step in planning for communities. This task occurred during the second phase of the Plan development, a phase including extensive public involvement.

Key Time for Community Input

The alternative city form scenarios were taken out to the citizens of McKinney for their review and input. The public participation occurred during an intensive series of three (3) community workshops. Each workshop was advertised with print and web-page notices for weeks in advance. The workshops were held during a single week in the month of April. The workshops were facilitated in a different McKinney neighborhood each night.

Community Workshops

Workshop	Area	McKinney Venue
# 1	East side	Old Settler's Recreation Center
# 2	Southwest	Wolford Elementary School
# 3	Northwest	Slaughter Elementary Schol

Each of the workshops were well attended for meetings conducted during a comprehensive planning effort. The citizens, or stakeholders, were concerned about the growth pressures that were affecting their community. Comments regarding preference over city form scenarios are discussed at the end of this section and provided direction toward the development of a preferred scenario and eventual Future Land Use Plan.

Scenarios as Singular Alternatives

The alternative city form scenarios were developed to give stakeholders of McKinney a choice toward future community development. The four (4) scenarios that were used assisted the planning team in communicating to stakeholders that cities can develop with a different physical fabric or distribution of higher densities. These scenarios acted as conceptual diagrams depicting the characteristics of a particular city form. Each alternative was developed with only one city form pattern; this was to communicate the potential relationships in McKinney's future if that pattern were to be desired. It is fair to mention, that cities and towns across Texas and Collin County do not develop with just one pattern of development; in fact, they can use many of the city form alternatives described in this section.

Community Workshop meeting at Old Settler's Recreation Center

5.1 Different Forms of City Development

McKinney, Frisco, Austin, and Dallas have all developed with different forms of physical development. These communities have separate aspects that provided the growth pressures. The growth pressures and vision come from transportation sources

such as rivers, railroads, highways, and airports. City forms also respond to natural features such as steep hills, floodplains, and unstable soils.

McKinney's development pattern historically was affected by the railroad and the distance one could travel in a day (which just happens to be the distance to Dallas). After the railroad/agriculture boom, McKinney has been affected (as have most American cities) by the automobile and the major roads built to accommodate them.

The region around McKinney is blessed with rolling hills and good sources of water. With the aid of road construction, most of the McKinney countryside became open for northern expansion. First, SH 5 provided access; next, US 75 provided the beginning of a highway network. That network brought urban corridor development built on the frontages on these major roads. Next, came the residential neighborhoods in many different types, layouts, and densities. Urban/suburban development was here to replace crop land as the future of McKinney.

5.2 Corridor Scenario

The four (4) alternative city form scenarios are discussed in the following pages. Each scenario includes a brief description of its characteristics and relationships to the urban area and is followed by the locational criteria and attributes used to measure its relevance.

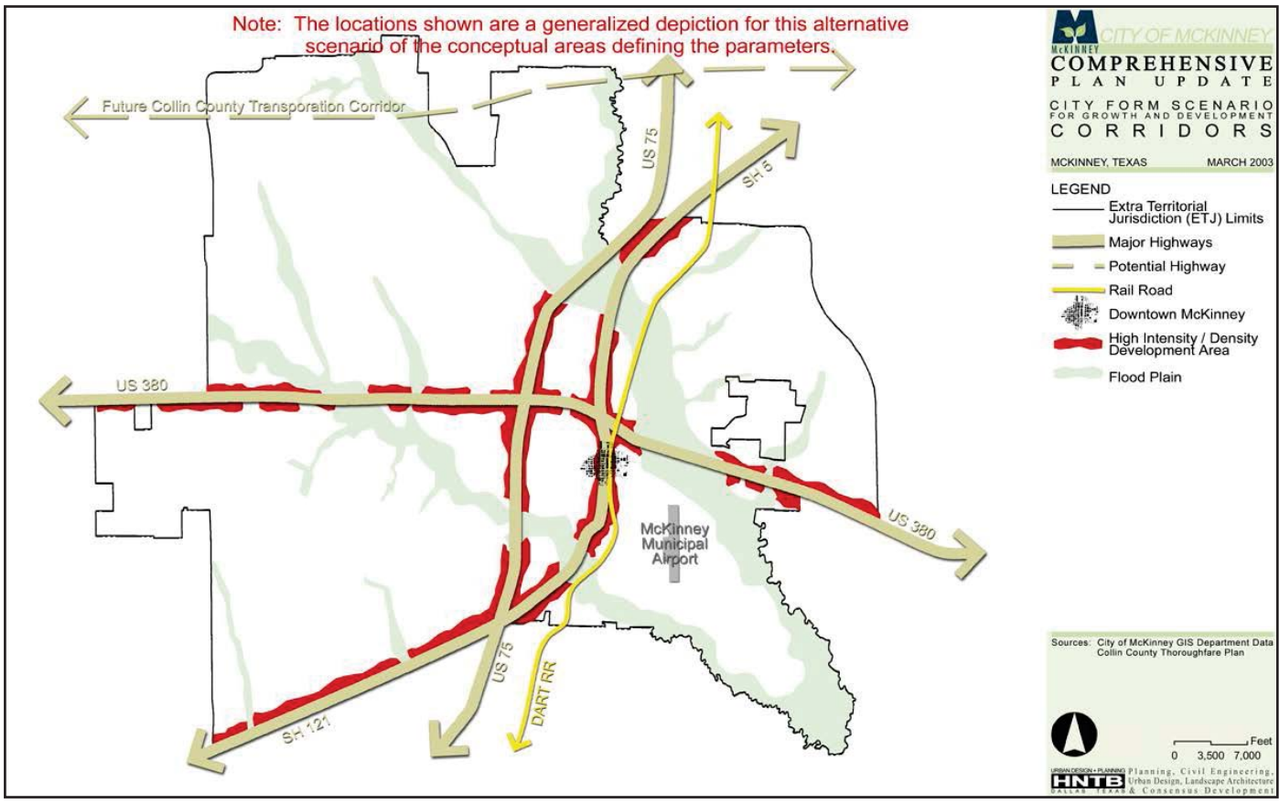


Figure 5.1: Corridor Scenario

The alternative that is represented by corridor development is defining a growth pattern that exists across much of Texas. This scenario suggests that the greatest intensity and highest density land uses are primarily located adjacent to existing

and/or planned highway corridors. A corridor pattern to commercial development establishes a linear form of building that responds to the front street, while creating a back-door (service access) environment that is often ugly, smelly, noisy, and negative for adjacent property values.

In McKinney, existing corridor development can be found along SH 5 (McDonald Street), US 75, and US 380. A large portion of the corridor development along SH 5 represents older commercial developments that took place prior to the opening of US 75 and have been through several users. Development along this corridor is built closer to the roadway and is best seen below 30 mph. More recent types of corridor development are found along US 75 and US 380. The two corridors are characterized by new vehicle showrooms and lots, shopping centers, restaurants, low-rise office buildings, industrial establishments, hotels, some entertainment venues, and land yet to be developed. For the most part, these are commercial uses that can catch the consumers' eye at 35 mph or greater. Development is set back from the roadway to conform to more recent City codes.

Prototypical images of Corridor city form development in Texas.

Locational Criteria

Locational criteria distinguish key aspects that can either accentuate or relegate the development possibilities for properties along major corridors. These key aspects can be measured at different levels of importance but tend to focus on the proximity and accessibility of developable land to the major roadway, its site characteristics, and how land along a corridor relates to the needs of an auto-oriented society.

The following locational criteria were used to identify Corridor Scenario patterns in McKinney:

1. Convenient access from developable land adjacent to a highway or limited-access freeway
2. Proximity to highway interchange with high traffic volumes
3. Developable land depth from roadway should be approximately 750 feet
4. Caters to auto-oriented access, visibility, and movement

Attributes

For City Officials, developers, and residents of McKinney, corridor development provides certain features that make it a desirable option for the City's built landscape.

Listed below are several attributes that distinguish the Corridor Scenario:

1. Provides strong visibility and access that is attractive for commercial tenants
2. Capitalizes on existing development patterns found in nearby cities (Allen, Frisco, Plano, Richardson)
3. Well understood in development community

Implications

The attributes associated with corridor development make this an attractive option as a community development choice; nevertheless, there are certain consequences that are associated with this development alternative.

Implications associated with Corridor Scenarios are noted below:

1. Major thoroughfares US 75, US 380, SH 121, SH 5, and their supporting frontage roads could require additional capacity

2. Encourages highest density of land uses along corridors
3. Potential to encourage ugly commercial "strip development" patterns
4. Majority of major commercial development located along regional corridors
5. Traffic congestion can be an issue nearest the corridors during peak hours or events

5.3 District Scenario

District development breaks the community down into geographic areas that are identifiable by a particular activity or amenity. Such activities or amenities drive development within these districts providing a focus for sustainability, provided that the focus remains viable to the larger marketplace. Business and industrial districts many times have developed around the agglomeration of a particular technology or natural resource, such as the telecommunication industry in Richardson or the petrochemical industry along the Houston Ship Channel and in Texas City. Public institutions associated with medicine, education, and the arts are well-known for developing recognizable districts. For residential developments, amenities could spotlight a particular community theme, event, or natural feature.

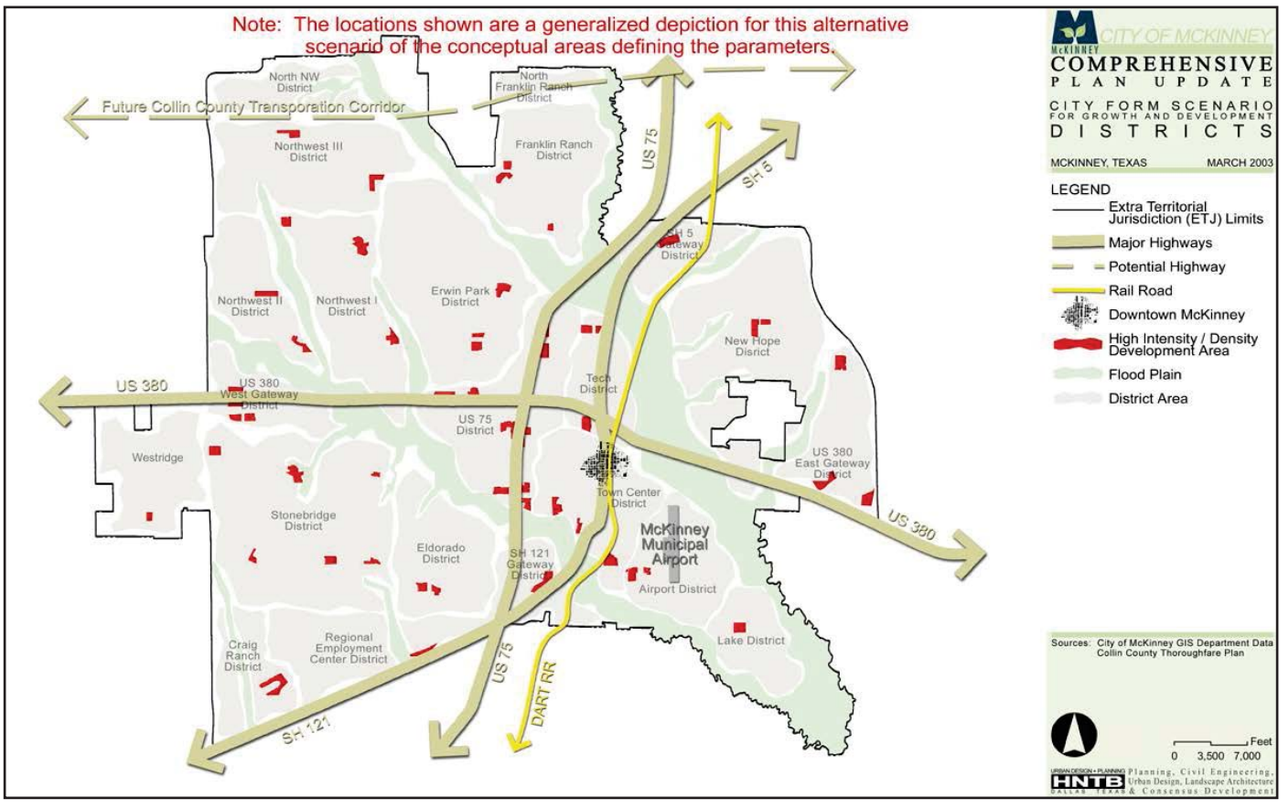


Figure 5.2: District Scenario

In McKinney, district development is limited to a few notable areas - the Downtown Historic District, the Historic Residential District, and the new master-planned developments west of US 75 - Eldorado and Stonebridge Ranch. The former two districts have gained in value as the limited heritage of North Texas communities takes on a new appreciation. The latter two developments are attractive to residents searching for a particular lifestyle centered on neighborhood cohesion and outdoor recreation, namely golf. As growth continues to occur in McKinney, districts could evolve to

meet the needs of an expanding population and business sector as well as garner public support to enhance the districts' prominence.

Locational Criteria

The key aspects that drive district development tend to focus on the primary use or feature that spurs associated development. The locational criteria for each district are usually tied to a unique development pattern tailored to the specific market needs of each area.

The District Scenario locational criteria are listed below:

1. Land use pattern has singular purpose
2. Specialized transportation, infrastructure, or educational resources can be a prerequisite of some districts
3. Depending on the size and location of the district, could cater to a variety of access and relationships

Attributes

District development has several characteristics that could make this a viable option for a city's development pattern. These attributes can enhance and expand a community's social, physical, and economic resources by allowing key aspects to reach their full potential.

Attributes for the District Scenario are noted below:

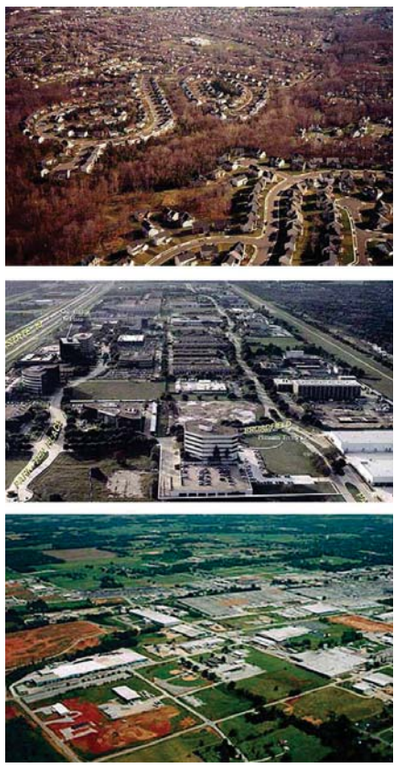
1. Works with some existing large-scale patterns of development
2. Districts defined by the major land use
3. Promotes unique character of different districts
4. Intensity and density levels are similar within each like district
5. Attractive to market and promote possibilities

Implications

Allowing district development to reach its full potential requires special treatment from city leaders who are usually bound by certain limitations. A community containing numerous districts has to cope with the various issues that make each district unique. Each district will take on different physical and land use characteristics, which could present a city with administrative and funding challenges.

Implications associated with District Scenario are noted below:

1. Districts can be single purpose - to a fault
2. Transportation and infrastructure pattern is a wide-spread network
3. Visibility and access are not equal for all



Prototypical images of District city form development patterns.

5.4 Greenway Scenario

The Greenway Scenario takes what is considered less developable floodplain acreage and raises its value through the development of a series of regional and community parkways and trails that run adjacent to the floodplain. This city form scenario suggests that the development patterns are organized along primary creeks, floodplains, or lakes as scenic amenities. The greenway route consists of a series of single-loaded roads having development along one side. Commercial and/

or residential development along these roads would focus on the scenic value of McKinney's natural creek systems and would offer opportunities for special development patterns. Property values could be increased due to the relationship of property to park-like views. The greenway provides a distinct form/structure for development in specific areas (standards for adjacent development would include attention to view corridors in order to optimize these scenic resources). Greenways would function to link distant sections of the community through parkways and trails straddling above and alongside floodplain and woodland acreage.

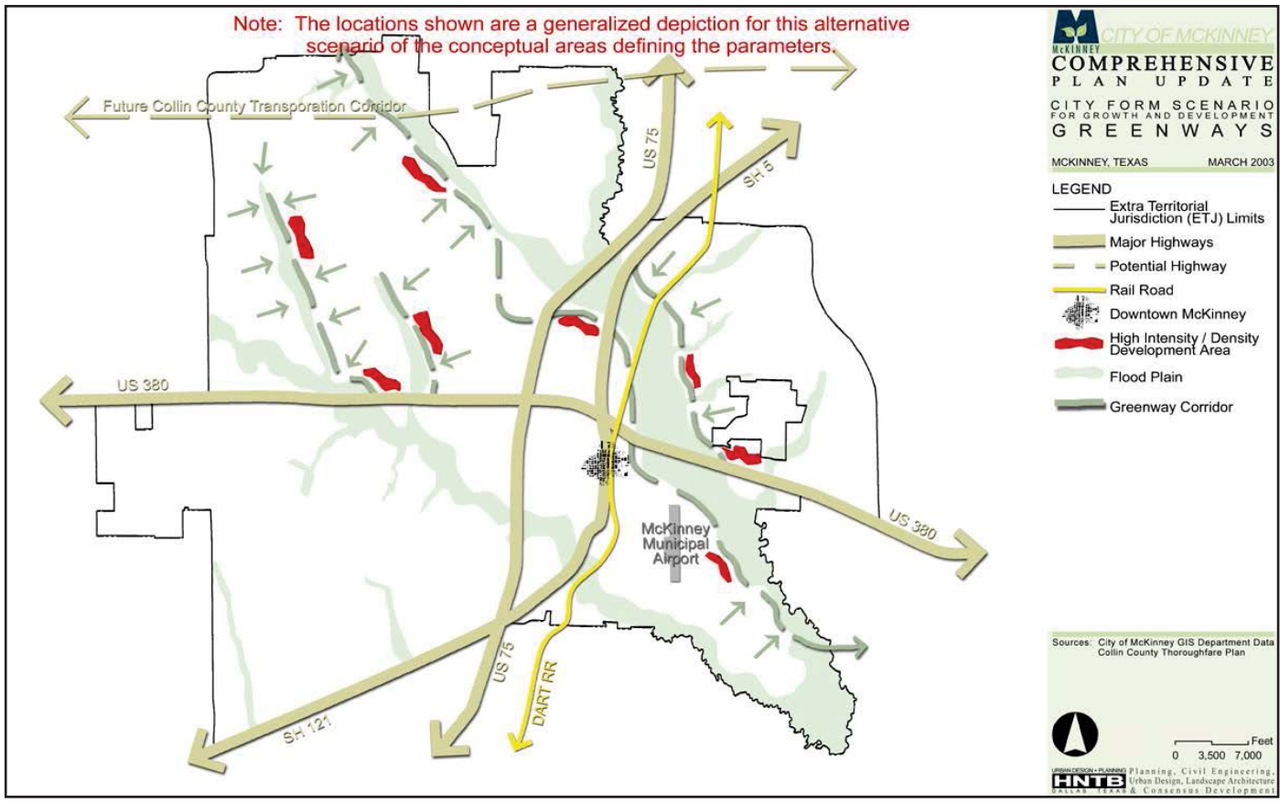


Figure 5.3: Greenway Scenario

The greenway route currently exists in McKinney along Wilson Creek from Rock Hill Road on the west to Wilson Creek Parkway on the east, via Northbrook Drive and Park View Avenue. For travelers on US 75, this greenway passage provides a visual break from the corridor development patterns found along the highway. In addition, the portion of the greenway serves as an unofficial natural gateway entrance to the City for drivers heading north along US 75. Other possible greenway routes in McKinney could include an extension of the existing route along Wilson Creek, both upstream and downstream; along the East Fork of the Trinity River; along Honey Creek; and minor tributaries linked to the three waterways mentioned above.

Locational Criteria

The locational criteria for Greenway Scenarios tend to be associated more with those quality of life issues emphasizing community aesthetics, sense of place, and pedestrian-oriented movement and less with auto-oriented access, traffic volumes, and a focused activity.

The following locational criteria were used to identify McKinney's Greenway Scenario patterns:

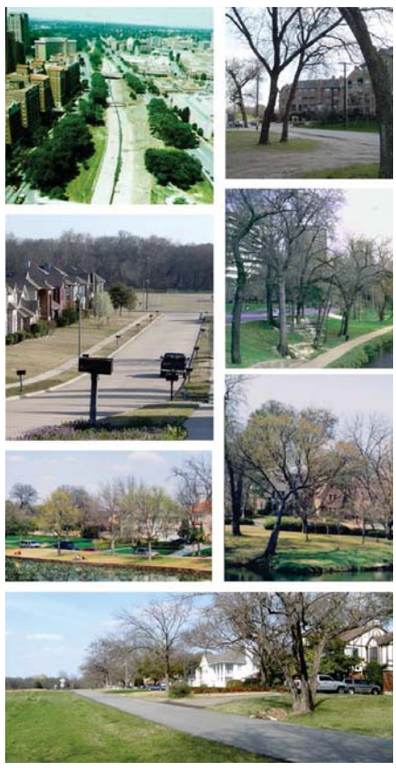
1. Roadway running alongside floodplains of the area's rivers, creeks, and tributaries accessing development
2. Development maximizes the views of the open space and parkland
3. Roadway and developable land must be situated outside the floodplain
4. Caters to auto-oriented, pedestrian-oriented, bicycle-oriented access and movement

Attributes

The appeal of the Greenway Scenario plays to the human desire for proximity and vistas associated with open space and park land. Most communities across America link their attractive quality of life to the acreage, accessibility, and connectivity associated with their green space.

Listed below are attributes related to the Greenway Scenario:

1. Series of interconnected parkways running along the two primary floodplains (Wilson Creek and East Fork/Honey Creek)
2. Allows for expansion through "finger greenway parkways" into adjoining creeks and tributaries
3. Takes advantage of the natural landscape by providing a meandering frontage along the creeks similar to Turtle Creek and West Lawther Drive (around White Rock Lake) in Dallas; George Washington Parkway in Washington, D.C.; and Ward Parkway in Kansas City, MO
4. Promotes residential and commercial developments with scenic views and access to potential parks/open space
5. Links McKinney east and west in a different manner (removes focus from US 75)
6. Improves access between the northwest quadrant, City center, Collin County Regional Airport, US 75, and US 380
7. Creates new community form relating to existing natural features (river, creeks, floodplains, woodlands, and slopes)
8. Builds on existing investment in parks and open spaces
9. Differentiates McKinney's growth pattern from surrounding communities
10. Higher property values can result from uses adjacent to park-like amenity



Prototypical images of built Greeenways city form development patterns.

Implications

The Greenway Scenario has many features that would make this a desirable choice for community development. Despite its attractiveness, the Greenway Scenario also carries with it several consequences that prevent this development pattern from being more widely used in communities.

The implications resulting from the Greenway Scenario are noted below:

1. Modification to existing thoroughfare plan is required
2. Collector roads tying into the greenway corridors should also respect interior natural features, including tributaries and slopes
3. Transportation, utilities, and land uses are planned with a greenway focus
4. Establish new design standards for development along the greenway corridors
5. Cost associated with road construction would be absorbed by the City if traditional methods of financing are to be used

5.5 Neighborhood Cores Scenario (Community Village)

The Neighborhood Core Scenario functions as a town square or community village. This pattern of development puts forward that the highest intensity and density is primarily located in the planned areas for neighborhood core development. This development scenario pattern locates commercial, office, and residential uses in a pedestrian scaled setting. Neighborhood cores can include buildings of between one to four stories. The neighborhood cores include residential densities greater than single family.

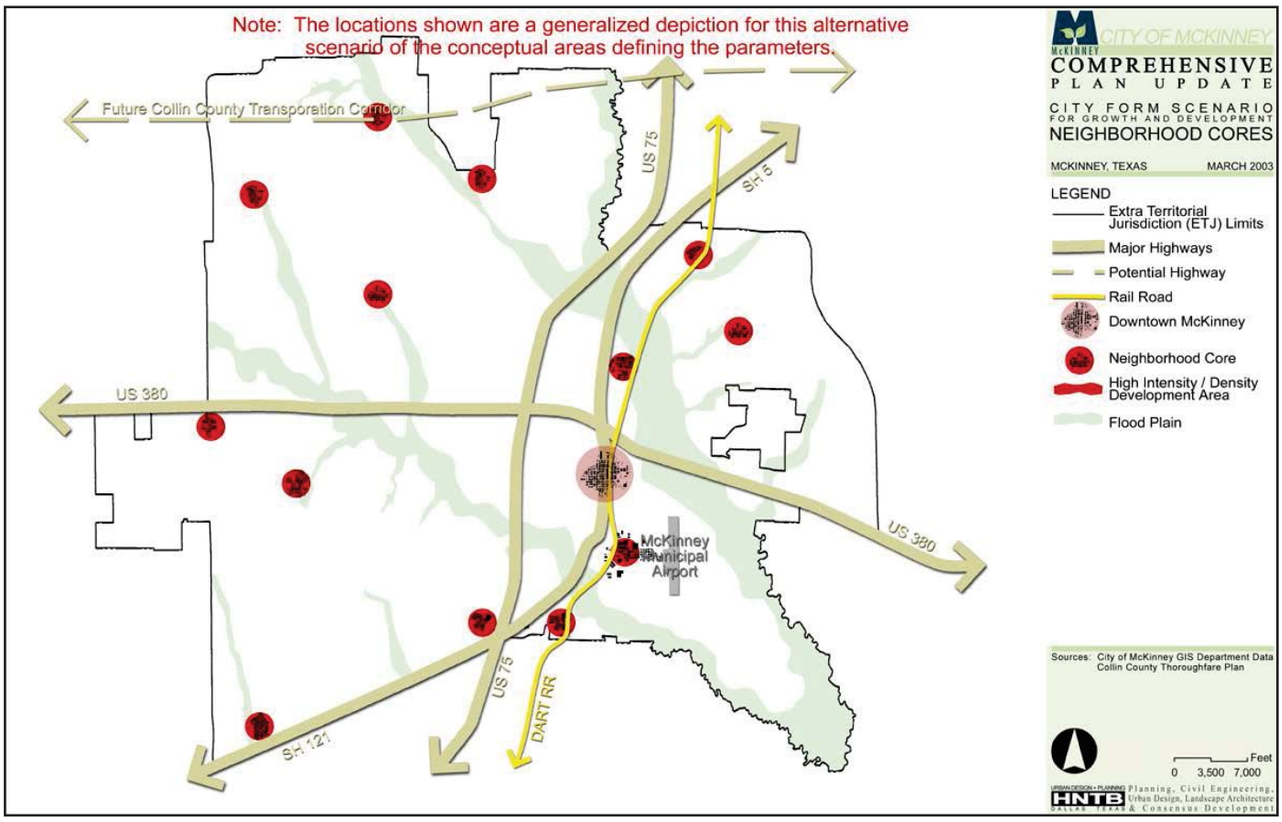


Figure 5.4: Neighborhood Cores Scenario

The primary neighborhood core for this pattern in McKinney is associated with the City's downtown. Downtown McKinney serves the needs of surrounding neighborhoods, yet also attracts users willing to travel further for a specific need. Future neighborhood cores could evolve over time in existing neighborhoods driven by market demands and guided by careful planning. In sections of McKinney that have yet to experience wide-scale development, neighborhood cores would complement new suburban and commercial developments, providing cohesion and continuity.

Locational Criteria

The key aspects that differentiate the locational criteria for the Neighborhood Cores scenario from other development patterns are its sense of place, connectivity, and scale in relation to its surrounding development. For neighborhood cores to be a draw, this pattern of development needs to be situated near the crossroads of two major thoroughfares. At the same time, the dynamics of this development pattern

require that it succesfully blend pedestrian-oriented activities within a vehicular-dominated landscape.

The following locational criteria are for the Neighborhood Cores Scenario:

1. Located near the crossroads of two thoroughfares
2. Centered around a development focus or park
3. Direct adjacency to mix and variety of land uses
4. Pedestrian-scale street environment
5. Caters equally to pedestrian-oriented access and vehicular movement
6. Neighborhood core size dependent on surrounding area being served

Attributes

Neighborhood cores can help to set the tone and qualities that relate to the surrounding built landscape.

Noted below are attributes associated with the Neighborhood Cores Scenario:

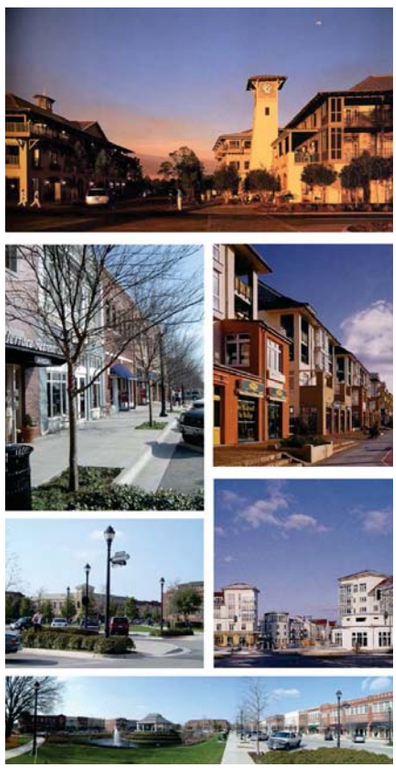
1. Creates unique centers tailored to surrounding areas and market needs
2. Neighborhood core development may be adapted to surrounding uses or needs
3. Helps reduce traffic by concentrating development
4. Less emphasis on auto-oriented travel
5. Site for multi-family development
6. Neighborhood core can be a focus for commercial and employment uses
7. Neighborhood core has extensive pedestrian connections with adjacent uses
8. Neighborhood core could focus on a natural or public amenity

Implications

Along with the many attributes associated with the Neighborhood Cores Scenario, there are several implications tied to this pattern of development.

These implications are listed below:

1. Infrastructure and services are concentrated
2. Subject to market demands and pressures
3. Transportation and infrastructure vary from one village to another



Prototypical images of built Neighborhood Cores or Villages city form development patterns.

5.6 McKinney Citizen Input

Community input was strong for the series of public workshops. Questions from McKinney citizens were equally divided among the four (4) alternative city form scenarios. Each of the options had positive feedback from community stakeholders. Each of the options had physical assets that individuals enjoyed and felt would add to the community of McKinney.

In an analysis of citizen's reviews, comments, and concerns, it was a combination of the four alternatives that together brought the best solution to McKinney. Working with the City Council and Planning and Zoning Commission, the HNTB team was able to craft a concept that embodied what the citizens desired.

5.7 Preferred Plan

The preferred plan is the option that was chosen. This concept is the document that began the detailed development of the Future Land Use Plan, as described in detail in future sections. The graphic below is the preferred plan. Note the identification of higher intensity development along the northern future multi-modal corridor, US 75 to the north, and US 380.

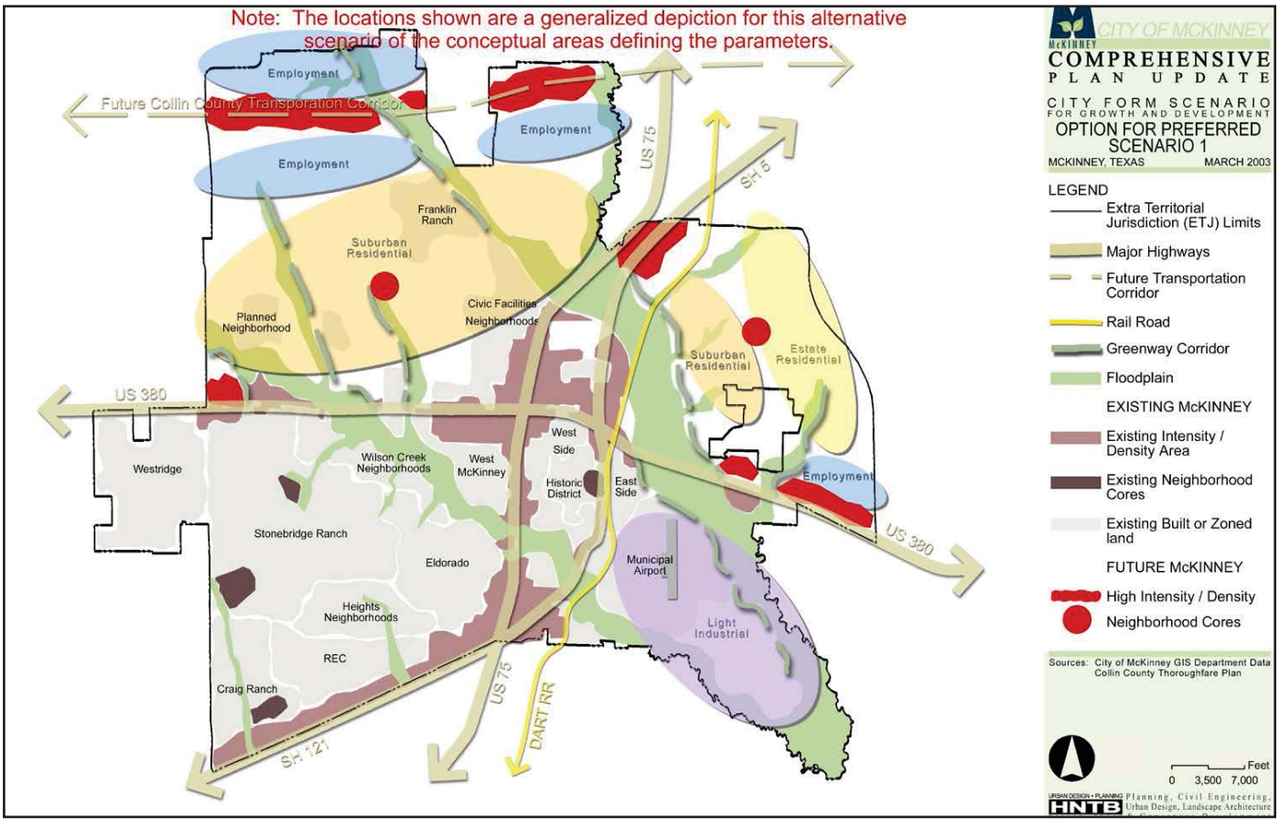


Figure 5.5: Preferred Plan

This preferred plan includes aspects of all alternative city form scenarios. The large area of suburban residential north of US 380 and east of US 75 is conceptually a district. The location of neighborhood cores or villages in the preferred plan is using that specific alternative. In this preferred plan several major arterials were defined to be greenway thoroughfares. The greenways thoroughfare concept received good input from the citizens of McKinney during the community workshop meetings, and the preferred plan also uses the corridor development pattern to enhance its opportunity for economic development along existing and proposed freeway corridors.

The preferred plan uses the creeks and streams as a strong environmental feature, providing opportunities for future parks, hike and bike systems, and open space. These floodplains and natural amenities provide much of the character that McKinney is known for throughout the Metroplex.

In summary, the primary attributes from the alternative city form scenarios that were desirable and combined together to form the preferred plan are as follows:

- Employment opportunities along the proposed Future Collin County Transportation Corridor expressed as several commercial land uses
- Growth at and around the Collin County Regional Airport providing employment shown as light industrial
- Continued single-family residential development north of US 380
- Include neighborhood cores or villages within the residential areas to provide the major commercial needs of those residents and aggregate the larger commercial structures into a village pattern
- Provide future rail transit opportunities for citizens and employers in McKinney
- Commercial growth along US 75 and US 380 corridors

Much of the preferred plan's development is directly from comments solicited from McKinney stakeholders as a part of the open planning process to develop the McKinney Comprehensive Plan.

EXHIBIT F

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Section 6: Economic Development and Fiscal Impact

The Economic Development and Fiscal Impact section of the Comprehensive Plan provides background on Insight Research Corporation's Development Simulation Model (DSM) that was used to measure the fiscal impacts of the plans developed for the document. The DSM establishes the basis for the economic modeling that will measure costs and benefits associated with new development applications. Assumptions in the DSM are for demonstration and modeling purposes only. This section describes the purpose, methodology, and results of the fiscal modeling performed by Insight Research Corporation.

Just as the 1964 City of McKinney General Development Plan included an Economic Forces section to guide land use decisions, the Economic Development and Fiscal Impact section of the Comprehensive Plan provides a tool for updating the Future Land Use Plan and for making land use decisions in the future. However, the economic models created for the Comprehensive Plan are only one of many factors to consider. Both the economic impact and the impact on quality of life must be taken into consideration when making land use decisions.

6.1 Purpose of Performing a Fiscal Analysis of the Comprehensive Plan

The McKinney Comprehensive Plan functions as a guide for decision makers and as a tool for managing McKinney's economic, social, and physical development for achieving one of the goals of McKinney's Comprehensive Plan, which is economic development vitality for a sustainable and affordable community. To ensure the Comprehensive Plan provides the direction and framework for McKinney to achieve the goal of a sustainable and affordable community, Insight Research Corporation was retained to employ its methodology to measure fiscal implications of changes to the Future Land Use Plan.

While some cities may include generalizations about the impacts of various land uses in their comprehensive plans, the DSM used as part of the City of McKinney's Comprehensive Plan provides three separate analyses to be used in the development of the Future Land Use Plan and in making land use decisions in the future.

1) Build-Out Scenario Comparison — A comparison of alternate build-out scenarios provides an examination of impacts at ultimate development as:

    (a) A percent of residential to commercial acres,
    (b) Property tax base values in current dollars, and
    (c) Ultimate tax revenue and total city service cost.

    These comparisons are used to test the Future Land Use Plan to ensure, at build-out, a balance of tax base that allows the City of McKinney to provide the appropriate levels of service. This comparison was made at 100% build-out in order to compare the two plans using the same assumptions and at the same level of development. This level of build-out, however, will most likely never be achieved because, as a community approaches build-out and the amount of available land diminishes, development slows considerably. No estimate on the timeframe for achieving build-out was made for either plan.

2) Ten-Year Cash Flow — A cash flow forecast provides ten years of revenues and expenditures under a projected development scenario, which provides a ten-year projection of city finances based on residential and commercial construction forecasts in contrast with traditional budget forecasting standards of five years. This forecast projects the city's cash flow and aids in the making of short term adjustments in order to provide adequate city services while maintaining current tax rates.

3) Cost/Benefit Potential Comparison — The cost/benefit potential comparison measures the impact of different hypothetical land uses on twenty acres over ten years, both in tax revenue generated by a use and in the cost to provide city services. Just as a transportation model is run to determine if the planned road network can accommodate the projected number of vehicles, a fiscal model determines if the projected tax revenue from different zoning classifications can pay for the city services required by that zoning. Furthermore, the cost/benefit potential comparison provides a model for the analysis of future zoning and land use decisions associated with new development. Using this model, the City is able to forecast the taxable value and cost of city services on alternate development scenarios for a property.

The City of McKinney is feeling the pressures of a rapidly growing community where every land use decision has significant impact on the community. The DSM provides a clear, comparative link between future land use and its resulting impact on public finances that allows staff, as well as elected and appointed officials, to make informed decisions that benefit the City of McKinney.

6.2 Methodology

The City of McKinney contracted Insight Research Corporation to work with City Staff to customize the fiscal modeling portion of the Comprehensive Plan using Insight's DSM. The DSM forecasts a community's future growth under different scenarios, calculating the potential new revenue streams and the related public cost associated with each option.

Data was calibrated and methodologies adjusted specific to McKinney were used to achieve the outcomes of the three analyses, including detailed examination of the following historic values:

- Construction and land use
- Public revenue and expense
- Population and employment growth
- Public service cost:

  - The public service cost is the cost to provide city services per consumer.
  - Two methods were used to calculate public service costs: expansion method and full cost method. Each of these methods is valuable in providing information that is used in different stages of the modeling effort. It is important to understand the differences between the two methods to avoid confusion and misuse.

    1. Expansion Method — The expansion method of calculating public service cost is used for project-specific cost of service. This method is used

to determine the cost to provide city services to a specific development project. It takes into account only those costs directly attributable to that project and, therefore, is a good measure of the impact of a single land use or zoning decision.

2. Full Cost Method — The full cost method of calculating public service cost is useful for citywide modeling and forecasting. This method takes the entire city budget into account, including those costs that cannot be attributed to any one project such as administrative costs and debt service on municipal bonds. Because the full cost method takes into account all costs, it is useful in tracking the city budget to determine if the citywide tax revenue is sufficient to pay for the operating costs of the city government.

Many variables went into the development of the DSM, many of which can be modified over time as conditions change to prevent the model from becoming outdated and to allow examination of different development types. In 2007-2008, Insight Research Corporation completed an update of the DSM for the City of McKinney. Insight's DSM variables can be modified to examine different possible outcomes:

- Population Forecasts
- Public Employment Forecasts
- Household Size
- Assessed Values of Land and Improvements
- Sales Taxes from Retail Sales
- Building Permit Revenues
- Future Land Development by Type and Value
- Local Construction Cost
- Allowable Zoning Densities
- Future Capital Needs
- Principal and Interest on Debt Service

The following are the methodologies used for the three (3) specific analyses developed for the Comprehensive Plan update:

1) Build-Out Scenario Comparison — The comparison of the proposed Future Land Use Plan with the 1990 Future Land Use Plan was completed by preparing value assumptions specific to the City of McKinney.

   Staff was directed by City Council to honor existing development and zoning, so the acres of developed land uses and existing zoning were grouped into land use categories and held constant for both future land use plans. Since the existing development and zoning was the same in the two plans, the area that needed to be analyzed and compared was the land within the city limits currently zoned as Agriculture and the undeveloped property in the extraterritorial jurisdiction (ETJ).

   The 1990 Future Land Use Plan was divided into the land use categories based on the area shown on the plan. The proposed Future Land Use Plan was divided based on the percentages for each land use allowed in each land use module.

Results from the build-out scenario comparison included the taxable value of the land uses allowed by each plan at a theoretical 100% build-out, the cost to provide city services to those uses, and the balance between the taxable value of residential and commercial uses for each plan.

2) Ten-Year Cash Flow — The ten-year cash flow was completed using ten-year city generated estimates the annual residential and commercial land development expectations. The tax revenue for each land use was calculated for each year based on the growth assumptions, and the public service cost was calculated using the full cost method in order to measure the effect on the total city budget.

3) Cost/Benefit Potential Comparison — The cost/benefit potential comparison measures the tax revenue against the expansion public service cost to determine the impact various land uses have on the finances of the City. The assumptions that are built into the DSM include the construction and employment estimates specific to the City of McKinney plus the proprietary databases of Insight Research Corporation.

6.3 Results

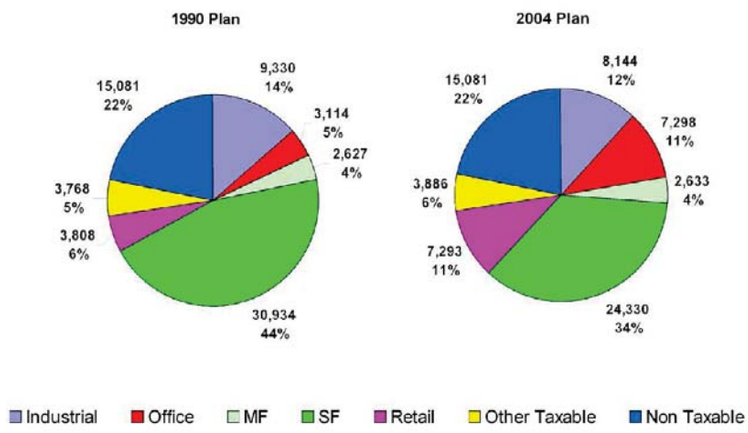
1) Build-Out Scenarios

In 2004, Insight Research Corporation performed a comparison of the new 2004 Future Land Use Plan with the Future Land Use Plan previously adopted in 1990 in the areas of acreage of land uses, property tax value, and ultimate revenue to cost results.

The 2004 Future Land Use Plan reduced the number of acres devoted to single family residential from approximately 30,000 acres to about 24,000 acres. These acres were redistributed primarily to retail and office uses. Much of this was in response to the future Collin County Multi-modal Transportation Corridor that crosses the northern portion of McKinney's ETJ.

The shift of roughly 6,000 acres of land from residential was a key reason for a corresponding shift in taxable value. The new Future Land Use Plan had a potential

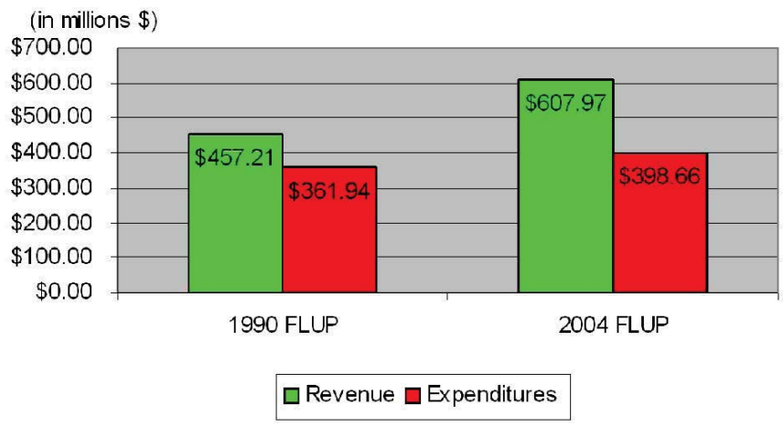
Figure 6.1: Total Acres by Use - City Limits and ETJ
1990 and 2004 Future Land Use Plan
City of McKinney, TX



taxable value of 60 billion dollars, almost six billion dollars, or about 11% more than the 1990 Future Land Use Plan.

Using the potential taxable value of each of the Future Land Use Plans, potential revenue from property tax, sales tax, franchise fees, development fees, and other revenue sources was determined. Using computations of public service costs, Insight Research Corporation also calculated expenditures, or the cost of providing city services to the land uses at build-out. The 2004 Future Land Use Plan had a potential for over $650 million in city tax revenue, up from approximately $480 million in the 1990 plan, a 35% increase.

Figure 6.2: City Revenue & Expenditure Forecast
Hypothetical Build-Out of all Acres



Some areas of the Future Land Use Plan may or may not develop as shown on the Plan. For example, the northernmost east-west commercial corridor is dependent on the construction of the Future Collin County Multi-modal Transportation Corridor (also known as the Outer Loop). In 2006, due to a change in the alignment of the Outer Loop by Collin County, the City of McKinney approved an amendment to the Future Land Use Plan in the area to the southeast of the City of Weston. The change shifted the alignment of the corridor approximately one (1) mile to the north of the alignment that had been shown on the 2004 Future Land Use Plan. Now, as a result, McKinney's ETJ in the area to the southeast of Weston no longer shows a transportation corridor and the Future Land Use Plan in that area has been changed from primarily commercial to residential uses, resulting in a dramatic effect on the balance of future tax values. Based on the 2007-2008 update of the DSM performed by Insight Research Corporation, the 2006 amendment to the Future Land Use Plan (precipitated by the change in the Outer Loop alignment) resulted in a reduction in the percentage of taxable commercial values at build-out from 66.5% to 58.5%. See Figure 6.3 below.

Figure 6.3: Maximum Build-Out Full Development Simulation
Modeling Comparison of Potential Taxable Values

2002 CITY LIMITS & ETJ Maximum Build-Out 2004 Comprehensive Plan			
	ACRES	VALUES (In Billions)	% of Value
Residential	26,962.7	$20.0	33.5%
Commercial	26,620.8	$39.7	66.5%
Total	53,583.5	$59.7	100.0%

2007 CITY LIMITS & ETJ Maximum Build-Out 2004 Comprehensive Plan with 2006 Amendment			
	ACRES	VALUES (In Billions)	% of Value
Residential	35,938.5	$28.4	41.5%
Commercial	21,699.1	$39.9	58.5%
Total	57,637.6	$68.3	100.0%

Additionally, the area immediately to the east of the East Fork of the Trinity River is designated as Industrial in the 2004 Future Land Use Plan (and in the 1990 Future Land Use Plan), but that area faces many obstacles to the development of industrial uses. At some time in the future, when a detailed study of that area is completed or as development pressures dictate, that area could also resort to a residential land use pattern. Such a change would also have a dramatic effect on the balance of taxable values. Nevertheless, the purpose of the DSM is to measure the Future Land Use Plan as depicted, and any changes to the Future Land Use Plan must be modeled as they are proposed in order to fully understand the fiscal impact.

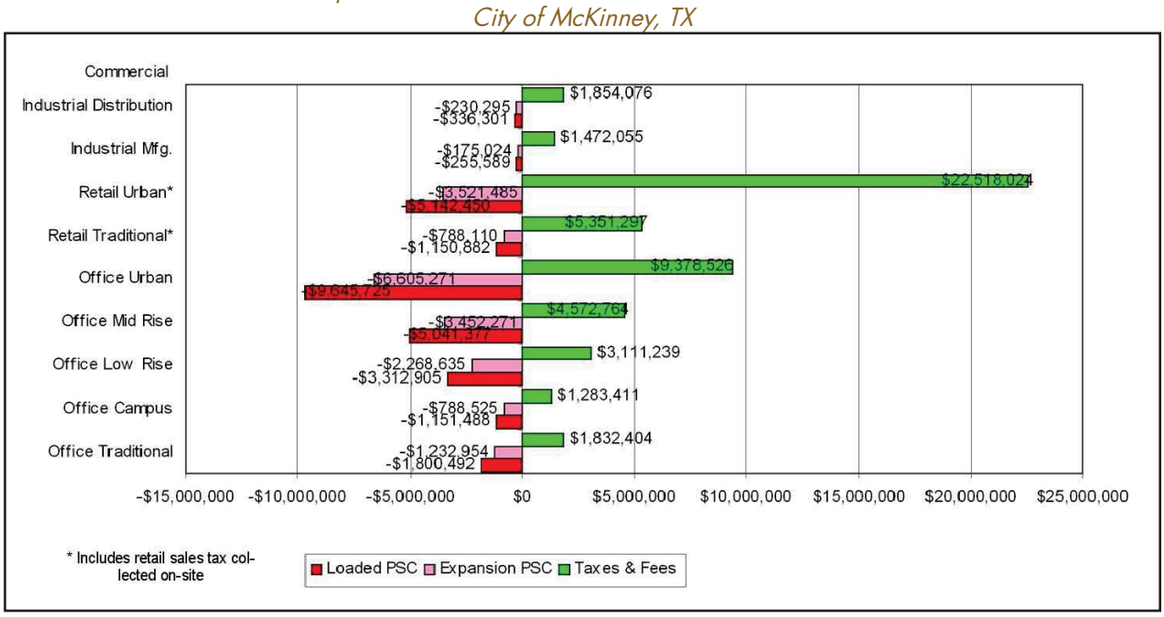
2) Ten-Year Cash Flow

A ten year cash flow analysis provides the City with a reasonable projection of its finances over the next ten years. Based on assumptions about the growth of residential and commercial development in the city, the ten-year cash flow analysis reinforces the importance of the development of the commercial tax base. Due to the conservative nature of the DSM, the output of the cash flow model shows the cost of providing city services constantly above the tax revenue generated by the projected land uses. The cash flow analysis is not intended to provide exact data on future city budgets but, instead, shows a trend of rising city costs created by rapid residential development.

3) Cost/Benefit Potential Comparison

Hypothetical land uses on twenty acres were measured to determine the cost to provide city services and the potential tax revenue for the City. The results of the Cost/Benefit Potential Comparison include both the expansion cost and the full cost methods of determining public service cost. Breakdowns of the cost/benefit comparison for both the expansion and full cost methods are included in the Data Sets and Public Presentations Report that accompanies the Development Simulation Modeling for McKinney.

Figure 6.4: Comparison of Cost/Benefit Potential
Development Alternatives for a 20-Acre Tract Over 10 Years
City of McKinney, TX



Section 7: Land Use Element

Land uses are affected by the decisions of individuals, private groups, and public bodies. These include property owners, real estate investors and developers, local residents, City Council, City Staff, local boards and commissions, school districts, county government, the North Central Texas Council of Governments, utility providers, and even state legislators. Land use also affects many decisions facing the community, from where to locate a new home or business, to where to build a road, to the size of a sewer line, to how many elementary schools to build, to projecting the fiscal health of the City, to how to provide water for the area in 50 years, etc.

This section of the McKinney Comprehensive Plan serves as the basis by which the City of McKinney makes land use decisions. This includes the City Council, the Planning & Zoning Commission, and City Staff. This element also serves as the basis for many other plans - water & sewer master plans, thoroughfare plan, parks plan, etc. Because this plan affects so many other plans, changes to it need to be carefully considered.

In addition to serving as a guide for decision making, the land use element serves as the foundation for zoning and subdivision regulations as well as the Capital Improvements Program (CIP).

The pattern of land uses proposed by this element is consistent with the goals and objectives of the Comprehensive Plan and is intended to lead to the type of community desired by the citizens. In developing the element, the goals and objectives had to be balanced and compromises had to be made where one goal conflicted with another. For example, some land uses conflict with one another if in close proximity, yet without both of them, the city's tax base is unbalanced. Weighing the goals to find a balance through compromise and creative solutions will be key when making decisions based on the various plans which make up this element.

The land use element is comprised of text as well as maps that graphically illustrate the concepts of the plan. These include the existing land use plan and the future land use plan element. The future land use plan element includes the future land use plan module, the future land use plan, definitions, the land use table, the locational criteria, etc. Caution should be used so as not to rely too heavily on any one component of the plan.

The entire section, and to some degree the entire Comprehensive Plan, should be referenced when making a decision. To focus on only one statement in the plan or one aspect of a map leads to an incomplete understanding as to the overall goals and objectives of the plan.

Like the entire Comprehensive Plan, the land use element of the plan applies to an area larger than the city limits. The planning area includes the city limits and the City's extraterritorial jurisdiction or ETJ. Though the City's zoning authority extends only to the city limits, many decisions the City makes affect land use throughout the entire area. These decisions include the approval of subdivisions, the construction of public infrastructure, and the expansion of the city limits.

Land use affects many decisions facing the community, such as where to locate a new home or business, where to build a road, determining the size of a sewer line or how many elementary schools to build, projecting the fiscal health of the City, and how to provide water for the area in 50 years, for example.

7.1 Existing Land Use

The existing land use map, along with the zoning map, were shown with a great degree of deference when the land use element and the future land use plan were developed. The existing land use map indicates the uses of property. This map was developed over time using the state tax codes, which are provided by the Collin Central Appraisal District for all parcels of land. This was supplemented through the review of a recent aerial photo, field verification, and grouping of land use types/ categories. Changes and modifications were then made as necessary. This information allowed for a database to be created regarding the amount of each land use in the City.

A map showing the existing zoning, excluding "AG" - Agricultural zoning, for undeveloped areas was created to supplement the existing land use map. These areas, although not developed, have existing zoning and development rights. The City Council determined early on to try to honor zoning already present as much as possible and directed staff to consider this when developing the future land use plan. When the zoning of an existing parcel or area significantly conflicts with the goals of the Comprehensive Plan, the City may find it beneficial and necessary to consider rezoning the property into a district (or districts) that better conforms to the goals of the plan.

A review of McKinney's Existing Land Use Map and associated land use database served to focus discussion of existing land use issues and how land should be used in the future to continue the positive aspects and mitigate the negative aspects. This review also allowed for an analysis of the factors, both local and regional, which led to the existing land use pattern. This provided insight into which of those factors are anticipated to continue impacting land use. We can also begin to distinguish those factors the City can influence from those the City cannot. The plan can be implemented via the City's regulatory powers and is not dependent on factors beyond the City's control.

Table 7.1: Existing Land Use (2003)

Category	Type	Approximate Acreage	% of Existing City Limits
Undeveloped	Agricultural/Vacant	+/- 22,400 acres	59%
Developed Open Space	Golf/Private Open Space/Parks	+/- 2,700 acres	7%
Residential	Single Family/Multi-Family/ Townhomes & Duplex	+/- 7,200 acres	19%
Commercial	Retail/Office	+/- 1,900 acres	5%
Industrial	Industrial	+/- 1,100 acres	3%
Public/Semi-Public	Government/Airport/Schools/Utility/ Right-of-Way	+/- 1,900 acres	5%
Other	Other Uses	+/- 80 acres	2%
Total Acreage		+/- 37,280 acres	100%
Extraterritorial Jurisdiction (ETJ)		+/- 36,000 acres	--

Existing Land Use Table (2003)

The Existing Land Use Table (2003) lists the seven categories of existing land uses, some uses in that category, the approximate acreage of each category for the City limits, the total acreage for the City limits and ETJ, and the percentage of each category for the City limits. The data is as of January 2003.

Existing Land Use Descriptions - 2003

The existing land use map indicates 17 types of land uses. It is anticipated the land designated as agricultural will develop as some other type of use in the future. Although floodplain is shown on the existing land use map, it is not considered a land use type. The floodplain designation overlays a base designation of another land use. The most common designations are vacant and agricultural, given the limited ability to develop land within the floodplain. The following are brief descriptions of each land use type.

Agricultural - Land used for agricultural uses.

Vacant - Undeveloped land and including vacant lots within developed residential and commercial subdivisions.

Golf Course - Public or private golf courses and driving ranges.

Parks - Open space amenities for both active and passive recreation. This category includes sport facilities, open space, playgrounds, recreation centers, and aquatic facilities. It does not include private neighborhood recreation centers.

Private Open Space - Preserved open space under private ownership, including common areas, nature preserves, and private neighborhood parks and recreation facilities, that does not have the ability to be further developed.

Single-Family - Residential development with one detached unit per lot.

Townhouse & Duplex - A single-family dwelling unit on one lot attached to another dwelling unit on a separate lot on one or two sides. A duplex can also be two attached units on a single lot.

Multi-Family - Residential development with multiple units on one lot, or two or more attached units on separate lots. This category includes apartments, three-plexes and four-plexes.

Retail - Commercial development providing goods for sale, such as a grocery store, drug store, restaurant, or department store. Some service providers and offices are grouped with retail when located in a shopping center.

Office - Commercial development providing services for sale such as an accountant or a physician, or providing general office and administrative uses.

Industrial - Commercial development devoted to the processing of raw materials and/or the production of goods and/or wholesale storage of goods.

Government - Includes all developed properties owned by government enti-

ties, except public parks including buildings, post offices, jails, etc.

Airport - Land used for an airport both private and government owned.

Schools - Land used for educational uses, both public and private, ranging from kindergarten to high school.

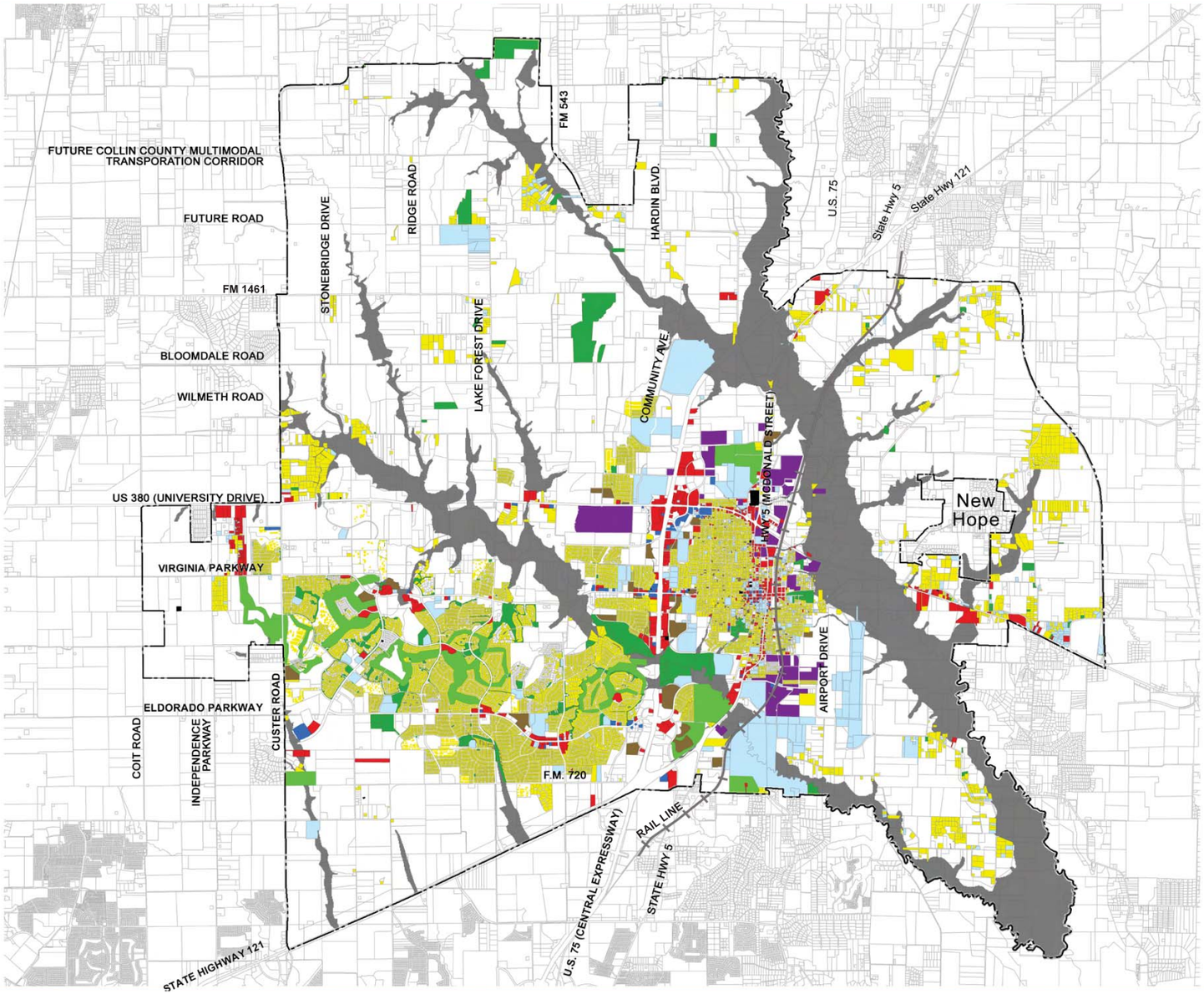
Utility - Land owned by and/or used by public utility that provides for the transfer of utilities, such as transfer stations. This does not include overhead lines or underground pipelines.

Right-of-way - Land set aside for use as roads and alleys.

Other - Land used for uses other than those categorized above. Primary uses in this category are tax exempt, and include churches, non-profit uses, heritage farms, cemeteries, and institutions of higher learning.

Existing Land Use Map - 2003

The following graphic depicts the existing land use inventory within the City of McKinney and its ETJ. This map is developed using the state tax codes, which are provided by the Collin Central Appraisal District for all parcels of land. This land use inventory was verified using 2003 aerials and accompanied with field observations by McKinney City Staff. The foldout map was developed by City of McKinney GIS personnel and HNTB planners.



CITY OF MCKINNEY
COMPREHENSIVE PLAN

EXISTING LAND USE

LEGEND
- Floodplain
- Golf Course
- Parks / Open Space
- Institution (Schools, Government, Church)
- Industrial
- Retail
- Office
- Single Family
- Multi-Family
- Private Utilities

Source Date: March 2003
Source: City of McKinney GIS Department Data

22 March 2004
FIGURE 7.2

1 Square Mile
100 Acres
Feet
0 3,500 7,000

URBAN DESIGN + PLANNING HNTB DALLAS TEXAS
Planning, Civil Engineering, Urban Design, Landscape Architecture & Consensus Development

EXHIBIT H

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EXHIBIT H

7.2 Future Land Use System

The future land use system is a major component of the Comprehensive Plan. It is comprised of maps and text indicating the desired use of land. The use of land is a significant part of the community's vision for the future. It is from this plan that other future plans are based and decisions are made. The thoroughfare plan and water and wastewater master plans are all developed from assumptions based upon the type, location, and intensity of development indicated by the future land use system. The Future Land Use Plan should be referenced when considering development proposals and the location of public facilities.

McKinney System

The future land use system for McKinney is slightly different from most plans in that it has two maps working together to plan land uses. These two maps are the **McKinney Future Land Use Plan** and the **McKinney Future Land Use Plan Module Diagram**. This system developed as a solution to the problem of trying to plan for all areas of such a fast growing, rapidly changing community. This pace of growth can cause the plan to quickly become less effective as a planning tool. At the same time, the City has a need to plan for its future and a desire to affect the type of community becomes. The combination of the two maps, and supporting text, create a plan with both a clear direction for future development and enough flexibility to respond to changing conditions.

The first step in the development of the plan was an initial review of the current land use map. As part of this effort, factors that have influenced the way McKinney has developed over time were studied. A development suitability analysis was done in order to gain an understanding of features that will influence future development. As the Comprehensive Plan process continued, the goals and objectives were developed and input was received on the city form scenarios. These became the base for documenting the vision of the community and creating a Future Land Use Plan.

The most significant challenge to creating the Future Land Use Plan was making the plan flexible enough to deal with changing market conditions over a long period of time. With no reliable way to predict market conditions within that long period, the plan has been designed to accommodate a range of possible conditions. It was decided that long range land use plans for such a large area are best when they avoid setting specific details, such as the size and location of commercial properties, and instead provide a range of acceptable options. When a specific development is proposed, the market conditions present at that time can be considered, and the best option within that range can be chosen.

A series of criteria for future development were created to evaluate development proposals. Other aspects were left to the market to determine. These ideas were further refined and developed to create the future land use system for McKinney.

Components

McKinney's future land use system includes three important components that work together and are interdependent. These components are the **Future Land Use Plan**, the **Future Land Use Plan Modules Diagram**, and the **supporting text**.

EXHIBIT H

Future Land Use Plan

The Future Land Use Plan map is a graphic illustration of the general land use type mix desired by the City for the entire planning area. It should be noted that the colors shown on the map do not correspond to a particular zoning district and each color designation or module may allow for a range of uses. **This map should be used in conjunction with the module map and the accompanying text, including flexibility factor and locational criteria to assess the types of land uses to be allowed in a particular area**.

The map includes both bold and pastel colors. The bold colors distinguish areas with limited existing development and/or zoning from areas having significant development or zoning, which are represented by the pastel colors. A generalized alignment of major roadways is shown on this map to serve as a point of reference. Refer to the transportation element and thoroughfare plan for information about the location and size of roadways. An examination of the water and wastewater master plans, the parks and open space plan, and hike and bike trail plan should also occur when utilizing this map.

Future Land Use Plan Modules Diagram

The future land use plan module diagram breaks the City and ETJ into 61 planning areas or modules. Each module is characterized by one of twelve dominant or primary land use types indicated by a particular color and land use code (SM - Suburban Mix - yellow, I - Industrial - purple, etc.). Within each module, a variety of land uses are allowed based on its land use mix and locational criteria, which are included as part of the supporting text. Modules that have significant existing development and/or zoning are cross-hatched to distinguish them from modules with less development and/or zoning. This is necessary as the land use mix and locational criteria function differently based on the additional constraints found in these more developed areas.

The boundaries of the modules were determined by natural and man made features such as rivers, creeks, roadways, zoning, and existing land uses. The size of the modules was determined based on the above features, infrastructure/service needs (in the case of Suburban Mix modules the ability to support one elementary school; however, with the final consideration focused on the number of elementary schools being based on density and household size), and the ability to absorb that particular land use types mix of uses.

Supporting Text

In order to utilize the Future Land Use Plan and the Future Land Use Plan Module Diagram, the supporting text must be taken into consideration. The supporting text includes the individual module sections, the locational criteria, and the module tables. To some degree, this entire chapter should also be referenced.

The module descriptions include an introduction and a definition of each of the 12 modules. Each individual module section includes an overview, a land use table, a land use description, community form, and locational criteria.

The Future Land Use Plan Modules table is a record of the land uses percentage and acreage for each module type, which is used to track development in each module. It will be updated on a regular basis as property is zoned and development occurs.

The Process for Utilization section is the "How to" section, describing how the various text components and the two maps are used to make land use decisions and respond to and act on request for zoning changes and plan amendments.

Process for Utilization

There are two processes for utilizing the future land use system, one for areas having significant zoning and development and one for areas that do not. These more developed areas are distinguished on the Future Land Use Plan map and the Future Land Use Plan Module Diagram by pastel colors and cross hatching. The process for more developed areas places more importance on the existing development pattern, not exceeding the existing (or currently planned) infrastructure capacity, and providing transitions between uses. The process for less developed areas puts greater importance on achieving a balanced mix of uses and building the desired city form throughout the module.

Additionally, city policies relating to specific land use types or areas of the City should be utilized in conjunction with this section. The Multi-Family Policy, which was in effect at the time of this update, is incorporated as part of the Comprehensive Plan and is included in the appendix. The Multi-Family Policy should be considered when reviewing any zoning requests for multi-family uses. The Multi-Family Policy discusses various regulations to limit the amount and location of multi-family uses. The ultimate goal of the Multi-Family Policy is to create a 10% city -wide cap on multi-family units. Other specific city policies, as they are developed, should likewise be included when land uses or classifications are being considered.

Significantly Developed Areas

Although not necessarily infill or redevelopment, much of these areas includes property already developed and/or zoned for development. To a large degree, it is assumed that property will develop within the range of land uses allowed by the current zoning. As a result, the Future Land Use Plan map designates these areas as it is anticipated that they will develop based on the existing zoning or the adjacent land uses. This was done so that infrastructure could be sized and public facilities could be planned for the most likely uses. That being said, there will clearly be cases where a different set of land uses is not only acceptable but is desirable for economic, land use compatibility, and balanced land use mix reasons. However, the new zoning requested should not contradict the desired existing and anticipated development pattern.

Each rezoning request must be weighed against the goals and objectives of the Comprehensive Plan to determine the degree to which the request is in keeping with or in conflict with them. In most cases, each request will be in keeping with some and at odds with others. In reviewing zoning requests, the positive effects (ones that meet the community's goals) must be weighed against the negative effects (ones that are neutral or contradictory to them). The following is a list of some of the factors to consider:

- Specific Area Plans or Studies: In some cases a more detailed analysis of a particular area may have been conducted, and a specific plan for a neighborhood or area may have been adopted. This plan should be

referenced when evaluating land use questions within an area covered by the plan. The plan should be built upon the Comprehensive Plan and provide additional details about the area's goals and expectations.

The following specific area plans/studies have been completed: Town Center Study (March 2008) and the Northwest Sector Study (February 2015).

- Impact on Infrastructure: The Water Master Plan, Wastewater Master Plan and Master Thoroughfare Plan are all based on the anticipated land uses as shown on the future land use plan. Any change in zoning, which will alter the type or intensity of land uses, should also evaluate the degree to which these plans are impacted. It will frequently be necessary for the applicant to conduct a study to determine the effect of the change on the system. This study will be conducted under the supervision of City Staff. Changes should not be approved when there is anticipated to be inadequate capacity and no acceptable method of providing the additional capacity required. Solutions, which negatively impact the level or quality of service, increase costs to the City, or unfairly burden neighboring land owners, are unacceptable. When a proposed potential development would utilize more capacity than is planned, special consideration should be given.

- Impact on Public Facilities/Services: Public services include schools, fire and police, libraries, parks, and sanitation services. Similar to infrastructure, public facilities/services are planned for based on the anticipated land uses. Unlike infrastructure, the negative impacts on public facilities/schools may not be felt immediately. This should not lead one to believe they are any less real. In many instances, the negative implications can be more severe.

- Lack of Compatibility with Existing and Potential Adjacent Land Uses: It is important to have appropriate transition of land uses. However, it will not always be possible to create the most ideal transition between land uses, given current development patterns. Careful consideration should be given to ensure that an acceptable transition is provided. In some cases, specific design elements may be used to mitigate some of these impacts.

- Economic Impact: When weighing the economic impact of a particular land use decision, it is important to weigh not only the short-term implications but also the long term fiscal implications. Although the tax benefits of developed property are positive, undeveloped property has very little cost to the City and school districts for services. A realistic expectation that the property will be able to develop at some point in the future is important. Economic modeling should be done to quantify the fiscal implications. As part of the modeling, assumptions must be made. Although in individual cases, some of the actual costs and benefits may differ, to deviate in a particular case can be problematic. Most often, applicants will have a tendency to emphasize the factors which positively impact the model, causing the results to be skewed and less reliable.

- Over Concentration of a Use: To allow for an over-concentration of a particular land use type sometimes creates long-term problems. An over-concentration is a situation where it can reasonably be expected that many of this type of use will not be viable in the future. That being

said, a great deal of deference should be shown to the market to determine the appropriate mix. Economies change over time, and many of these changes cannot be predicted. To try to predict these changes and develop solutions may overly constrain the free market. In cases where there is a concern that an over concentration may occur, the goals and objectives of the plan for the type of community that is desired must be considered and applied cautiously.

Areas with Minimal Development

These areas are characterized by very little existing zoning and limited development other than sparsely scattered estate type development, which has generally occurred over time. Much of the land is still used for agricultural purposes and, in many cases, has not yet been incorporated into the City limits. Although existing land uses should be considered when making land use decisions, an assessment should occur as to whether it is anticipated that those uses will be viable in the long term. The impact of the timing of different types of land uses on future land uses should be considered when making a decision to zone land even for a use allowed within a module.

- Conformance with Desired Land Uses Mix: The percentage mix of land uses within the modules was developed with the goals and objectives of a Comprehensive Plan in mind. This was done for a number of reasons: to plan for infrastructure and public facilities, to achieve a desired mix of land uses, which has economic and quality of life implications. The range of uses provided allows for an acceptable level of flexibility. A proposal for a land use mix beyond the acceptable range should be considered as a request to amend the Comprehensive Plan. Only by reviewing that part of the Comprehensive Plan can all the issues and implications of the proposal be given proper consideration.

- Locational Criteria: The locational criteria provide a guide as to where uses should be located in relation to major roadways, adjacent uses, public facilities, etc. It is understood that some uses require greater visibility from major roadways, a greater ease of access, etc. Certain uses are better able to incorporate natural features as an amenity. Planning for an appropriate transition between uses is important in providing for the quality of life expected by the community. Each module type has a unique set of locational criteria appropriate for that module's land use mix.

- Compliance with Community Form: The community form section describes the character of the built environment in each module. Proposed rezoning requests should be considered in the context of the descriptive narrative of the Community Form. While the land use mix and locational criteria sections are more related to the type of land use, the community form deals more with the way that development relates to the built environment. Community form is the fabric binding the various uses together to foster a sense of place.

- Impact on Infrastructure: The Water Master Plan, Wastewater Master Plan and Master Thoroughfare Plan are all based on the anticipated land uses as shown on the Future Land Use Plan. Any change in zoning, which will alter the type or intensity of land uses, should evaluate the degree to which these plans are impacted. It will frequently be necessary for the applicant to conduct a study to determine the effect of the change

on the system. This study will be conducted under the supervision of City Staff. Changes for which there is not anticipated to be adequate capacity and no acceptable solution is proposed should not be approved. Solutions, which have a negative impact on level or quality of service, increased costs to the city or unacceptable implications for other landowners, should not be allowed. When the proposed potential development would utilize more capacity than is planned, careful consideration should be given.

- Impact on Public Facilities: Similar to infrastructure, public facilities and services (schools, fire and police, libraries, parks, and sanitation services) are planned for based on the anticipated land uses. Unlike infrastructure, the negative impacts on public facilities/schools may not be felt immediately. This should not lead one to believe they are any less real. In many instances, the negative implications can be more severe.

  To help establish appropriate fire insurance premiums for residential and commercial properties, insurance companies need reliable information about a municipality's fire protection services. The Insurance Services Office (ISO) - an independent statistical, rating, and advisory organization that serves the property/casualty insurance industry - provides that information through the Public Protection Classification program. ISO collects information on a community's public fire protection, such as the available water supply in the area and its emergency communication facilities and analyzes the data using the Fire Suppression Rating Schedule. The Fire Suppression Rating Schedule is broken down into the following components:

  - 10% - How well the fire department receives and dispatches fire alarms
  - 50% - How well the fire department compares to ISO standards
  - 40% - How well the city's water supply compares to the ISO standards

  In Texas, an extra 5% may be added to the final calculations as a result of Texas Exceptions to the Fire Suppression Rating Schedule.

  ISO then assigns a Public Protection Classification from 1 to 10. Class 1 represents exemplary public protection, while Class10 - the worst rating - represents less than minimum recognized protection.

  According to the McKinney Fire Department, McKinney has a current Public Protection Classification of Class 4, with the last inspection being performed in 1990. In 1990, these exceptions added sufficient points to McKinney's final score, moving the City's score from Class 5 to Class 4. Rating inspections occur approximately every 12 to 15 years, and McKinney will be requesting a reclassification inspection in the second half of 2009. For comparison purposes, other cities in Collin County have the following Public Protection Classification:

  Allen - Class 2
  Frisco - Class 1
  Plano - Class 1
  Richardson - Class 2
  Wylie - Class 1

ISO is not the only system that insurance companies use to determine the fire insurance rates charged by a particular insurance company in a community. ISO is the rating company used by most insurance companies to determine the cost of fire insurance. A lower ISO rating in McKinney would have differing impacts of different types of buildings in McKinney. Generally, a lower ISO rating will result in a lower insurance cost for nearly every building in the City.

- Compatibility with Adjacent Land Uses: The issue of compatibility is addressed indirectly as part of the development of the land use mix, locational criteria and compliance with urban form sections and should be consulted when evaluating a zoning request. The specific circumstances should be considered but with the understanding that land use mix needs to be considered in the context of the entire city and the Comprehensive Plan as a whole.

- Timing of the Zoning Request: Many of the modules allow a range of uses. It should be understood that land should be zoned for a secondary use only when it will not impact the ability of the primary land use to develop. In modules designated for regional commercial or office park, it may be necessary to delay the zoning on land for residential uses as the residential uses may preclude or hinder the primary commercial uses from developing. The nonresidential development pattern may need to become established, along with infrastructure such as road alignment, before it can be determined where the residential uses should be located. In some instances, residential may serve as infill development where appropriate.

7.3 Future Land Use Plan Component

The Future Land Use Plan map is one of two maps comprising McKinney's future land use system. The text in this portion of the section is designed to support the map, by providing a table of the uses shown on the map and definitions of the uses.

Future Development Patterns

For the purpose of future planning efforts, the planning area has been divided into seven (7) sectors - the Town Center, the Regional Employment Center, the West Side, the Northwest Side, the Southeast, the Northeast, and the Northern Corridor. It is anticipated that the City will continue to conduct more specific sector studies to provide for a closer study of these areas and to plan for their development on a more micro level. These areas were created based on natural and man made features that create boundaries, the time or era of development, a common development or land uses characteristic, or a proposed unique feature.

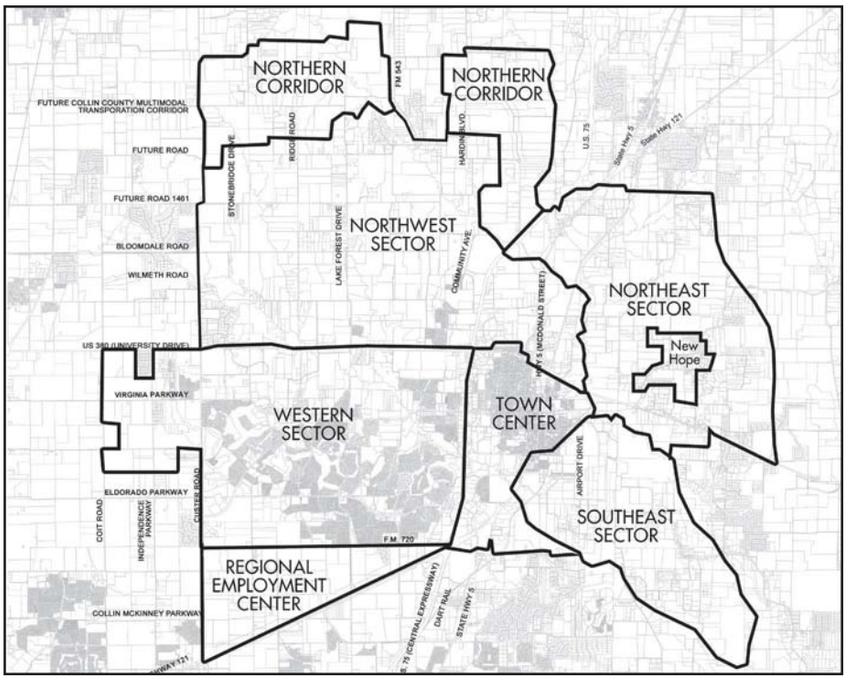


Figure 7.3: Sector Map

1. Town Center - This is a holdover designation from the 1990 Comprehensive Plan. The town center extends generally from US Highway 380 on the north to Elm Street on the south, US 75 on the west to the East Fork of the Trinity River to the east. This area includes the oldest developments in McKinney and is characterized by development patterns that occurred over the first 150 years of the community. Many of the issues facing this area are those associated with redevelopment. Problems typical of gentrification exist in certain areas as well. Planning efforts to focus on transition of uses, development standards that are appropriate given existing constraints, providing adequate infrastructure and public services to accommodate redevelopment, etc.

   In August 2006, the City of McKinney initiated the Town Center Study as a proactive approach to addressing the development pressures that were being felt in the Town Center area. With significant involvement from local stakeholders, the City hosted a series of public design workshops exploring how basic urban design principles could be used to foster healthy revitalization and redevelopment in the Town Center. See the Town Center Study Phase 1 Report (adopted March 2008) for additional information.

2. Regional Employment Center - In 1999, the City of McKinney in conjunction with the Gateway Planning Group began development of a sector plan for a Regional Employment Center (REC). So named because it was designated by the 1990 Comprehensive Plan to provide land for corporate campus style headquarter facilities as well as large scale manufacturing and distribution facilities. As shown in Figure 7.3, the REC was originally a triangularly shaped area of approximately 4,500 acres generally bordered by SH 121, Custer Road, McKinney Ranch Parkway (formerly FM 720) and US 75. In the late 1990s, the City began to feel pressure to allow development not in keeping with what was envisioned by the 1990 Comprehensive Plan. Up until that

time, a lack of infrastructure had limited the developability of much of the area. However, when residential development from the northeast began to approach, the extension of utilities for similar types of development became more feasible. Concerned that the existing plan for the area was unrealistic, an REC sector planning effort began.

After significant property owner involvement, the result that emerged was a radically different plan with enough residential density to support a proposed mix of high intensity, regionally-appealing non-residential uses. The revised plan (adopted in March 2003), along with public-private partnerships to provide infrastructure, led to the rapid start of development in the REC Sector of McKinney. The adopted REC Study and associated development regulations served as the guiding tool for development in the REC Sector of McKinney for almost a decade after its adoption.

In 2014 and 2015, in partnership with property owners and city leaders, the vision for the REC Sector was revisited to evaluate the ultimate feasibility for achieving the urban-style development pattern that was originally established in 2003. Through this process, it became clear that the vision for urban-style development was too large to be achievable over 4,500 acres and under current conditions. As a result, the vision was adapted to capture current market conditions and concentrate the urban-style development pattern that was originally called for as part of the 2003 REC Study to a smaller footprint more attainable in today's market. Throughout the remainder of the REC Sector, the goal for development now centers on a significant concentration of regionally-scaled commercial, retail and service uses that are supported by a mix residential uses in both urban and traditional development patterns, as well as large office and corporate headquarters that provide substantial employment opportunities. The adapted vision is still reminiscent of the original vision in terms of its desire to establish this sector of McKinney as a regional destination. See the Tollway Commercial Module and Urban Mix Module descriptions for additional information.

3. Western Sector - The western sector is approximately 25,400 acres and is generally bounded by US Highway 75 on the east, US Highway 380 on the north, FM 720 on the south and on the west by the edge of the McKinney ETJ, future Coit Road. While most of this area is either already developed or is zoned for development, there are still some tracts zoned as "AG" - Agricultural, as well as some areas west of Custer Road, which have not yet been annexed. Nearly half of the area is occupied by the Stonebridge Ranch and Eldorado master planned developments. While most of this area is developed or anticipated to develop for suburban style residential and supporting commercial uses, the areas along US 75 and US 380 have developed for more intensive regional commercial uses. The northeast portion of this sector is anchored by the 196-acre Raytheon facility. Development is generally progressing westward and northwestward.

4. Northwest Sector - Development of this area is generally just beginning, with the exception of scattered estate type development. There are a number of large undeveloped "PD"s - Planned Development Districts, the Crow-Billingsley tract and Franklin Ranch. The area is generally lacking in infrastructure, with water and wastewater lines just beginning to be extended. Many roads have not yet been improved to City standards.

UPDATE: In June 2013, the City of McKinney initiated the Northwest Sector Study to proactively prepare for the anticipated growth expected in this sector. The goal of the Study was to create a comprehensive vision to address the priorities and goals that community stakeholders deemed important. With significant involvement from a variety of stakeholders, the resulting vision for the Northwest Sector outlines priorities and principles to embrace, enhance, and expand the attributes of the Northwest Sector as growth occurs. See the Northwest Sector Study Phase I Report (approved February 2015) for additional information.

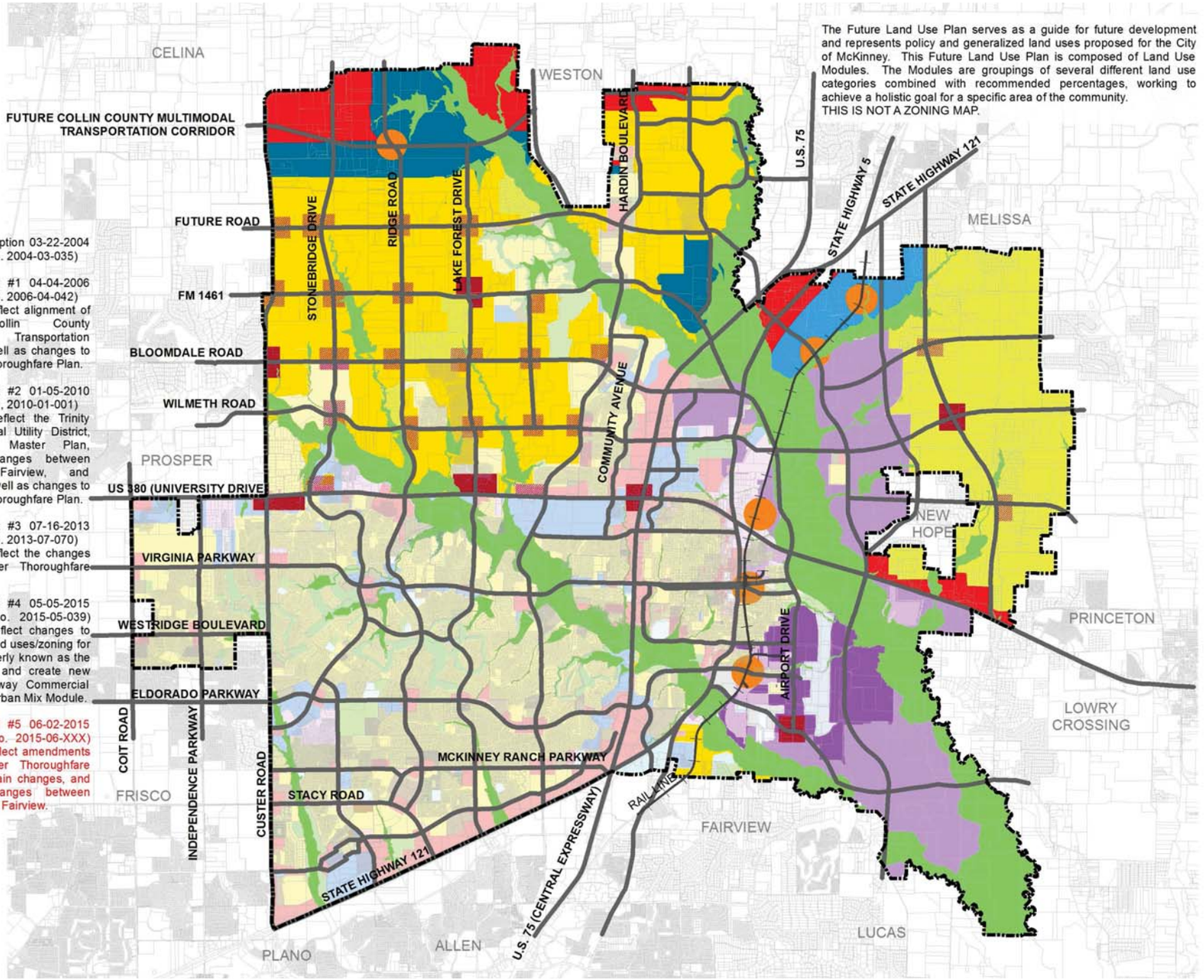
5. Southeast Sector - This area includes McKinney National Airport as the primary feature and is planned to develop for industrial uses, which desire a location near the airport. This area is bounded by the East Fork of the Trinity River and Wilson Creek to the east and south. There currently exists some estate type development that is scattered throughout the area and is clustered in spots. A lack of infrastructure has limited development in much of this area, but development is anticipated to occur as it is extended.

6. Northeast Sector - Some estate type development exists, but there is very little infrastructure. The East Fork of the Trinity River, which serves as the western boundary of this sector, creates a significant barrier to providing infrastructure to this area. The infrastructure is necessary to allow for more intensive development to occur. This area encircles the Town of New Hope.

7. Northern Corridor - The main feature, a future multi-modal corridor, is still in the early planning stages. The area is generally undeveloped, but some estate type development exists. It is expected that development pressure to allow single-family residential development will occur as development approaches from the south and east. The Northern Corridor also contains a large undeveloped Municipal Utility District (MUD) called Trinity Falls. In 2006, the developer, Marlin Atlantis, proposed this development and entered into various development agreements with the City of McKinney. Trinity Falls is envisioned to be a master-planned development located wholly within the northern reaches of McKinney's ETJ (generally between Weston and US 75), with ultimate build-out of approximately 4,500 single-family residential units and a limited amount of complementary non-residential uses (retail, office, schools, parks, and open space). Because of its proximity to and the abundance of similarities it shares with the Northwest Sector, the Northern Corridor was included in the Northwest Sector Study. See the Northwest Sector Study Phase I Report (approved February 2015) for additional information.

Future Land Use Plan Map

The following graphic depicts the Future Land Use Plan for the City of McKinney, including McKinney's ETJ. The Future Land Use Plan was developed through the City of McKinney Comprehensive Planning process, incorporating the goals and objectives of the community; the guidance of McKinney City Staff and HNTB - the Comprehensive Plan consultants; input solicited from residents through stakeholder interviews, community meetings, public input meetings, telephone surveys, and community questionnaire responses; and the direction provided by the Joint Committee made up of members of the City of McKinney City Council and McKinney Planning and Zoning Commission. The foldout map was developed by City of McKinney GIS personnel and HNTB planners.



* Original Adoption 03-22-2004 (Ordinance No. 2004-03-035)

* Amendment #1 04-04-2006 (Ordinance No. 2006-04-042) Revised to reflect alignment of Future Collin County Multimodal Transportation Corridor as well as changes to the Master Thoroughfare Plan.

* Amendment #2 01-05-2010 (Ordinance No. 2010-01-001) Revised to reflect the Trinity Falls Municipal Utility District, the Airport Master Plan, boundary changes between McKinney, Fairview, and Princeton as well as changes to the Master Thoroughfare Plan.

* Amendment #3 07-16-2013 (Ordinance No. 2013-07-070) Revised to reflect the changes to the Master Thoroughfare Plan.

* Amendment #4 05-05-2015 (Ordinance No. 2015-05-039) Revised to reflect changes to anticipated land uses/zoning for the area formerly known as the REC Module and create new modules: Tollway Commercial Module and Urban Mix Module.

* Amendment #5 06-02-2015 (Ordinance No. 2015-06-XXX) Revised to reflect amendments to the Master Thoroughfare Plan , floodplain changes, and boundary changes between McKinney and Fairview.

CITY OF MCKINNEY
COMPREHENSIVE PLAN
FUTURE LAND USE PLAN
PROPOSED

Legend

- Existing and Future Thoroughfares
- Extraterritorial Jurisdiction (ETJ)
- Rail Line
- Floodplain

FUTURE LAND USE MODULES

- Estate Mix
- Suburban Mix
- Urban Mix
- Town Center
- Transit Village (1/4 mile radius)
- Community Village
- Regional Commercial
- Tollway Commercial
- Regional Employment
- Office Park
- Industrial
- Airport Industrial
- Potential Commercial within the Residential Module (Based on Locational Criteria)

ANTICIPATED LAND USES / ZONING

- Floodplain
- Golf Course
- Parks/Open Space
- Government/Schools
- Airport
- Heavy Manufacturing
- Light Manufacturing
- Commercial Historic
- Commercial
- Neighborhood Business
- Mixed Use
- Office
- Residential/Low Density
- Residential/Medium Density
- Residential/High Density
- Residential/Urban High Density

Source: City of McKinney Planning Department Data

02 June 2015
FIGURE 7.4

Miles
0 1 2

100 Acres
1 Square Mile

EXHIBIT H

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EXHIBIT H

Future Land Use Plan Module Diagram Definitions

Suburban Mix: The predominant use is single-family detached housing. It also allows for medium density residential as well as neighborhood office and retail facilities, which support the residential component. Community facilities such as schools, parks and churches are also included.

Estate Mix: The primary use is single-family residential on large lots, with a limited amount of more dense single family residential and support office and retail uses.

Town Center: A mix of residential housing types with both neighborhood and regional office and commercial uses as well as significant amounts of community facilities - government offices, churches, schools and parks.

Transit Village: Development based around a transit center and including medium density residential, office and retail uses. Each transit village is anticipated to have a different mix of uses with some composed of regional office and commercial uses and others with greater amounts of entertainment and commercial uses with varying degrees of residential uses.

Community Village: An area of concentrated development. Generally it is a grouping of commercial uses serving a larger region. It includes office, retail, entertainment and community facilities. Some residential uses may be allowed when designed to minimize impacts from and to the primary commercial uses.

Regional Employment: A large scale office and potentially light industrial/ research development providing employment on a regional level.

Tollway Commercial: The principal uses include commercial, office, and entertainment uses with a strong regional draw, as well as vertical mixed-use projects that can be integrated into surrounding commercial uses. A mix of other residential housing types are permitted in small percentages and include, single-family, medium density, and high density urban residential uses. Community facilities such as churches, schools and parks are distributed throughout the module.

Urban Mix: The predominant use is single-family detached housing in both urban and traditional style patterns. This module also allows for medium density and high density urban residential with neighborhood office and retail facilities supporting the residential component. Community facilities such as schools, parks and churches are also included.

Regional Commercial: An area of large scale commercial development providing for retail and service uses on a regional level.

Office Park: This area is characterized by the primary use, which are office parks. It also includes supporting retail and service uses.

Airport Industrial: Development focused around its proximity to the airport. It Includes a range of industrial and support uses.

Industrial: Development includes industrial, manufacturing, office, distribution, and warehouse uses with support retail and office uses.

For additional information regarding the Town Center and Transit Village modules, refer to the Town Center Study Phase I Report (adopted March 2008).

Anticipated Land Use Definitions

Floodplain: Land adjacent to a river, creek, or lake and is susceptible to flooding (100 year floodplain is designated on the plan).

Golf Course: A public or private golf course.

Park/Open Space: Public and private recreation facilities.

Government/Schools: Schools, public or private, municipal and county buildings, etc.

Airport: City owned property associated with the operation of the Collin County Regional Airport.

Heavy Manufacturing: Heavy industrial includes mining, salvage yards, concrete batch plants, and similar intensive manufacturing and processing operations.

Light Manufacturing: Light industrial refers to land and buildings used for the production of some type of goods with minimal outside storage such as electronics, manufacturing, products assembly, etc. Uses should be relatively nuisance free.

Commercial Historic: Commercial uses within the historic downtown.

Neighborhood Business: Land and buildings used for retail sale of convenience goods and personal services such as grocery stores, barber or beauty shops, etc.

Office: These areas provide for office buildings with supportive retail and service uses intended primarily for occupants of such office buildings. It may also include an office park, which is a tract containing multiple office buildings, support uses, and open space designed, planned, constructed, and managed on an integrated and coordinated basis.

Commercial: Uses can include some of the more intensive commercial uses such as hotels, auto dealerships, department and furniture stores, as well as banks, restaurants, large home improvement stores, etc.

Mixed Use: An area of vertically integrated office, retail and residential uses in an urban style development.

Mobile Home Park: Land for the renting or leasing of sites for the location, occupancy, or accommodation of one or more mobile home dwelling.

Residential Estates: Characterized by single-family homes on large lots, generally at least a one acre minimum.

Residential/Low Density: Typified by single- family homes with a density ranging between 3.2 and 4.5 dwelling units per acre. See Suburban Mix Module or Urban Mix Module for density calculation methods.

Residential/Medium Density: This category has densities ranging from 5 to

12 dwelling units per acre and may include a variety of residential types such as single family attached units (duplex, triplex, fourplex) row houses, single family cluster or garden home developments, and townhouses.

Residential/High Density: This residential type is characterized by multi-family or apartment buildings, and may have development densities ranging from 12 to 24 dwelling units per acre.

Residential/Urban High Density: This residential type is characterized by multi-family or apartment buildings in an urban and pedestrian oriented style of development, and may have development densities that are greater than 24 dwelling units per acre.

7.4 Future Land Use Plan Module Diagrams Component

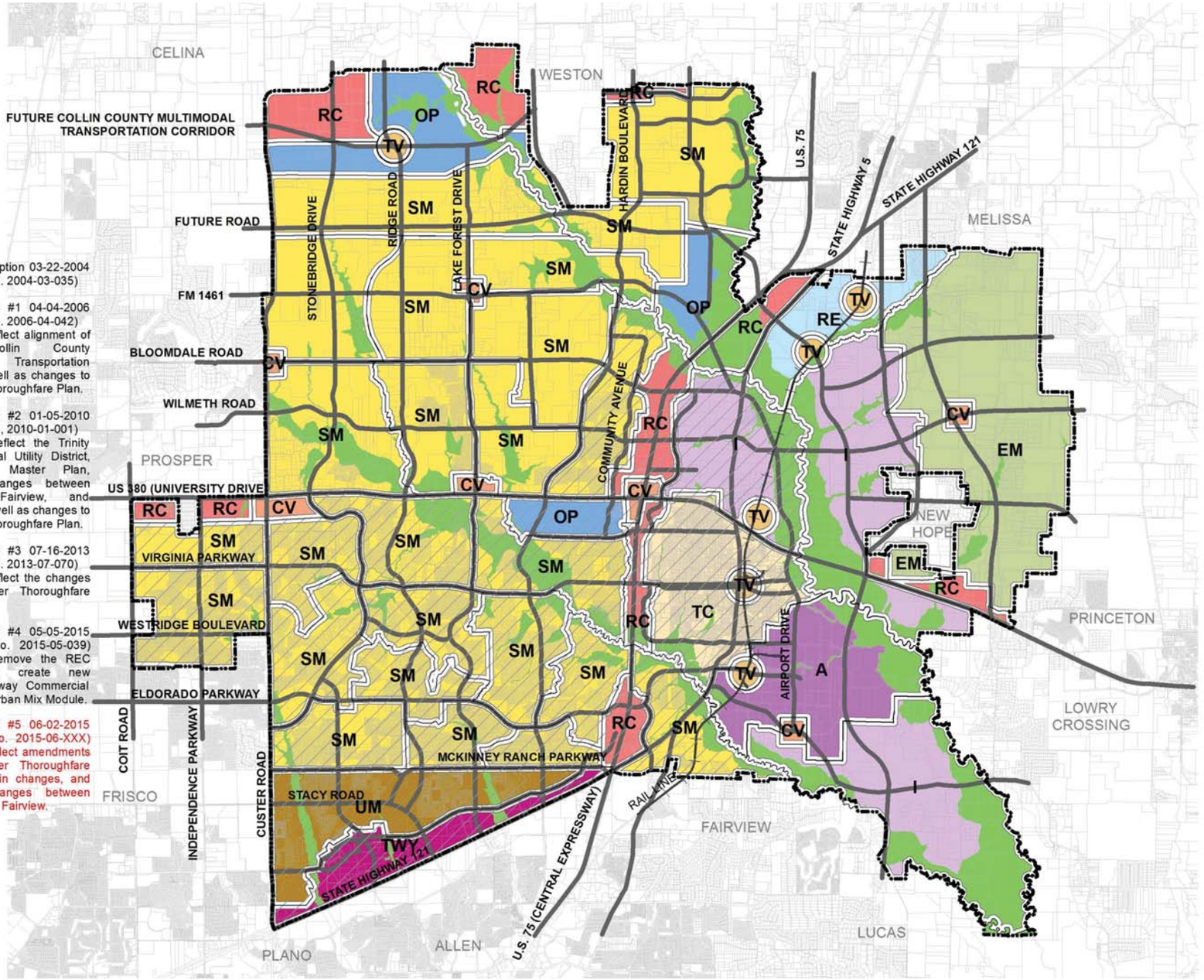
To help maintain McKinney's community values and guide the City's future growth, City officials have worked to devise a method for planning and monitoring development. This method for guiding new development provides City Staff an efficient means to quantify land use changes and provide City Leaders a way to justify future development decisions and their fiscal impact on the City. To help monitor development, City Staff and consultants have developed the Future Land Use Plan Module Diagram component to be used in conjunction with the future land use plan component. The Future Land Use Plan Module Diagram helps to ensure that decisions made on land use issues are based on fiscal realities, thereby avoiding the arbitrary assignment of land uses to areas on the future land uses plan map. By incorporating the Future Land Use Plan Module Diagram into the City's Fiscal Impact Model, both City Staff and City Leaders have a tool to justify decisions and manage the community's growth.

Future Land Use Plan Module Diagram

The following graphic depicts the Future Land Use Plan Modules Diagram for the City of McKinney within McKinney's current city limits and ETJ. The Future Land Use Plan Module Diagram was developed through the City of McKinney Comprehensive Planning process, incorporating the goals and objectives of the community; the guidance of McKinney City Staff; input solicited from McKinney residents through stakeholder interviews, community meetings, public input meetings, telephone surveys, and community questionnaire responses; and the direction provided by the Joint Committee made up of members of the City of McKinney City Council and McKinney Planning and Zoning Commission. The foldout map was developed by City of McKinney Staff and HNTB planners.

Future Land Use Plan Module Diagrams Table

The Future Land Use Plan Module Diagrams Table lists the land use modules in the City of McKinney's future land use plan. Along with the land use modules are columns indicating the total acreage for each land use module, and the land use category types within each module with a column for land use category type base percentage and acreage of each land use in the future land use plan. This table or series of tables will be updated by City Staff as land is zoned and developed in order to track the current land use mix.



* Original Adoption 03-22-2004 (Ordinance No. 2004-03-035)

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* Amendment #5 06-02-2015 (Ordinance No. 2015-06-XXX) Revised to reflect amendments to the Master Thoroughfare Plan, floodplain changes, and boundary changes between McKinney and Fairview.

CITY OF MCKINNEY
COMPREHENSIVE PLAN

FUTURE LAND USE PLAN MODULE DIAGRAM
PROPOSED

Legend

- Rail Line
- Existing and Future Thoroughfares
- Floodplain
- Extraterritorial Jurisdiction (ETJ)

FUTURE LAND USE MODULES

- EM Estate Mix
- SM Suburban Mix
- UM Urban Mix
- TC Town Center
- TV Transit Village
- CV Community Village
- RC Regional Commercial
- TWY Tollway Commercial
- RE Regional Employment
- OP Office Park
- I Industrial
- AI Airport Industrial

MODULE TYPE

- Existing Modules
- Future Modules

Source: City of McKinney Planning Department Data

02 June 2015
FIGURE 7.5

Miles
0 1 2

1 Square Mile
100 Acres

EXHIBIT H

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EXHIBIT H

Future Land Use Mix Category Descriptions

Within the City of McKinney Future Land Use Plan, there are twenty-one land use categories. The descriptions below have been developed to help provide guidance regarding the City's future development. Floodplain has not been described as it is considered undevelopable due to natural forces and economic limitations.

Estate Residential: Residential properties having one permanent single family detached dwelling unit on a parcel of land ranging in size from greater than two acres to less than ten acres. The size of the residential property is a key consideration for this classification of residential use. This residential use maintains an openness of the land. Estate Residential allows for larger than average lots than can incorporate personal activities and interest, but does not encourage large-scale commercial agricultural endeavors.

Single-Family Residential: One single family detached dwelling unit built on a parcel site. The detached dwelling unit is open on all four sides with the structure centered towards the middle of the parcel. The housing unit provides space for entertaining, habitation, personal cooking, sanitary accommodations, and storage that would be used by members of a family unit or an individual inhabitant.

Single-Family Urban Residential: One or two single family dwelling units built on one or two parcels. The structure is situated in close proximity to the street. The housing unit provides space for entertaining, habitation, personal cooking, sanitary accommodations, a carriage house, and storage that would be used by members of a family unit or an individual inhabitant. The street pattern is typically a modified grid pattern.

Medium Density Residential: Medium density residential is attached housing units and includes townhouses, apartments, and four-plexes.

High Density Urban Residential: This residential type is characterized by multi-family or apartment buildings in an urban and pedestrian-oriented style of development, such as structures situated in close proximity to the street, parking internal to the site with limited visibility from adjacent streets, and streetscape features that encourage pedestrian activity. Structured parking and vertical mixed-use developments with residential uses above ground floor commercial are encouraged within this residential type.

Retail - Neighborhood: Retail services serving the needs of the surrounding cluster of neighborhoods, generally a trade area of +/- one mile. Retail - Neighborhood provides a location for the selling or offering of consumer goods and services to the public in a non-habitation space. The size of Retail - Neighborhood ranges generally from 1,000 square feet up to 250,000 square feet.

Retail - Urban: A retail building set closer to street curb having shared or reduced parking standards. This retail product supports a street-level, pedestrian-oriented environment within a higher-density location. This use works well with adjacent Office - Urban and Mixed Use structures and can benefit further through the close proximity to a transit station. Retail - Urban structures can be either single-story or up to three-stories in height but frequently must be at least two stories.

Retail - Regional: Retail - Regional serves a trade area of +/- five miles. This use provides a location for the selling or offering of consumer goods and services to the public in a non-habitation space. The size of Retail - Regional generally ranges from 250,000 square feet up to 2,500,000 square feet.

EXHIBIT H

Table 7.6: Future Land Use Plan Modules

Land Use Module	Acres in Future Land Use Modules Plan	Land Use	Base Percentages	Acres of Each Land Use in Future Land Use Plan
Suburban Mix	31,539	Single Family Residential	65%	20,500
		Medium Density Residential	10%	3,154
		Office - Neighborhood	5%	1,577
		Retail - Neighborhood	5%	1,577
		Community Facilities	15%	4,731
Estate Mix	4,495	Estate Residential	75%	3,371
		Single Family Residential	10%	449
		Office / Retail Neighborhood	5%	225
		Community Facilities	10%	449
Town Center	2,449	Single Family Urban Residential	35%	858
		Medium Density Residential	10%	245
		Mixed Use	10%	245
		Retail - Retail Urban/Regional	10%	245
		Office - Office Urban/Regional	5%	122
		Entertainment	5%	122
		Light Industrial / Manufacturing	10%	245
		Community Facilities	15%	367
Transit Village	717	Mixed Use	40%	287
		Medium Density Residential	20%	143
		Office - Urban	15%	107
		Retail - Urban	10%	72
		Entertainment	5%	36
		Community Facilities	10%	72
Community Village	912	Retail - Regional	45%	411
		Office - Regional	15%	137
		Medium Density Residential	15%	137
		Single Family Urban Residential	10%	91
		Entertainment	5%	46
		Community Facilities	10%	91
Regional Employment	804	Office - Urban	30%	201
		Medium Density Residential	25%	201
		Mixed Use	20%	161
		Retail - Urban	10%	80
		Entertainment	5%	40
		Community Facilities	10%	80
Tollway Commercial	1,459	Tollway Commercial	70%	1,021
		Mixed Use	10%	146
		Single Family Residential	5%	73
		Medium Density Residential	5%	73
		High Density Urban Residential	5%	73
		Community Facilities	5%	73
Urban Mix	2,616	Single Family Urban Residential	30%	785
		Single Family Residential	25%	654
		Retail - Neighborhood	15%	392
		Medium Density Residential	10%	262
		High Density Urban Residential	10%	262
		Office- Neighborhood	5%	131
		Community Facilities	5%	131
Regional Commercial	4,224	Retail - Regional	55%	2,323
		Retail - Neighborhood	15%	624
		Office - Regional	15%	624
		Entertainment	5%	211
		Lodging	5%	211
		Community Facilities	5%	211
Office Park	2,937	Office - Regional	60%	1,762
		Retail - Regional	15%	441
		Lodging	15%	441
		Medium Density Residential	5%	147
		Community Facilities	5%	147
Airport Industrial	2,119	Airport Operations	25%	530
		Light Industrial / Manufacturing	25%	530
		Office - Regional	15%	318
		Flex Office/Warehouse	15%	318
		Retail - Neighborhood	10%	212
		Lodging	5%	106
		Community Facilities	5%	106
Industrial	6,110	Light Industrial / Manufacturing	50%	3,055
		Office - Regional	20%	1,222
		Flex Office / Warehouse	15%	916
		Retail - Neighborhood	10%	611
		Community Facilities	5%	305

Office - Neighborhood: Office - Neighborhood typically represents a single-story office structure that compliments the aesthetic qualities of the surrounding residential neighborhoods. Office - Neighborhood space is attractive for tenants with limited space needs (space needs greater than 5,000 square feet and less than 50,000 square feet). This office space provides either surface or covered parking for tenants and visitors and is appropriate for suburban environment.

Office - Urban: Multiple story office built closer to street curb, attractive for both tenants with limited space needed and tenants with larger space needs. This office product provides either surface or garage parking for tenants and visitors in a suburban environment. In a higher density urban setting parking for tenants and visitors would be available by garage.

Office - Regional: Multiple story office built in a campus style complex of buildings and set back from the roadway. Office - Regional is attractive for tenants with larger space needs and convenient access to regional roadways and transit lines. Access to this office product can be by an entry driveway and parking for tenants and visitors is provided either through surface or garage facilities. Depending on building size, tenant demand, and convenience, support facilities such as drug stores, restaurants, office services, and personal needs can be incorporated into Office - Regional.

Mixed Use: Mixed Use provides two or three uses under the same roof of a multi-story building. This vertical mix of uses incorporates ground floor retail and/or office with residential, office, or lodging above. Combinations for Mixed Use include retail on the lower floors with residential above, retail on the lower floors with office above, retail on the lower floors with lodging above, office on the lower floors with residential above, office on the lower floors with lodging above, a combination of retail and office on the lower floors with residential above, and a combination of retail and office on the lower floors with lodging above.

Research & Development: Research & Development is a concentration of business and educational establishments. This collected partnership works together in a campus setting in the pursuit of scientific and technological breakthroughs and patented applications. Facilities include space for laboratories, research and technology, and offices.

Light Industrial/Manufacturing: Light Industrial/Manufacturing includes facilities used for the receiving, staging, processing, assembly, and shipping of raw materials or goods. Such facilities require reliable access to utility and transportation infrastructure as well as plentiful source of skilled labor.

Flex Office/Warehouse: Flex Office/Warehouse is flexible space for its occupants to conduct their business. This flexibility is in the form of floor space configuration for offices, showrooms, warehouse, distribution, light manufacturing and processing. Because it can meet the needs of warehouse users this space provides amenities associated with stand alone warehouse space.

Airport Operations: This contains the fenced-in area of Collin County Regional Airport, including the airport's terminal, landside and airfield operated maintained in accordance with all federal, state, and city regulations. Also included are the fuel farms and aviation support facilities providing direct access to airport taxiways and runways.

Entertainment: Entertainment types of facilities provide locations for viewing live performances, cinema, and musical productions; for participating in competitive

games; and entertainment-related theme establishments that provide a mixture of novelties, entertainment, and shopping. Closely related uses that support and can be part of entertainment include eating establishments.

Lodging: Lodging represents establishments that providing overnight dwelling accommodations and personal services to the traveling public for a fee. Lodging establishments can be categorized by price points, level of services offered, size by total number of units, affiliation, and groups served.

Community Facilities: Community facilities represent public uses that provide for the safety, educational, transit, and spiritual needs of a community. Public safety needs include facilities for police, fire, and emergency workers and equipment. Educational centers include all public or private institutional facilities offering instruction from kindergarten upwards to post-graduate university levels, either in a single structure or spread out with multiple buildings in a campus environment. Transit includes the property, parking facilities, and stations that support the collective movement and distribution of people at a single location. A transit station serves as the focus for bus, light rail, and/or commuter rail transit service within a concentration of higher density uses. It is a stopping point along a transportation route where people embark and disembark in their commutes. A transit station can be a stand-alone facility or integrated with other uses, such as retail, office, and entertainment, to create a seamless, festive urban center to a broader urban village. Religious grounds and buildings are used for gatherings and spiritual awareness. Some structures connected with the main sanctuary are used as gathering halls for banquets, classrooms, meeting halls, recreation centers, and communication centers. In addition, some religious complexes provide residential units for clergy and religious orders.

Employment Center: An Employment Center is a concentration of commercial or industrial developments with employment ranging from 1,000 to 2,500 workers within a single establishment or employment ranging from 2,500 to 5,000 employees within a campus complex of less than 50 acres. Employment Center would be the hub of activity for a much larger area featuring associated and subsidiary businesses.

Tollway Commercial: Tollway Commercial represents land uses that contribute to a significant concentration of regionally-scaled commercial, retail and service uses as well as campus style office and corporate headquarter uses that provide substantial employment opportunities to the surrounding area. Commercial and office uses are attractive for tenants with larger space needs and convenient access to regional highways.

Future Land Use Plan Module Diagrams Descriptions

There are twelve different Future Land Use Plan Module types, which are described below. The module descriptions provide more detailed information about the characteristics of each module. This information includes each module's land use table with the flexibility factor, land use notes and recommendations, a brief description of each module's community form, and locational criteria to help guide each module's development patterns.

7.5 Suburban Mix Module

A Suburban Mix module is made up of land uses that promote a neighborhood setting with single-family detached houses as its primary development type. The single-family residential component drives this module with retail and office developments providing convenient access to daily goods and services while promoting a more balanced tax base. Single-family tracts in this module make good use of the rolling terrain and changing topography along McKinney's creek channels. Recreation and leisure amenities, neighborhood schools, parks and other community facilities add to the quality of life for residents within the module.

Below are representative photographs of each specific land use type included in this module.

Single-Family Residential

Medium Density Residential

Retail - Neighborhood

Office - Neighborhood

Community Facilities (Park)

Table 7.7: Suburban Mix Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Single-Family Residential	65%	+/- 5%
Medium Density Residential	10%	- 5%
Retail - Neighborhood	5%	+ 5%
Office - Neighborhood	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	15%	+/- 5%
Total	100%	

Land Use

Single-family residential uses generally comprise 65% of a Suburban Mix module. The density of each single-family tract and the total of all single-family tracts in the module should not exceed 3.5 units per acre (gross). In order to take into consideration the topographical differences in property and the impact floodplain, erosion hazard setbacks, and lakes can have on the form of development, density calculations shall consider these factors along with how the design of the residential area is in keeping with the overall goals and objectives of the Comprehensive Plan and the urban design element.

Density shall be calculated based on land used for residential dwellings. Areas used for retail, office, commercial, parks and schools shall not be considered. The density shall generally be 3.2 dwelling units per gross acre of residential property, exclusive of areas of floodplain, erosion hazard setbacks, and lakes. The density may be increased up to 3.4 dwelling units per acre if the principles espoused in the urban design element are incorporated into the design of the subdivision and included as part of the zoning.

Additionally, 2 dwelling units per acre floodplain may be allowed for floodplain up to 35% of the area to be used for residential development not encumbered by floodplain, erosion hazard setbacks, or lakes. To achieve the density credit for floodplain, the entire residential development shall comply with the design principles espoused in the urban design element. This density credit may be awarded even if the area of floodplain is to be dedicated for parkland.

In general the median and mean lot size shall be a minimum of 7,200 square feet.

Medium density residential uses should not exceed 10% of the module's land and should not exceed a density of 8 units per acre. Retail uses should occupy at least 5% of the module. Office uses should also occupy at least 5% of the module. Community facilities, such as parks, schools, and places of worship, should occupy approximately 15% of land area in the module. All the above noted percentages are without any potential flexibility factor.

General notes and recommendations for land uses in the Suburban Mix module:

1. The general module size is based on the number of acres to accommodate the target number of students of an elementary school (approximately 650 students based on 2003 McKinney Independent School District figures) with the modules corresponding density; nevertheless, the number of elementary schools will be based on density and household size.
2. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
3. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while affecting corresponding changes in other categories.
4. The flexibility factors for residential, retail, office, and community facilities allow land use transfer between all categories.
5. The locational criteria defines the physical parameters of how different land uses and their physical parameters come together to shape a neighborhood or commercial development. The locational criteria should be followed as development plans are prepared in McKinney.

Community Form

The form of the built environment in a Suburban Mix module is centered on the suburban-style home and standard traditional neighborhood unit. This traditional neighborhood unit can have commercial land uses (retail and office) located near neighborhoods at the intersections of arterials. Pedestrian connections such as sidewalks and trails are important to provide access from the residential to the commercial uses.

Community form for medium density uses is best described as enclaves. Medium density residential can be either urban or garden style in layout. Urban style medium density buildings have common setbacks and parallel public streets. Garden style housing sites buildings in clusters away from public streets.

Commercial uses should have unified architecture, well planned pedestrian connections linking buildings, parking, and amenities, buildings sited to create pedestrian spaces, and parking fields broken into smaller sizes with the use of landscape.

Community facilities should be sited to act as a transition between land uses that are not directly compatible. Neighborhood parks and open space intended to serve the module's residents should be sited more internally, and pedestrian connections to them from neighborhoods are desirable. Floodplains, heavily-wooded areas, and other land not best-suited for development can be used to provide open space, hike & bike trails, or pedestrian connections.

While McKinney features areas for lower-density housing (e.g. Estate Mix) and higher-density housing (e.g. Town Center, REC), the Suburban Mix modules provide housing for the majority of citizens, and does so at typical suburban densities. The module provides significant opportunities for owner-occupied housing on medium-sized lots, with convenient access to the most frequently needed retail uses.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality residential neighborhoods, commercial villages, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following locational criteria are for the Suburban Mix module:

LC1. Retail and office uses are to be located nearest the intersection of two major arterials.
LC2. Retail and office uses should not be organized in a linear form; instead they should be planned as villages. Note: reference community form.
LC3. The future land use plan identifies potential locations of commercial (retail and office) development at intersections of two arterials. This is shown as red lines in a hatched pattern of squares. These areas may be developed as either commercial or residential based on the allowed land use module mix.
LC4. Non-residential low impact development may be located in certain situations at collector-arterial intersections. This low impact development includes vet clinics, professional office, and day-care facilities.
LC5. Parks should be developed in areas to preserve existing trees, wetlands, or

natural habitat. Parks should also work in conjunction with school sites and be accessible by pedestrians, bicycles, and public streets.

LC6. Open space should be used as an amenity for surrounding development. Many times the open space takes the form of a floodplain, wetlands, or stands of existing trees. This integration can occur in many ways - a common method is to have a road front the open space providing a public view, access or "front-door" to the amenity.

LC7. Medium density residential should be located near the intersection of two arterials. This land use can be sited between single family residential and commercial uses.

LC8. This module is anticipated to require one elementary school.

LC9. This module will require at least one neighborhood park. Parks can and should also relate to the quantity and quality of the natural environment in the module.

LC10. This module and the residential neighborhoods will include a variety of lot sizes. The lot sizes need to vary by a meaningful width.

LC11. Public streets should be sensitive to the natural slope of the land in order to maximize views and provide ease of drainage. This is best demonstrated with proposed streets paralleling contours.

LC12. Public streets also need to be aligned to provide interest, variation, and order. A residential neighborhood needs to have a street layout that provides primary linkages to community facilities and amenities.

LC13. Streets in single-family residential areas should be designed primarily to connect the homes to arterials, and not be designed to encourage arterial-to-arterial or "cut-through" traffic.

LC14. Sidewalks and hike & bike trails should be provided to accommodate pedestrians and bicyclists on both sides of public streets.

7.6 Estate Mix Module

The Estate Mix module is focused primarily around low-density residential uses that reflect a rural setting. The lot sizes for estate residential generally range from 2 acres to 10 acres. Single-family residential uses on smaller lots are less frequent and placed adjacent to smaller retail and office centers that serve a broader land area due to the lower densities.

There are two Estate Mix Modules located in the north and northeast corner of the community. The first module borders the City of Weston and the other extends north from US 380 around the east side of the Town of New Hope and continues north to the City of Melissa.

Below are representative photographs of each specific land use type included in this module.

Estate Residential

Single-Family Residential

Retail

Office

Community Facilities (Park)

Table 7.8: Estate Mix Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Estate Residential	75%	+/- 5%
Single-Family Residential	10%	- 5%
Retail &/or Office Neighborhood	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	10%	+/- 5%
Total	100%	

Land Use

Estate residential comprises 75% of an Estate Mix module. Single-family density residential uses should not exceed 10% of the module's land and should not exceed a density of 3.0 units per acre. Retail and office uses should occupy at least 5% of the module. Community facilities, such as parks, schools, and places of worship, should include approximately 10% of the module. Each of these percentages have a flexibility factor that can been seen in the previous chart.

General notes and recommendations for land uses in the Estate Mix module:

1. The general module size is based on the number of acres to accommodate the target number of students of an elementary school (approximately 650 students based on 2003 McKinney Independent School District figure) with the modules corresponding density; nevertheless, the number of elementary schools will based on density and household size.
2. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
3. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while affecting changes in other categories.
4. The flexibility factors for residential, retail, office, and community facilities allow land use transfer between all categories.
5. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape an area. They should be followed as development plans are prepared in McKinney.

Community Form

The form of the built environment in Estate Mix module should complement and encourage the low density residential and rural commercial uses. The module should concentrate non-residential uses at intersections of arterials locating them within close proximity of the intersection to prevent a sprawling appearance along the arterials.

Agricultural uses not permitted elsewhere in the city are permitted within estate residential, but performance standards should limit them to activities that do not conflict with the enjoyment of residential properties. However, residents should expect the agricultural uses to provide a different character to the area and a different quality of life than other modules. These uses should not be so intense as to be incompatible with residential uses. However, uses allowed in the Estate Mix module are intended for rural areas, and are not typical of what would be planned for in a suburban setting.

The estate residential land use is characterized by single-family residential homes on 2 to 10 acre lots. Auxiliary structures, such as barns and sheds, and limited livestock are permitted on residential lots. There is potential for non-residential uses to be located adjacent to the estate lots due to the agricultural activities common in the module and the large nature of the residential lots.

The form of the built environment in single-family residential developments in the Estate Mix module is similar to but more rural in nature than that found in the Suburban Mix module. The standard single-family development would be located in close proximity to intersections of arterials and adjacent to natural features that would serve as buffers between the residential units and the rural/agricultural uses that are typical in the Estate Mix module. Single-family developments are also intended to be dispersed throughout the module and much smaller than developments found in

the Suburban Mix module. Clusters of single-family residential should not exceed fifty units in any one location.

Commercial uses should be well planned with parking fields broken into smaller sizes with the use of landscape. However, some of the commercial uses within the module may be more agricultural and rural in character, attracting customers from a wider area; the commercial uses are not intended to attract significant volumes of traffic.

Fewer neighborhood parks will be provided in the Estate Mix module due to the spread out nature of the residential units and the rural feel of the module. Flood-plains, heavily-wooded areas, and other land not well-suited for development can be used to provide open space, hike & bike trails, or pedestrian connections.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality residential neighborhoods, commercial villages, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following locational criteria are for the Estate Mix module:

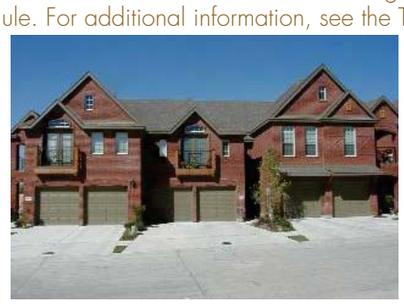
LC1. Retail and office uses are to be located nearest the intersection of two major arterials.
LC2. The future land use plan map identifies commercial (retail and office) development at intersections of two major arterials. This is shown as red lines in a hatched pattern in the pattern of squares. These areas are generally proposed for commercial development.
LC3. Non-residential low impact development may be located in certain situations mid block along arterials. This low impact development includes: vet clinics, professional offices, and day-care facilities.
LC4. Parks should be developed in areas to preserve existing trees, wetlands, or natural habitat. Parks should also work in conjunction with school sites.
LC5. This module is anticipated to require at least one elementary school.
LC6. This module will require at least one park. Parks can and should also relate to the quantity and quality of the natural environment in the module.
LC7. Suburban residential uses should be dispersed in small clusters of no more than 50 units throughout the module and located in close proximity to arterial intersections.

7.7 Town Center Module

The Town Center module is the historic heart of McKinney and stretches from the earliest developments of the community in and around the historic downtown to land first developed around 1970. The built environment features buildings and structures typical of every style common between 1870 and 1970, from the dense urban pattern of downtown, to smaller lots homes, to the larger lots that would become the suburban style. The land use pattern also reflects those times, with residential uses intermixed with and in close proximity to commercial uses. A great deal of redevelopment and infill is occurring within the Town Center module, with much of the housing being built through the City's affordable housing program. This module extends outwards from McKinney's historic core north to US 380, west almost to US 75, south to Wilson Creek and east to the East Fork of the Trinity River.

UPDATE: The Town Center Study Phase 1 Report (2008) outlines key concepts that should be referenced when considering land use decisions in the Town Center module. For additional information, see the Town Center Study Phase 1 Report (2008).

Single-Family Urban



Medium Density Residential

Mixed Use

Office and Office - Urban/Regional

Retail and Retail - Urban/Regional

Entertainment

Community Facilities (Park)

Unique Relationships

The Town Center module will accommodate the unique issues of planning for an area in its second, third, and even fourth phase of development. While some undeveloped land remains and other properties are being developed for the first time, the vast majority of the module has been developed at least once and much of it has already been redeveloped. Corridor studies may be needed in the future to address the transitions of land uses within the module as continued redevelopment occurs.

The buildings, properties, and public infrastructure have both the benefits of their original design and the burdens associated with age and meeting the demands of modern society. Because this area is so different from any other part of the community, a unique module has been created to enhance its assets and address the future.

Table 7.9: Town Center Land Use

Land Use	Existing Percentage of Acreage
Single-Family Urban Residential	35%
Medium Density Residential	10%
Mixed-Use	10%
Retail & Retail Urban/Regional	10%
Office & Office Urban/Regional	5%
Entertainment	5%
Light Industrial	10%
Community Facilities (Parks, Schools, Churches, etc.)	15%
Total	100%

It should be noted that residential, retail, and office uses can all be allowed in the mixed use category of this table. In acting to change the land use balance on a smaller scale, the function of both the immediate surrounding area and the entire module should be considered. Within the Town Center module, much of the mixed use development is centered around the downtown commercial district.

Land Use

Given that the Town Center module is mostly developed and includes a wide variety of land uses, the percentage of the land area devoted to each use is not as important as the compatibility with existing uses. As a result, the flexibility factor has been removed, but this does not indicate that land use percentages are static.

Community Form

Because the module features a wide variety of land uses in close proximity to each other, the relationship and interaction between them is critical to its function. The variety of land uses function well in the Town Center module due to several factors. A grid street pattern allows for land uses to easily front and/or back each other and therefore limits negative impacts. Appropriate edges and buffers are also important in the placement of these varying land uses. All development within this module needs to use a grid street pattern. Pedestrian sidewalks need to be included for all land uses in this module.

Much of the future development in this module occurs as infill. This infill development is typically at a smaller scale than greenfield development. The infill pattern should be compatible with and complimentary to existing land uses.

Locational Criteria

Each module is defining a set of locational criteria for the elements comprising that set of land uses. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to maintain and enhance high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following locational criteria are for the Town Center module:

LC1. Infill development should be compatible with and complementary to adjacent existing land uses.

LC2. Development should pay special attention to infrastructure capacity. The Town Center module has aging infrastructure that in many cases is over capacity, and new development should not worsen the level of utility services for neighboring land uses.

LC3. Infill development in this module should continue the existing grid street pattern.

LC4. Land use transitions need to occur at the rear of the property. Land use transitions should not occur at the street in the front of development. Example: land uses across the street from each other should be the same, in most occurrences.

EXHIBIT H

7.8 Transit Village Module

The Transit Village module is designed to maximize the potential of a special transportation opportunity, such as a rail station or public transit transfer station. Given the critical transit component, development of these modules will be impacted by the timing of the transit facility. Each of the transit modules will differ in its character based on the type of transit facility, the existing development, and the module type surrounding the transit village. The location of transit villages will be dependant on the infrastructure in the immediate area. Transit villages can be dispersed throughout the city and will not be restricted to possible rail stations.

Two transit villages are shown in proximity to the future Collin County Multi modal Transportation Corridor, while five of the transit villages are centered along the rail line running north/south to the east of SH 5. The right-of-way for the rail line has been acquired by the Dallas Area Rapid Transit System (DART). Provision for mass transit will become critical to the future growth and sustainability of the City.

Transit Village modules serve as gateways, marking the entrances into the community along rail or multi-modal corridors. Transit Village modules provide consumer and employment opportunities for residents of McKinney and the region. The modules add to the quality of life of McKinney residents and provide fiscal benefits connecting McKinney businesses to the larger market of North Texas.

Below are representative photographs of each specific land use type included in this module.

UPDATE: In anticipation of future rail transit, a conceptual illustrative vision for the rail transit village in the Town Center was developed as part of the Town Center Study Initiative. For more information on this site, refer to the Town Center Study Phase 1 Report (2008).

Office - Urban

Retail - Urban

Mixed Use

Medium Density Residential

Entertainment

Community Facillities (Park)

Table 7.10: Transit Village Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Mixed Use	40%	+ 10%
Retail - Urban	10%	+/- 5%
Office - Urban	15%	+/- 5%
Medium Density Residential	20%	+/- 5%
Entertainment	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	10%	+ 5%
Total	100%	

Land Use

The Transit Village is a compact module centered on a significant opportunity to access public transportation. The Transit Village is a multi-modal node, where people can transfer from one mode of transportation to another. People will be walking, riding bikes, driving cars, catching buses and trains, and transferring between these different modes. The module's residents can walk to buses and/or trains, while other citizens may drive there, park, and ride a bus or train to their place of work.

Retail and office uses should not be reduced to less than 55% of the module, and residential uses should comprise at least 15% of it. Entertainment uses are encouraged as they add a recreational character to the module, but the modules in high employment, low residential areas may not be able to sustain entertainment uses. Community Facilities, both publicly maintained and privately maintained, are critical to the module and should not be less than 5%. The distribution of land uses within each module will vary with the character of the surrounding area (residential, commercial, industrial), the verticality proposed (height of buildings, combination of uses & functions), and the level of transportation opportunities (number of bus routes, frequency of trains, commuter park-and-ride convenience). All the above noted percentages are without any potential flexibility factor.

The above criteria is intended to describe in general terms the potential mix of land uses anticipated. However, each transit village is anticipated to have a different character and, as a result, a unique mix of appropriate uses. The existing light rail transit stops in the Cities of Plano, Richardson and Dallas each have a unique character and a different mix of land uses surrounding them. More detailed plans should be developed prior to the zoning of the transit villages so that this mix can be established.

General notes and recommendations for land uses in the Transit Village module:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages with corresponding changes in other categories.
3. The flexibility factors for residential, retail, office, and community facilities provides for land use transfer between all categories.
4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The built form of a Transit Village module is centered around a "heart" - a public space - in which the transit station(s) are located with frontage facing retail and entertainment uses. The "heart" is surrounded by multi-story buildings, helping to define its boundaries, but important view corridors into and out of the heart should be maintained. Large single-story structures and large surface parking lots should locate outside the periphery of the heart. The module should also accommodate all the modes of transportation converging within it. The module should also feature a visual edge or boundary, making it distinct from the surrounding area. The module's compact size makes access to the different uses within the module efficient.

The land surrounding the heart of the module should accommodate retail, office, entertainment and residential uses, and buildings and interior spaces that are multi-functional are encouraged. The module's transportation facilities for passengers should be incorporated into the heart as well. The periphery of the module can be less dense and intense than the center, with shorter, more horizontal buildings and larger parking areas.

Locational Criteria

Each module is defining a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction.

However, since each transit village is anticipated to have a different character, a unique set of land use criteria will need to be developed for each of the modules. More detailed plans should be developed prior to the zoning and development of the transit villages so that this mix can be established. The goal of the locational criteria is to plan and construct high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Transit Village module:

LC1. Transit station facilities should be located at the central point within this module.
LC2. Higher density uses such as Mixed Use, Retail - Urban, and Office - Urban should be located near or across from the transit station.
LC3. Uses such as Medium Density Residential and service-oriented Community Facilities (fire stations, community centers, operations centers, parking lots) should be located towards the periphery of the module as appropriate.
LC4. Land uses along the periphery of the modules should be sensitive to the adjacent modules and land uses in order to provide for the appropriate transition between uses.
LC5. Ground-level active uses will have frontage onto public streets, rather than be separated from the street by large parking areas typical of a suburban shopping center.
LC6. Residential housing options should be designed to provide for a variety lifestyle choices.
LC7. Natural features such as streams, wetlands, and groves of trees within the module should be incorporated into the urban fabric.
LC8. Open space amenities within this module such as parks and public plazas should be strategically placed to support the pedestrian street environment and to add emphasis within the module's urban fabric.
LC9. Sidewalks should be placed on both sides of the street.

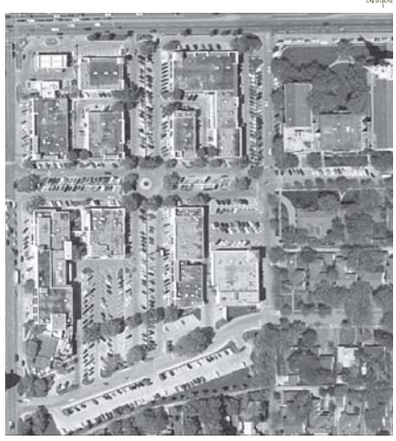
LC10. Transportation facilities and streetscape amenities such as transit stations, bridges, sidewalks, street signage, lighting, should be enhanced to provide interest, variation, and order within this high-density pedestrian friendly urban environment.

LC11. The module should have a minimum of one major arterial fronting a transit station.

7.9 Community Village Module

The Community Village module is intended to concentrate higher-intensity commercial uses and higher-density residential around an arterial-arterial intersection in a suburban residential area. Creating a Community Village module within one or more Suburban Mix modules benefits both the residential and commercial uses in each. The co-location of more intense uses creates opportunities for a sense of place not possible in a more sprawling pattern of commercial uses along an arterial. The module provides for both fiscal and quality of life benefits to the community.

Below are representative photographs of each specific land use type included in this module.



Retail - Regional

Office - Regional

Medium Density Residential

Single-Family Urban

Entertainment

Community Facilities (Park)

Table 7.11: Community Village Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Retail - Regional	45%	+ 5%
Office - Regional	15%	+/- 5%
Medium Density Residential	15%	+ 5%
Single-Family Residential	10%	+/- 5%
Entertainment	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	10%	+ 5%
Total	100%	

Land Use

The Community Village module is smaller in area than other modules, average size of approximately 100 acres, surrounded by one or more other modules most often Suburban Mix or Estate Mix modules. The Community Village is a separate module from the surrounding area, and its land uses do not count as part of the neighboring modules. Community Village modules combine both residential and commercial uses within a more organized form than typically found in suburban areas.

Community Village modules are located at arterial-arterial intersections. Retail - Regional, with uses serving a broader market area than the traditional suburban retail establishments, is the primary use in this module, accounting for 45% of the land area. Secondary uses, such as Office - Regional and Entertainment, account for 15% and 5% respectively of the module's acreage and function as complementary uses with this large retail grouping. Residential uses make up a quarter of the module's land area, with Medium Density Residential accounting for 15% and Single-Family Urban capturing 10% of the acreage. All the above noted percentages are without any potential flexibility factor.

General notes and recommendations for land uses in the Community Village module:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages with corresponding changes in other categories.
3. The flexibility factors for residential, retail, office, and community facilities provides for land use transfer between all categories.
4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The commercial core of this module will include Retail - Regional, Office - Regional, Entertainment, and pedestrian active Community Facilities (such as post offices and churches). The recommended form for commercial uses is a village concept. This village concept is necessary to soften the impacts of the allowed uses. The village concept is defined through unified architecture; well planned pedestrian connections linking buildings, parking, and amenities; buildings sited to create pedestrian spaces; and parking fields broken into smaller sized with the use of landscape. Ground floor space should respond to the pedestrian sidewalks with display windows and entrances.

In the commercial core of the Community Village, intense commercial buildings may be multi-story (greater the two-stories). Medium Density Residential also may be in large or multi-story buildings. The additional height should be respectful of the adjacent uses and may be limited if it has the potential to negatively impact them. At the periphery of the Community Village will be the residential uses and community facilities. These uses will serve to transition the more intensive uses in the commercial core of the Community Village to the less intensive residential uses outside the module. Medium Density Residential uses in smaller or two-story buildings will buffer the commercial uses in the core of the module while Single-Family Urban uses will be located at the outer edge of the module.

Given the larger area served, access by cars will be significant; however, pedestrian connectivity should be incorporated for those living or working in closer proximity. Pedestrian enhancements should be provided to add emphasis and insure safety along pedestrian corridors. Facilities for public transit stops and pedestrian access to these facilities are also strongly encouraged.

Locational Criteria

Each module is defining a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to plan and construct high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Community Village module:

LC1. Higher intensive uses such as Retail - Regional, Office - Regional, and Entertainment should be located at the core of this module.
LC2. Single-Family Urban should be located at the periphery of the module.
LC3. Building heights will be stair-stepped from the more intensive commercial uses in the core down to the less intensive residential uses in the periphery.
LC4. Medium Density Residential and Community Facilities (such as schools, churches, community centers, and parks) should be used to transition to less dense residential uses outside of the community village.
LC5. In the module's commercial core, parking fields should be broken into smaller sized areas with the use of landscape.
LC6. Natural features such as streams, wetlands, and groves of trees within the module should be incorporated into the urban fabric.
LC7. Within the commercial core of the module, there should be an interior roadway channeling traffic to the major arterials but not into the module's periphery residential areas.
LC8. Pedestrian-enhanced cut-through walkways and interior courtyards are desirable to link the module's commercial core to the residential periphery.
LC9. There will be minimum of two major arterials crossing within the module or adjacent to the module.

EXHIBIT H

7.10 Regional Employment Module

The Regional Employment module is designed to create an urban-style, multi-use development built around a major regional employment establishment or an agglomeration of major employment establishments. The Regional Employment module fosters a working community within a larger city where residents can enjoy an urban-friendly environment mixing working, shopping and living in close proximity to regional transportation corridors, including major freeways, transit lines, and hike and bike trails.

Below are representative photographs of each specific land use type included in this module.

Office - Urban

Medium Density Residential

Mixed Use

Retail - Urban

Entertainment

Community Facilities (Park)

Table 7.12: Regional Employment Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Office - Urban	30%	+/- 5%
Medium Density Residential	25%	+/- 5%
Mixed Use	20%	+ 10%
Retail - Urban	10%	+/- 5%
Entertainment	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	10%	+ 5%
Total	100%	

Land Use

The Regional Employment module provides within McKinney a location for a major employment complex to be centered, surrounded by an environment of residential, shopping, entertainment, and community facilities. This module is similar to Legacy Park in Plano and the area around the Telecom Corridor in Richardson.

On average, Office - Urban accounts for 30% of the Regional Employment module; however, this use can be an additional five percentage points higher. Uses, such as Retail - Urban and Entertainment, help support the residential population generated by Medium Density Residential and the Mixed Use complexes. Mixed Use, accounting for 20% of the module, provides a flexibility of uses within a vertical structure, such as retail or office at street-level with residential above, retail at street-level with office above, or retail or office at street-level with lodging above. This combination of uses helps generate an active street environment, both during the business day and after hours.

Community Facilities, both publicly and privately maintained, are critical to the module and should not be less than 10%. The distribution of land uses within each module will vary with the character of the surrounding area (residential, commercial, industrial), the verticality proposed (height of buildings, combination of uses & functions), and the level of transportation opportunities (number of bus routes, frequency of trains, commuter park-and-ride convenience).

Each of these percentages have a flexibility factor that can been seen in the previous chart.

General notes and recommendations for land uses in the Transit Village module:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages with corresponding changes in other categories.
3. The flexibility factors for mixed use, residential, retail, office, and community facilities provides for land use transfer between all categories.
4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The physical form of the Regional Employment module is focused around one major regional employment establishment or a cluster of major employers. These employment activities can be centered in the module, or in close proximity to a Transit Village module. The employment complex can take the form of a single corporate campus or a cluster of buildings developed around a central focus.

Both supporting and taking advantage of the major employment establishments are residential and commercial uses. While having a higher density than that found in the Suburban Mix module, the densities in the Regional Employment module are lower than those occurring in the Transit Village modules. Retail - Urban, Entertainment, Mixed Use, and pedestrian intensive Community Facilities (such as libraries, post offices, churches) should have unified architecture, well planned pedestrian connections linking buildings, parking and amenities; buildings sited to create pedestrian

spaces, and structured or surface parking.

Medium Density Residential uses should blend into other residential and commercial uses; however, at the periphery of the module only Medium Density Residential and Community Facilities (such as parks, schools, churches) should be allowed. The module's transportation network should link major employment establishments with regional transportation corridors, such as major freeways and regional transit lines, and with regional and local hike and bike trails. Natural features found in the module, such as stream corridors, woodlands, and bluffs, should be incorporated as natural public amenities by providing open space and softening the surrounding built environment.

Locational Criteria

Each module is defining a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to plan and construct high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria is for the Regional Employment module:

LC1. Major employment structures and complexes will be located towards the interior of the module. Less intense land uses such as medium density residential and community facilities should be located on the periphery of the module to provide a desirable transition of uses.
LC2. Retail, Office, Mixed Use, and Entertainment uses should be located along major arterials linking major employment structures and major employment complexes with nearby transit stations, or in high density clusters built on a system of interconnecting streets functioning as the module's commercial core.
LC3. Uses such as Medium Density Residential and Community Facilities should be located towards the periphery of the module.
LC4. Residential housing options should be designed to provide for a variety lifestyle choices.
LC5. Commercial districts within the Regional Employment Module should provide defined public places and activity centers. This can be accomplished by the utilization of greens, plazas, and other open space.
LC6. Natural features such as streams, wetlands, and groves of trees within the module should be incorporated into the urban fabric.
LC7. Open space amenities within this module such as parks and public plazas should be strategically placed to support the pedestrian street environment and to add emphasis within the module's urban fabric.
LC8. Selected streets should terminate at streets fronting along parks and significant urban buildings (such as government buildings and religious institutions) to add emphasis within the module's urban fabric.
LC9. At least one major thoroughfare should provide direct access from the module's interior to a nearby regional freeway and a transit station.
LC10. Public streets that make up the module's commercial core should be developed in a grid pattern.
LC11. Major thoroughfares should be developed to emphasize and protect important view corridors.
LC12. Sidewalks should be placed on both sides of the street.
LC13. Pedestrian-enhanced cut-through walkways and interior courtyards are desirable within larger urban blocks in the module's commercial core.

LC14. The transportation network within the module should provide right-of-way access for regional and local hike and bike trails to link with major employment structures and complexes and with nearby transit stations.

LC15. Transportation facilities and streetscape amenities such as transit facilities, bridges, sidewalks, street signage, lighting, and bike racks should be enhanced to provide interest, variation, and order within the interior of the module and the module's commercial core.

EXHIBIT H

7.11 Tollway Commercial Module

The Tollway Commercial module is designated for significant regional commercial, office, and vertical mixed-use opportunities in the city. The module provides land for intense retail and campus style office and corporate headquarter uses in larger structures not typically appropriate in close proximity to single-family residential dwellings. The module also provides opportunities for high-traffic generators, such as entertainment and hotel uses. Given its location along State Highway 121 (Sam Rayburn Tollway), the Tollway Commercial module is a critical element to the City of McKinney, providing the fiscal benefit of sales tax revenue to the city and school districts, and the quality of life benefit with major shopping destinations convenient to businesses and visitors.

Below are representative photographs of each specific land use type included in this module.

Tollway Commercial

Mixed Use

Single-Family Residential

Medium Density Residential

High Density Urban Residential

Community Facilities (Park)

Table 7.13: Tollway Commercial Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Tollway Commercial	70%	Unlimited
Mixed Use	10%	+/- 5%
Single-Family Residential	5%	- 5%
Medium Density Residential	5%	- 5%
High Density Urban Residential	5%	+/- 5%
Community Facilities (Parks, Schools, Churches, etc.)	5%	+/- 5%
Total	100%	

Land Use

The Tollway Commercial module is dependent on high traffic volumes as it will serve both customers from within the city and beyond it. Within the Tollway Commercial module, there should be a high intensity of regionally-scaled retail and service uses; large scale office uses (providing substantial employment opportunities); and pockets of vertically-integrated mixed use structures with non-residential uses on the ground/lower floors with a residential component above. The module serves a regional market area including both residents and businesses in McKinney and surrounding cities. The intense retail and service use developments that occur along the frontage of SH 121 should be scaled appropriately to maximize visibility from SH 121 and contribute to the regional footprint that is called for as part of the Tollway Commercial module. In addition, the module should offer a large corporate campus anchored by an urban-style, multi-use development that is densely developed and can cater to the needs of large office and corporate office users.

These intense retail and office uses provide a fiscal benefit to the community, bringing in property tax and sales tax revenue to the City and the school districts. Typically, these commercial uses have a positive fiscal impact on the City, as the cost of the City services they demand is less than the tax revenue they generate. Similarly for the school districts, they bring in revenue without directly generating more students to be served. Also, their significant shopping opportunities give local and area consumers more choices and options and provide convenient access to goods and services that otherwise would require a trip outside the city. This provides a quality of life benefit to residents, helps attract large employers, and brings in customers from outside the city.

Residential density shall be calculated based on land used for residential dwellings. Areas used for retail, office, commercial, parks and schools shall not be considered. The density shall generally be 4.5 dwelling units per gross acre of residential property, exclusive of areas of floodplain, erosion hazard setbacks, and lakes.

Additionally, 2 dwelling units per acre floodplain may be allowed for floodplain up to 35% of the area to be used for residential development not encumbered by floodplain, erosion hazard setbacks, or lakes. To achieve the density credit for floodplain, the entire residential development shall comply with the design principles espoused in the urban design element. This density credit may be awarded even if the area of floodplain is to be dedicated for parkland.

Medium density residential uses should not exceed 5% of the module's land and should not exceed a density of 12 units per acre. High density urban residential should occupy no more than 5% of the module. Tollway Commercial uses should occupy at least 70% of the module. Mixed use should occupy 10% of the module. Community facilities such as parks, schools, and places of worship should occupy approximately 5% of the module. All the above noted percentages are without any potential flexibility factor.

General notes and recommendations for land uses in Tollway Commercial modules:

1. The proposed land uses in this module are calculated using gross acreage.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for tollway commercial, mixed use, residential, and community facilities allows land use transfer between all categories.
4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial

development. They should be followed as development plans are prepared in McKinney.

Community Form

The built environment in the Tollway Commercial module is oriented around the automobile. Customers arrive and depart by car, and the buildings, sites, signage, and infrastructure should be designed for significant levels of traffic. Buildings should be oriented towards the adjacent regional frontages and are typically large, multi-story, structures with a deep setback from the road. Sites should be designed to facilitate ingress from the arterials without causing excessive friction and reducing their efficiency. Signage should be large enough to be noticeable to passing drivers without creating a cluttered, discordant streetscape. Many of the developments will require extensive lighting across the site, but lighting levels should not be so high as to pollute the night sky or disrupt the enjoyment of nearby residential areas.

Retail and service uses will be substantial in the Tollway Commercial module, and can accommodate large office campuses that broaden the options for consumers. Entertainment uses and lodging opportunities enhance the quality of life of residents and attract consumers from outside the city.

Locational Criteria

Each module defines a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed, defined, and implemented in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to plan and construct high-quality commercial and employment areas while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Tollway Commercial module:

LC1. Residential uses shall generally be located no closer than 1,000 feet from State Highway 121 (Sam Rayburn Tollway)

LC2. Intensity of uses should be considered when located on the periphery of the Tollway Commercial module to minimize the negative impacts on adjacent land uses.

LC3. Structured parking should be encouraged. Where surface parking exists, the parking areas need to be connected with the building with pedestrian walkways. These walkways should be landscaped and signed.

LC4. Pedestrian connections need to be provided between adjacent commercial buildings. These walkways provide pedestrians the linkage between buildings.

LC5. Public facilities can be planned as an amenity for this module. These areas can be the focus for planning and site organization. This planning will allow pedestrian linkages to and from public facilities and the adjacent development.

LC6. Retail, Office, Mixed Use, and Entertainment uses should be located along major arterials and regional frontages or in high density clusters functioning as the module's commercial core.

LC7. Commercial districts within the Tollway Commercial module should provide defined public places and activity centers. This can be accomplished by the utilization of greens, plazas, and other open space.

LC8. Open space amenities within this module such as parks and public plazas should be strategically placed to support the pedestrian street environment in and around vertical mixed use buildings and large activity center, and should also complement the module's urban fabric.

7.12 Urban Mix Module

The Urban Mix module is made up of land uses that promote a neighborhood setting with single-family detached houses as its primary development type. The single-family residential component drives this module with neighborhood-scaled retail, service, and office developments providing convenient access to daily goods and services while promoting a more balanced tax base. Single-family tracts in this module make good use of the rolling terrain and changing topography along McKinney's creek channels. Recreation and leisure amenities, neighborhood schools, parks and other community facilities add to the quality of life for residents within the module.

Below are representative photographs of each specific land use type included in this module.

Single-Family Urban Residential

Single-Family Residential

Retail - Neighborhood

Medium Density Residential

High Density Urban Residential

Community Facilities (Park)

Table 7.14: Urban Mix Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Single-Family Urban Residential	30%	+/- 5%
Single-Family Residential	25%	+/- 5%
Retail - Neighborhood	15%	+/- 5%
Medium Density Residential	10%	+/- 5%
High Density Urban Residential	10%	- 5%
Office - Neighborhood	5%	+/- 5%
Community Facilities (Parks, Schools, Churches, etc.)	5%	+/- 5%
Total	100%	

Land Use

Single-family detached residential uses generally comprise more than half of the Urban Mix module. The densities of each single-family tract in the module may vary based on proximity to urban nodes within the module and the development style of the neighborhood (ie. suburban or urban). In order to take into consideration the topographical differences in property and the impact floodplain, erosion hazard setbacks, and lakes can have on the form of development, density calculations shall consider these factors along with how the design of the residential area is in keeping with the overall goals and objectives of the Comprehensive Plan and the urban design element.

Density shall be calculated based on land used for residential dwellings. Areas used for retail, office, commercial, parks and schools shall not be considered. The density shall generally be 4.5 dwelling units per gross acre of residential property, exclusive of areas of floodplain, erosion hazard setbacks, and lakes.

Additionally, 2 dwelling units per acre floodplain may be allowed for floodplain up to 35% of the area to be used for residential development not encumbered by floodplain, erosion hazard setbacks, or lakes. To achieve the density credit for floodplain, the entire residential development shall comply with the design principles espoused in the urban design element. This density credit may be awarded even if the area of floodplain is to be dedicated for parkland.

Medium density residential uses should not exceed 10% of the module's land and should not exceed a density of 12 units per acre, while high density urban residential should occupy no more than 10% of the module. Retail uses should occupy at least 15% of the module. Office uses should also occupy at least 5% of the module. Community facilities, such as parks, schools, and places of worship, should occupy approximately 5% of land area in the module. All the above noted percentages are without any potential flexibility factor.

General notes and recommendations for land uses in the Urban Mix module:

1. The proposed land uses in this module are calculated using gross acreage.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while affecting corresponding changes in other categories.
3. The flexibility factors for residential, retail, office, and community facilities allow land use transfer between all categories.

The locational criteria defines the physical parameters of how different land uses and their physical parameters come together to shape a neighborhood or commercial development. The locational criteria should be followed as development plans are prepared in McKinney.

Community Form

The form of the built environment in the Urban Mix module is centered on the suburban and urban-style dwellings within a standard traditional neighborhood unit. This traditional neighborhood unit can have commercial land uses (retail and office) located in close proximity to neighborhoods at the intersections of arterials to provide convenient shopping opportunities for daily goods and services. Pedestrian connections such as sidewalks and trails are important to provide access from the residential to the commercial uses.

Medium density residential can be either in an urban or traditional style in layout, but should blend into other adjacent residential and commercial uses. Urban style medium density residential and High Density Urban Residential buildings should be constructed in an urban and pedestrian-oriented manner with structures in close proximity to the street with on-street parking or parking internal to the site with limited visibility from adjacent streets), while traditional medium density residential will have common setbacks from public streets. Vertical mixed-use and structured parking is encouraged with the High Density Urban Residential use category, incorporating ground floor commercial uses with residential uses above.

While having densities typically higher than that found in the Suburban Mix module, densities in the Urban Mix module are lower than those occurring in the Transit Village modules. Retail - Neighborhood, Office – Neighborhood, and Community Facilities (such as libraries, community centers, or churches) should have unified architecture, well planned pedestrian connections linking buildings, parking and amenities; and buildings sited to create pedestrian spaces.

Natural features found in the module, such as stream corridors, woodlands, and bluffs, should be incorporated as natural public amenities by providing open space and softening the surrounding built environment.

Commercial uses should have unified architecture, well planned pedestrian connections linking buildings, parking, and amenities to the neighborhood unit, buildings sited to create pedestrian spaces, and parking fields broken into smaller sizes with the use of landscape.

Neighborhood parks and open space intended to serve the module's residents should be sited more internally, and pedestrian connections to them from neighborhoods are desirable. Floodplains, heavily-wooded areas, and other land not best-suited for development can be used to provide open space, hike & bike trails, or pedestrian connections.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality residential neighborhoods, commercial villages, and community facilities while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Urban Mix module:

LC1. Streets in single-family residential areas should be designed primarily to connect the homes to arterials, and not be designed to encourage arterial-to-arterial or "cut-through" traffic.

LC2. Public streets also need to be aligned to provide interest, variation, and order. A residential neighborhood needs to have a street layout that provides primary linkages to community facilities and amenities.

LC3. Sidewalks and hike & bike trails should be provided to accommodate pedestrians and bicyclists on both sides of public streets.

LC4. This module and the residential neighborhoods will include a variety of lot sizes. The lot sizes need to vary by a meaningful width.

LC5. Medium Density Residential and High Density Urban Residential should be located near the intersection of two arterials. This land use can be sited

between single-family residential and commercial uses.

LC6. Retail and office uses are to be located nearest the intersection of two major arterials. Non-residential low impact development may be located in certain situations at collector-arterial intersections. This low impact development includes vet clinics, professional office, and day-care facilities.

LC7. Parks should be developed in areas to preserve existing trees, wetlands, or natural habitat. Parks should also work in conjunction with school sites and be accessible by pedestrians, bicycles, and public streets.

LC8. Open space should be used as an amenity for surrounding development. Many times the open space takes the form of a floodplain, wetlands, or stands of existing trees. This integration can occur in many ways - a common method is to have a road front the open space providing a public view, access or "front-door" to the amenity.

7.13 Regional Commercial Module

The Regional Commercial modules provide a significant amount of the shopping opportunities in the city, being heavily dedicated to retail and office uses. The modules provide land for intense retail and office uses and larger structures not appropriate for residential areas. They also provide opportunities for high-traffic generators, such as entertainment and lodging uses. The modules are a critical element to the City of McKinney, providing the fiscal benefit of sales tax revenue to the city and school districts and the quality of life benefit with major shopping opportunities convenient to businesses and visitors.

Below are representative photographs of each specific land use type included in this module.

Retail - Regional

Office - Regional

Retail

Entertainment

Lodging

Community Facilities (Church)

Table 7.15: Regional Commercial Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Retail - Regional	55%	Unlimited
Office - Regional	15%	+/- 5%
Retail - Neighborhood	15%	Unlimited
Entertainment	5%	Unlimited
Lodging	5%	Unlimited
Community Facilities (Parks, Schools, Churches, etc.)	5%	+/- 5%
Total	100%	

Land Use

The Regional Commercial modules are dependent on high traffic volumes as they serve both customers from within the city and beyond it. Consequently, they are located along regional connectors, such as US 75, US 380, and the proposed Collin County Multimodal Transportation Corridor. The modules serve a large market area including both residents and businesses in McKinney and surrounding cities. The modules should provide a variety of services including retail, office, entertainment, and lodging opportunities.

These intense retail and office modules provide a fiscal benefit to the community, bringing in property tax and sales tax revenue to the City and the school districts. Typically, these commercial uses have a positive fiscal impact on the City, as the cost of the City services they demand is less than the tax revenue they generate. Similarly for the school districts, they bring in revenue without directly generating more students to be served. Also, their significant shopping opportunities give local consumers more choices and options and provide convenient access to goods and services that otherwise would require a trip outside the city. This provides a quality of life benefit to residents, helps attract large employers, and brings in customers from outside the city.

General notes and recommendations for land uses in Regional Commercial modules:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for residential, retail, office, and community facilities allows land use transfer between all categories.
4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The built environment in Regional Commercial modules is oriented around the automobile. Customers arrive and depart by car, and the buildings, sites, signage, and infrastructure should be designed for significant levels of traffic. Buildings should be oriented towards the adjacent regional connectors and are typically large, single story, and with a deep setback from the road. Sites should be designed to facilitate ingress from the arterials without causing excessive friction and reducing their efficiency. Signage should be large enough to be noticeable to passing drivers without creating a cluttered, discordant streetscape. Many of the developments will require extensive lighting across the site, but lighting levels should not be so high as to pollute the night sky or disrupt the enjoyment of nearby residential areas.

Retail uses dominate the Regional Commercial module, but only in combination with other commercial uses does the module function at its best. Office uses broaden the options for consumers. Entertainment uses and lodging opportunities enhance the quality of life of residents and attract consumers from outside the city. It is not expected that Community Facilities would use land in Regional Commercial modules.

Office uses often locate within retail districts, but zoning districts for just office uses can help a module reach the table's distribution of land uses. Regional Commercial

should not have more than 20% dedicated to office uses as other modules, like Office Park, allow them at higher levels. Entertainment and Lodging uses can greatly contribute to the success of a Regional Commercial module, but because they have very specific locational criteria, some modules may not be suitable for them. In those cases, their 15% can be redistributed into the Retail and Office categories.

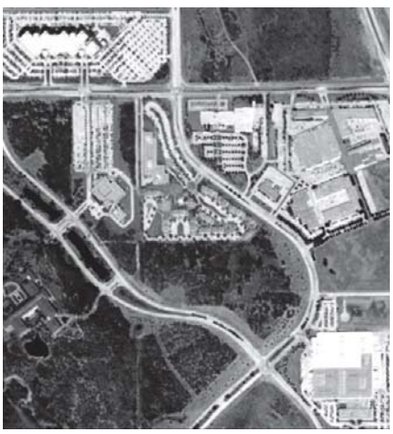
Locational Criteria

Each module defines a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed, defined, and implemented in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to plan and construct high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Regional Commercial modules:

LC1. Screens and buffers are needed along the back of many of these commercial land uses, when the adjoining land use is not another commercial use.
LC2. Parking areas need to be connected with the building with pedestrian walkways. These walkways should be landscaped and signed.
LC3. Buildings should be planned in a manner that provides visual sight lines connecting pedestrian access and building front doors. This can be termed, village concept, providing quality site design organization.
LC4. Pedestrian connections need to be provided between adjacent commercial buildings. These walkways provide pedestrians the linkage between buildings.
LC5. Public facilities can be planned as an amenity for this module. These areas can be the focus for planning and site organization. This planning will allow pedestrian linkages to and from public facilities and the adjacent development.
LC6. Intensity of uses should be considered when located on the periphery of the Regional Commercial module to minimize the negative impacts on adjacent land uses.

EXHIBIT H



7.14 Office Park Module

The Office Park module provides significant employment opportunities within the community, housing major employers that need convenient transportation, high quality public services, and a worker friendly environment. In addition to office uses, the modules provide for the supporting uses, such as retail and lodging opportunities. The module also provides for the amenities that employees desire, such as lakes, plazas, and fountains, which make for a more aesthetically-pleasing employment environment.

Below are representative photographs of each specific land use type included in this module.

Office - Regional

Retail - Regional

Medium Density Residential

Lodging

Community Facilities (Park)

Table 7.16: Office Park Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Office - Regional	60%	Unlimited
Retail - Regional	15%	- 10
Medium Density Residential	5%	+/- 10%
Lodging	15%	Unlimited
Community Facilities (Parks, Schools, Churches, etc.)	5%	+ 5%
Total	100%	

Land Use

Office regional comprises 60% of an Office Park module. Retail regional land uses should not exceed 15% of the module's land. Lodging should also occupy at least 15% of the module. Medium Density Residential completes the development pattern with a minimum of 5% land use. Community Facilities, such as parks, schools, and places of worship, should include approximately 5% of the module. Each of these percentages have a flexibility factor that can be seen in the previous table.

General notes and recommendations for land uses in Office Park modules:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for all retail, office, entertainment, lodging, and community facilities allow land use transfer between all categories.
4. Flexibility factors for land use types that are labeled unlimited offers the greatest opportunity for modifications. The only stipulation is that commercial land uses (office, retail, entertainment, lodging, etc) replace other commercial uses as a switch.
5. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The form of the built environment of Office Park modules will feature mostly moderately sized buildings, though some areas may have buildings of significant height and volume with surface or structured parking. Office areas are often built in campus setting with more landscaping and aesthetic amenities such as lakes, fountains, open spaces, urban forests, and public art than land developed for retail uses.

Office Uses provide some of the most significant employment opportunities within the community. This provides a quality of life benefit to residents, giving them a larger and broader range of job options, and a fiscal benefit to the community, providing tax revenue to the City and school districts and only moderate demands on public services. The module also helps provide the City with a daytime population that shops at local businesses convenient to their place of employment.

Commercial uses should have unified architecture; well planned pedestrian connections linking buildings, parking, and amenities; buildings sited to create pedestrian spaces; and parking fields broken into smaller sizes with the use of landscape.

Community form for medium density uses is best described as enclaves. Medium Density Residential can be either urban or garden style in layout. Urban style medium density buildings have common setbacks and parallel public streets. Garden style housing sites buildings in clusters away from public streets.

Community Facilities should be sited to act as a transition between land uses that are not directly compatible. Parks within Office Park modules should serve as open space for leisure and recreational activities for both the residents and employees in the module. Floodplains, heavily-wooded areas, and other land not well-suited for development can be used to provide open space, hike & bike trails, or pedestrian connections.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality employment areas, commercial villages, residential enclaves, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Office Park module:

LC1. Intensity of uses should be considered when located on the periphery of the Office Park module to minimize any negative impacts on adjacent property and to provide adequate transition of land uses.

LC2. Parking areas need to be connected to the building with pedestrian walkways. These walkways should be landscaped and signed.

LC3. Structured parking facilities must have a façade treatment that is similar and compatible with the façade of the office building.

LC4. Buildings should be planned in a manner that provides visual sight lines connecting pedestrian access and front doors.

LC5. Public facilities can be planned as an amenity for this module. These areas can be the focus for planning and site organization. This planning will allow pedestrian linkages to and from public facilities and the adjacent development.

LC6. Parks should be developed in areas to preserve existing trees, wetlands, or natural habitat. Parks should be accessible by pedestrians, bicycles, and public streets.

LC7. Public streets should be sensitive to the natural slope of the land in order to maximize views and provide ease of drainage. This is best demonstrated with proposed streets paralleling contours.

7.15 Airport Industrial Module

The Airport Industrial module is intended to focus on the opportunities made available by Collin County Regional Airport (TKI), located on McKinney's east side. The airport is a tremendous opportunity to grow a sector of the economy that is unique to all of Collin County. The airport is designated as a reliever airport in the Dallas-Fort Worth Metroplex system. Convenient access to the airport allows people and goods to be efficiently transported throughout the country and even internationally. The module will provide opportunities for those industrial and office uses that desire convenient access to an airport.

The Airport Master Plan Update was approved by the City Council on November 2, 2004, and the FAA approved the Part 150 Noise Study effective on April 28, 2006. The Master Plan calls for a replacement runway to meet federal safety design standards, a replacement air rraffic control tower to enhance the safety of flight, and three (3) taxi lanes to accommodate the movement of aircraft.

Below are representative photographs of each specific land use type included in this module.

Collin County Regional Airport

Light Industrial

Flex Office/Warehouse

Office - Regional

Retail

Lodging

Community Facilities (Park)

Table 7.17: Airport Industrial Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Airport Operations	25%	Unlimited
Light Industrial / Manufacturing	25%	Unlimited
Office - Regional	15%	Unlimited
Flex Office / Warehouse	15%	Unlimited
Retail - Neighborhood	10%	Unlimited
Lodging	5%	Unlimited
Community Facilities	5%	+ 5%
Total	100%	

Land Use

With the exception of Community Facilities, which will occupy generally between 5% and 10% of the area, the acreage percentages are intended to serve as a guide with regard to anticipated mix of land uses. It is anticipated that the development of Airport Operations, Light Industrial/Manufacturing, Flex Office/Warehouse, and Office-Regional will drive the need for retail and lodging facilities.

General notes and recommendations for land uses in the Airport Industrial module:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for all industrial, office, retail, and community facilities allow land use transfer between all categories.
4. Flexibility factors for land use types that are labeled unlimited offers the greatest opportunity for modifications. The only stipulation is that commercial land uses (industrial, office, retail, etc) replace other commercial uses as a switch.
5. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The built form of areas near the airport will include large buildings scaled toward air travel. Proposed facilities on airport property must adhere to standards that provide for safe aviation facilities, while accommodating future aviation demand. The form of the built environment for industrial uses often features large structures with large floor plates used for manufacturing, shipping, and storing materials and products. These buildings are typically of a single floor with taller than average ceiling heights.

Industrial form includes storage in covered or semi-enclosed structures. Support structures and facilities are common and provide backup electricity, reserve equipment, and maintenance systems. Shipping facilities and docks may also be required for the loading and unloading of trucks or rail cars. Facilities may be secured through fencing and screening walls, and significant lighting may be required to secure the grounds and equipment at night.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. This includes completion of the airport master plan. The goal of the locational criteria is to achieve high-quality employment areas, commercial villages, industrial, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Airport Industrial module:

LC1. Retail and service uses should be organized around the intersection of major roadways. This clustering of service type uses is to provide for convenient access from the airport as well as office and industrial users.

LC2. Buffers and screens are important components in industrial development patterns. They are used to minimize the adverse impacts of light, noise, and views of truck traffic, storage yards, movement of freight, and manufacturing processes. They should be used in the planning for industrial development as needed.

LC3. Where adjacent to existing residential areas, the anticipated intensity of proposed land uses should be considered in order to provide a more compatible transition between uses.

LC4. The height of structures and impact of uses (light, smoke, wildlife, etc) on the safety of airport operations should be considered.

7.16 Industrial Module

The Industrial module provides much of the city's opportunities for manufacturing, assembly, and warehouse uses. Industrial uses are dependent on reliable transportation, and the Industrial modules are located along and near major regional access points such as US 380, the Collin County Multimodal Transportation Corridor, and Collin County Regional Airport. Some of them also have access to the existing railroad line in McKinney.

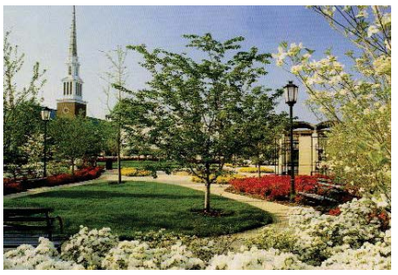
Below are representative photographs of each specific land use type included in this module.

Light Industrial

Office - Regional

Flex Office/Warehouse

Retail



Community Facilities (Park)

Table 7.18: Industrial Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Light Industrial / Manufacturing	50%	Unlimited
Office - Regional	20%	+/- 10%
Flex Office / Warehouse	15%	Unlimited
Retail - Neighborhood	10%	+/- 5%
Community Facilities (Parks, etc.)	5%	+ 5%
Total	100%	

Land Use

Light Industrial/Manufacturing comprises 50% of an Industrial module. Office Regional land uses should account for approximately 20% of the module's land. Flex Office/Warehouse is anticipated to occupy approximately 15% of the module. Retail completes the development pattern with 10% land use. All the above noted percentages are without any potential flexibility factor. It should be noted that the light industrial, office and flex space are anticipated to dictate the amount of support type uses. To some degree the market will also dictate the location of the uses if in keeping with the overall development pattern. Community Facilities, such as park should make up approximately 5% of the module.

The module provides for a combination of uses that support industrial activities. Office uses provide the administrative and management support industrial activities need and are often desirable in close proximity to them. Retail uses within the module provide convenient goods and services to those employed in the industries and office. Industrial uses serve as economic generators within the local economy. The added value is captured within the local economy, multiplying into office jobs, retail goods and services, and residential investment.

General notes and recommendations for land uses in Industrial modules:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for all industrial, office, retail, and community facilities allow land use transfer between all categories.
4. Flexibility factors for land use types that are labeled unlimited offers the greatest opportunity for modifications. The only stipulation is that commercial land uses (industrial, office, retail, etc) replace other commercial uses as a switch.
5. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The form of the built environment for industrial uses often features large structures with large floor plates used for manufacturing, shipping, and storing materials and products. These buildings are typically of a single floor with taller than average ceiling heights.

Industrial form includes storage in covered or semi-enclosed structures. Support structures and facilities are common and provide backup electricity, reserve equipment, and maintenance systems. Shipping facilities and docks are frequently required for the loading and unloading of trucks or rail cars. Facilities may be secured through fencing and screening walls, and significant lighting may be required to secure the grounds and equipment at night.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City

of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality employment areas, commercial villages, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Industrial module:

LC1. The impact of potential industrial uses on adjacent existing residential uses and environmentally sensitive areas should be considered when determining the appropriate intensity of uses for particular areas.

LC2. Buffers and screens are important components in industrial development patterns. They are used to minimize the adverse impacts of light, noise, and views of truck traffic, storage yards, movement of freight, and manufacturing processes. They should be used in the planning for industrial development as needed.

LC3. Transportation networks should be well planned to ensure adequate/appropriate levels of service.

LC4. Public facilities can be planned as an amenity for this module. These areas can be the focus for planning and site organization. This planning will allow pedestrian linkages to and from public facilities and the adjacent development.

LC5. Open space should be used as an amenity for surrounding development. Many times, the open space takes the form of a floodplain, wetlands, or stands of existing trees. This integration can occur in many ways. A common method is to have a road front the open space providing a public view, access or "front-door" to the amenity.

Section 8: Transportation

A community's land use pattern and transportation system interacts constantly with one another in that different types of land uses have different transportation needs; for example, single-family residential uses require local and collector streets to accommodate low speeds and low traffic, while commercial uses require arterial streets for handling major traffic volumes caused by shoppers. Conversely, the transportation system may have an impact upon the types of land uses that predominate in a particular land use module; for example, rail and interstate access can be important for industrial uses.

This section of the McKinney Comprehensive Plan serves to define a future thoroughfare system that is consistent with the City of McKinney's long range land use plans. Population and employment projections from the Land Use element were the basis for modeling future transportation demand. The thoroughfare plan defines a hierarchy of roadway functions providing a balance between mobility and access. The Thoroughfare Plan describes the general location, type and functional classification for thoroughfares within McKinney. This Plan serves as a general guide for long range growth of the City's future roadway network. The Thoroughfare Plan is implemented primarily through a series of capital improvement programs, land owner agreements, and developer-constructed roads over many years. Due to increasing traffic congestion within Collin County, continued high-quality growth of McKinney will be dependent upon the implementation of the Thoroughfare Plan and, with other multi-modal transportation systems. McKinney and other cities in Collin County will need to plan and construct additional multi-modal systems (light rail, commuter rail, bicycle lanes, pedestrian trails, buses, etc.) to support the growth as the area matures.

The thoroughfare plan describes the general location, type and functional classification for thoroughfares within McKinney.

8.1 Function and Benefits of Thoroughfare Planning

An important purpose of the Master Thoroughfare Plan is to provide a long-range vision to assist in thoroughfare facility implementation. The Thoroughfare Plan has been developed to support the Future Land Use Plan by identifying a system of roadway corridors to move both people and goods.

The major benefits provided by the Master Thoroughfare Plan include:

- Identifying right-of-way (ROW) needs in advance of new development or as it occurs;
- Identifying roadways that will accommodate traffic from adjacent land use patterns;
- Limiting the potential for high traffic volumes on neighborhood streets;
- Anticipating when funds must be programmed for needed roadway improvements; and
- Reducing the potential negative effects due to increased traffic congestion.

Thoroughfare Plan and Growth

The aim of the Thoroughfare Plan is to help guide the development of the community's roadway system in a manner consistent with managing traffic demands, accommodating growth estimates of the City, and supporting transportation policies. Proper transportation planning can assist in ensuring that limited transportation funds are utilized efficiently and effectively. As such, this Thoroughfare Plan will help identify capital street improvements needed as traffic demands increase. For the transpor-

tation system to keep pace with increasing traffic demands, a capital improvement strategy needs to be developed from the City's Master Thoroughfare Plan. The location of present and future residential, commercial, and industrial enterprises affects major street and highway locations and their carrying capacity. Conversely, the location of major streets and highways within the urban area will influence the urban development pattern. The Comprehensive Plan has taken into account the relationship between land uses and thoroughfares as an important component in community form.

An effective thoroughfare plan includes five (5) framework elements:

1. A long-range plan that addresses increased travel demand and projected growth.
2. A process to perform traffic impact analyses of new developments.
3. Implementation of access management, transportation system management (TSM), and travel demand management (TDM) programs.
4. Coordination with county, regional (North Central Texas Council of Governments (NCTCOG)), and state (Texas Department of Transportation (TxDOT), North Texas Tollway Authority (NTTA)) planning programs.
5. A flexible plan with a process in place for updating/revising the plan as conditions warrant.

Access management is the combination of physical techniques and transportation policies that control the flow of traffic between roads and surrounding lands.

Traffic Impact Analysis Process

It is recommended that the City establish a process that helps the community understand the demands and impacts placed on the community's transportation network from development. This will allow the City to better estimate future traffic demands and related roadway improvements. This process is accomplished by the preparation of traffic impact analyses.

There are two types of traffic impact analyses conducted that support development processes. The first is a traffic impact analysis that assesses the effects a particular development's traffic will have on the transportation network resulting from a change in land use different from the Future Land Use Plan. The second type assesses the specific site and roadway improvements needed resulting from a proposed development. These studies are important in assisting public agencies in making land use decisions. These studies can be used to help evaluate whether the development is appropriate for a site; ensures adequate access is available for the proposed development; that sufficient roadway capacity exists to accommodate it; and what type of transportation improvements may be necessary.

Access Management

Access management is the combination of physical techniques and transportation policies that control the flow of traffic between roads and surrounding lands. Several common physical techniques for this are limiting the number of curb cuts into a private development, organizing the curb cuts into private development with others as a planned system, and using separate access lanes to access several smaller developments. The policies of access management include: regulating the number of driveways and median openings along a transportation corridor, encouraging shared access driveways between businesses, and incorporating street design standards that facilitate traffic flow.

This process protects the public investment in roadways and the need to move traffic through the City and not have congestion points. In addition, access management balances the desire for access to private property with the mobility needs of the

community.

Transportation System Management (TSM)

Transportation system management strategies help to alleviate traffic congestion by increasing the efficiency, safety, or flow of traffic on a community's existing transportation facilities. TSM can provide a viable alternative to costly reconstruction or road widening projects. These strategies can optimize the performance of the City's transportation network without adding new infrastructure that is often much more expensive and can be disruptive during construction.

Added capacity is gained through TSM measures such as high occupancy vehicle (HOV) lanes, intelligent transportation systems, facility design and modification, access management techniques, traffic signal timing changes and phasing, sidewalk widening, and other operation-oriented strategies. Other strategies, such as traffic calming and safety measures, support livability more than just TSM.

Travel Demand Management (TDM)

Travel demand management strategies are complementary to TSM strategies. TDM strategies help alleviate automobile traffic demand through ridesharing, peak-period spreading (flexible work schedules, staggered work hours, or compressed work weeks), enhanced transit and paratransit use, and parking management programs. TDM strategies are policy related components that assist in transportation management. An example of this for the future would be if the employees of Corporation A in McKinney were working off peak schedules, say 7:00 am to 4:00 pm. This would create a reduced demand in McKinney at the peak travel times nearest 8:00 am and 5:00 pm.

Project Planning Coordination

As the adjacent regional transportation facilities develop and grow around and within the City of McKinney, it is imperative that the City takes an active role in the planning and design of these TxDOT, NTTA, and other public and private roadway projects to ensure that these facilities are coordinated with planned City roadways. These roads include: US 75, US 380, SH 5, SH 121, FM 720, FM 1461, and others. The City also needs to coordinate roadway improvements with Collin County, NCTCOG, and surrounding municipalities. It is recommended that the City explore and consider incorporating multi-modal systems that provide alternative modes of travel to the private automobile. The process of adding capacity to existing roadways can be limited and a financial burden to the community. Alternative modes of travel will enhance the livability of the community by providing additional transportation choices and offer additional means of travel that can not be added to the existing roadway system.

Plan Update

The City of McKinney's Master Thoroughfare Plan should be flexible and should be reviewed on a yearly basis to incorporate changes in local conditions. The flexibility of the Plan is illustrated via the conceptual alignments of future roadways. The Plan indicates a generalized location for roads that will require additional site analysis and design. The plan is a guide that will indicate the appropriate combination of roadway capacity and property access needed to provide a balance between public mobility and neighborhood integrity in each sector of the City. In developed sections of the City, the Thoroughfare Plan provides guidance for upgrading and or protecting the integrity and character of existing thoroughfares and neighborhoods.

The MasterThoroughfare Plan is a guide that will indicate the appropriate combination of roadway capacity and property access needed to provide a balance between public mobility and neighborhood integrity in each sector of the City.

8.2 Thoroughfare Plan Development

The development and application of a functional street classification system and a travel demand forecasting model are two components in the development of the Thoroughfare Plan. Functional street classifications define the role of each major thoroughfare and reflect a set of characteristics that are common to all roadways within each classification. The travel forecasting model assists in evaluating future roadway capacity and functional requirements by providing future travel forecasts for the local and adjacent regional transportation network. The development of this model enables a plan to be developed that can move projected traffic demands.

Functional Classification System

McKinney's existing and future roadway system can be divided into a system called functional classifications. Functional classification is the grouping of highways, roads and streets by the character of service they provide and was developed for transportation planning purposes. Basic to this process is the understanding that individual routes do not serve travel singularly. Rather, most vehicular travel involves movement through a network of roads. This network of roads is driven by the residents of McKinney every day. Comprehensive transportation planning uses functional classification to determine how travel can be channelized within the network in a logical and efficient manner. Functional classification defines the part that any particular route should play in serving the flow of trips through a network.

The classic transportation chart (Figure 8.1) graphically depicts the relationship between the hierarchical functional classifications and the balance between access and mobility.

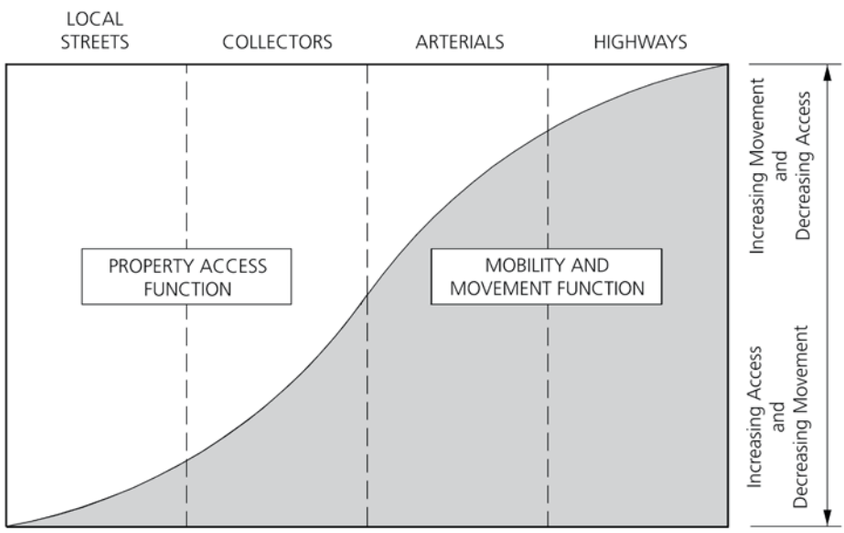


Figure 8.1: Functional Classification Model

The roadway system within McKinney can be divided into four (4) general classifications. They are as follows:

Local Streets

The local street is intended for low volume, low speed traffic movements. They provide access to residential lots and buildings sites. These streets should be arranged to discourage most through-traffic, except traffic that is directly related to the area. Because the streets are characterized by low volume, low speed traffic, they have narrower pavement widths consisting of two moving lanes.

For many years McKinney has been cognizant of the need to plan for local street systems within residential developments. Through past planning efforts, a network of residential streets is being developed to provide form and structure to neighborhood areas. Most streets in older sections of the City have varying right-of-way and pavement widths. The narrow paving widths found for many of these streets near the center of the City reflect the space needed at that time for vehicular travel when the subdivisions were platted.

Local streets that link and connect different subdivisions need to be direct and logical in alignment. Sometimes, a local street system will evolve which requires travel onto a major arterial to gain access to a subdivision within the same neighborhood. Consideration for continuity between subdivisions is particularly important when evaluating school-age children's needs for reaching school or park facilities within their neighborhood.

Local streets in McKinney

Collector Streets

A collector street's primary function is to collect and distribute traffic from local access streets to the arterial or major streets. These streets move moderate amounts of traffic volumes and provide limited access to adjacent properties. Collectors supplement the arterial system and should not be continuous for long distances. The collector street is usually located in a manner to discourage through-traffic movements. This is accomplished by the disruption of traffic flow by offsetting intersections and by incorporating curvilinear design.

Although not shown on the City of McKinney Thoroughfare Plan, collector streets are a critical component of the thoroughfare network. A well-designed system of collector streets can prevent potential problems on residential streets such as overly high traffic volumes and excessive speeds. Given the typical spacing of arterial streets (generally one (1) mile), a system of north/south and east/west collector streets could be provided midblock between arterials. These streets should not be continuous between arterials, as they would then be used for "cut-through" travel patterns.

Collector street in McKinney

The locations of collectors should be established as development plans, general development plans and preliminary plats are being prepared. The collectors should frame the edges of distinct neighborhoods. Houses should not front these collectors and instead should generally back to them. Additional collectors should be provided as necessary to distribute traffic throughout the neighborhood.

Arterial Streets

The greatest number of roads in the McKinney system is made of arterial streets. The main function of arterials is to provide for continuity and high traffic volume movement between major activity centers (employment and commercial centers, etc.) Property access is a medium level priority with an emphasis on limiting the location of driveways and groups of curb cuts that access this thoroughfare type. Arterials are usually divided to provide space for future left turn or through-lanes once traffic conditions are warranted. Hence, some arterials will contain four travel lanes, two

Arterial street in McKinney

in each direction, and others will contain six travel lanes, three in each direction.

Arterial street in McKinney

Strategic Regional Arterial

A Strategic Regional Arterial (SRA) is a facility with operational characteristics between those of freeways and other arterials. SRAs offer the characteristics associated with expressways, such as grade separations at arterial intersections and speed limits of 50 miles-per-hour, but usually require much less right-of-way. Since one of the primary goals of building an SRA is to increase vehicular movements in a corridor, traffic signals, and other control devices that contribute to delay should be minimized, but when necessary, should be spaced such that the impacts on through traffic movements are kept to a minimum. SRAs are typically spaced no closer than 3 to 5 miles apart and they should not penetrate residential neighborhoods. An SRA is generally recommended in corridors characterized by high through-traffic volumes or those which service land uses of regional significance such as large office complexes and shopping malls. SRAs provide the high-level of capacity roadway needed without the freeway's regional components such as frontage roads, access ramps, and state controls. This high capacity roadway can be a highly valued element for McKinney and its goals for increased economic development.

Tollways

SH 121 (Sam Rayburn Tollway) in Collin and Denton Counties is a 6-lane toll road which passes through the cities of McKinney, Allen, Plano, Frisco, The Colony, Carrollton, Lewisville, and Coppell. The SH 121 project in Collin County extends from US 75 to the Dallas North Tollway (DNT). The Sam Rayburn Tollway features all-electronic toll collection.

US 75 in McKinney

Freeways and Major Regional Highways

Freeways and regional highways are high capacity facilities intended to carry high volumes of longer distance trips and are a regional supplement to the arterial system. They usually consist of limited or highly controlled access. These highways are under the jurisdiction of regional, state, or federal agencies. However, the City does have input regarding how these agencies design future improvements to these facilities.

The state and federal highway system served as the initial structuring element for the City's Thoroughfare Plan. Among these highway facilities are SH 121, US 75, US 380 and SH 5. Each facility provides McKinney linkage to other cities in the region, and each handles significant volumes of traffic.

Base Information

The City of McKinney's existing roadway system consists of two distinct city-wide functional systems: the regional highway network and the local arterial roadway network. The regional highway network is served by four different highways located within the McKinney extraterritorial jurisdiction (ETJ). These highways are SH 121, US 75, US 380 and SH 5. US 75 is currently a four-lane rural freeway with parallel frontage roads that runs north-south through the center of McKinney's ETJ. SH 121 is a six-lane divided tollway running east/west along the southern edge of the City. SH 121 continues along US 75 and then splits to the northeast from US 75 just north of the City's northern ETJ border. After the split, SH 121 becomes a two-lane state highway. US 380 is a six and four lane, two-way thoroughfare that runs east-west through the center of City's ETJ. US 380 provides a critical highway link between McKinney and the Denton urban area. Multiple signalized intersections are located along this facility. SH 5 is a four lane, two-way thoroughfare that runs north-south

through McKinney's ETJ. SH 5 runs along the east side of downtown McKinney and contains multiple signalized intersections. This facility has varying characteristics such that it functions as a principle arterial in some segments and a minor arterial in others.

The local arterial roadway network provides for vehicular movement within the City. The roadway arterial's right-of-way widths vary according to location and is anywhere between 85 and 130 feet. Several of the north/south arterials are characterized by the 130 foot right-of-way cross section referred to as the greenway arterial. This greenway arterial provides an aesthetic 44-foot landscaped median. Heavy north/south movements are provided by Custer Road, Stonebridge Drive, Ridge Road, Lake Forest Drive, and Hardin Boulevard. Major east/west movements are accommodated by McKinney Ranch Parkway, Eldorado Parkway, Virginia Parkway, and Wilmeth Road.

Heavy congestion currently occurs on McKinney's highways, particularly US 380 and SH 121. The average daily traffic (ADT) demand on US 380 east of US 75 is roughly 37,000 ADT. US 380 west of US 75 sees an approximate demand of 51,000 ADT. Average daily traffic on SH 121 east of US 75 has a demand of approximately 47,000 ADT. US 380 congestion is due to high retail and employment land uses along its corridor, while SH 121 is congested due to an increase in regional traffic resulting from neighboring developments. The interchanges along US 75 are areas of high congestion because they are points of access to the arterial systems for the 124,000 ADT using US 75 south of Eldorado Parkway. Several arterials within McKinney are also experiencing congestion during peak hours. These include Eldorado Parkway and Virginia Parkway.

Year 2030 traffic forecasts were developed for the major thoroughfares in McKinney. These traffic forecasts were based on the projected changes in employment and population described in this Comprehensive Plan.

Travel Demand Forecasting Model

To support the City of McKinney's Thoroughfare Plan development, year 2030 traffic forecasts were developed for the major thoroughfares in McKinney. These traffic forecasts were based on the projected changes in employment and population described in this Comprehensive Plan. Because past records of traffic growth rates are not sensitive to shifting distributions of population and employment, the only valid method for considering changes in future travel patterns is a travel demand-forecasting model. This travel demand model requires subdividing the entire area into traffic analysis zones, and then population and employment projections are allocated to these zones. This allocation produces traffic volume forecasts on roadway segments. The McKinney traffic forecasting model was developed using the TransCAD (version 4.5) travel demand forecasting system.

Zone Structure

The amount and type of vehicle travel is dependent on the land use input into the transportation forecasting model. Traffic survey zones (TSZ) are the land use analysis units of the model. All the land use data is incorporated into zones that vary in size from a few city blocks in the urban area to several miles in the rural area. Zones are combinations of either Census blocks or block groups. Zonal boundaries consist of major roadway thoroughfares and other natural or manmade dividers, such as streams and railroads, which limit the amount of crossings available for vehicles to use. The land use is described in terms of type, intensity and location. This data is used to estimate the number of trips that a typical household or business employee will produce and attract from/to each TSZ. Land use data is developed for the base year (2000), a mid-year (2030), and build-out with no definition of time (year).

McKinney's TSZs were developed based on Census block group geography re-

ceived from the NCTCOG. For the McKinney model, the NCTCOG's TSZs were divided into smaller zones by arterial roadway locations and land use groupings. NCTCOG's TSZ data is developed for the regional area model and therefore, is generally too broad in scope for local city models. The demographic data contains such information as the number of households and basic, retail, and service employment levels that are currently contained within the TSZs. For the base year, each TSZ was coded with existing demographic data. The demographic data was determined through aerial photographs and City databases.

Building Existing Network

In developing a simulated transportation network for modeling, the roadway system is represented by a series of nodes and links. A node is the conceptual point along a roadway segment that traffic enters or exits the system. Links are the conceptual road alignment. Many links can make-up a local street. This representation is an attempt to quantify the street system for use in the traffic forecasting model. Inherent in the modeling effort is a simplification of the actual system of streets. For the McKinney model, highways, arterials, and major thoroughfares were identified through the City's Geographic Information System (GIS) database. This GIS data was loaded into the TransCAD software and coded for each roadway's existing characteristics. Data used in the model includes speed limits, number of lanes, and vehicle capacity available per lane.

Trip Generation

Trip generation is the procedure by which the amount of travel generated within each TSZ is estimated. Travel is estimated in the form of trip productions and trip attractions, and each is calculated by applying trip production and attraction rates to the land-use data variables in each TSZ. Typically, a trip production is associated with the home end of the trip (e.g., based upon the location of the household), while trip attractions are associated with the non-home end of the trip (based upon the location of employment).

Trip productions and attractions were estimated for four (4) different trip purposes: home-based work, home-based non-work, non-home-based, and other trips. These four types of trips are the majority of automobile trips produced in McKinney. The trip generation rates in the McKinney model are based on rates developed by the NCTCOG. Trip productions are stratified by household size and area type. Trip generation has been performed for the 2000 validation, 2030 mid-year, and the build-out time frame.

Trip Distribution

Trip distribution is the process by which the resulting trip productions and attractions are linked together to create travel flows between TSZs. Both the NCTCOG regional model and the McKinney subarea model are based on the mathematical relationship for the physical law of gravity. In fact, this type of distribution model is commonly called a gravity model. The gravity model distributes trips based upon the relative attractiveness of each zone and inversely to the distance between each zone. The trip distribution model has been calibrated based on the interzonal travel times from the 2000 simulation network and the use of nationally accepted gravity model friction factors. Trip distribution has been estimated for each of the four trip purposes in the model. The interzonal travel times from the 2030 network and the 2030 trip generation production and attractions have been used to develop 2030 vehicle trip tables by purpose.

Traffic Assignment

The vehicle trip tables were then assigned to the simulation network. The assignment process accumulates the vehicle trips on each network link based upon the travel path taken for each origin-destination zone pair. Volume-delay algorithms consider the effect that roadway congestion has on the network links selected to complete the trip. For the base year 2000 validation, the model-estimated volumes from the network simulation were compared to the observed traffic counts for selected screenline locations.

Calibration and Validation

Model calibration and validation are regarded as the final stage to investigate if each model component adequately reproduces observed travel characteristics. This determines if the overall performance of the model is reasonable and matches the existing real base data. Calibration is the process of identifying the appropriate parameters for each stage of model development. Validation is a required step that ensures that the traffic forecasting model contains acceptable error margins and that it provides traffic volume estimates that are reasonably close to actual vehicle counts at specific locations. Once the validation of the 2000 travel demand model to the observed conditions was producing acceptable results, the year 2030 land use and network data were used to prepare 2030 highway assignments. The 2030 assignment results were prepared and analyzed to test different thoroughfare plan concepts and provide information in the development of the final recommended plan. Build-out results were also developed for the complete roadway network.

Volume-to-Capacity Analysis

The projected daily traffic volumes were compared to the vehicular carrying capacities of each roadway. This volume-to-capacity (V/C) ratio is used to determine the level of congestion on a roadway over a twenty-four hour period.

The V/C ratio is translated into a level of service (LOS) indicator for purposes of interpretation. The LOS indicators are A, B, C, D, E and F; where "A" is free-flow conditions with no congestion, and "F" is heavily congested. This assessment allows communities to "grade" their traffic networks. Most communities plan for a LOS of no better than "D". In previous Thoroughfare Plan updates, McKinney used a policy of LOS "C" or better, but no worse than "D".

The transportation model for the McKinney Comprehensive Plan of 2004 is based on the LOS of "D" or better. This LOS is commonly used by Metroplex cities, particularly the high growth cities of Collin County. This was done to balance community desires regarding, movement, impact on neighborhoods, cost, etc.

The Master Thoroughfare Plan set forth herein is the updated plan; it is accurate for areas currently under development pressures and areas within the City of McKinney's ETJ.

8.3 Master Thoroughfare Plan

The Master Thoroughfare Plan (MTP) defines the network of future roads identified to handle the various levels of vehicular traffic. This document is a framework to plan and organize related land uses. The MTP set forth herein is the updated Plan; it is accurate for areas currently under development pressures and areas within the City of McKinney's ETJ.

The MTP map in Figure 8.2 illustrates the master thoroughfare system for McKinney. Completion of the system will occur over a period of time as the facilities are warranted, either as the adjacent lands develop or as may be required to accommodate special traffic movements through undeveloped sections.

The MTP provides generalized locations for thoroughfares. Alignments may shift as roads are engineered to accommodate flood plain areas and to meet sound engineering and urban planning principles. The system of thoroughfare alignments shown on the MTP have been coordinated with adjacent plans for the cities of Allen, Fairview, Prosper, Melissa, Frisco, and generally with the Collin County Thoroughfare Plan as well as with roadway plans from TxDOT and the NCTCOG.

Standards

Standards are needed to provide continuity throughout development of the thoroughfare system. Standards address a range of concerns from safety in operation to construction. The standards and criteria for all streets in McKinney are set forth in the City's Street Design Manual. The thoroughfare cross-section designs that are to be followed for future construction, as well as the roadway classifications, can be found in that manual. The following list is for informational purposes only. For a detailed description of thoroughfare design criteria, the McKinney Street Design Manual should be consulted.

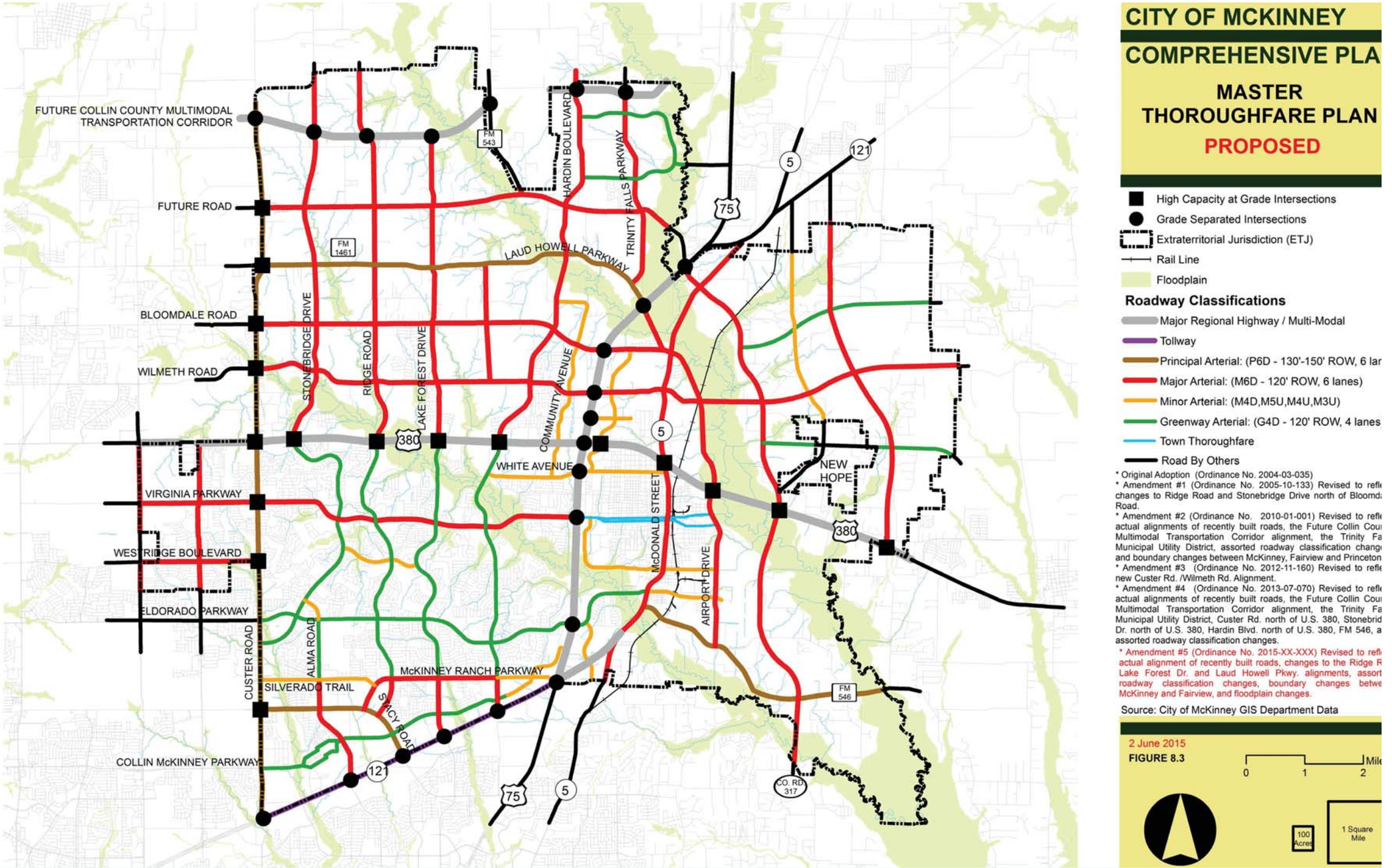


EXHIBIT I

Disclaimer: The Master Thoroughfare Plan provides generalized location for future thoroughfares. Alignments may shift as roads are engineered and designed to accomodate floodplain areas and to meet sound engineering and urban planning principles The roadway lines shown on the plan are not preceise (site specific) locations of future thoroughfares.

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EXHIBIT I

Roadway Classifications

Principal Arterial, Divided ("P-6D") - Principal arterials have a minimum ROW width of 130 feet and an ultimate cross-section of six lanes. The pavement section consists of two 36-foot roadways with a 30-foot center median. The parkway area is intended to accommodate deceleration lanes into driveways and intersecting streets. There are traffic signals at all major intersections coordinated for progression during peak periods.

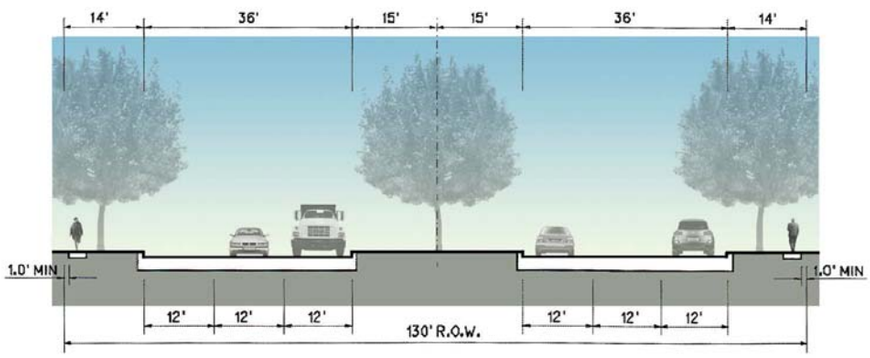


Figure 8.3: Principal Arterial Divided - Subregional

Major Arterial Divided ("M-6D") - The pavement section consists of two 36-foot wide roadways with a 20-foot center median. The standard ROW width is 120 feet, but may be increased at intersections. Median openings are spaced at significant intervals to reduce conflict between through-traffic and turning vehicles. The ultimate cross-section of a major arterial is six travel lanes.

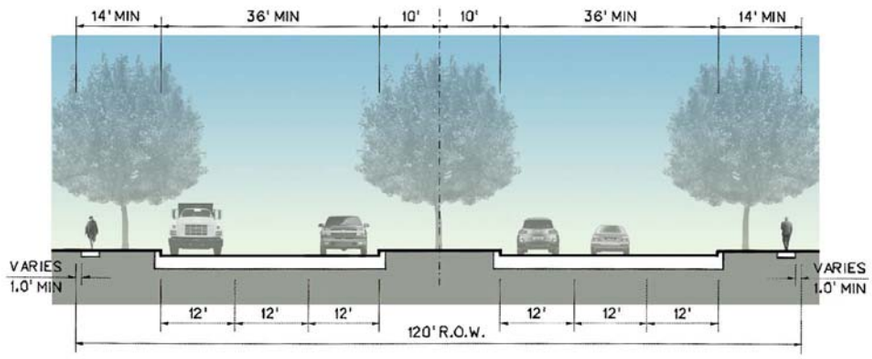


Figure 8.4: Major Arterial Divided - Local

Greenway Arterial Divided ("G-4D") - The Greenway arterials have a minimum ROW width of 120 feet with an extra wide 44-foot center median to accommodate landscaping and street trees. The pavement section provides two 24-foot roadways separated by the extra wide landscaped median. The greenway arterial has four lanes of traffic.

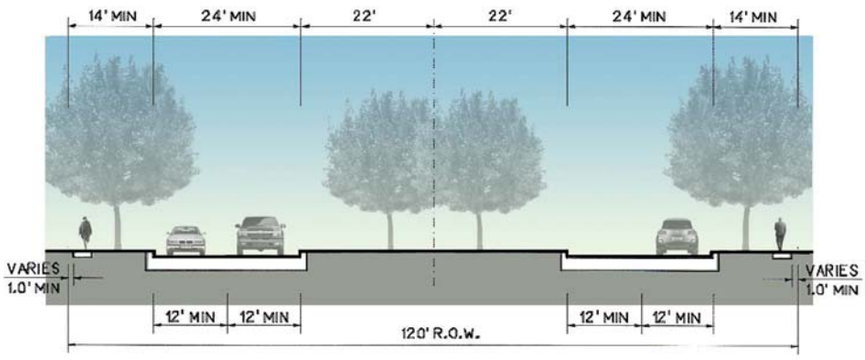


Figure 8.5: Greenway Arterial Divided

Minor Arterial Divided ("M-4D") - Minor arterials are a secondary thoroughfare used to move local traffic. They include two 24-foot wide pavement sections, divided by a 20-foot wide median. The minimum ROW is 100 feet. Minor arterials are intended to be a four-lane divided roadways.

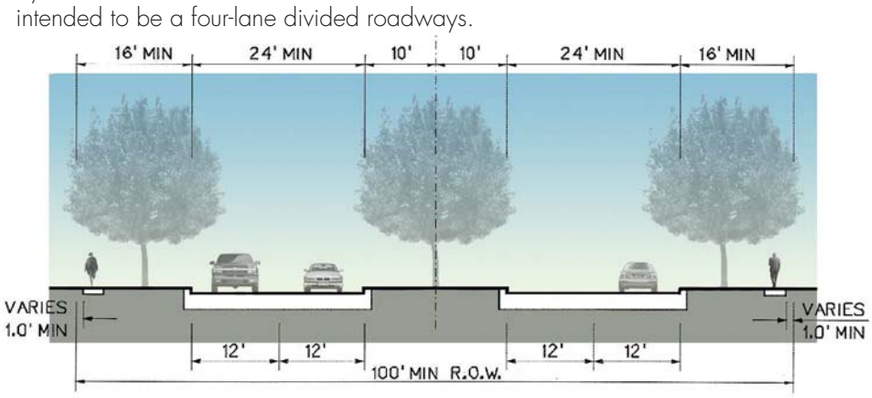


Figure 8.6: Minor Arterial Divided

Minor Arterial Undivided ("M-4D") - Minor arterials are a secondary thoroughfare used to move local traffic. Minor undivided arterials include two 22-foot wide pavement sections, with no median. The minimum ROW witdth is 80 feet.

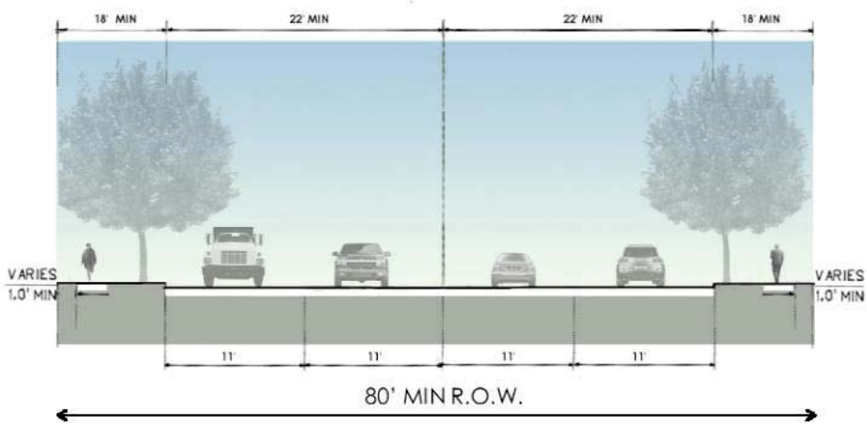


Figure 8.7: Minor Arterial Undivided

Thoroughfare Recommendations

Freeways

Three freeway facilities are planned or existing in the McKinney ETJ. These are US 75, SH 121, and the future Collin County Multi-modal Transportation Corridor. As a regional facility, the north-south location of US 75 links the City to the center of the Dallas metropolitan area. This facility has interchanges with major east/west regional highways as well as access to the interior sections of the region. TxDOT has proposed to widen US 75 to eight lanes through McKinney, including intersection and ramp improvements as well.

SH 121 (Sam Rayburn Tollway) between US 75 and DFW Airport is a tollway maintained by the North Texas Tollway Authority (NTTA). SH 121 includes full access-controlled tollway main lanes, continuous frontage roads, and grade separated interchanges at key crossings. The communities along SH 121 have worked closely with TxDOT in planning this tollway. The ultimate tollway section from US 75 westward to DFW Airport gives McKinney significant access to all transportation nodes and major land use areas along this route. SH 121 is an important thoroughfare because its intersection with US 75 forms a primary entrance into McKinney. Therefore, urban design and landscape design considerations must be carefully evaluated for all developments along the SH 121 corridor.

The future multi-modal transportation corridor is still in the early planning stages, but a general location has been chosen in the far north section of McKinney's ETJ. This corridor will be the next limited access freeway north of SH 121 and is planned to extend from IH 35 in Denton County to IH 30 east of Dallas County. This future freeway corridor provides McKinney with an area for long term tax base development as well as increased east-west regional access.

Regional Highways

US 380 provides east/west regional access and will continue to carry high traffic volumes to and through the City. US 380 has recently been widened to accommodate this higher traffic volume. As traffic volumes continue to increase along this corridor, access management, TSM strategies, and grade separated intersections should be considered for implementation.

SH 5 traverses the central business district of the City paralleling US 75. Generally, north-south traffic destined for the center City in McKinney will use SH 5. North-south through-traffic generally stays on US 75. This facility has varying characteristics such that it functions as a principal arterial in some segments and a minor arterial in others.

UPDATE: In late 2012, the City of McKinney (in partnership with the North Central Texas Council of Governments and Texas Department of Transportation) launched a corridor planning study for the portion of SH 5 within McKinney. The corridor planning study, known as the State Highway 5 Context Sensitive Transportation Study was completed in April 2014. The resulting Master Plan (adopted June 17, 2014) establishes the necessary framework to achieve a seamless transition of the roadway's feel and function as it traverses McKinney. See the State Highway 5 Corridor Context Sensitive Master Plan for additional information.

Arterials

The following describes many of the arterials in McKinney with future recommendations.

- Custer Road is a major north/south arterial carrying traffic continuously from western McKinney and eastern Frisco to Allen, Plano and Richardson to the south. Custer is designated as an ultimate six-lane principal arterial with 130 feet of ROW. Consideration should be given to preserve the mobility function of this facility in the future. Traffic projections show Custer carrying a significant amount of traffic attributable to the new growth planned for western McKinney.
- McKinney Ranch Parkway and Stacy Road carry east-west traffic to, from and through McKinney, connecting McKinney with Frisco to the west and Allen to the south. Stacy Road is designated as a six-lane principal arterial requiring 130 feet of ROW. McKinney Ranch Parkway is designated as a six-lane arterial with 120 feet of ROW.
- Collin McKinney Parkway is designated as a greenway arterial generally paralleling SH 121. This facility serves as the main arterial that generally bisects the Tollway Commercial module and the Urban Mix module.
- Virginia Parkway is designated as an east-west six-lane major arterial in the southwest part of the City. This facility will function to collect trafficdestined for US 75 or the McKinney central business district from the west-McKinney residential development and provide a high level of mobility.
- Stonebridge Drive is designated as a four-lane greenway arterial between US 380 and FM 720. North of US 380, it is anticipated that growth will produce the demand for this facility to be a six-lane major arterial.
- Ridge Road is a four-lane greenway arterial south of US 380, but is designated as a six-lane major arterial north of US 380.
- Lake Forest Drive is also a four-lane greenway arterial south of US 380 and a six-lane major arterial north of US 380.
- Hardin Boulevard is a four-lane greenway arterial south of US 380 and anticipated to be needed as a six-lane major arterial north of US 380.
- Eldorado Parkway is an east/west greenway arterial through the southwestern part of the City. This facility carries traffic from US 75 westward to residential areas in McKinney. However, it is also continuous with arterials in Frisco and to the west through the Colony and Little Elm. This roadway eventually connects to IH 35E via the Lewisville Lake Toll Bridge (opened in August 2009).
- Bloomdale Road is designated as a six-lane major arterial carrying east-west traffic across the northwest part of McKinney.
- Wilmeth Road is proposed to be a six-lane major arterial carrying east-west traffic parallel to and north of US 380.
- FM 546 is proposed to be a six-lane principal arterial carrying east-west traffic parallel to the southern ETJ boundary and to the south of the McKinney National Airport.
- FM 1461 and Laud Howell Parkway (formerly known as the FM 543 Connector) are designated as an east-west six-lane principal arterial in the northwest part of the City.

It is recommended that one of the east/west arterials (north of US 380 and west of US 75) be considered for special design treatments to facilitate higher vehicular capacities and speeds. This is in order to meet the anticipated travel demands attributable to the area's economic development and planned growth. One of the north/south arterials also in the northwest part of the City should be considered for these special design treatments to facilitate higher vehicular capacities and speeds.

8.4 Traffic Related Design Details

Traffic related design and thoroughfare planning is the continual analysis of factors affecting the flow of traffic. Intersection design and traffic signal timing are as important to a street's capacity abilities as the number of lanes available. Through traffic volume and impact analysis, intersections can be designed to accommodate smooth traffic flow by indicating a need for free right turn movements or dual left turn lanes. Access between the thoroughfare and adjacent private property is important, particularly at intersections. This concern often indicates a need for an access ordinance with appropriate design standards.

Often, through improved intersection design, signal timing, or signage, safety at accident prone locations can be significantly improved. Points of high volume movement of through or turning traffic should be recorded and periodic study made of conditions to ascertain that all the identifiable features are being handled correctly.

Coordination between trail systems within the parks and greenbelts with pavement space on the road for bicycle use is an important element in the design of future thoroughfares. Allocation of space for bicycle use in the arterial system requires greater pavement width for those facilities where this use will occur; therefore, the bike system must be planned as accurately as possible to ensure that space and safety measures are incorporated into the initial roadway design and construction.

Medians

Medians provide a separation of travel lanes and a location for beautification. Numerous factors are involved in the design of medians. An important factor is the distance between median openings that allow for turning movements. The Street Design Manual allows for openings to be created at intersections with dedicated streets as well as at limited mid-block locations. The purpose of limiting the number of mid-block openings is to ensure safe, efficient traffic movements and to maintain the appropriate level of service along major thoroughfares by reducing the conflict between through-traffic and turning vehicles. The optimum spacing of median openings is defined in the McKinney Street Design Manual.

Intersections

The capacity of a major street is significantly influenced by the design and operation of signalized intersections. Number of lanes, sequence of movements, and signal timing each affect the number of vehicles which can be handled by an intersection of two major thoroughfares. The Street Design Manual provides for a right turn lane exclusive of the through-lanes. When volumes can be projected by traffic studies or can be anticipated to be greater than the volume which can be managed for a standard intersection design, right-of-way provisions should be made to accommodate a greater number of lanes.

The illustrations in the Street Design Manual show intersection designs for various sizes of thoroughfares that recognize the need for mandatory right turn lanes as well as a high number of left turn lanes. An important feature of the Manual is that the right turn lanes are given deceleration space in advance of the intersection and acceleration space for traffic leaving the intersection after the right turn. Another important feature of the manual is the dual left turn. This feature has the advantage of moving vehicles through the intersection in pairs, thus significantly improving the efficiency of operation. Vehicular storage for waiting vehicles in dual left turn lanes is doubled as compared to a conventional left turn lane.

Grade Separations

Grade separations currently exist on US 75 and along SH 121. While the future Collin County Multi-modal Transportation Corridor is still in early planning stages, it is anticipated that it will eventually be constructed as a limited access freeway with grade separated intersections.

Other grade separations may be required as the City's urban area expands and the traffic demand at various thoroughfare intersections increases. Some cities choose to preserve the option of implementing arterial grade separations where it is anticipated that a significant amount of crossing traffic will occur. While not always immediately popular to consider, preserving the option for future generations provides additional solutions to solve future transportation problems. Where this type of intersection will not work, the crossing of two major thoroughfares should be given specific attention to reduce intersection delay and congestion, both of which contribute to poor air quality.

The City will use the Trans Plan transportation model to develop and test future development options. This will help in the understanding of need for high-capacity intersections and other elements. The City will use this model to coordinate better with NCTCOG over future projections and demand figures. Using this information, appropriate right-of-way can be acquired as development occurs.

In order to determine where such grade separations may possibly be needed, traffic demands can be analyzed using the Dallas-Fort Worth Regional Travel Model developed by NCTCOG or the new City of McKinney travel demand model. Travel models examine the relationship of land uses to the capacity of the thoroughfares. The data provided from a model provides a wealth of detailed information regarding future volume and capacity.

8.5 Other Transportation Modes

Means of transportation other than motor vehicles influence the City's development and will continue to impact future development. Some modes of transportation will relate either to personal needs or to needs for business services. As the city's urban area continues to gain population, new and expanded transportation services will be created or enhanced to meet the demands. Among these are the following:

Air Transportation

McKinney has operated a municipal airport for several years, but in recent years the importance of this facility has become increasingly greater to the City's service and economic base. The Collin County Regional Airport completed its Master Plan update in February 2006. The Master Plan focused on facility needs and evaluating alternatives for future development. In 2013, the City of McKinney purchased airport assets and renamed it as McKinney National Airport (TKI), viewing the acquisition as an economic development opportunity. In its first twelve months as McKinney National Airport, operations increased by 6%.

The airport is one of five general aviation facilities located in the north Dallas County and Collin County area and is second in annual operations to the Addison Municipal Airport. An Airport Master Plan update and Environmental Assessment were completed in 1988, which set forth projections for the McKinney facility. The 7,000-foot runway permits the municipal airport to accommodate aircraft larger than those handled by a utility airport. As airspace becomes more congested for airports

interior to the region, use of the airport can be expected to increase and be coupled with growth from personal and business operations conducted from the airport.

NCTCOG prepared a study in 1984 which examined airport facilities for the DFW region. Anticipated updating of data in this study will make available information on both conventional airport facilities, as well as heliport. The 1984 study recommended heliports for the Dallas and Fort Worth central city areas, a mid-cities location, and a north Dallas facility but none in the vicinity of McKinney or southern Collin County.

To maintain input from communities, NCTCOG has an Air Transportation Advisory Committee, which has existed since the mid-seventies. This Committee provides technical assistance to staff in maintenance of the 1984 Plan other aviation needs and serves as a technical advisor to the Regional Transportation Council.

On-Street Bicycling

The On-Street Bicycling section has been created to serve as a link between the On-Street Bicycle Transportation Master Plan and the Transportation Element of the Comprehensive Plan. The On-Street Bicycle Transportation Master Plan (Bicycle Master Plan) was adopted in 2012 and provides the City of McKinney with a policy framework which is needed for the implementation of networks, facilities, projects, and programs related to a safe and successful on-street bicycle network.

The Bicycle Master Plan sets forth the existing bicycling conditions within the City of McKinney, lays out the preferred network, facility types, wayfinding, routes and other related infrastructure, as well as program elements needed to support the Plan. The Bicycle Master Plan, including any future amendments, should be referenced when considering transportation decisions in the City. For additional information, see the On-Street Bicycle Transportation Master Plan (2012).

Public Transit

Presently, bus service is the only form of public transportation between McKinney and other sections of the region. Prior to April 2013, bus service was provided within the City by Collin County Area Rural Transit (CCART) in the form of on-call/on-demand service and fixed bus routes. However, in April 2013, City Council designated Texoma Area Paratransit Service (TAPS) as the provider of bus service within the City. TAPS provides public transportation in the form of on-call/demand response service and fixed bus routes.

A Transit Needs Assessment and Planning Study for Collin County was completed in September 2013 by the North Central Texas Council of Governments to determine current and future transit needs for Collin County. The City of McKinney participated as a stakeholder in this study process. It can be expected that, as population increases and as other factors that impact private vehicular travel occur, the need and service of mass transportation will be met.

After the 2000 Census, the City of McKinney was designated by the US Census Bureau as an Urbanized Area and began receiving urban transportation funds allocated by the Federal Transit Administration (FTA). Prior to April 2013, these funds were designated to CCART, as the designated-recipient, on an annual basis to help provide on-call/on-demand service and fixed bus route service. As of April 2013, TAPS is now the designated-recipient of these FTA funds.

Future public transportation service may be provided by Dallas Area Rapid Transit (DART). Currently, DART serves Dallas and 13 surrounding cities with more than 11,900 bus stops, 90 miles of light rail transit (LRT), 60 miles of HOV lanes, and paratransit service for the mobility impaired. DART and the Fort Worth Transportation Authority (the T) jointly operate 35 miles of commuter rail transit (the Trinity Railway Express or TRE), linking downtown Dallas and Fort Worth with stops throughout the mid-cities and DFW Airport.

DART light rail transit currently reaches as far north as Plano. DART has purchased the ROW for the railroad extending north from Plano, through McKinney. A city must designate a one-cent local sales tax to become a DART member city. Currently, the City of McKinney designates that one-cent sales tax towards the McKinney Economic Development Corporation (MEDC) and the McKinney Community Development Corporation (MCDC) and cannot increase the sales tax above the current level. Consideration with DART and/or other agencies is ongoing.

The North Central Texas Council of Governments initiated the McKinney Corridor Conceptual Engineering and Funding Study in late 2008 to support future passenger rail service implementation from Plano to McKinney. The study was facilitated by conducting outreach with key stakeholders and providing an open forum to identify key issues, identify potential station locations, and examine alignment options. In addition, the study documents existing environmental conditions and identifies potential impacts. The study and associated final report was completed in the summer of 2010 and provides a foundation for future environmental documentation anticipated to be completed by the implementing transit agency and identifies possible funding strategies intended to expedite project implementation.

Freight Systems

Freight rail service and future rail transit opportunities do not currently work together. This is due to the fact that the railroad line running through McKinney is only a single track network. A single track can not carry both modes of movement for people and freight. Further detailed review will need to be completed to better understand these two rail services. Any rail planning will need to include DART, the freight service provider, Collin County, and the City of McKinney.

Section 9: Parks, Recreation and Open Space

The Parks, Recreation and Open Space Element of the Comprehensive Plan serves as a guide for decision making regarding the number, type, and location of future parks to complete the parks system within McKinney.

This element identifies goals and objectives for the development of the parks, recreation and open space system in the City of McKinney. It establishes the levels of service (LOS) and standards for each park type and makes recommendations for policies that will help achieve the quality of service expected by the citizens of the community.

The McKinney Comprehensive Plan's Parks, Recreation and Open Space Element has been created as the link between the adopted –Parks, Recreation and Open Space Master Plan and the Land Use Element of the Comprehensive Plan.

9.1 Goals and Objectives

The development of goals and objectives that provide direction for McKinney's park system is necessary to ensure that all aspects of the parks element work toward a common end result. The following are the goals and objectives set by the Parks, Recreation and Open Space Master Plan, which complement the goals and objectives of the Comprehensive Plan. These goals were developed through the public participation portion of the Parks, Recreation and Open Space Master Plan process, which included user surveys, focus groups, and phone surveys.

Goal 1. Expand the park system to maintain and enhance the physical form and image of the City of McKinney.

- Parks should be timeless.
- Parks should be unique to McKinney to celebrate its character and qualities.
- Parks should be site specific and integrate well into the urban design and landscape of the surrounding area.
- Open space should be prevalent enough and interspersed to present an image that McKinney has a great amount of open space.
- Image helps economic development, therefore the economy.

Goal 2. Preserve and protect open space, cultural landscapes and natural resources within the City.

- Open space is valuable; use it to preserve, solidify, and announce McKinney's image, as part of the City's systems of portals.
- Use open space to protect creeks, tree covered areas, prairie land and agricultural landscapes.
- Keep McKinney looking like McKinney by not developing everything.
- Plan to protect the creeks and important view sheds.

Goal 3. Provide a system of green infrastructure that links parks, schools, neighborhoods, businesses/retail areas, greenbelts, and open space through physical connections.

- "Green" is appropriate and necessary.
- Plan today for a green, walkable and bikeable community tomorrow.
- Open space benefits both the environment and people, e.g. clean area, clean water, flood protection, carbon sink, etc.

- Green infrastructure promotes healthy activity.
- Provide a sustainable recreational & transportation infrastructure within the City.
- Green infrastructure comprises alternative transportation.
- Green infrastructure ensures a connected community.

Goal 4. Create and provide a variety of opportunities accessible to every citizen meeting the needs of a diverse citizenry and supporting the individual, family, and community health and well-being of all.

- Enhanced well-being leads to improved quality of life.
- Recognizing diversity means understanding individual's desired outcomes and different programs, accessibility, and approaches.
- Adults & children have different needs.
- Varied but coordinated opportunities serving a diverse citizenry will help bring people together as a community.

Goal 5. Optimize the utilization of existing resources across other public, private, nonprofit and commercial entities through shared resources, partnership, etc.

- Create a structure and process for implementing a comprehensive sharing plan.
- Understand and define the criteria that are essential for the City to participate (legal, financial. ethical, etc.).
- Create opportunities for outside assistance with funding.
- Understand the inter-relationship between parks, open space and a healthy economy.
- Connect community through city and non-city cooperation and interaction.

Goal 6. Maintain the character and community feel of the City as it grows and ages.

- During the public input process, the overwhelming message was that the McKinney citizens cherish its "character and community feel."
- McKinney has never looked like a Dallas suburb; its future vision is to be unique;
- Definable uniqueness is an advantage in economic competition for employers and residents.
- Maintenance of the community feel will enhance the unique image of the community and attract businesses.

9.2 The Planning Process

The Parks, Recreation and Open Space Element of the Comprehensive Plan incorporates the public input, data, and results of the adopted City of McKinney Parks, Recreation and Open Space Master Plan.

During the creation of the Parks, Recreation and Open Space Master Plan, critical park issues were identified through workshops, public meetings, user surveys, and focus groups. The purpose of the community meetings and user surveys was to obtain perceptions, opinions, and priorities from the citizens of McKinney about current and future parks and recreation needs. From this, the park standards were updated, a needs analysis including prioritization of those needs was prepared, and implementation techniques were developed. These standards, needs, and techniques were incorporated into this section of the Comprehensive Plan. The Parks, Recreation and Open Space Master Plan is typically updated every five years.

9.3 Park Types

Park sites and their facilities are classified in McKinney as neighborhood, community, special purpose, linear parks, greenbelts and hike and bike trails, regional parks, and natural areas and open space. The multi-purpose nature of these parks allows for a mixture of park facilities within each park as noted below.

Neighborhood Parks

Neighborhood parks are considered the primary focus of municipal park systems because they serve as the focal point of neighborhoods. Ideally, they provide amenities and recreation space for the entire family but are within easy walking or cycling distance of the people they serve.

The neighborhood park typically serves one large or several smaller neighborhoods. The standard size of a neighborhood park in McKinney is approximately 10 to 20 acres. Neighborhood parks should be accessible to residents who live within walking distance of the park. Ideally, neighborhood park facilities should be located within a ½ mile radius (or five to ten minute walk) of the residents who will use those facilities.

Neighborhood parks are generally located away from major arterial streets and provide easy access for the users that surround it. A neighborhood park should be accessible without having to cross major arterial streets.

Neighborhood parks are frequently located adjacent to elementary schools in order to share acquisition and development costs with the school district. Adjacencies of park and school grounds allow for joint use and sharing of facilities. It also lends itself to the community's involvement with the school grounds and vice versa, leading to a synergistic result that adds to the quality of life for everyone.

The spacing of the neighborhood parks is heavily influenced by the location of elementary schools. The residential future land use plan modules have been generally sized based on MISD target elementary school populations.
Typical facilities within a neighborhood park include:

- Playground equipment with adequate safety surfacing around the playground
- Unlighted basketball courts and half courts
- Active areas for unorganized play and practice fields
- Picnic areas with benches, picnic tables and cooking grills
- Shaded pavilions and gazebos
- Jogging and exercise trails
- Unlighted tennis courts
- Security lighting
- Drinking fountains

The overall design and layout of a neighborhood park is important to its final quality and timelessness. These parks should generally be designed with the programmed space – playgrounds, pavilions, basketball courts, etc. – clustered into an "activity zone" within the park. These areas need ample seating and shade to be hospitable year round. Siting these areas near existing stands of trees is strongly recommended as this eliminates the years of waiting for shade trees to mature. The open / unprogrammed space should be visible from this activity area, but should be clearly delineated through plantings and hardscape features such as paved trails and seatwalls. Finally, a loop trail is today considered an essential component of a neighborhood

park. It is important to design a neighborhood park that is unique in character, respond to the surrounding environment, and provide unique experiences for the park's users.

Parking for neighborhood parks will vary based on the size of the park, the facilities it contains, and the number of users. Opportunities to share parking may be beneficial to different yet compatible functions, such as libraries, schools, City buildings and the like.

The Community Park

Community parks are larger parks that serve a group of neighborhoods or a portion of the City. Community parks are usually reached by automobile, although residents adjacent to the park and trail users may walk or cycle to it, rendering them de facto neighborhood parks. A variety of recreational facilities are provided, including, in some cases, lighted playing fields for organized sports, hike and bike trails and sufficient parking to accommodate participants, spectators, and other park users.

There are two typical types of community parks – active and passive. Active community parks typically focus on high-intensity uses such as lighted competitive game fields, recreation centers, and manicured vegetation. Passive community parks, on the other hand, typically have low-intensity uses such as hiking, picnicking, and free play and generally have a large amount of natural and un-programmed space in the park.

The typical community park should be large enough so it can provide a variety of amenities while still leaving open space for unstructured recreation, practice space, and natural areas. The park should also have room for expansion, as new facilities are required. The standard size of a community park in McKinney ranges from 40 to 100 acres in size, serving an area 2-3 miles in diameter.

Community parks should be located near a major thoroughfare to provide easy access from different parts of the City. Where possible, care should be taken to provide adequate buffers to adjacent residential streets, minimizing noise and bright lights at night (specifically important for active community parks). A good option to be considered is "cut-off" or "directional" lighting, which allows light patterns to be controlled, thereby avoiding undesired lighted areas. Because of the requirement for lighted facilities, it is often desirable to have active community parks located adjacent to commercial, retail, and/or light industrial areas, rather than residential neighborhoods.

Depending on community park type, facilities generally located in community parks may include:

- Playground equipment with adequate safety surfacing around the playground
- Active free play areas
- Picnic areas and pavilion(s)
- Unlighted practice fields for baseball, soccer, football, softball, etc.
- Restrooms
- Natural open space
- Jogging, bicycle and nature trails
- Lighted ball fields, suitable for organized competitive events
- Lighted multi-purpose practice fields
- Recreation center (if appropriate)
- Security lighting

Other facilities as needed which can take advantage of the unique characteristics of the site, such as nature trails or fishing adjacent to ponds, swimming pools, skateboard parks, amphitheaters and even community gardens.

Parking for a community park varies based on the facilities provided and the size of the park. Consideration should always be given towards the concept of "shared parking," whereby parking may be shared with adjacent land uses such as schools, City facilities, etc.

Special Purpose Parks

Special purpose parks are designed to accommodate specialized recreational activities. Because the facility needs for each activity type are different, each special purpose park usually provides for one or a few activities. Examples of special purpose parks include:

- Golf courses
- Athletic fields or complexes
- Nature centers or large natural preserves
- Botanical Gardens/arboretums
- Swimming pool centers
- Aquatic Parks
- Pocket Parks
- Recreation Centers
- Senior Citizen Centers
- Tennis complexes
- Dog parks
- Skate parks/BMX tracks
- Cemeteries

Linear Parks, Greenbelts and Hike and Bike Trails

Linear parks and greenbelts are open park areas that generally follow some natural or man-made feature that is linear in nature, such as creeks, abandoned railroad rights-of-way or power line or utility corridor easements. Properly developed to facilitate pedestrian and bicycle travel, these parks can serve to link or connect other parks in the local system, as well as schools, libraries, and other major destinations. No specific standards apply to linear/linkage parks other than to be large enough to adequately accommodate the trail and provide a connection between each end. Linear parks can also serve as effective linear greenbelts, which preserve open space and provide trail connections along a natural or landscaped man made feature.

Hike and bike trails, often found in linear parks, serve to provide active and passive recreation as well as connections between parks and other destinations within the City. A trails system should be established to serve both recreation needs and as a means to alternative transportation choices and connections throughout the City. In a few instances, a typical off-street trail through a greenbelt is not a possibility due to lack of right-of-way or other constraints. In such instances, trails along streets within existing right-of-way are options for achieving a connected, city-wide trail system. Such a system should provide each resident with quick and easy access to parks, schools, retail, and employment areas.

The Regional Park

Because of regional importance and relevance, regional parks serve the entire City of McKinney as well as other surrounding cities. This may be due to their natural characteristics including habitat, geological formations, and/or aesthetic beauty. Other reasons may be the role that a particular site plays in issues of regional importance such as historical memorial, habitat protection or ecological service (including water conservation and flood protection).

The size of a regional park can vary from less than one hundred acres to several thousand acres, depending on the purpose and character of the site. Regional parks are often under single ownership and under the control of county and state government. Major thoroughfares should be located adjacent to regional parks in order to accommodate the large number of visitors that may be expected to arrive by automobile.

Natural Areas and Open Space

The benefit and inclusion of places that are nature areas or un-programmed open space has been largely overlooked in the context of typical parks master plans. Conservation and preservation are especially valuable as, over time, natural resources disappear in our cities and natural habitat is wiped out. The value of walking through historic and natural places that have been left untouched is immeasurable. Such opportunities are rapidly becoming rare, and the identification and protection of such areas is urgently needed in most cities today. Cities that marshal the will and act quickly to conserve natural resources demonstrate the foresight and resolve necessary to ensure that future generations may enjoy something of beauty and timelessness.

Nature areas and open space are part of a city's resources and are its "natural gems." The value of such land may have visual, historic, and cultural appeal that imprints upon the visitor and creates a sense of place as well as of lasting memories. Wilderness, creeks, lakes, prairies, and particular geologic formations or topographic change may all be considered elements worthy of protection, public access, and celebration. As un-programmed space, there is the added benefit of these areas as "self-maintaining". There may be the occasional need to check for hazards, but maintenance is generally not a significant factor. Other than recreational and aesthetic opportunities afforded by natural areas, they also have huge economic value to society in terms of ecological services provided - functions like water and air purification, carbon sequestration, flood attenuation, pollination, air cooling, and positively effecting human health and well-being.

The East Fork of the Trinity River, Wilson Creek, Honey Creek, Rowlett Creek and all of their tributaries provide unique natural beauty and memorable recreation for the citizens of McKinney. The aesthetics and recreational value of natural water features available to the public is immeasurable. The protection of both riparian vegetation and habitat is essential to water quality and wild life diversity and ultimately to all citizens of McKinney.

Figure 9.1: Preservation Plan graphically depicts flood- prone land that possesses, to varying degrees, environmental, cultural, and/or visual assets worthy of acquisition and preservation. These high priority areas should be preserved through parkland dedication or easements, preserving the open space and providing public access. The Parks, Recreation and Open Space Master Plan is in full support of this vision and regards the Preservation Plan as a foundation for the protection of open space and natural areas in McKinney.

Other opportunities for open space land dedication include:

- Creek corridors that include a buffer area beyond the 100 year flood line depending on unique site features.
- Secondary tributary streams or swales that can create linkage "fingers" to adjacent neighborhoods by means of trail connections.
- Land identified as possessing natural and cultural importance including wetlands and their buffers; moderate and steep slopes; groundwater resources and their recharge areas; woodlands; heritage farmland; significant wildlife habitat; historic and archaeological features; and scenic view sheds.

9.4 Existing Conditions

Existing Parks and Recreational Facilities Systems

The City of McKinney Parks, Recreation and Open Space Department is responsible for the programming, maintenance, and planning for park and recreational services in McKinney, and provides most of the traditional public parks and recreational facilities. There are currently 47 park and recreational facilities including one recreation center, one community center,one municipal golf course, and two disc golf courses. The City also owns and operates the McKinney Senior Recreation Center, which includes an indoor swimming pool.

McKinney's park and open space system consists of six classifications: neighborhood parks, community parks, special purpose parks, linear parks, greenbelts and hike and bike trails, regional parks, and natural areas and open space.

9.5 Analysis

McKinney is situated in rolling terrain, primarily associated with two major floodplains, the East Fork of the Trinity River and Wilson Creek, and their tributaries, which comprise more than 11,000 acres.

The Comprehensive Plan identifies areas which are less suitable for development based on natural features, including the FEMA-designated 100-year floodplain, slopes greater than 15%, natural and urban tree cover, and certain soil types. Most of these prohibitive factors occur in conjunction along the 100-year floodplain.

In addition, the Comprehensive Plan identifies existing land use, zoning, and visual landmarks that may have an impact on future park locations to serve as natural scenic gateways. Taking advantage of the rolling terrain and natural beauty of McKinney's primary floodplains, the City's community and regional parks should be located primarily along the East Fork of the Trinity River and Wilson Creek.

Neighborhood parks should also take advantage of these natural resources when possible, but the primary purpose of these parks is to provide recreational opportunities within residential developments.

9.6 Land Standards by Park Type

Since 2003, the City has had an adopted target Level of Service (LOS) of 25 acres

per 1,000 residents, which is significantly more than the regional average, and that recommended by the Collin County Open Space Plan (18 acres/1,000). This standard includes both floodplain and open space. This is also the same standard established by Texas Parks & Wildlife. The average standard for parkland in the Dallas/Fort Worth Metroplex is 11 acres per 1,000 residents

The Parks, Recreation and Open Space Master Plan also follows the park acreage standards set forth by the NRPA (National Recreation and Parks Association).

The NRPA target standard for neighborhood parks is 1-2 acres per 1,000 population and for community parks, 5-8 acres per 1,000 population. More information on the City's parkland and recreational facilities can be found in Tables 6.1 and 6.2 of the Parks, Recreation and Open Space Master Plan.

McKinney's high standard reflects the determination of the City to preserve as much floodplain land as possible of the East Fork of the Trinity River, Honey Creek, and the Wilson Creek corridor for undeveloped open space. Both private and City-owned land could be preserved within the floodplain.

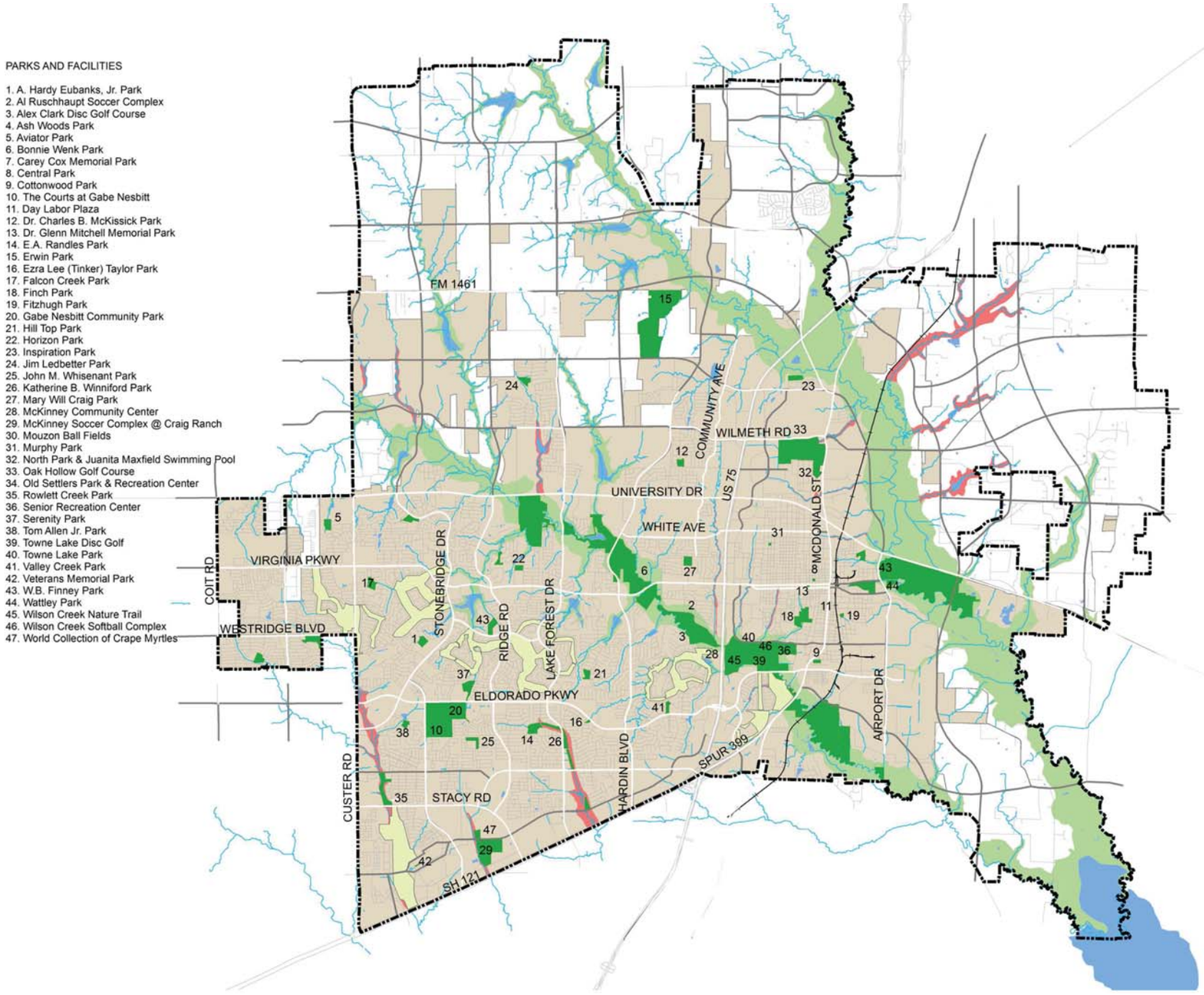
The acreage and facility standards contained in this section are reflective of the local needs, trends, National Recreation and Parks Association (NRPA) standards, demand levels in McKinney, comparative data from other Dallas/Fort Worth Metroplex cities, and the experience and observations from a park planning and design consultant with emphasis primarily in north central Texas. More detail on these standards is found in the Parks, Recreation and Open Space Master Plan.

Standards and guidelines are useful criteria for quantifying the land and facility requirements of a parks and recreation system. However, these standards should be viewed as guidelines rather than rules. A City's park plan must reflect the unique needs and desires of the community in establishing any local standards and will likely undergo revision as the community builds out.

9.7 Future Parkland and Facility Needs

The Parks, Recreation and Open Space Master Plan identifies a strong need to acquire parkland and recommends that a concerted, targeted and expedited effort be made toward this end. Acquisition of land should be focused on the provision of neighborhood parks, community parks, linear parks, special purpose parks, and the protection of habitat, cultural landscapes and open space. Desireable locations for parkland to be acquired are shown in the Existing & Proposed Community & Neighborhood Parks found in the Parks, Recreation and Open Space Master Plan.
Neighborhood Parks

About 35 new neighborhood parks are recommended for the entire City at build-out conditions. At a size of 10 to 20 acres per park, this constitutes an average of 525 acres to be acquired over the next 10 to 15 years and beyond. This will bring the City well into the target standard of 2 acres per 1,000 population at build-out. Recommendations for achieving this target are acquiring sites that are easily accessible and that have sufficient land that is useful for multi-purpose ball field development; continuing the practice of park dedication by developers as new communities are built; considering acquisition of land for neighborhood parks in conjunction with the school district's needs in order to ensure the development of parks and schools adjacent to each other; and where possible, acquiring land for neighborhood parks close to creeks in order to provide a trail connection along the creek to other parks and amenities.



CITY OF MCKINNEY
COMPREHENSIVE PLAN

PRESERVATION PLAN
PROPOSED

Legend

- Roads
- Rail Line
- Proposed Thoroughfares
- Creeks
- Extraterritorial Jurisdiction (ETJ)
- City Limits
- Park Property
- Golf Courses
- Lakes

Floodplain

Preservation

- High Priority
- Medium Priority

* Original Adoption: 3-22-04 (Ordinance No. 2004-03-035)

* Amendment #1: 12-4-12 (Ordinance No. 2012-12-064) Added acquired park land

*Amendment #2: 06-02-2015 (Ordinance No. 2015-06-XXX) Revised to reflect floodplain changes and boundary changes between McKinney and Fairview.

Source: City of McKinney Planning Department Data

2 June 2015
FIGURE 9.1

Miles
0 1 2

100 Acres

1 Square Mile

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Community Parks

Ten additional community parks are recommended at build-out conditions. At a size of 40 to 100 acres per park, this constitutes 400 to 1,000 acres to be acquired over the next 10 to 15 years and beyond. This will bring the City closer to the target standard of 2,325 acres or 6 acres per 1,000 population at build-out. Recommendations for achieving this target are acquiring lands that provide for the practical implementation of ball fields and multi-purpose fields outside of the floodplain for active sports use; acquiring lands within the floodplain for passive community parks; and acquiring land large enough to accommodate future growth in the parks.

Special Purpose Parks

Five types of special purpose parks are recommended:

- City portals – The City's plan to develop 4 city portals to announce McKinney and their locations is largely based on the natural quality of the land in terms of topography, hydrology and habitat. These areas reinforce the City's brand, Unique by Nature, by celebrating McKinney's natural character and quality. The Parks, Recreation and Open Space Master Plan recommends an additional portal along the City's most northern edge along both sides of the future Regional Outer Loop. One of the main features of this proposed portal is a lake which has the length of about half a mile. From the lake the portal stretches to the east and southeast to include Honey Creek and its tributary.
- Trail heads – acquire about 14 areas for seven trail heads between 1 and 3 acres in size to accommodate parking, informationanal signage and trail gateways.
- Community gardens – identify appropriate land either in existing parks or future park sites considering quality of soil and access to water and irrigation.
- Habitat protection – the confluence of the East Fork of the Trinity River and Wilson Creek is located in the upper reaches of Lake Lavon. Acquire parkland on this beautiful peninsular area.

Land for Linear Parks

Linear parks are typically located adjacent to a linear landscape feature such as a creek and/or utility easement. If land is to be required for a trail only, the following guideline will be helpful to determine the need for land acquisition. A trail surface width of 12 feet within a 15 foot wide pedestrian easement constitutes 1.8 acres per mile.

Land and Easements for Trail Development

Trails are part of all parks and add connectivity to the parks system as a whole. The current City system should be expanded. The City's Hike and Bike Trails Master Plan identifies future trails and connections that will enhance connectivity to parks, schools and neighborhoods as well as cultural landscapes and natural resources within the City. The trail network suggests connections to surrounding cities' trails as well.

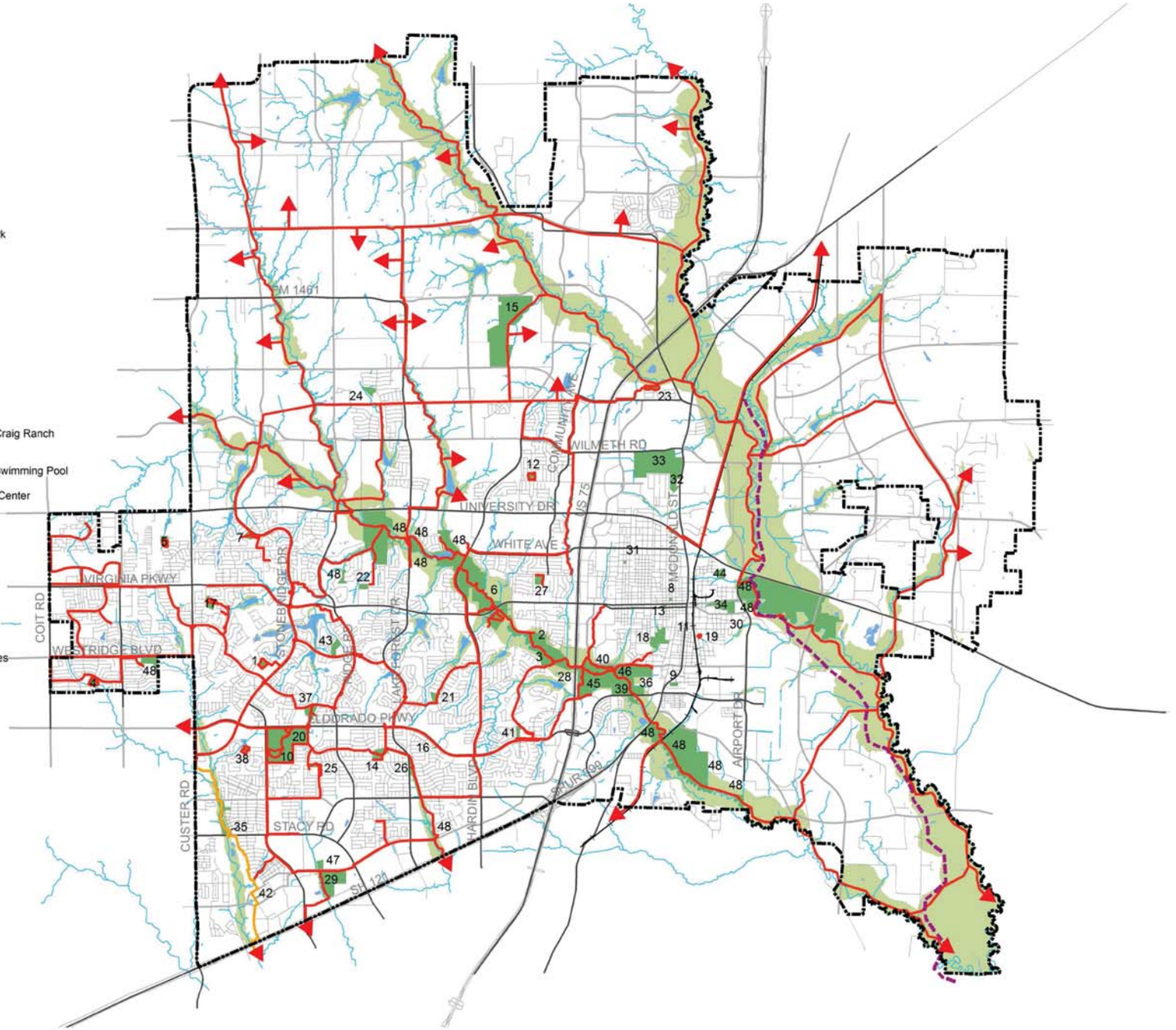
9.8 Hike and Bike Trail Master Plan

The hike and bike trail system for McKinney is planned to link neighborhood, community, linear and special purpose park sites with the City's three major creek and river corridors. The following tributaries support Wilson Creek: Gray Branch, Franklin

Branch, Stover Creek, and Jean's Creek. Honey Creek joins in confluence with the East Fork of the Trinity River that has been dammed to form Lake Lavon located southeast of the City. The majority of the hike and bike trail system is planned to be constructed by developers linking their projects in the most efficient routing to the nearest creek or river corridor and school sites as depicted in Figure 9.2: Hike and Bike Trails Master Plan, which is considered the official Hike and Bike Trails Master Plan for the City.

PARKS AND FACILITIES

1. A. Hardy Eubanks, Jr. Park
2. Al Ruschhaupt Soccer Complex
3. Alex Clark Disc Golf Course
4. Ash Woods Park
5. Aviator Park
6. Bonnie Wenk Park
7. Carey Cox Memorial Park
8. Central Park
9. Cottonwood Park
10. The Courts at Gabe Nesbitt
11. Day Labor Plaza
12. Dr. Charles B. McKissick Park
13. Dr. Glenn Mitchell Memorial Park
14. E.A. Randles Park
15. Erwin Park
16. Ezra Lee (Tinker) Taylor Park
17. Falcon Creek Park
18. Finch Park
19. Fitzhugh Park
20. Gabe Nesbitt Community Park
21. Hill Top Park
22. Horizon Park
23. Inspiration Park
24. Jim Ledbetter Park
25. John M. Whisenant Park
26. Katherine B. Winniford Park
27. Mary Will Craig Park
28. McKinney Community Center
29. McKinney Soccer Complex @ Craig Ranch
30. Mouzon Ball Fields
31. Murphy Park
32. North Park & Juanita Maxfield Swimming Pool
33. Oak Hollow Golf Course
34. Old Settlers Park & Recreation Center
35. Rowlett Creek Park
36. Senior Recreation Center
37. Serenity Park
38. Tom Allen Jr. Park
39. Towne Lake Disc Golf
40. Towne Lake Park
41. Valley Creek Park
42. Veterans Memorial Park
43. W.B. Finney Park
44. Wattley Park
45. Wilson Creek Nature Trail
46. Wilson Creek Softball Complex
47. World Collection of Crape Myrtles
48. Undeveloped/Open Space



CITY OF MCKINNEY
COMPREHENSIVE PLAN
HIKE AND BIKE TRAILS MASTER PLAN
PROPOSED

- Extraterritorial Jurisdiction (ETJ)
- Hike and Bike Trail
- Six City Trail
- Equestrian Trail
- Roads
- Proposed Thoroughfares
- Rail Line
- Creeks
- Lakes
- Park Property
- Flood Plain

The arrows represent potential connections to future school sites with the intent of connecting all school sites with the main trails along major creeks.

Original Adoption 03-22-04 (Ordinance No. 2004-03-035)
*Amendment #1: 10-18-05 (Ordinance No.05-10-133) Revised sections of Ridge Road and Stonebridge Drive north of Bloomdale Road.
*Amendment #2: 04-04-06 (Ordinance No. 2006-04-042) Realigned the trail in the vicinity of the intersection of the Irving Water Distribution Line Easement and the East Fork of the Trinity River
*Amendment #3: 06-03-08 (Ordinance No. 2008-06-055) Adding, relocating, and eliminating various hike and bike sections.
*Amendment #4: 6-2-15 (Ordinance No. 2015-06-XXX) Adding, relocating and eliminating various hike and bike sections, updating floodplain changes, removing Bridge/Grade crossings designations, boundary changes between McKinney and Fairview, and updating the Master Thoroughfare Plan.

Source: City of McKinney Planning Department Data

2 June 2015
FIGURE 9.2

Miles
0 1 2

1 Square Mile
100 Acres

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9.9 Priorities, Phasing, Implementation

The priorities, phasing, and implementation of the Parks, Recreation and Open Space Element of the Comprehensive Plan is found in the adopted Parks, Recreation, and Open Space Master Plan. The Parks, Recreation, and Open Space Master Plan is scheduled for updating every five years, at which time these items can be re-evaluated and modified.

9.10 Inventory

The Parks, Recreation, and Open Space Master Plan contains an overview of the of the parks system in McKinney, listing the location, pictures and description of amenities that each park/facility contains. Please see Chapter 3 of the Parks, Recreation and Open Space Master Plan for more information.

9.11 Public School / Park Facilities

The City and area school districts consistently engage in cooperative school-park planning. Most new neighborhood parks are being built adjacent to new elementary schools allowing shared use of facilities common to both facilities. Many of the new schools use sustainable building design principles such as cisterns, windmills, vertical sundials, and "day-lighting" of classrooms, all of which make them interesting park neighbors and serve to remind park users and the community of vital environmental issues.

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Section 10: Water/Wastewater

The Water/Wastewater Element of the McKinney Comprehensive Plan provides for a link between the 2004 Comprehensive Plan and the approved Water Distribution System Master Plan developed by Alan Plummer Associates, Inc. and the approved Wastewater Collection System Master Plan.

In conjunction with the 2012-2013 Impact Fee Update process, the Water Distribution System Master Plan and Wastewater Collection System Master Plan were updated in 2013 by Birkhoff, Hendricks, & Carter, LLP. Future updates of these plans are anticipated as growth continues and conditions change.

The future land use plan provides the projections of land uses and population on which the water and wastewater master plans are based. The master plans use this information to model the utility infrastructure needs for the community at various levels of development. This modeling determines the type, amount and size of improvements needed to provide water and sewer, including cost estimates for Capital Improvements Plan (CIP) projects, for the City of McKinney as it develops.

10.1 Land Use And Population Methodology

In order to determine the ultimate type, amount and size of improvements, the water and wastewater master plans present plans for the water distribution and wastewater collection systems to serve the City of McKinney at build-out. The build-out condition is determined using a combination of existing development, existing zoning and future land use designations.

In addition to providing for adequate water and wastewater systems at build-out, it is important to examine the systems at intervals to ensure adequate utility systems during the short-term, high growth period, and to make modifications needed due to changing conditions that arise as the City continues to grow. Population projections for these intervals were produced from projections of singlefamily and multi-family housing units.

It is critical that the City anticipate long term facility needs in order to properly size utility improvements. By requiring the construction of ultimate sized water and wastewater lines, the City is providing the necessary city services that are critical to public health, safety and welfare, and that allow for continued development.

In order to determine the ultimate type, amount, and size of improvements, the water and wastewater master plans present plans for the water distribution and wastewater collection systems to serve the City of McKinney at build-out.

10.2 Water Distribution System Master Plan

The Water Distribution System Master Plan presents a plan for the development of the water distribution system to serve the City of McKinney at build-out conditions. The City's proposed ultimate water distribution service area consists of approximately 75,016 acres or 117 square miles. The planning area includes McKinney's existing city limits and ETJ, the Town of New Hope and a portion of the City of Weston. The ultimate water distribution service area will include these areas outside the ultimate city limits of McKinney because, due to their location, the provision of water is easier for the City of McKinney than for an outside provider.

The City's existing Certificate of Convenience and Necessity (CCN) service area does not extend to the projected ultimate city limits. Water service outside the City's CCN service area is currently provided by North Collin Water Supply Corporation

in future north/northeast McKinney, Danville Water Supply Corporation (acquired by the City of McKinney in October 2011) in future northwest McKinney and Milligan Water Supply Corporation in future southeast McKinney. If and when the City desires to expand its water system within its current or future city limits, but outside its current CCN, negotiations would be required with the water supply corporation to adjust the CCN boundaries.

Objectives of the Water Distribution System Master Plan

- Development of a water distribution system capable of supplying the City of McKinney at build-out.
- Development of planning and budget level construction costs associated with the prescribed short and long-range actions necessary through a 10-year CIP and Impact Fee Program.

Analysis and design of the proposed water distribution system is based on the maximum water demand anticipated and the distribution of that demand according to the projected future land use in McKinney.

Projected Water Use

The design of the water distribution system is based on various rates of water use, which are generally referred to as water demand. Water demand rates are generally expressed in million gallons per day (MGD). The three water demand rates most used are defined as follows:

- Maximum Daily Demand: This is the total amount of water used during the day of heaviest consumption in any given year. The high service pumps must be capable of pumping at least this amount of water, and water must be supplied to the pumps at this rate.
- Maximum Hourly Demand: This is the amount of water drawn from the system during the period of maximum water usage on the day of maximum demand. This rate is generally of a short duration, no more than a couple of hours, and is most economically provided for by the use of elevated storage in addition to water supplied to the system by pumps. The distribution system, including storage and pumping capacity, must be able to satisfy this demand.
- Minimum Hourly Demand: This is the rate that water is drawn from the distribution system during the hour of minimum demand on the day of maximum demand. This demand rate is used in the water distribution analysis to determine the adequacies of the system to replenish elevated storage. In other words, after the water distribution system has used up its stored water supply for the peak usage period, how well does it replenish the water stored in elevated and ground storage tanks?

To a great degree, the projected water usage is a function of demand. This demand is expressed in number of gallons consumed per capita per day. Metroplex cities can range from less than 150 gallons per day to nearly 325 gallons per person per day average. Various areas in McKinney reflect this regional trend, with some areas showing 125 gallons and other areas showing consumption of 270 gallons per person per day.

Analysis and design of the proposed water distribution system is based on the maximum water demand anticipated and the distribution of that demand according to the projected future land use in McKinney. Specifics on the water distribution system are found in the Water Distribution System Master Plan.

Water Conservation

According to the 2011 Texas State Water Plan for Region C, the population is projected to increase 94% by 2060, and municipal water demand is projected to increase 89% by 2060. Even with the projected water savings from conservation, the water supply from existing sources is projected to meet only 43% of the projected water demand. The population of the City of McKinney is projected to increase by over 170% during the same period, and Collin County as a whole is experiencing similar growth. To address this situation, the North Texas Municipal Water District is taking steps to provide for future water demand.

The City of McKinney adopted the North Texas Municipal Water District's Model Water Conservation Plan in 2004 and as amended in 2014 that works to:

- Reduce water consumption from the levels that would prevail without conservation efforts.
- Reduce the loss and waste of water.
- Improve efficiency in the use of water.
- Encourage efficient outdoor water use.
- Document the level of recycling and reuse in the water supply.
- Extend the life of current water supplies by reducing the rate of growth in demand.

The population of the City of McKinney is projected to increase by over 170% by the year 2060, and Collin County as a whole is experiencing similar growth.

The following strategies have been implemented to further reduce per capita water usage.

- Increased education: By educating the citizens and business owners of McKinney on water conservation methods, a reduction in the amount of water used can be realized. This education takes place in the schools, through the use of public advertising on billboards, on the City's cable channel or through direct mailings.
- Increased regulation of landscape irrigation to reduce wasteful watering practices: Property owners are only allowed to irrigate landscapes twice per week, between the hours of 6 pm and 10 am, and between the months of April 1 through October 31. All irrigation systems are required to have evapotranspiration (ET) smart controllers with rain and freeze sensors and are required to pass an inspection.
- Adjust water bill rate structure: McKinney has adopted a multiple tier rate system, which means heavy users of water pay higher rates.

More work can be done to reduce the per capita water usage, including, but not limited to the following measures:

- Require use of well-adapted and/or native shrubs, trees and grass: The use of drought-tolerant and heat-tolerant plants will reduce the need for constant watering.

10.3 Wastewater Collection System Master Plan

The Wastewater Collection System Master Plan identifies and prioritizes improvements required to accommodate the projected growth of the City of McKinney. The wastewater collection system includes all the pipes and pump stations necessary to collect and transmit domestic, commercial and industrial wastewater for treatment. Wastewater from the City of McKinney flows through two existing large diameter sewer interceptors to the Wilson Creek Regional Wastewater Treatment Plant, a

regional wastewater treatment plant operated by the North Texas Municipal Water District (NTMWD).

Objectives of the Wastewater Collection System Master Plan

As with the Water Distribution System Master Plan, the population projections within the planning areas are an important element in the analysis of the wastewater collection system. These projections are based on the future land use plan module diagram, and include projections for 2012, 2022 and build-out.

The Wastewater Collection System Master Plan has three objectives. These are:

- Development of a systematic and comprehensive plan for future development and growth.
- Development of planning and budget level construction costs associated with the prescribed short and long-range actions necessary through a CIP and Impact Fee Program.
- Provide a quantitative condition assessment utilizing temporary and permanent wastewater flow meters with respect to infiltration and inflow. Infiltration and inflow is water that enters the wastewater collection system through pipe joints, manhole walls, defective pipes and manhole covers.

As with the Water Distribution System Master Plan, the population projections within the planning areas are an important element in the analysis of the wastewater collection system. These projections are based on the future land use plan module diagram, and include projections for 2012, 2022 and build-out.

The Texas Commission on Environmental Quality (TCEQ) requires that municipal wastewater collection systems be designed for the peak two-hour flow.

A key component in developing the wastewater collection system master plan is analyzing the flow throughout the wastewater system. Both historical and current wastewater flows in the City of McKinney must be analyzed to accurately evaluate the collection system. The various flow data gathered aids in calibrating and verifying the computer model that is used to assess the adequacy of the existing collection system and then size the future system.

Inflow and infiltration (I/I) is a significant source in identifying a deteriorating or faulty wastewater collection system. To better characterize inflow and infiltration, it can be stated that inflow occurs during and immediately after a rainfall event and infiltration occurs after an event and tends to sustain itself for a longer period of time depending upon the condition of the wastewater collection system. While a majority of wastewater systems are designed to handle some excess inflow and infiltration, the primary goal of any municipality should be to eliminate I/I to the best of their ability.

Section 11: Urban Design

The Urban Design Element is based on the values and goals expressed by McKinney residents and businesses throughout the Comprehensive Plan process. Key to these values and goals is a strong desire to maintain a unique "McKinney Character" that citizens and visitors have come to appreciate and associate with McKinney. This desire to maintain and, with regard to new development, establish a distinctive community character includes such things as the proper utilization of our existing rolling terrain and wooded stream corridors, the preservation of historic downtown McKinney and the surrounding historic residential neighborhoods, and the distinct and readily identifiable districts, including Eldorado, Stonebridge Ranch, and Craig Ranch. The Urban Design Element is intended to help guide physical land use decisions in order to realize our community's values and goals.

To a great degree, this element establishes the physical land use vision as expressed by the community. This vision is expressed through the urban design elements and the module design treatments. The expression of this vision includes the basic urban form of new development, the treatment of gateways and portals; the look and feel of major transportation corridors; the utilization of creeks, lakes, floodplains, and open space; and land use transitions and buffers.

Urban design can best be described as the physical structures and artifacts that comprise a city.

11.1 Role of Urban Design

Urban design plays an important part in how people perceive a community and associate with it. Urban design can best be described as the physical structures and artifacts that comprise a city. These creations include buildings, roads, signs, street trees, sidewalks and much more. In McKinney the role of urban design is quite important. McKinney's neighborhoods east of US 75, near the downtown, have an urban design pattern that was built primarily between the 1930's and 1950's. This pattern of streets and homes establishes a pedestrian friendly environment. The suburban neighborhoods to the west of US 75 have an urban design pattern that creates efficient vehicular circulation.

The physical character, placement, juxtaposition, and choice of construction materials of physical elements within McKinney give citizens and visitors an understanding as to the values they hold dear. The urban design character of a place helps to define the values of the community. An additional aspect of urban design is the use of public, quasi-public and civic space. Public space includes places such as the sidewalks along the downtown square, city parks, plazas and church courtyards. McKinney's urban design character is one of a culturally rich community with historic roots, high-quality new and contemporary development, with quality public spaces.

11.2 Urban Design Plan

This Urban Design Plan identifies the framework of spaces and linkages that McKinney can achieve with the associated Future Land Use Plan. The plan (Figure 11.2) is a diagram defining future opportunities for "place making". The most important places and spaces are pedestrian environments that provide the setting for people to socialize and enjoy the character that is McKinney.

McKinney can achieve this vision for urban design. To achieve this vision, the community will need to begin by following the Future Land Use Plan in this Comprehensive Plan which includes these proposals for urban design spaces which build on

the quality and character that McKinney exhibits today. McKinney understands that future residents and employers will require that the community continues to increase its "quality of life" features through planning and design.

A. Urban Design Elements

The following urban design elements should be treated on a broad basis, working with the land use modules serving a citywide purpose for placemaking and wayfinding. These urban design concepts are proposed to enhance value and identity in McKinney. The urban design concepts are just concepts; further detailed planning and design must be completed for all items as McKinney defines their priority to move forward on implementation. These proposed urban design concepts work together with the Future Land Plan and other Comprehensive Plan elements to create a physical environment unique to McKinney. These elements, if implemented properly over time, can add to the economic development potential for the city.

1. City Gateways / Portals

City entrance gateways should be placed where natural waterways cross major highway corridors (see Figure 11.1). These entryways should express the natural beauty that is found in McKinney's wooded streams and rivers while creating a sense of arrival. They should help delineate one community from another as the traveler passes from a neighboring city into McKinney.

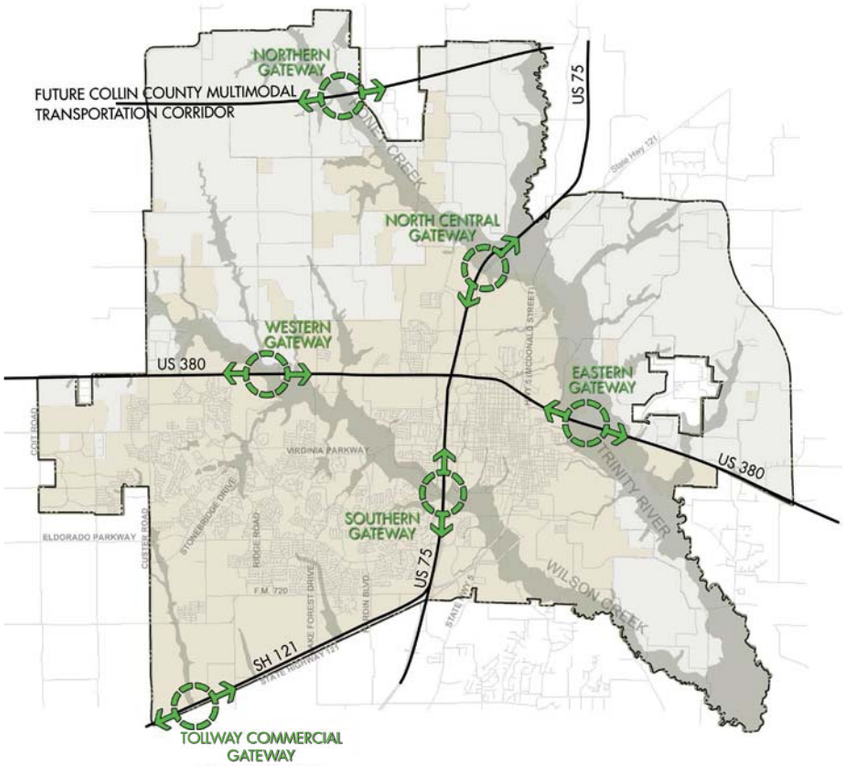
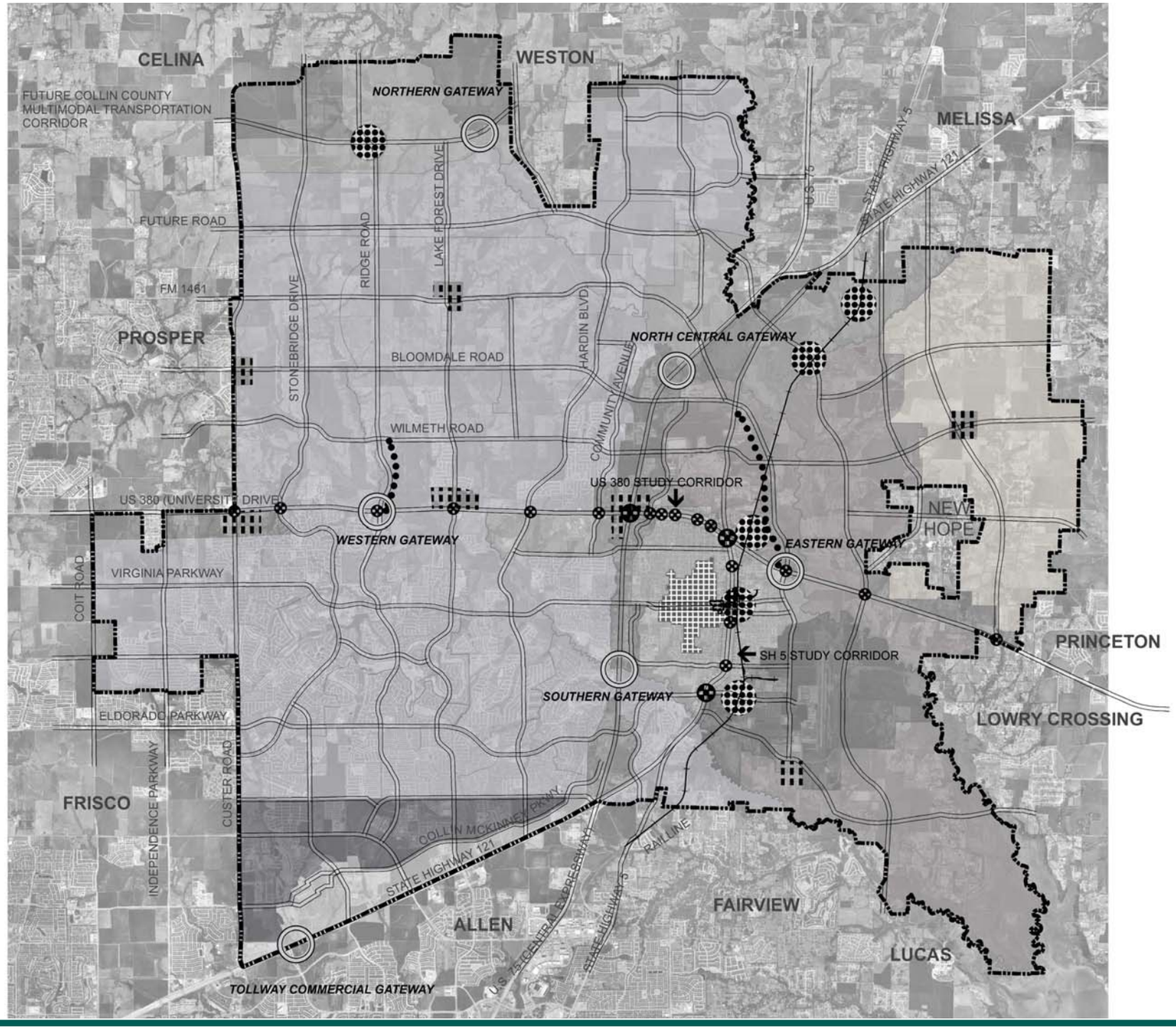


Figure 11.1: City Gateway/Portal Locations



CITY OF MCKINNEY
COMPREHENSIVE PLAN

URBAN DESIGN PLAN
PROPOSED

Legend

- Extraterritorial Jurisdiction (ETJ)
- Rail Line
- Major Roads
- Intersection Study
- District Gateways
- Greenbelt Thoroughfare
- Historic Downtown
- Historic Residential
- Corridor Study
- Transit Village
- Community Village

* Original Adoption 03-22-2004 (Ordinance No. 2004-03-035)

* Amendment #1 01-05-2010 (Ordinance No. 2010-01-001) Revised to reflect boundary changes between McKinney, Fairview and Princeton as well as changes to the Master Thoroughfare Plan.

* Amendment #2 05-05-2015 (Ordinance No. 2015-05-039) Revised to reflect changes to some District Gateway names and the removal of the Transit Village located at Collin McKinney Parkway and Alma Road.

* Amendment #3 06-02-2015 (Ordinance No. 2015-06-XXX) Revised to reflect boundary changes between McKinney and Fairview as well as changes to the Master Thoroughfare Plan.

Source: City of McKinney GIS Department Data

02 June 2015

FIGURE 11.2

Miles
0 1 2

1 Square Mile

100 Acres

EXHIBIT L

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EXHIBIT L

Urban design aspects to be addressed include:

- Location

  As previously mentioned, city gateways should be located at the confluence of natural streams and rivers with major highways. These crossings provide several natural amenities which signify the quality of life in McKinney, while serving as functional elements of the open space and trails systems. Already distinguishable by prevalent mature tree cover, these entry portals have an inherent natural beauty which can be highlighted with strategically placed manmade focal points.

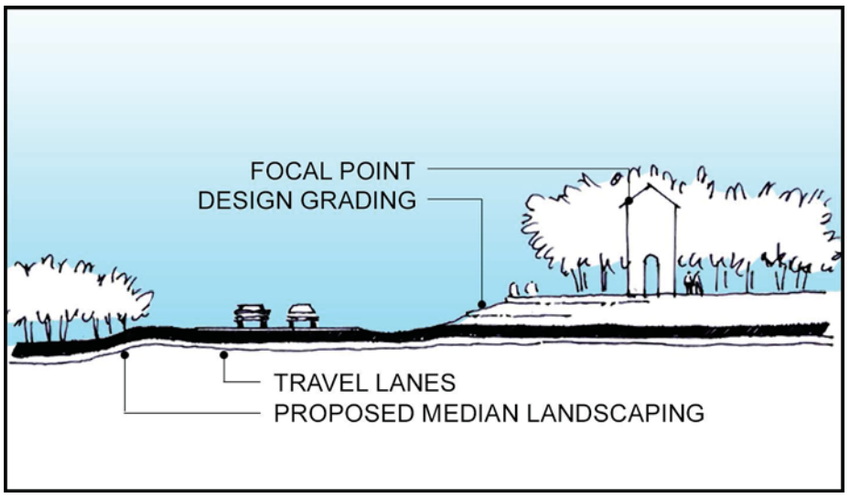


Figure 11.3: McKinney Gateway Concept

- Description / Character

  A single focal point placed within city gateways can be aesthetically pleasing as well as functional. The functional aspect includes features such as: pedestrian overlooks, trail place or event markers, or even a signature art piece. Design grading may be used to enhance the feel of the landscape, especially near the entry portal's focal point. This focal point should be constructed of brick or native stone and should reflect it's purpose and be carefully integrated into its surroundings. Vernacular or regional architecture should inform the focal point's design character, which should result in an architectural element which is sensitive to its context, rather than overpowering.

  City gateways offer natural opportunities for trails and other recreational opportunities. The inclusion of the human element to activate these spaces (an example is the Towne Lake and Wilson Creek corridor) brings another dimension to the gateways, further reflecting McKinney's quality of life attributes. Programming the space for meaningful human use is an integral part of establishing a desirable character.

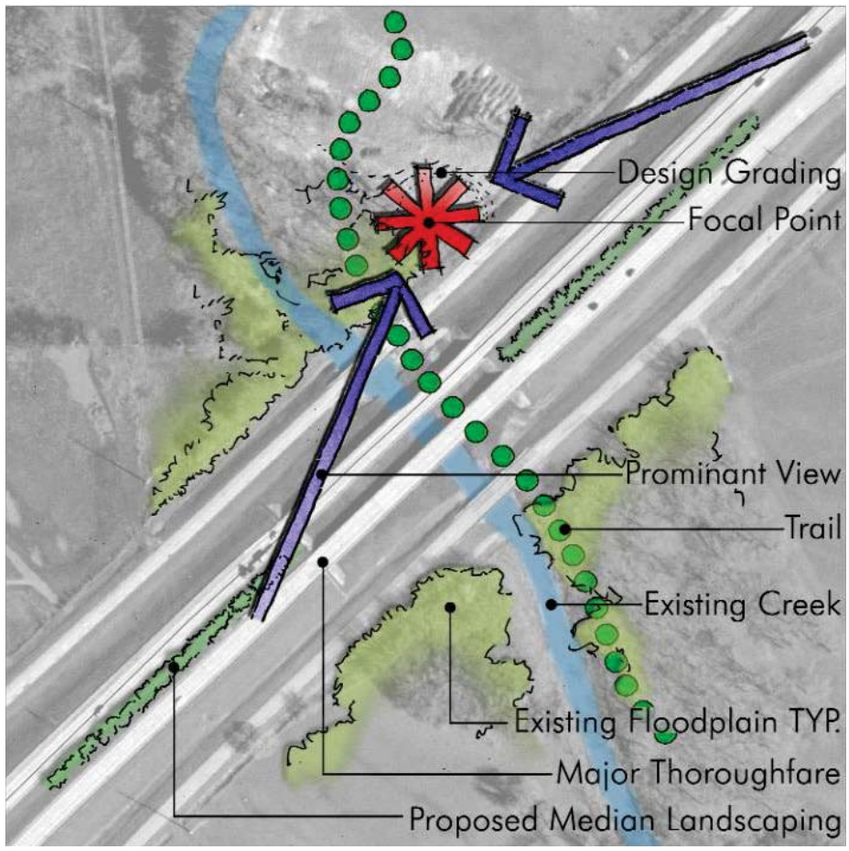


Figure 11.4: Prototypical McKinney Gateway Concept Plan

2. Corridors

State Highway 5 Corridor

One of the primary focuses of the Town Center Study was the State Highway 5 (McDonald Street) Corridor. The Town Center Study Phase 1 Report (2008) serves as a policy guide for city officials, staff, property owners, and private developers when considering land use decisions affecting the Town Center of McKinney, including the State Highway 5 Corridor. As an extension of the Town Center Study, the State Highway 5 Corridor Context Sensitive Master Plan was complete in June 2014 and establishes the necessary framework to achieve a seamless transition of the roadway's feel and function as it traverses McKinney. See the State Highway 5 Corridor Context Sensitive Master Plan for additional information.

State Highway 5 (McDonald Street) is a north/south corridor in McKinney. The study area along SH 5 between US 380 and Industrial Boulevard crosses the eastern edge of Downtown McKinney. Prior to the construction of the existing US 75 freeway, SH 5 was the main north/south highway through McKinney. The development along this corridor typically predated McKinney's first zoning ordinance (1969), so many of the landscaping, parking, and building set back standards typical of contemporary development were not provided. Some of the lots fronting onto State Highway 5 are shallow by current standards, further challenging the redevelopment opportunities along the corridor.

Existing land uses along the corridor include residential, commercial, and light in-

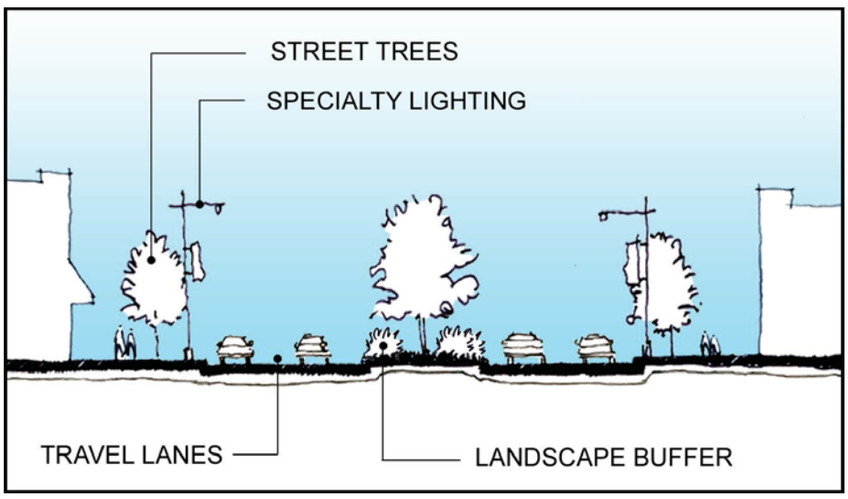


Figure 11.5: SH 5 Corridor Section (Conceptual)

dustrial. There are several sites available for infill development along the corridor. To a certain degree, some of the unique character from the area results from these pre-zoning standards, and it may be to the City's advantage to play off this unique development pattern and preserve a snapshot of McKinney's history.

Intersections

The intersection of State Highway 5 and Virginia and Louisiana Streets connects Historic Downtown McKinney with one of McKinney's oldest warehouse districts. Design treatments should complement the existing architectural style of downtown.

Streetscape

Pedestrian-scale street environment is encouraged along the corridor. Due to the unique constraints of the corridor, traditional methods of creating pedestrian-scale street environment may have limited applicability. However, in some areas it may be possible to provide landscape plantings to create pockets of separation from motor vehicles for pedestrians.

Building Relationships

Special consideration of urban form along State Highway 5 is appropriate. A detailed study is currently being made to identify those unique elements that may add value to the corridor that are not currently provided for within McKinney's development standards. By enhancing the unique nature of this pre-zoning commercial corridor, it may be possible to continue the revitalization that has been occurring along the corridor in a more strategic manner.

Just as the physical relationship of the buildings to the street create the quality of environment in Downtown McKinney, the physical relationship of the State Highway 5 corridor should be utilized as an asset, not a liability.

Reference the Town Center Study Phase 1 Report (2008) and the State Highway 5 Corridor Context Sensitive Master Plan (2014) for more detailed urban design concepts related to intersections, streetscape and building relationships along the State Highway 5 corridor.

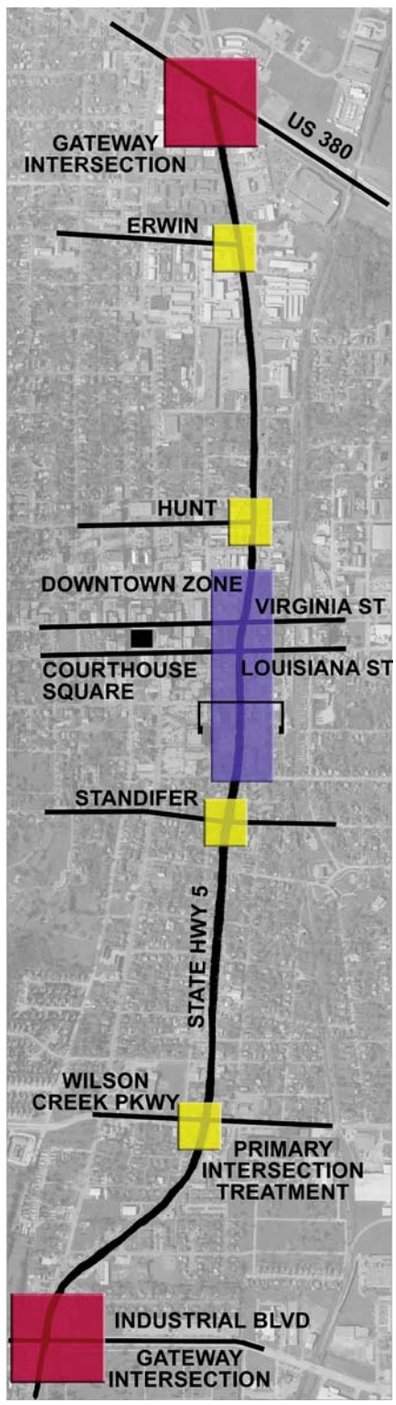


Figure 11.6: SH 5 Corridor Concept

US 380 Corridor

One of the primary focuses of the Town Center Study was the U.S. Highway 380 corridor (generally between Graves Street and State Highway 5). The Town Center Study Phase 1 Report (2008) serves as a policy guide for city officials, staff, property owners, and private developers when considering decisions involving issues (such as land use, circulation, and aesthetic improvements) affecting the U.S. Highway 380 corridor.

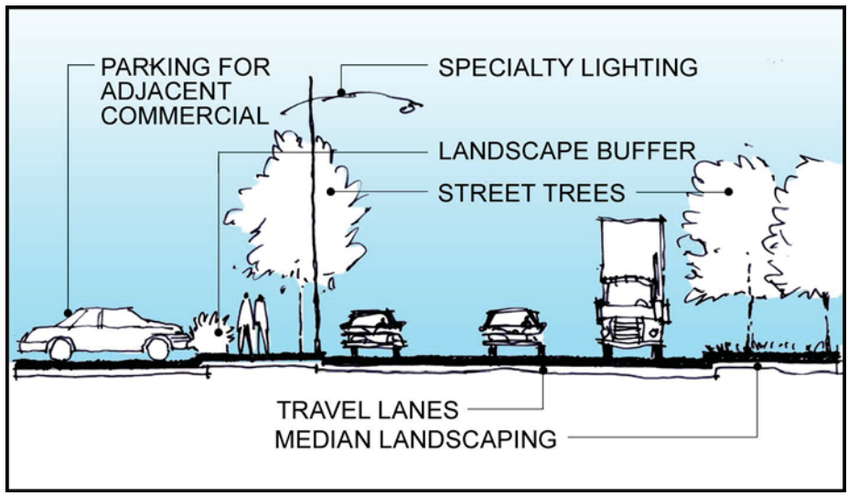


Figure 11.7: US 380 Corridor Section (Conceptual)

US 380 is a major east/west highway through McKinney that provides a connection to the western and eastern sections of the City of McKinney. It is a six-lane divided highway with land uses that include residential, office and regional commercial uses along the edges.

Figure 11.8: US 380 Corridor Concept

Corridor Sections

Five distinct sections of the US 380 Corridor exist. Each section should be reviewed for its unique strengths, while keeping an overall corridor theme and context in place.

- Trinity River Portal Section
- Town Center Section
- US 75 Commercial Core Section
- Wilson Creek Portal Section
- Western Section

Intersections

Two key intersections have been identified for Community Village designation. Those intersections are at Custer Road and Lake Forest Drive. Community Villages are discussed in detail in the Land Use section of the Comprehensive Plan.

Streetscape

Landscaped medians should be created along the US 380 corridor (Figure 11.7). Concentrations of streetscape planting are recommended in the Town Center Module. Landscape street trees soften the highway aesthetically, while enhancing pedestrian safety.

Building Relationships

Future land uses along the corridor should allow a full range of commercial uses, while limiting residential uses. Special concern should be given to providing an appropriate transition between uses fronting the corridor and their adjacent uses. This is necessary to avoid those adjacent uses from being negatively impacted by the uses directly along the corridor which may be significantly more intensive. Height and massing controls should provide a compatible relationship to the adjacent residential neighborhoods.

Reference the Town Center Study Phase 1 Report (2008) for more detailed urban design concepts related to intersections, streetscape and building relationships along the section of the U.S. Highway 380 corridor within the Town Center Module.

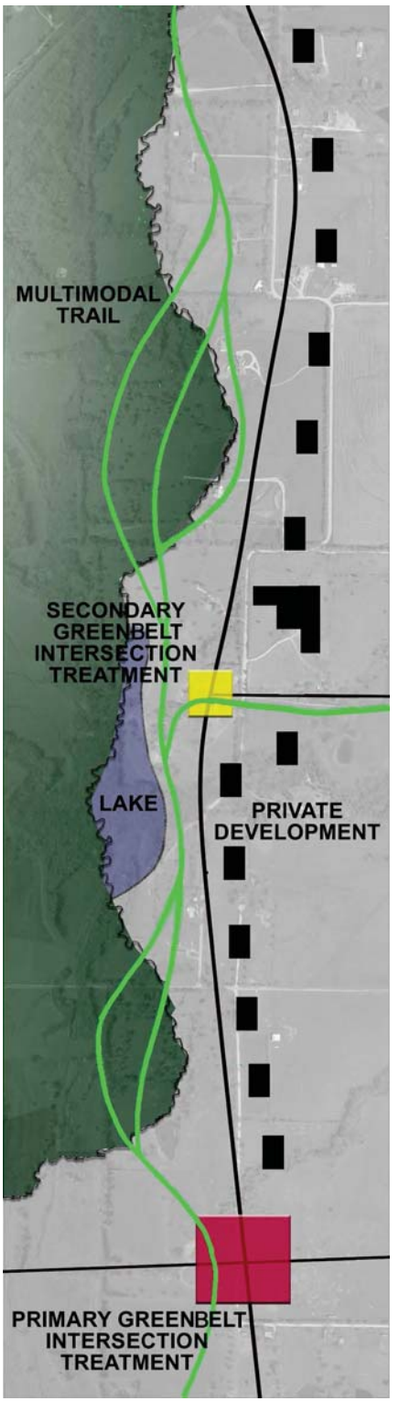


Figure 11.10: Greenbelt Thoroughfare Corridor Concept

Greenbelt Thoroughfares

The Greenbelt Thoroughfares are organized to take advantage of the creeks, floodplains, lakes, and open spaces that occur throughout the City of McKinney. Two Greenbelt Thoroughfares have been designated to occur north of US 380 along Ridge Road and Airport Drive.

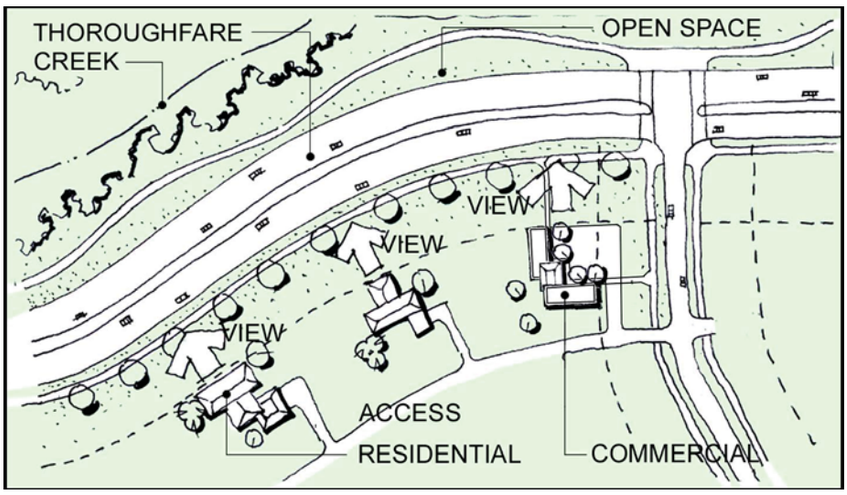


Figure 11.9: Prototypical Greenbelt Thoroughfare

Intersections

Greenbelt Thoroughfares are encouraged to utilize "T" intersections whereby views and access to the natural amenities can be heightened. Pedestrian trail access at grade should be provided at logical locations along Greenbelt Thoroughfares.

Streetscape

The streets designated as Greenbelt Thoroughfares are designed to include significant single-loaded roadway segments having development only along one side. Streetscape elements should differ between the developed side and greenbelt side. Enhanced pedestrian and bicycling facilities should be provided on the greenbelt side. Special consideration of hiking and biking activities, connections to existing trail networks, pedestrian furniture, trash receptacles, and lighting, as well as informal tree plantings should be made.

Building Relationships

Building orientation to take advantage of the natural open space is encouraged. Inward facing developments should be used if no practicable means of taking advantage of the open views is possible; in such cases, special/enhanced treatment of the rear and sides of the development should be provided to maintain an appropriate view from the public trails and the street.

3. Creeks, Lakes, Floodplains, and Open Space

McKinney's natural elements, including creeks, lakes, floodplains, and open space, should be considered in the context of urban design. These elements influence the physical form of the developed environment and can enhance its value, if utilized in a thoughtful manner. McKinney currently requires buffers/screens as a part of their various development codes. The following buffers are recommended along with current requirements.

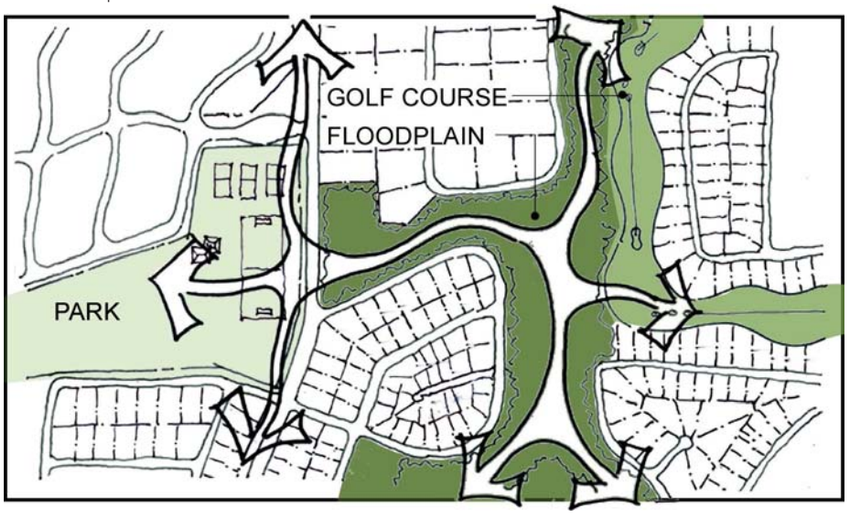


Figure 11.11: Prototypical Open Space Concept

Urban design elements to be addressed include:

- Development Frontage

  Developments adjacent to a creek, lake, floodplain, or open space should take advantage of the view of these areas and incorporate them into the design of the new development. In particular, when located along a road which separates the natural feature from the developed area (see also Greenbelt Thoroughfares), the development should look out across the road to the natural area. In doing so, the built environment can connect people with these natural areas rather than serving to further limit contact. Development, particularly residential, should not be oriented away from the road and natural element, leaving rear fences, alleys, or neighborhood walls adjacent to the road in this condition. Views from development should take advantage of the adjacent natural amenity.

  Setbacks, parking requirements (including parking location in relationship to structures), and landscape improvements for development along creeks, lakes, floodplains, and open space are governed by existing zoning regulations, but amendments should be considered to provide for site design which is sensitive to these natural amenities. Sidewalks should be present along developments with this frontage to accommodate pedestrian activity and connect to trail networks.

- Open Space Relationship

  Where possible, open spaces (creeks, lakes, floodplains, parks, or private open spaces) should be connected to form a network which allows for habitat protection and wildlife migration. Existing segmented open

spaces should be targeted for connection where possible. Open spaces may be connected through public lands, or through linear opportunities such as utility and rail easements or street right-of-way.

The resulting open space system sets the framework for alternative transportation options, such as trails. In addition, it can add to the value of individual properties, developments, and the community as a whole. By developing residential areas adjacent to open space, property values increase, and demands for these lots increase.

4. Buffers

Buffers serve an important purpose in urban design as they relate to the separation of inappropriate land uses. Buffers can take many forms: architectural buffers include walls, buildings, or other structural elements that form a visual barrier. Landscape buffers utilize trees, berms, shrubs, or grasses to form the barrier. Both architectural and landscape buffers are appropriate if conflicting land uses are in close proximity to one another. Open space buffers, on the other hand, are less visually dominating and are appropriate in circumstances where conflicting land uses are not in close proximity, (in other words, where the open space to separate the two uses is present and unaccounted for). Natural open space buffers can be subtle buffers which promote a more natural, less intense separation.

Urban design elements to be addressed include:

- Architectural buffers

  Architectural buffers are most appropriate when placed between buildings of conflicting land uses. Buffers such as walls, for example, can be used to effectively separate such uses in areas of low visibility. Such uses may also include screening waste or mechanical structures near buildings. However, architectural barriers should be avoided for use along a street without a high level of design consideration and accompanying landscape treatments to soften its appearance. Visible walls should be constructed of brick or stone. Wood fences should be avoided due to their limited life span.

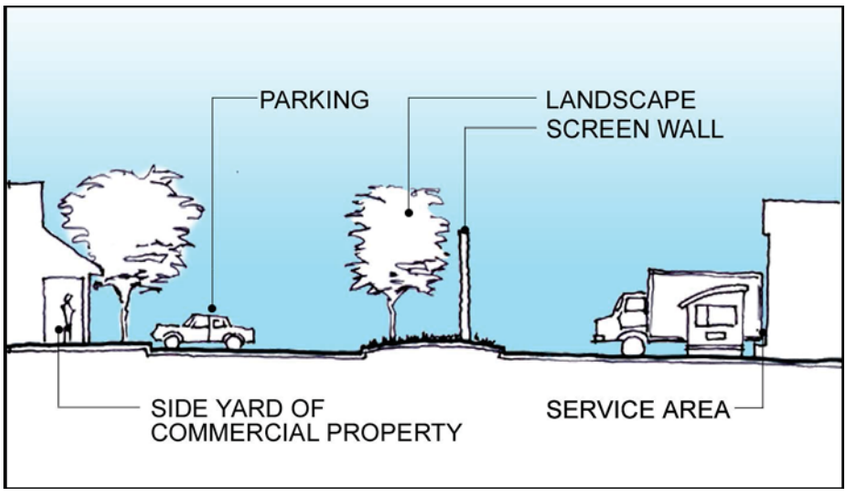


Figure 11.12: Prototypical Architectural Buffer

- Landscape buffers

  Landscape buffers, including trees, shrubs, and grasses, are appropriate when placed in areas of higher visibility. Landscape buffers should be used along long stretches of streets, given the softer appearance. Additionally, such uses may include screening parking areas from thoroughfares or screening smaller mechanical or utility boxes. They may also be used in conjunction with architectural buffers to soften their appearance.

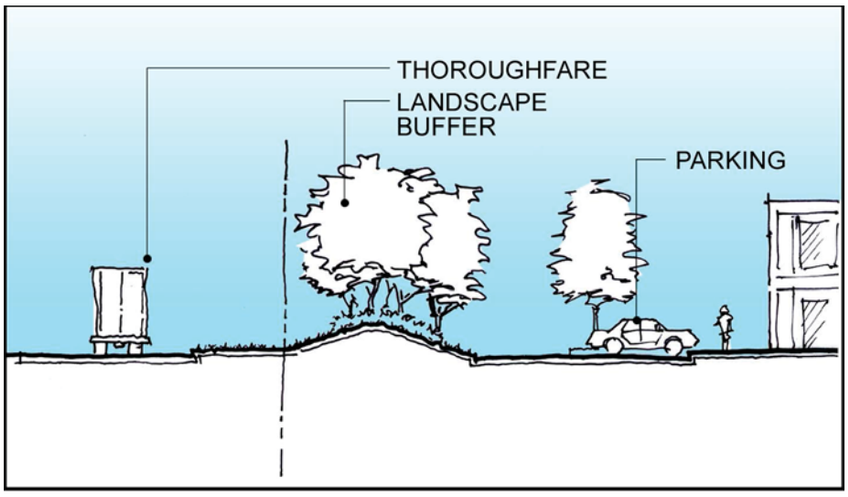


Figure 11.13: Prototypical Landscape Buffer

- Open space buffers

  Open space buffers are most appropriate to separate conflicting land uses which have a minimum of 30 feet between them. Such buffers may include vegetation, landscape, and/or trails or other pedestrian amenities.

  Buffers should be used to supplement sensitive site design to mitigate potential negative impacts rather serve as a substitute for sensitive site design. No buffer or screening device can ever entirely mitigate the negative impacts associated with uses of varying intensities. By considering these factors when beginning to lay out the site, rather than as an afterthought, uses can be made more compatible.

B. Module Design Treatments

The following urban design treatments are specific to particular land use modules, based on a range of desired characteristics for each module.

1. Town Center Module

The Town Center Study Phase 1 Report (2008) serves as a policy guide for city officials, staff, property owners, and private developers when considering decisions regarding urban design treatments within the Town Center Module.

The Town Center Module is a mix of traditional residential housing types with neighborhood and regional office, retail, and commercial uses. This Module contains a significant amount of community facilities such as government offices, churches, schools and parks. The core of the Town Center Module is the Downtown Commercial District, consisting of the historic town square surrounded by blocks of commercial structures and the City of McKinney's main municipal campus.

Ringing the core is the Historic Residential District, a mix of pre-World War II housing in a pre-automobile, traditional neighborhood pattern to form a strong sense of place. Surrounding this core are other neighborhoods and commercial districts. This outer zone is made up of residential units and commercial developments that catered to surrounding residential neighborhoods from the 1880's through today. This module, with its unique blend of land uses, relationships, and age of development, requires a planning document specific to itself. This area contains much of the physical fabric that people reference as "McKinney Character". The plan for the Town Center includes a much greater detail of analysis and recommendations.

Reference the Town Center Study Phase 1 Report (2008) for more detailed module design treatments related to building orientation, pedestrian environment, parking, and vehicular access in the Town Center Module.

A - Downtown Commercial District

Figure 11.14: McKinney Downtown Commercial District

Building Orientation

The Downtown Commercial District was developed before the automobile and reflects a pedestrian-oriented development pattern. The downtown served as

the Collin County seat, a center of agricultural trade and the area's retail hub. These primary land uses are still reflected today in the historic courthouse and the retail storefronts on and around the square. The multi-story grain mills by the railroad tracks still remain today and represent a significant redevelopment opportunity for the community.

While the businesses and wares have changed, this pedestrian-friendly commercial environment continues to draw customers to McKinney's downtown. Any redevelopment in the area should be sensitive to the historic land uses and building patterns, including following the Historic Design Guidelines if the property is zoned "historic." The dominate downtown building patterns and uses include:

- Retail, office, and mixed use buildings set closer to the street curb with little or no setbacks from the property line.
- Retail urban and office urban structures ranging between single-story and three stories in height.
- The retail, office, and mixed-use product support a street-level pedestrian-oriented environment.

Pedestrian Environment

The traditional building orientation and architectural detail were designed at the human scale, as opposed to the contemporary automobile-oriented development pattern that is typically found in retail developments along and west of US 75. Maintaining the prominence of the pedestrian-friendly environment, as well as the historically sensitive architectural treatment of new development, is critical in the downtown area. To help facilitate such development patterns, the following design treatments should be considered:

- Traditional window displays, entryways, and architectural decorative treatments around window displays and entryways.
- Wide sidewalks, building set-to lines, and careful attention to access location and design.

Parking

The Downtown Commercial District attracts shoppers from a wide region, in addition to surrounding neighborhoods. Both customer and employee parking is an important factor in the development of this module. In general, off street parking should not dominate the downtown area while maintaining convenient, efficient, and, to some degree, intuitive access. To achieve this, it is critical that the following design elements be considered:

- Surface parking lots should be located behind buildings or one to two blocks off the main square where possible.
- Parking structures require appropriate placement, scale, and design if utilized downtown. Parking structures should not dominate gateways into downtown but should be conveniently located one to two blocks off the square.
- A parking study of downtown is being conducted in order to determine the type, location, and timing of parking improvements.

Vehicular Access

The street patterns within the Downtown Commercial District are a traditional

grid pattern typical of early community development. The grid pattern within the module features narrow streets and on-street parking.

- To maintain the pedestrian-oriented environment while still providing efficient vehicular access into and around the downtown area, special emphasis on minimizing pedestrian-vehicular conflicts is required.

B - Residential Historic District

Figure 11.15: Residential Historic Prototype

Building Orientation

The historic residential areas are made up of a mix of housing types, of varying styles and sizes, along with a smaller amount of medium density dwelling units. The building pattern is traditional, and many of the streets were laid out in the pre-automobile era prior to World War II. Maintaining this unique mix and relationship between residential dwelling units, street activity, and neighborhood cohesiveness is important in the historic residential area.

- The Historic Design Guidelines should be utilized for areas with a "historic" zoning designation.
- Lots sizes vary from block to block. As redevelopment occurs building massing should be consistent within each block (facades fronting each other).

Pedestrian Environment

The Residential Historic District should continue to emphasize its human scale design that creates a pedestrian-friendly environment. This treatment should be present in redevelopment projects when appropriate.

- Residential streets should incorporate sidewalks on both sides of street.
- The street grid network should be preserved in order to provide expanded choices in movement for both pedestrian and vehicular access.

Vehicular Access

The street patterns within the Residential Historic District are similar to the Down-

town Commercial District - a standard grid pattern typical of pre-automobile community development. This pattern should be continued with new and redevelopment projects within this area.

2. Transit Village Module

The Town Center Study Phase 1 Report serves as a policy guide for city officials, staff, property owners, and private developers when considering decisions regarding urban design treatments within the Transit Village Module generally located on the east side of McDonald Street (S.H. 5) near Louisiana Street, Virginia Street, and the DART rail right-of-way.

The Transit Village Module describes development based around a transit center and includes medium to high density residential, office, retail, and mixed-use projects. Each transit village is anticipated to have a different mix of uses with some composed of regional office and commercial uses and others with greater amounts of entertainment and commercial uses with varying degrees of residential uses. Each transit village can take on a character and style of its own, creating unique opportunities to address a variety of development patterns. These patterns may include interim park & ride facilities, mixed use facilities, employment centers, and traditional downtown-scale centers. True transit villages require the use of public transit, including light rail and bus, in addition to automobile, bicycle, and pedestrian access.

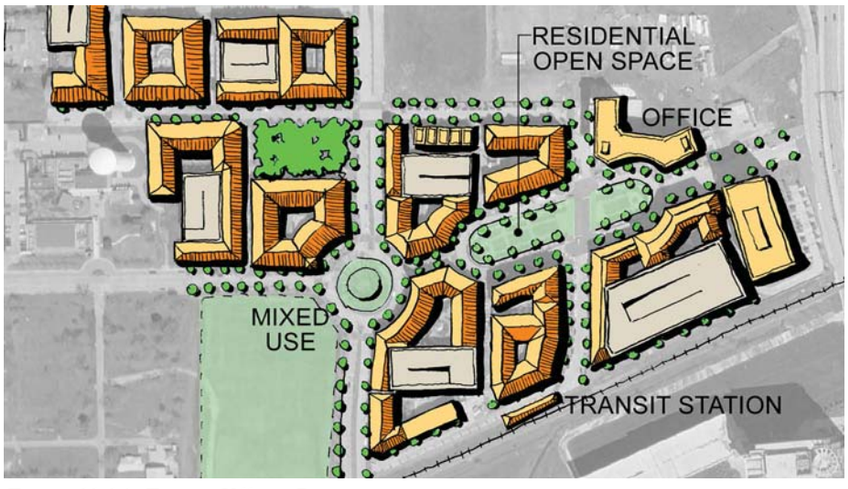


Figure 11.16: Transit Village Prototype

Transit Relationship

The Transit Village Module is geared toward the existence of a transit station serving local and regional commuters. To efficiently serve the transit station, the built environment of streets, sidewalks, buildings, and public spaces must be tailored to provide safe active surroundings and foster a pedestrian-friendly setting where walking and transit are a preferred means of mobility.

- The highest level of density within the Transit Village should be focused within a quarter-mile radius, or ten minute walk, from the transit station.
- To address the higher densities of the Transit Village, public plazas or parks should be interspersed within a quarter-mile radius of the transit station so that no building is more than 300 feet

from such public plazas or parks. At least one significant and meaningful public space should be provided. Size, function, and prominence define the concept of significant and meaningful.
- Transit stations should be located with ample access to at least two major roadways serving the Transit Village.

Building Orientation

Within the Transit Village, buildings are developed primarily to serve the pedestrian needs of neighborhood residents, village employees, and visitors. Because of this pedestrian focus, building facades should properly address wide sidewalks and street-related activities. **Reference the Town Center Study Phase 1 Report for more detailed module design treatments related to building orientation, pedestrian environment, parking, and vehicular access in the Transit Village module generally located on the east side of McDonald Street near Louisiana Street, Virginia Street and the DART rail right-of-way.** Generally, the following treatments should be considered:

- Buildings with the greatest density need to be adjacent to the transit facility.
- A density cone sits over the transit village with buildings at the center having greatest density and lessening as you move to the perimeter developments.
- Buildings should utilize build-to lines, not contemporary setback lines.
- Buildings can be arranged to create a court or village pattern. These patterns provide a pedestrian scaled environment. This can be reinforced with landscape and lighting for identification.
- Exterior environments for dining and relaxing are vital for some land uses. These "outdoor rooms" can be designed with landscape or plaza hardscape materials.
- Service areas need to be located away from adjacent front door access points. Service courts can be defined on u-shaped buildings to contain trash and delivery products.

Pedestrian Environment

The core of the Transit Village is the transit station; this hub is surrounded by a dense concentration of land uses which can include a combination of retail, office, entertainment, and residential developments. Key to making these various parts work together as an integrated whole is the design, including scale and functionality, of the Transit Village. Mixed uses, pedestrian access, activity nodes, and attention to architectural design differentiate a Transit Village from a simple commuter-oriented "park and ride" facility.

- Wide sidewalks, front entries, and street oriented commercial establishments should be emphasized.
- Walkways linking adjacent neighborhoods with this module need to be provided.
- Walkways must be provided on both sides of all streets.

Parking

While automobile movement should be secondary in design and importance to pedestrian movement, auto-oriented travel will still need to be properly accom-

modated. The following parking considerations should be utilized within Transit Village developments:

- Multi-level parking garages and surface parking lots should not front directly onto streets but should instead be located in the interior courtyard settings of building(s) when possible.
- On-street parallel parking should be considered for all local streets.
- On-street head-in parking should be considered only in limited circumstances.

Vehicular Access

Within the Transit Village Module, automobile movement should be secondary in design and importance to pedestrian movement.

3. Community Village Module

Community Villages are areas of concentrated development. Generally, a community village is a grouping of commercial uses serving a larger region. It includes a higher concentration of retail and lesser concentration of office, entertainment and community facilities. Some residential uses may be allowed when designed to minimize impacts from and to the primary commercial uses. But these will generally fill in around, rather than develop prior to, the commercial uses.

Figure 11.17: Community Village Corner Prototype

Building Orientation

Within the Community Village, buildings are developed primarily to serve the needs of shoppers and workers by providing a concentrated commercial environment.

- Unified architectural standards should be developed for each or all community villages. The standards should use high-quality building materials, provide architectural variety, while establishing a family of compatible standards.
- The uniform alignment of facades should be used to provide for a more planned appearance and character. In contrast, overly long building facades should incorporate offsets to prevent

monotony.

- Buildings can be arranged to create a court or village pattern. These patterns provide a pedestrian scaled environment. This can be reinforced with landscape and lighting for identification.
- Exterior environments for dining and relaxing are vital for some land uses. These "outdoor rooms" can be designed with landscape or plaza hardscape materials.
- Service areas need to be located away from adjacent front door access points. Service courts can be defined on u-shaped buildings to contain trash and delivery products.

Parking

Because of its broad market appeal, Community Village Modules will attract shoppers traveling from a wide area. Both customer and employee parking will be an important factor in the development of this module. Ample, convenient parking should be provided.

- Parking lots should be divided into smaller parking "gardens" separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.
- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrians toward the primary entry of buildings.
- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.

Pedestrian Environment

These concentrated commercial modules require a network of walkways for pedestrians, bicycles, and other modes to move between buildings.

- Walkways linking adjacent neighborhoods with this module needs to be provided.
- Walkways connecting adjacent buildings need to be provided.
- The network of walkways can be enhanced with landscaping and lighting to support safe and pleasant movement.

Vehicular Access

Convenient access should be provided. Fire lanes and cross access drives should be included to the front and rear of buildings.

- Heavily used access drives should be designed to reduce conflicts with vehicles backing out of parking spaces.
- Primary access drives can take the look and feel of a local street. These streets allow the user to circulate the village with a logical pattern allowing easy and safe access.
- Unified signage standards should be developed to define the comprehensive package of high-quality development standards for this module.

4. Suburban Mix Module

The Suburban Mix Module is generally used for single-family residential development typically at a density of 3.0 to 3.4 dwelling units per acre, with supporting office and retail uses rounding out the typical module area. Medium density residential along with community facilities such as schools, parks and religious institutions are also included in the Suburban Mix Module. Opportunities to connect with the City of McKinney's trail network should be utilized if the module is located adjacent to the trail system.

Figure 11.18: Suburban Mix Prototype

A - Residential Single-Family

Building Orientation

The single-family residential housing units that dominate the Suburban Mix Module have a typical residential building pattern that is characterized by average front- and rear-yard setbacks, as well as minimum side-yard setbacks. Design of subdivisions should work with the natural features of the land such as topography, creeks, and scenic view. Engineering efficiency along with maximizing lot count should not be the primary consideration of subdivision design.

Another critical element in building orientation is the traffic patterns and levels within the module. Fronting homes on higher traffic roads can have an undesirable impact, whether real or perceived, on the quality of life of the residents. Poorly designed subdivisions that don't account for adequate use of collector streets, appropriate stacking at major roadways, and limiting cut-through traffic patterns often result in requests to the City for traffic calming measures. Subdivisions should be planned in a holistic manner that accounts for the overall area traffic patterns, neighborhood levels, and the like.

- Single-family housing units should side on residential collector streets and to back single family on major collector streets.
- Single loaded streets in residential subdivisions are desirable when adjacent to a park, floodplain, or greenbelt.

Design for Density

In order to achieve the density bonus for preferred design, the following features should be incorporated into the design of residential developments. To achieve

the increase to 3.4 dwelling units/acre available for single-family residential, the items below should be used:

- Extremely large tracts should be broken down into smaller separate distinct neighborhoods or villages generally no larger than 50 acres or +/-175 lots.
- Curvilinear streets should be used rather than a modified grid pattern.
- Natural areas such as creeks and lakes should have single loaded streets adjacent to them.
- Usable open space should be centrally located throughout the neighborhood to serve as an amenity for all residents. These open areas should not serve as detention ponds.
- Culs-de-sac should not be perfectly round, rather they should be more elliptical (tear drop) and off center. A landscaped island is also desirable.
- Median features should be incorporated into street design, particularly at the entrance to neighborhoods.
- A mix of lot sizes and shapes should be included along a street frontage rather than a uniform lot size.
- Penetrating screen walls and allowing view corridors into neighborhoods from arterial streets via the use of landscape or metal fencing at the terminus of neighborhood culs-de-sac is desirable.

B - Commercial & Multi-Family

Building Orientation

Multi-family and commercial land uses should be oriented toward arterial roadways with secondary access on major collector roadways, not residential streets. The land use transition, including building height, architecture, landscaping, and site plan elements, is a significant element that can define the appropriateness of the site planning on the more intensive land uses when adjacent to single-family uses.

- Transitions are a design feature that includes: stepping building height away from residential, window orientation limits for second floor buildings, landscape buffers, living screens, and others.
- Exterior environments for dining and relaxing are vital for some land uses. These "outdoor rooms" can be designed with landscape or plaza hardscape materials.
- Service areas need to be located away from adjacent front door access points. Service courts can be defined on u-shaped buildings to contain trash and delivery products.

Parking

Because of its market appeal, commercial development will attract shoppers traveling from adjacent neighborhoods. Both customer and employee parking will be an important factor in the development of this module.

- Parking lots should be divided into smaller parking "gardens" separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.

- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrians toward the primary entry of buildings.
- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.

C - Residential and Commercial

Pedestrian Environment

The Suburban Mix Module is dominated by residential uses with a secondary mix of neighborhood supported commercial uses. To foster greater neighborhood organization and to develop stronger bonds to local amenities and commercial centers, pedestrian linkages must be put in place. The following design treatments should be considered in strengthening these connections.

- Suburban Mix Module residential streets should incorporate sidewalks on both sides of street where necessary to provide for increased pedestrian access.
- Sidewalks from residential streets should connect with sidewalks running alongside community collector roads and thoroughfares.
- For residential streets terminating at parks or greenbelts, pedestrian access to hike and bike trail systems should be provided where appropriate.
- To help facilitate other modes of travel and to connect with community amenities, interior sidewalks and crosswalks within commercial centers should link with adjacent thoroughfare sidewalks, residential street sidewalks, and trails within adjoining greenbelts and parks.
- Community facilities, such as schools, libraries, religious facilities, and fire stations, should link into adjoining greenbelt and park trails when possible.

5. Estate Mix Module

The Estate Mix Module is generally used for low density single-family residential on large lots, with a limited amount of other single-family residential and support office and retail uses. Community facilities such as schools, parks and religious institutions are also included in the Estate Mix Module. Medium densities and higher concentrations of residential or commercial land uses are generally incompatible with this module unless additional infrastructure capacity for thoroughfares, water/wastewater facilities, schools, parks, and the like are provided. Opportunities to connect with the City of McKinney's trail network should be utilized if the module is located adjacent to the trail system.

Building Orientation

Low density larger lot single-family residential housing is found in the Estate Mix Module. This type of residential building pattern is characterized by broad front and back-yard setbacks as well as sufficient side-yard setbacks.

- The limited commercial building patterns in this module should be sensitive to the rural atmosphere that the estate residential

neighborhoods enjoy.

- Additional landscaping buffers, deeper setbacks, residential-scale architectural design, reduced signing levels, and lower lighting levels would be appropriate.

Pedestrian Environment

The Estate Mix Module is dominated by large lot residential uses with a limited mix of neighborhood supported commercial uses. The large size of residential lots, rural street character and infrequent commercial developments make pedestrian linkages less necessary. Even so, design should not ignore this feature.

6. Regional Commercial, Tollway Commercial, Regional Employment, Office Park, and Industrial Modules

The Regional Commercial Module is an area of large scale commercial development providing for retail and service uses on a regional level. Tollway Commercial includes a mix of commercial, office, and entertainment uses that have a strong regional draw. Residential uses within the Tollway Commercial Module are limited and shall generally be located no closer than 1,000 feet from State Highway 121 (Sam Rayburn Tollway). Regional employment is a large scale office and potentially light industrial / research development providing employment at a regional level. Office parks are characterized by the primary use, which are office parks. It also includes supporting retail and service uses. Industrial is development that includes manufacturing, office, distribution, warehouse, flex-warehouse as well as industrial uses with supporting retail and office uses.

Figure 11.19: Regional Commercial, Tollway Commercial, Regional Employment, Office Park, and Industrial Modules Prototype

Building Orientation

Within these modules, buildings should be oriented to be both accessible and identifiable from the streets.

- The "back" of buildings which generally include service areas, dumpsters, loading docks etc. should be the least visible side of the building and not diminish the view from natural areas.
- Where this is not possible, appropriate screening should be used to soften the view.

- When residential adjacency exists, appropriate transitions, buffers, and other design elements should be utilized by the more intensive use to minimize any negative impacts on the residential neighborhood.
- Parking garages need to be near the building they serve and not be adjacent to neighboring residential.
- Parking garages must have façades that do not show ramping in the façade design.

Parking

These modules anticipate large numbers of people traveling to these centers for working and shopping, with most arriving by car or truck.

- Parking lots should be divided into smaller parking "gardens" separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.
- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrians toward the primary entry of buildings.
- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.

Vehicular Access

Ample, convenient access should be provided within these modules. Where possible, direct and convenient access would be desirable from regional highways and major thoroughfares into the core of these modules.

- Internal drives should be designed to direct traffic to the destination by the use of landscaping along drives, eliminating parking backing into primary drives and textured paving.

7. Airport Industrial Module

The Airport Industrial Module is development focused around its proximity to the Collin County Regional Airport. It includes a range of industrial, office and support uses. Of note: all landscaping within this module needs to follow the Bird Mitigation Program for the airport. This program calls for specific plant species that do not attract birds to the area to reduce the potential for bird strike events near the airport.

Building Orientation

Within the module, buildings should be oriented to be both accessible and identifiable from the streets.

- The "back" of buildings which generally include service areas, dumpsters, loading docks etc. should be the least visible side of the building and not diminish the view from natural areas.
- When residential adjacency exists, appropriate transitions, buffers, and other design elements should be utilized by the more intensive use to minimize any negative impacts on the residential neighborhood.

- Parking garages need to be near the building they serve and not be adjacent to neighboring residential.
- Parking garages must have façades that do not show ramping in the façade design.

Parking

These modules anticipate large numbers of people traveling to these centers for work, with most arriving by car or truck.

- Parking lots should be divided into smaller parking lots separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.
- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrian toward the primary entry to buildings.
- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.

Vehicular Access

This module requires special access for emergency vehicles to Collin County Regional Airport. This access will be supported with access to and through the module. Where possible, direct and convenient access would be desirable from regional highways and major thoroughfares into the core of the module.

- Special access must be provided for security access to and from air-side developments on the airport.
- Land-side access for development such as hotels, car rental, support commercial, light industrial, etc will be provided in an efficient and safe manner.

8. Urban Mix Module

The Urban Mix Module is characterized by a primary mix of urban and traditional single-family detached residential housing types. Some medium and high density residential may be allowed in order to support nodes of urban residential/commercial development patterns. The Urban Mix Module also includes neighborhood office, retail and commercial uses, as well as some community facilities. Opportunities to connect with the City of McKinney's trail network should be utilized in locations adjacent to the trail system.

Building Orientation

A - Single Family Residential

Single-Family detached and single-family attached residential housing units should have a typical residential building pattern that is characterized by average front and rear-year setbacks, as well as minimum side-yard and/or end of row setbacks. Single-Family Urban Residential should utilize build-to lines with structures located in close proximity to the street offering opportunities for pedestrian interaction and a street pattern based on a modified grid pattern. Design of subdivisions should work with the natural features of the land such as topography, creeks, and scenic views. Engineering efficiency along with maximizing lot counts should not be the primary consideration of subdivision design.

Another critical element in building orientation is the traffic patterns and levels of service within the module. Fronting homes on higher traffic roads can have an undesirable impact, whether real or perceived, on the quality of life of the residents. Poorly designed subdivisions that don't account for adequate use of collector streets, appropriate stacking at intersections of major roadways, and limiting cut-through traffic patterns often result in requests to the City for traffic calming measures. Subdivisions should be planned in a holistic manner that accounts for the overall traffic patterns of the area, neighborhood traffic levels, and the like.

- Single-family housing units should be located on residential collector streets and should back or side on local collector streets.
- Single loaded streets in residential subdivisions are desirable when adjacent to a park, floodplain, greenbelt, or other natural features.

B - Multi-Family Residential & Commercial

Multi-family and commercial land uses should be oriented toward arterial roadways with secondary access on local collector roadways, not residential streets. The land use transition, including building height, architecture, landscaping, and site plan elements, is a significant element that can define the appropriateness of the site planning on the more intensive land uses when adjacent to single-family uses.

High Density Urban Residential should be constructed in an urban and pedestrian-oriented manner (structures in close proximity to the street with on-street parking or parking internal to the site with limited visibility from adjacent streets).

- Transitions are a design feature that includes, but is not limited to: stepping building heights away from residential, window orientation limits for second floor buildings, landscape buffers, living screens, and others.
- Exterior environments for dining and relaxing are vital for some land uses. These "outdoor rooms" can be designed with landscape or plaza hardscape materials.
- Service areas need to be located away from adjacent front door access points. Service courts can be defined on u-shaped buildings to contain trash and delivery products.

Parking

Because of market appeal commercial development will attract shoppers traveling from adjacent neighborhoods as well as those that migrate from the more regionally-scaled commercial uses along SH 121. Both customer and employee parking will be an important factor in the development of this module.

- Parking lots should be divided into smaller parking "gardens" separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.
- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrians toward the primary entry of buildings.

- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.
- Structured parking is encouraged for multi-family residential and vertical mixed use developments.

Pedestrian Environment

The Urban Mix Module is dominated by residential uses with a secondary mix of neighborhood supported commercial uses and community facilities. To foster greater neighborhood organization and to develop stronger bonds to local amenities and commercial centers, pedestrian linkages must be incorporated. The following design treatments should be considered in strengthening these connections.

- Urban Mix Module residential streets should incorporate sidewalks on both sides of the street. Additionally, Single-Family Urban Residential streets should provide pedestrian-oriented streetscapes characterized by street trees, pedestrian scaled lighting, and pedestrian seating defining and protecting the pedestrian realm between streets and building facades.
- Sidewalks from residential streets should connect with sidewalks running alongside community collector roads and thoroughfares providing access to neighborhood scaled commercial sites serving the immediate area.
- For residential streets terminating at parks or greenbelts, pedestrian access to hike and bike trail systems should be provided where appropriate.
- To help facilitate other modes of travel and to connect with community amenities, interior sidewalks and crosswalks within commercial centers should link with adjacent thoroughfare sidewalks, residential street sidewalks, and trails within adjoining greenbelts and parks.
- Community facilities, such as schools, libraries, religious facilities, and fire stations, should link into adjoining greenbelt and park trails when possible.

Section 12: Educational Facilities and Services Element

The Educational Facilities and Services Section is intended to aid each school district as they plan for capital facilities by helping them to understand how McKinney's Future Land Use Plan impacts the growth in their district. It will provide each school district with an estimated residential unit build-out based on the Future Land Use Plan (FLUP) Module Diagram, which will allow them to plan and identify future campus locations and facility needs within their district. This section utilizes the residential unit build-out and student per household numbers from each school district to estimate the number of students.

The Educational Facilities and Services Section is intended to aid in the coordination of each school district's capital facilities planning with the City of McKinney's Comprehensive Plan.

This section will also help City officials, Staff, and developers understand the school districts' criteria for site location and school design, which will aid in the provision of proper sites for these facilities as part of the development process. This coordination is important because the well-being of a city is closely tied to the quality of the school districts and the educational opportunities provided for the citizens. Conversely, school districts rely on cities to generate tax revenue to fund the operation and expansion of the school facilities.

Within the City of McKinney and its ETJ, there are seven school districts:

- *McKinney Independent School District*
- *Allen Independent School District*
- *Frisco Independent School District*
- *Prosper Independent School District*
- *Celina Independent School District*
- *Melissa Independent School District*
- *Lovejoy Independent School District*

The McKinney Independent School District (MISD) includes approximately 70% of the total land area within the city limits and ETJ of the City of McKinney, followed by Prosper ISD with 11% of the land, Celina ISD (6%), and Frisco ISD (6%). While McKinney ISD comprises the majority of land within the city limits and ETJ, each school district serves a vital role in the education of children within McKinney. As McKinney continues to grow, more and more children living in the City of McKinney will attend schools in districts other than MISD. The City should continue to pay close attention to land use decisions that may affect each of the districts.

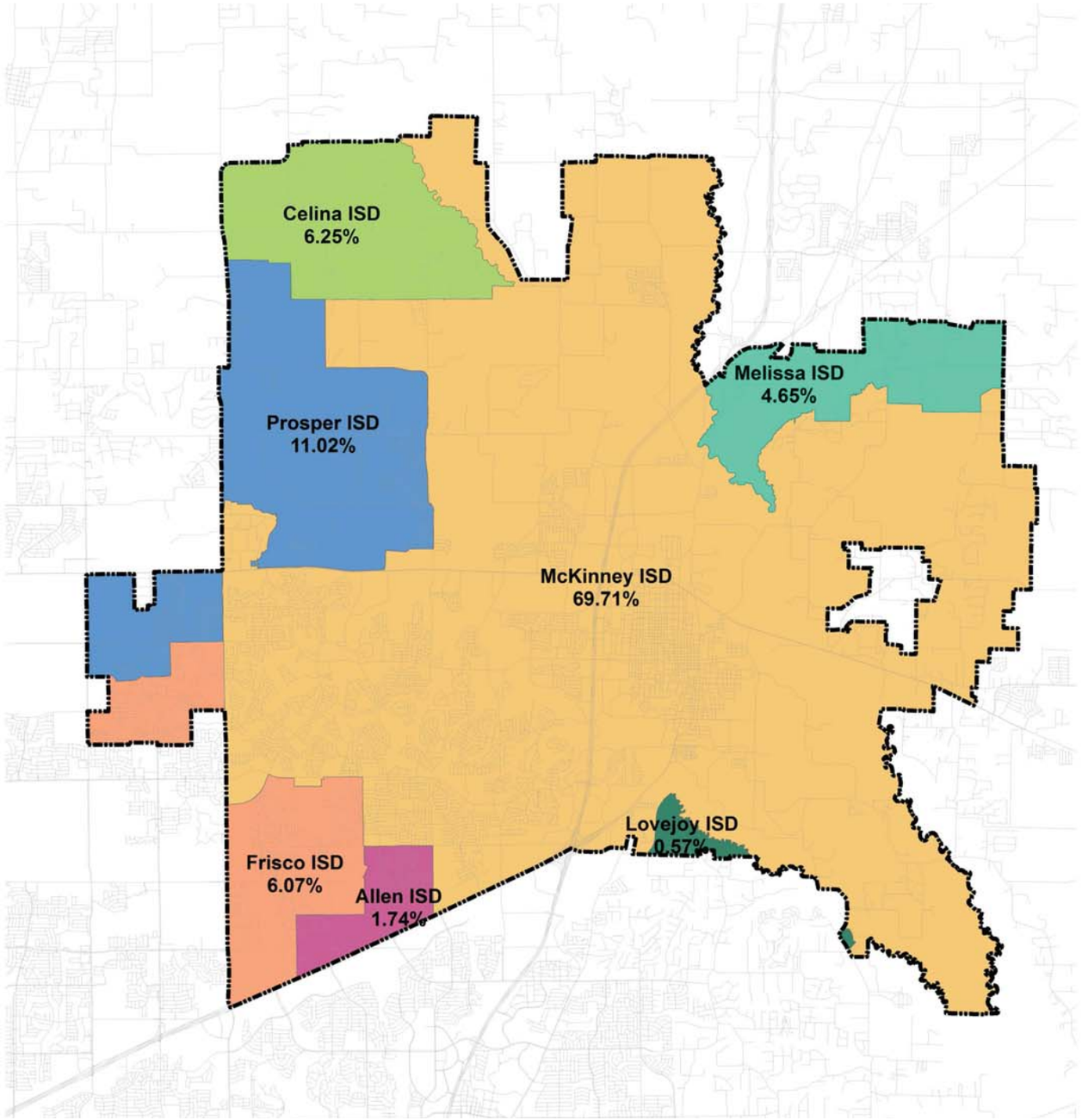
Although projections made in this chapter are intended to aid the school districts in determining an estimated number of facilities that may be needed to meet the anticipated student population, it does not establish the exact number of schools that will be required or take into account changes in school district policy that may occur in the future. Other changes may occur over time that would alter the number of students within each school district, such as changes to the Future Land Use Plan, development outside of the city limits that is different from the City's plans, or changing demographics. Therefore, any projections made within this chapter shall be used solely for informational purposes only.

12.1 Existing Conditions

One of the most important issues facing school districts in McKinney is growth in student enrollment. Unlike private schools that have the option of limiting their enroll-

ment, public schools must accommodate growth while continuing to nurture academic achievement for all students.

All of these ISDs seek to provide a physical environment that supports high levels of student achievement, promotes positive human relations and open communication, and celebrates the diverse, unique nature of McKinney.



CITY OF MCKINNEY
COMPREHENSIVE PLAN

SCHOOL DISTRICTS IN MCKINNEY AND ITS ETJ
PROPOSED

Legend

- Allen ISD
- Celina ISD
- Frisco ISD
- Lovejoy ISD
- McKinney ISD
- Melissa ISD
- Prosper ISD
- Extraterritorial Jurisdiction (ETJ)

*Original Adoption 04-04-2006
(Ordinance No. 2006-04-042)

*Amendment #1: 01-05-2010 (Ordinance No. 2010-01-001 Revised to reflect boundary changes between McKinney, Princeton, and Fairview.

*Amendment #2: 06-02-2015 (Ordinance No. 2015-XX-XXX) Revised to reflect boundary changes of Princeton Independent School District and boundary change betwee McKinney and Fairview.

Source: City of McKinney GIS Department Data

02 June 2015

FIGURE 12.1

0 1 2 Miles

100 Acres

1 Square Mile

EXHIBIT M

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EXHIBIT M

McKinney ISD

McKinney ISD covers approximately 109 square miles; however only 82.1 square miles are within the City of McKinney and ETJ. As of the Fall 2008 semester, 27 public schools serve the students within McKinney ISD with an enrollment of 23,122. The breakdown of facilities includes 19 elementary schools, 5 middle schools, and 3 high schools. McKinney Boyd High School was completed in time for the Fall 2006 semester and became McKinney ISD's third high school.

Future Enrollment Projections

Fall	EE	PK	KG	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total	EE-5	MS	HS
2008	288	307	1921	1921	1890	1921	1827	1817	1770	1714	1693	1725	1590	1390	1332	23,106	11,892	5,177	6,037
2009	292	307	1946	1946	1921	1890	1921	1827	1817	1770	1714	1793	1625	1490	1350	23,609	12,050	5,301	6,258
2010	296	307	1971	1971	1946	1921	1890	1921	1827	1817	1770	1814	1693	1525	1450	24,119	12,223	5,414	6,482
2011	299	307	1996	1996	1971	1946	1921	1890	1921	1827	1817	1870	1714	1593	1485	24,553	12,326	5,565	6,662
2012	303	307	2021	2021	1996	1971	1946	1921	1890	1921	1827	1917	1770	1614	1553	24,978	12,486	5,638	6,854
2013	307	307	2046	2046	2021	1996	1971	1946	1921	1890	1921	1927	1817	1670	1574	25,360	12,640	5,732	6,988
2014	311	307	2071	2071	2046	2021	1996	1971	1946	1921	1890	2021	1827	1717	1630	25,746	12,794	5,757	7,195
2015	314	307	2096	2096	2071	2046	2021	1996	1971	1946	1921	1990	1921	1727	1677	26,100	12,947	5,838	7,315
2016	318	307	2121	2121	2096	2071	2046	2021	1996	1971	1946	2021	1890	1821	1687	26,433	13,101	5,913	7,419
2017	322	307	2146	2146	2121	2096	2071	2046	2021	1996	1971	2046	1921	1790	1781	26,781	13,255	5,988	7,538

Table 12.2: McKinney ISD Future Enrollment Projections

In addition to the public schools listed above, McKinney ISD also has a number of alternative campuses to meet the special needs of students in a unique setting. Serenity High and the McKinney Learning Center provide opportunities for students who are behind in the traditional class structure but are committed to finishing their education, dealing with substance abuse and recovery, or dealing with previous behavioral concerns. The Herman Lawson Early Childhood Center, opening in the fall of 2009, will be home to Early Head Start, Head Start, Preschool Program for Children with Disabilities (PPCD), and Pre-Kindergarten programs in McKinney ISD. The enrollment at these campuses serves an additional 107 students bringing McKinney ISD's total enrollment for 2008 to 23,229.

UPDATE: As of the Fall 2014 semester, 28 public schools serve the students within McKinney ISD with an enrollment of 24,777.

McKinney ISD voters approved a 2005 bond Referendum for $197 million. The bond referendum was the result of a Long Range Facility Planning Committee that consisted of 40 citizens from across the community. The committee met several times and evaluated the district's current facilities in relation to the projected student growth and made a recommendation to the McKinney ISD Board of Trustees to meet the facility needs of the district through 2009.

UPDATE: In May 2011, McKinney ISD voters approved a bond Referendum for $191 million for educational facility construction and renovations.

ELEMENTARY SCHOOLS

Bennett Elementary
7760 Coronado Dr.
McKinney, TX 75070
469-302-5400

Burks Elementary
1801 Hill St.
McKinney, TX 75069
469-302-6200

Caldwell Elementary
601 W. Louisiana St.
McKinney, TX 75069
469-302-5500

Eddins Elementary
311 Peregrine Dr.
McKinney, TX 75070
469-302-6600

Finch Elementary
1205 S. Tennessee St.
McKinney, TX 75069
469-302-5600

Glen Oaks Elementary
6100 Glen Oaks Dr.
McKinney, TX 75070
469-302-6400

Herman Lawson Early Childhood School
500 Dowell St.
McKinney, TX 75071
469-302-2400

Johnson Elementary
3400 Ash Lane
McKinney, TX 75070
469-302-6500

Malvern Elementary
1100 Eldorado Pkwy.
McKinney, TX 75069
469-302-5300

McClure Elementary
1753 N. Ridge Rd.
McKinney, TX 75071
469-302-9450

McGowen Elementary
4300 Columbus Dr.
McKinney, TX 75070
469-302-7500

McNeil Elementary
3650 Hardin Blvd.
McKinney, TX 75070
469-302-5200

Minshew Elementary
300 Joplin Dr.
McKinney, TX 75071
469-302-7300

Press Elementary
4101 Shawnee Dr.
McKinney, TX 75071
469-302-7600

Slaughter Elementary
2706 Wolford St.
McKinney, TX 75071
469-302-6100

Valley Creek Elementary
2800 Valley Creek Trail
McKinney, TX 75070
469-302-4800

Vega Elementary
2511 Cattleman Dr.
McKinney, TX 75071
469-302-5100

Walker Elementary
4000 Cockrill Dr.
McKinney, TX 75070
469-302-4600

Webb Elementary
810 E. Louisiana St.
McKinney, TX 75069
469-302-6000

Wilmeth Elementary
901 La Cima Dr.
McKinney, TX 75071
469-302-7400

Wolford Elementary
6951 Berkshire Rd.
McKinney, TX 75070
469-302-4700

MIDDLE SCHOOLS

Cockrill Middle School
1351 N. Hardin Blvd.
McKinney, TX 75071
469-302-7900

Dowell Middle School
301 S. Ridge Rd.
McKinney, TX 75070
469-302-6700

Evans Middle School
6998 W. Eldorado Pkwy.
McKinney, TX 75070
469-302-7100

Faubion Middle School
2000 Rollins St.
McKinney, TX 75069
469-302-6900

Scott Johnson Middle School
3400 Community Blvd.
McKinney, TX 75071
469-302-4900

HIGH SCHOOLS

McKinney Boyd High School
600 N. Lake Forest Drive
McKinney, TX 75071
469-302-3400

McKinney High School
1400 E. Wilson Creek Pkwy.
McKinney, TX 75069
469-302-5700

McKinney North High School
2550 Wilmeth Rd.
McKinney, TX 75071
469-302-4300

ALTERNATIVE SCHOOLS

McKinney Learning Center/ Serenity High School
2100 White Ave.
McKinney, TX 75069
469-302-7800

ADMINISTRATIVE FACILITIES

MISD Central Administration
1 Duvall St.
McKinney, TX 75069
469-302-4000

MISD Greer Annex
510 Heard St.
McKinney, TX 75069
469-302-6302

MISD Central Distribution Center
412 Interchange Street
McKinney, TX 75071
469-302-4250

MISD Maintenance Center
800 N. McDonald St.
McKinney, TX 75069
469-302-4280

Club 360 Childcare Offices
2107 W. Eldorado Pkwy.
Suite 109
McKinney, TX 75070
972-569-6235

Figure 12.3: McKinney ISD Facility Locator Map (as of 2014)

Allen ISD

UPDATE: As of the Fall 2014 semester, 22 public schools serve the students within Allen ISD with an enrollment of 20,559.

Allen ISD covers approximately 29 square miles; however only 2.01 square miles are within the City of McKinney. As of the Fall 2008 semester, 20 public schools serve the students within Allen ISD with an enrollment of 17,508. Of the 17,508 students enrolled in Allen ISD, 207 students are from the City of McKinney. The breakdown of the facilities includes 15 elementary schools, 3 middle schools, 1 freshman learning center, and 1 high school. Allen ISD intends on having only 1 high school to serve the district, which will have a 4,200 student capacity after the final expansion. Allen ISD anticipates having only one elementary campus within the City of McKinney, located in McKinney Ranch.

Similar to McKinney ISD, Allen ISD has an alternative campus known as the Pat Dillard Special Achievement Center. Commonly know as the "Dillard Center", its mission is to provide an instructional environment that encourages academic success, appropriate behavior, and a strong foundation in social skills.

Allen ISD voters approved a $219 million bond proposal in November 2008 to fund construction of two new elementary schools, expansion of current schools, acquisition of additional land for a service center and purchase of technology improvements. Voters also approved a $71.2 million bond proposal in September 2003 to fund construction of two new elementary schools, renovations at the Lowery and Dillard Centers, technology upgrades and HVAC improvements to Ford Middle school.

UPDATE: In May 2009, Allen ISD voters approved a $119.4 million bond proposal to provide a number of educational facilities and technology improvements.

Frisco ISD

Frisco ISD covers approximately 75 square miles; however only 7.02 square miles are within the City of McKinney. As of the Fall 2008 semester, 42 public schools serve the students within Frisco ISD with an enrollment of 30,950. The breakdown of facilities includes 28 elementary schools, 9 middle schools, and 5 high schools. An additional 10 elementary schools, 5 middle schools and 3 high schools are being proposed to be opened in the future.

UPDATE: As of the Fall 2014 semester, 57 public schools serve the students within Frisco ISD with an enrollment of 49,657.

In May of 2006, Frisco ISD voters approved a $798 million bond. This bond funded 19 new schools, additional land for 16 schools, instructional and student support services and various special programs. Frisco ISD voters also approved a $478 million bond in March of 2003.

UPDATE: In May 2014, Frisco ISD voters approved a $775 million bond to provide educational facilities for up to 66,000 students.

Ogle Elementary, in Craig Ranch North, was the first Frisco ISD school to be constructed in McKinney. As of 2014, FISD has constructed Elliott Elementary, Mooneyham Elementary, Scott Elementary, Sonntag Elementary, Comstock Elementary, Ogle Elementary, and Scoggins Middle School in McKinney.

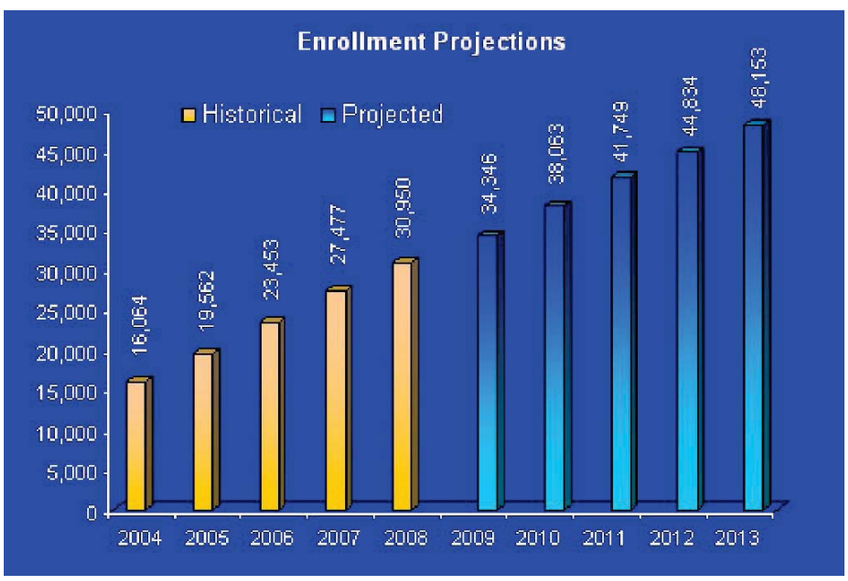

Figure 12.4: Frisco ISD Future Enrollment Projections (as of 2008)

EXHIBIT M

Prosper ISD

UPDATE: As of the Fall 2014 semester, 7 public schools serve the students within Prosper ISD with an enrollment of 7,086.

Prosper ISD covers approximately 57 square miles; however only 12.75 square miles are within the City of McKinney and ETJ. As of the Fall 2008 semester, 5 public schools serve the students within Prosper ISD with an enrollment of 3,190. The breakdown of facilities includes 3 elementary schools, 1 middle school, and 1 high school. Of these facilities, Baker Elementary is located with the City of McKinney.

In 2007, Prosper ISD voters approved a $710 million bond. The bond provided the funds to construct 4 new elementary schools, 1 new middle school, and 1 new high school. The bond also provided funds for land acquisition, technology updates and other various upgrades and renovations throughout the district.

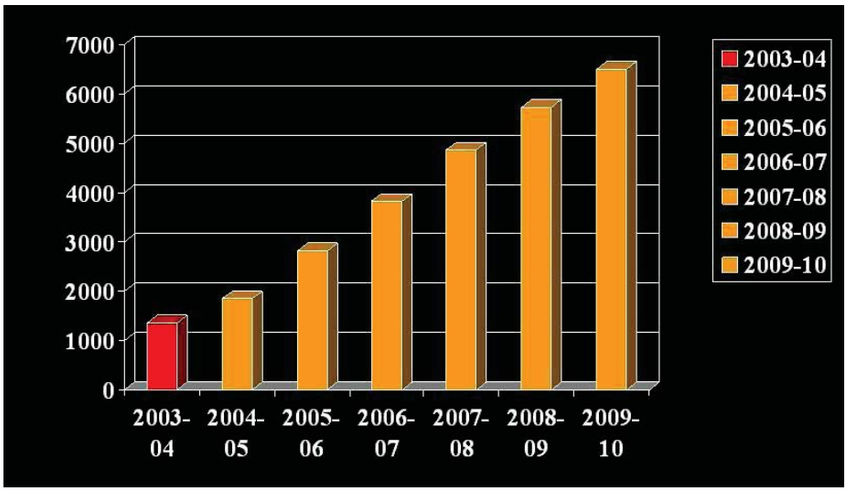

Figure 12.5: Prosper ISD Future Enrollment Projections (as of 2004)

Celina ISD

UPDATE: As of the Fall 2014 semester, 4 public schools serve the students within Celina ISD with an enrollment of 2,200.

Celina ISD covers approximately 87 square miles; however only 7.23 square miles are within the City of McKinney and ETJ. As of the Fall 2008 semester, 4 public schools serve the students within Celina ISD with an enrollment of 1,753. The breakdown of facilities includes 1 elementary school (PK – 3), 1 intermediate school (4 – 6), 1 junior high school (7 – 8), and 1 high school (9 -12).

Melissa ISD

UPDATE: As of the Fall 2014 semester, 4 public schools serve the students within Melissa ISD with an enrollment of 2,116.

Melissa ISD covers approximately 31 square miles; however only 5.40 square miles are within the City of McKinney and ETJ. As of the Fall 2008 semester, 4 public schools serve the students within Melissa ISD with an enrollment of 1,266. The breakdown of facilities includes 1 elementary school, 1 middle school (5-6), 1 intermediate school (7-8), and 1 high school.

EXHIBIT M

Lovejoy ISD

Lovejoy ISD covers approximately 17 square miles; however only 0.68 square miles are within the City of McKinney and ETJ. As of the Fall 2008 semester, 5 public schools serve the students within Lovejoy ISD with an enrollment of 2,900. The breakdown of facilities includes 3 elementary schools, 1 middle school, and 1 high school.

UPDATE: As of the Fall 2014 semester, 6 public schools serve the students within Lovejoy ISD with an enrollment of 3,828.

	McKinney ISD	Allen ISD	Frisco ISD	Prosper ISD	Celina ISD	Melissa ISD	Princeton ISD	Lovejoy ISD
District Size	109 Sq. Miles	29 Sq. Miles	75 Sq. Miles	57 Sq. Miles	87 Sq. Miles	31 Sq. Miles	60 Sq. Miles	17 Sq. Miles
Area Within McKinney and ETJ	82.1 Sq. Miles	2.01 Sq. Miles	7.02 Sq. Miles	12.75 Sq. Miles	7.23 Sq. Miles	5.4 Sq. Miles	0 Sq. Miles	0.68 Sq. Miles
Percentage of McKinney and ETJ	69.71%	1.74%	6.07%	11.02%	6.23%	4.65%	0%	0.57%
District Enrollment	24,777	20,559	49,657	7,086	2,200	2,116	3,743	3,828
Current Elementary Schools	20	17	37	4	1	1	3	3
Current Middle Schools	5	3	-	-	-	-	-	1
Current Intermediate Schools	-	-	-	1	1	1	1	1
Current Junior High Schools	-	-	-	-	1	-	1	-
Current Middle/High Schools	-	-	13	1	-	1	-	-
Current Freshman Learning Centers	-	1	-	-	-	-	-	-
Current High Schools	3	1	7	1	1	1	1	1
Proposed Elementary Schools	-	-	1	1	-	-	1	-
Proposed Middle Schools	-	-	2	-	-	-	-	1
Proposed Intermediate Schools	-	-	-	-	-	-	-	-
Proposed Junior High Schools	-	-	-	-	-	-	-	-
Proposed Middle/High Schools	-	-	-	-	-	-	-	-
Proposed Freshman Learning Centers	-	-	-	-	-	-	-	-
Proposed High Schools	-	-	2	-	-	-	-	-

Table 12.6: School Districts - Existing Conditions (as of 2014)
**In 2013, Princeton ISD boundaries were adjusted. As a result, Princeton ISD no longer falls within the McKinney ETJ.*

Private Schools

McKinney Christian Academy (MCA) is McKinney's only faith based school offering pre-kindergarten through grade twelve. Located just off of Virginia Parkway on Bois d'Arc Road, MCA occupies an approximate 60 acre site. Enrollment for the 2009-2010 school year is 470 students, including 240 students in the lower school (Pre-K through 6th Grade) and 230 students in the upper school (7th Grade through 12th Grade). MCA is accredited through the Association of Christian Schools International (ACSI).

UPDATE: As of the Fall 2014 semester, McKinney Christian Academy has an enrollment of 553 students.

Other private schools which offer Pre-Kindergarten and early elementary education are also available to McKinney residents. Castle Montessori of McKinney, Centennial Montessori School, Crossing Point School, Good Shepherd Academy, Good Shepherd Montessori School, Faith Christian Academy, Heritage Learning Center, Holy Family School, Little Saints School, McKinney Montessori Academy, North Texas Christian Academy, Our Savior Lutheran, and Primrose School of Eldorado, and others are located in the City of McKinney.

Universities and Colleges

Collin College (formerly known as the Collin County Community College District) opened its first campus, the Central Park Campus in McKinney, in January 1986. Located on 115 acres just west of Highway 75 on Highway 380, the campus includes a facility that houses the Division of Health Sciences and Emergency Services, which includes Dental Hygiene, Emergency Medical Services Professions, Fire Science, Nursing and Respiratory Care. Collin College also has campuses located in Plano, Allen, Rockwall, and Frisco. District wide, Collin College offers courses in Business and Computer Science, Communications and Humanities, Developmental Education, Teacher Certification, Engineering and Emerging Technologies, Fine Arts, Health Science and Emergency Services, Physical Education, and Social and Behavioral Science.

With all of its satellite campuses, Collin College is currently educating almost 53,000 students. Collin College is expanding in McKinney with the Collin Higher Education Center. Through the Collin Higher Education Center, Collin College and university partners will offer junior- and senior-level college courses as well as graduate degree programs. The new campus will also house selected administrative departments now located at the Courtyard Center in southwest Plano. Collin Higher Education Center opened in January 2010 and now offers more than 100 degrees and certificates in a wide range of disciplines.

Other local colleges and universities include the University of Texas at Dallas (UTD), which has a main campus in Richardson (20 miles south of McKinney), Southern Methodist University (SMU), located in Dallas (33 miles south of McKinney), Austin College, located in Sherman (33 miles north of McKinney), and the University of North Texas (UNT) and Texas Women's University (TWU), both located in Denton (30 miles west of McKinney).

12.2 School District Locational Criteria

A number of school districts adopt locational criteria for placement of schools depending on the type of school being constructed. Early designation of school sites helps to ensure adequate access and traffic circulation, as well as minimizing development costs. The educational element provides a series of criteria for the placement of various types of educational facilities.

The following criteria are intended to assist City Officials, Staff, and developers to coordinate with the school districts in the provision of proper site locations for these facilities as part of the development process by providing information on school design and site location criteria.

Developers are encouraged to discuss with the school district where a proposed project is to be located, prior to submittal, to determine district need of a potential facility as well as best placement within the development.

McKinney ISD

- Overall
    - Elementary school sites should not be located on major thoroughfares;
    - Sites should be located in close proximity to storm drainage, water, and sanitary sewer connections;
    - Sites should have topography that maximizes land utilization and safety, and minimizes development costs;
    - Sites should be located at the intersection of two collector streets to enhance both pedestrian and vehicular traffic circulation;
    - Sites should not be located next to alleys that would back to the sides of the school site. This discourages student foot traffic in alleyways;
    - Each school site should have two points of public access.
- Elementary Schools
    - An attempt should be made to coordinate the location of elementary schools and neighborhood parks to allow for joint use of facilities;
    - Sites should work in conjunction with City Park sites;
    - School sites should be a minimum of 15 acres if the site is rectangular, larger sites are required if the site is irregular in shape;
    - Sites should be large enough to provide adequate parking.
- Middle Schools
    - Sites should be a minimum of 30 acres if the site is rectangular, larger for irregular shaped sites.
- High Schools
    - Sites should be a minimum of 65 acres if the site is rectangular, larger for irregular shaped sites.

Allen ISD

- Overall
    - Elementary school sites should not be located on major thoroughfares;
    - Sites should be located in close proximity to storm drainage, water, and sanitary sewer connections;
    - Sites should have topography that maximizes land utilization and safety, and minimizes development costs;
    - Sites should be located on collector streets to enhance both pedestrian and vehicular traffic circulation;
    - Sites should not be located next to alleys that would back to the sides of the school site. This discourages student foot traffic in alleyways;
    - Each school site should have two points of public access.

- Elementary Schools
    - An attempt should be made to coordinate the location of elementary schools and neighborhood parks to allow for joint use of facilities;
    - There will be no joint park site associated with the AISD elementary school site located in the City of McKinney;
    - Should be a minimum of 14 acres if the site is rectangular, larger sites are required if the site is irregular in shape. The site should be large enough to provide adequate parking.
- Middle Schools
    - Site is to be located adjacent to a park site. The park site should be an active park and not a passive park that contains a large number of trees and creeks;
    - Sites should be a minimum of 28 acres for middle schools if the site is rectangular, and larger if an irregular shape. The site should be large enough to provide for adequate field space for various outdoor activities and adequate parking.

Frisco ISD

- Elementary Schools
    - Should be located in a neighborhood with a collector (37') on at least two (2) sides.
    - Minimum school site should be 10 acres
- Middle Schools
    - Should attempt to be located between three (3) elementary schools.
    - A neighborhood location is acceptable since there are no plans to have lighted fields.
    - Prefer collector streets on as many sides as possible. A four lane divided would be acceptable if needed.
    - Minimum school site should be 22+ acres
- High Schools
    - Location preferred outside of neighborhoods unless built prior to residential.
    - Collectors with the addition of turn lanes and/or four lane divided thoroughfares with appropriate median locations are also acceptable.
    - Minimum school site should be 60+ acres

Prosper ISD

- Prosper ISD did not indicate they have specific locational criteria but have established a minimum acreage for school sites.
    - Elementary School – 10 useable acres
    - Middle School – 30 acres
    - High School – 60 acres

Melissa ISD

- Elementary Schools (Stand Alone)
    - Collector/collector intersections within residential neighborhoods
    - Direct access onto local streets or arterial streets is not desirable
    - 15 ½ – 16 ½ acres of developable land (not flood plain, no steep slopes, etc.)
- Joint Elementary Schools/Neighborhood Park
    - Collector/collector intersections within residential neighborhoods
    - Direct access onto local streets or arterial streets is not desirable
    - 11 – 14 acres of developable land for school site
    - 9 – 12 acres of developable land for park site

The remaining school districts have not yet established locational criteria for schools as of this time.

12.3 Functional Capacity

A number of school districts have established a functional capacity for new schools. Many existing schools in rapidly growing districts have varying capacities, but new schools tend to be designed with the established functional capacity in mind. These functional capacities are subject to change as the school districts prepare for changes in student populations.

The functional capacity listed on the following pages does not represent the number of students every school within a district is able to accommodate. Older schools tend to have a lower functional capacity with little to no room to expand.

Portable classrooms are not factored into the functional capacities listed below.

Each school district must make a balanced decision when establishing a functional capacity that meets the district and student needs. A smaller functional capacity typically will require a smaller acreage site for facilities. However, establishing a functional capacity too low will require a district to build many schools and acquire many sites in order to serve the student population.

McKinney ISD

McKinney ISD has established the following functional capacities depending on school type.

- Elementary Schools
    - 600 – 850 Students
- Middle Schools
    - 1,200 – 1,500 Students
- High Schools
    - 2,200 – 3,000 Students

Allen ISD

Allen ISD has established the following functional capacities depending on school type.

- Elementary Schools
  - 950 Students
- Middle Schools
  - 1,150 Students
- Freshman Center
  - 1,900 Students
- High School
  - 4,200 Students

The majority of the elementary schools in Allen ISD have an 850 student functional capacity, while the three oldest facilities have a functional capacity of 725 – 815 students.

Current high school capacity, after the final phase, will be 4,200 students. The district philosophy and plan is to have only one high school comprised of seven houses each having its own principal, counselor, etc., with shared library, cafeteria, and academic resources.

Frisco ISD

Frisco ISD has established the following functional capacities depending on school type.

- Elementary Schools
  - 750 Students
- Middle Schools
  - 950 Students
- High Schools
  - 1,800 Students

Prosper ISD

Prosper ISD has established the following functional capacities depending on school type.

- Elementary Schools
  - 700 Students
- Middle Schools
  - 1,000 Students
- High Schools
  - Fewer than 2,000 Students

The remaining school districts have not yet established functional capacities for schools as of this time.

12.4 Forecasts

The following forecasts are intended to provide each school district with an estimated build-out population. These estimates are based on the Future Land Use Plan (FLUP) Module Diagram, existing and zoned residential units, combined with school district established student per household estimates. Although the following information is not intended to be completely accurate, it will allow each independent school district to utilize the following information when planning for the future. Changes to the Future Land Use Plan, development outside of McKinney's city limits, and changing demographics will alter the number of students for each school district. Therefore, any projections made within this chapter shall be used solely for informational purposes only.

School District	Acreage Minus Floodplain	Percentage of Total Study Area	Total Residential Units
McKinney ISD	41,970	69.2%	82,901
Allen ISD	1,285	2%	4,414
Frisco ISD	4,265	7%	13,456
Prosper ISD	7,093	12%	21,967
Celina ISD	4,249	7%	6,381
Melissa ISD	1,839	3%	8,352
Lovejoy ISD	190	0.3%	586
Totals	60,891	100%	138,057

Table 12.7: School District Residential Units Projection (based on 2004 projections)
**In 2013, Princeton ISD boundaries were adjusted. As a result, Princeton ISD no longer falls within the McKinney ETJ.*

The acreage listed in Figure 12.7 only includes land area within the City Limits of McKinney and ETJ. Furthermore, the total acreage and corresponding percentage of the total area does not include floodplain. The total units for each school district were calculated by combining existing units, zoned units, and the Future Land Use Plan (FLUP) module residential unit projections within each ISD Boundary to come up with a projected number. As McKinney continues to develop, or developable land within ISD boundaries reaches build-out, this number should be revised to maintain its accuracy.

In order to determine an estimated number of students for each school district within the City of McKinney and ETJ, student-per-household ratios were obtained from each school district for single-family residential and multi-family residential units. In the event a school district has not yet established a student-per-household ratio, the McKinney ISD student-per-household ratio was used. For calculation purposes, townhome and mixed use residential units were included in the total number of multi-family units for each district since these housing types typically exhibit fewer children than traditional low density single-family residential units.

To obtain the projected number of students for each district, the total number of projected units for both single-family residential units and multi-family units were multiplied by the student-per-household ratios. Similar to the number of units, the ratios established by each district tend to reflect changing trends either moving up or down and should be revised to maintain accuracy. Even a 0.1 change in the ratio can be significant in terms of number of children.

To determine the estimated number of schools that a district may need to provide in McKinney and the ETJ in order to serve the student population, the current functional capacities for each school district were combined with the total number of students for each district. As a "general" rule, for every three elementary schools, one new middle school would be required, and for every 1.5 middle schools, one new high school would be required.

The projections below are only estimates based on all schools in a district being filled to the current functional capacity and based on the current student per household ratio. Functional capacities are subject to change as the school districts prepare for changes in student populations. The projections are not intended to represent the actual number of schools that will exist when the City of McKinney and ETJ reach build-out.

McKinney ISD, unlike the other ISD's within the City Limits and ETJ of McKinney is unique in that there are many older existing schools still being used for facilities. Most of the older facilities do not have near the functional capacity recently established for the district.

School District	Estimated Single-Family Units	SF Student per Household Ratio	Projected Number of Students from SF	Estimated Multi-Family Units	MF Student per Household Ratio	Projected Number of Students from MF	Total Projected Number of Students
McKinney ISD	60,235	0.64	38,550	22,666	0.31	7,026	45,576
Allen ISD	1,348	0.75	1,011	3,066	0.28	859	1,870
Frisco ISD	7,613	0.61	4,644	5,843	0.23	1,344	5,988
Prosper ISD	16,610	0.8	13,288	5,357	0.31*	1,661	14,949
Celina ISD	3,635	0.64*	2,326	2,746	0.31*	851	3,177
Melissa ISD	639	0.64*	409	7,713	0.31*	2,391	2,800
Lovejoy ISD	207	0.64*	132	379	0.31*	117	249
Totals	90,287		60,362	47,770		14,249	74,609

Table 12.8: School District Student Projection (based on 2004 estimates and ratios)
**In 2013, Princeton ISD boundaries were adjusted. As a result, Princeton ISD no longer falls within the McKinney ETJ.*

McKinney ISD

McKinney ISD established 0.64 for the single-family residential student-per-household ratio and 0.31 for the multi-family student-per-household ratio.

The total projected number of students for McKinney ISD within the city limits and ETJ of McKinney is estimated at 45,576. As of 2014, 28 public schools serve 24,777 students within the entire MISD boundary, with a majority of the students living in the City of McKinney and the ETJ. The estimate would mean an additional 20,799 students for MISD located within the city limits and ETJ.

Based on 20,799 additional students:

- 12 Elementary Schools (850 Capacity)
- 4 Middle Schools (1,500 Capacity)
- 2 High Schools (3,000 Capacity)

18 Additional Schools (22,000 Capacity)

When combined with the existing facilities, there would be 31 elementary schools, 9 middle schools, and 5 high schools.

Allen ISD

Allen ISD established 0.75 for the single-family residential student-per-household ratio and 0.28 for the multi-family student-per-household ratio.

Allen ISD has purchased only one school site (18 acres) within the City of McKinney located between the Saddle Club Development and Village Park. This is anticipated to be the only AISD school within the City of McKinney. The site is intended for an Elementary School with a 950 student capacity. Students older than elementary school age would be bussed to the designated middle school and high school in the City of Allen.

Frisco ISD

Frisco ISD established 0.61 for the single-family residential student-per-household ratio and 0.23 for the multi-family student-per-household ratio. However, Frisco ISD is seeing higher student ratios in areas of McKinney such as Custer West.

The total projected number of students for Frisco ISD within the city limits and ETJ of McKinney is estimated at 5,988.

Based on that number:

- 5 Elementary Schools (760 Capacity)
- 2 Middle Schools (1,000 Capacity)

7 Additional Schools (5,800 Capacity)

A high school would not necessarily need to be built within the City of McKinney but will be needed to accommodate the number of students within the City of McKinney in Frisco ISD.

A number of sites in the City of McKinney have been designated as school sites by developers in Frisco ISD. Ogle Elementary School opened in 2006. Elliott Elementary and Scoggins Middle School both opened in 2008.

Prosper ISD

Prosper ISD established 0.80 as the single-family residential student-per-household ratio but does not have a ratio established for multi-family student-per-households. Therefore, the McKinney ISD multi-family student-per-household ratio was used for the medium density single-family development anticipated to occur within the Prosper ISD, such as townhomes.

The total projected number of students for Prosper ISD within the city limits and ETJ of McKinney is estimated at 14,949.

Based on that number:

- 10 Elementary Schools (700 Capacity)
- 3 Middle Schools (1,000 Capacity)
- 2 High Schools (2,000 Capacity)

15 Additional Schools (16,000 Capacity)

Celina ISD

Celina ISD has not established a ratio for single-family residential students-per-household or for multi-family students-per-household. Therefore, the McKinney ISD student-per-household ratios were used for the calculation of the potential number of students within the city limits and ETJ of McKinney for Celina ISD.

The total projected number of students for Celina ISD within the city limits and ETJ of McKinney is estimated at 3,177.

Based on that number:

- 4 Elementary Schools (800 Capacity)

4 Additional Schools (3,200 Capacity)

Melissa ISD

Melissa ISD has not established a ratio for single-family residential students-per-household or for multi-family students-per-household. Therefore, the McKinney ISD student-per-household ratios were used for the calculation of the potential number of students within the city limits and ETJ of McKinney for Melissa ISD.

The total projected number of students for Melissa ISD within the city limits and ETJ of McKinney is estimated at 2,800.

Based on that number:

- 3 Elementary Schools (800 Capacity)

3 Additional Schools (2,400 Capacity)

Lovejoy ISD

Lovejoy ISD makes up approximately 190 developable acres of the McKinney ETJ. The majority of the area of Lovejoy ISD located within the City of McKinney is predominately made up of the Heard Wildlife Preserve and recently developed Serenity residential subdivision. It is not anticipated that there will be any facilities located within McKinney for Lovejoy ISD.

12.5 Summary

Meeting the future needs of rapidly growing school districts is a formidable challenge. Enrollment growth is likely to continue for the foreseeable future given the strong employment growth in North Central Texas and the construction of thousands of homes in McKinney. Close coordination on issues that are important to both the City of McKinney and each school district is essential to be successful in meeting the educational needs of the community, while handling the pressures of rapid growth in a consistent and effective manner.

EXHIBIT M

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Section 13: Implementation

For the McKinney Comprehensive Plan to have a positive impact on the city, the document must be put into action and used on a daily basis. Through implementation of the Plan, the goals and objectives may be realized. Implementation occurs through work plans, supporting CIP documents, monitoring the Plan, making amendments and finally updating the Plan. The implementation section is broken down into four subsections (1) adoption of the Plan, (2) implementation of the Plan via work plans, (3) amending the Plan, and lastly (4) updating the Plan.

13.1 Adoption of the Plan

The McKinney Comprehensive Plan update process covered a fifteen-month period, requiring numerous meetings to solicit public input and monthly joint meetings to brief the City Council and the Planning and Zoning Commission on the Plan's status and to receive direction. Prior to adoption, the McKinney Planning and Zoning Commission held a public hearing to discuss the Plan, hear citizen input, and make recommended changes for the document's approval. After the document was approved by the Planning and Zoning Commission, the Plan and report from the Planning and Zoning Commission went to the McKinney City Council for consideration, public comments and adoption.

At this point, the ongoing process of implementing the Plan begins – today!

For the McKinney Comprehensive Plan to have a positive impact on the city, the document must be put into action and used on a daily basis.

13.2 Implementation of the Plan

The Plan's ultimate adoption by the McKinney City Council does not mean an end to the Comprehensive Plan process. Instead, it starts the next phase in the process: implementation. The first step to beginning to implement the Plan is to inform the community about the new plan. It is critical that citizens, city staff, elected and appointed officials, developers, property owners, neighboring communities, and other government agencies are aware of the plan and the goals and objectives contained therein.

As with the other components of implementation, creating public awareness of the Plan will be an ongoing process. This is especially true in McKinney, given the rapid growth being experienced. Within a year of adoption, approximately 10,000 new residents will move to McKinney. Without an aggressive, ongoing campaign to increase awareness about the Plan, many people will not be able to contribute to the implementation process. In order to become active in participating in local government, they will need to understand the direction and course the City has set for itself.

The process of implementing the various aspects of the Plan will be done as part of the work plan process. By developing work plans associated with the Comprehensive Plan, aspects of the Plan can be studied to determine if a change is warranted. Implementation also involves the monitoring of the Plan and amending the Plan as necessary over the years. This is an ongoing iterative process lasting until the Plan is updated. It is ongoing in that we will most likely not run out of work plan items and iterative in that, once changes are made to the Plan based on study, those changes will be monitored and amended as necessary.

Monitoring the plan is necessary in order to ensure it serves as a viable means for guiding the growth of the City.

A work plan is a tool used city-wide to monitor all major projects. Through use of the work plan, all City Staff and City Council will be able to keep abreast of progress on these items. It will also allow staff to better manage the workload in order to be as effective as possible. As with all work plan items, some work plan items associated with the Comprehensive Plan will be narrow in scope and shorter in timeframe while others will be broader and more open ended.

Monitoring the Plan is necessary in order to ensure it serves as a viable means for guiding the growth of the City. Monitoring will take a number of forms. Amendments to the Plan should occur only after a thorough review of that element, an evaluation of the goals and objectives related to that element, a clearly defined desired outcome, careful consideration of the implications of the potential change and a plan for monitoring the change.

Everyone has a stake in the success of the McKinney Comprehensive Plan and has a role in being guardians of the Plan. This investment in the community and its Plan will be realized through the committed efforts to implement the Plan's goals and objectives. A thorough understanding by all levels of the community of the Comprehensive Plan's role to maintain community values and influence McKinney's growth and development will ensure the Plan's worth and will foster a need for implementation.

Work Plans

Work plans are the means by which potential policies and ordinances are considered, evaluated, recommended, and put into place in order to implement the Comprehensive Plan. Listed below are a number of work plan items that can be used to implement the goals and objectives expressed in McKinney's Comprehensive Plan. This is a listing of the some of the basic areas that should be evaluated through the use of work plans.

1. Display side-by-side for public review and reference in the McKinney City Hall Council Chamber and the Development Services lobby:
    - Future Land Use Plan (completed)
    - Future Land Use Plan Module Diagram (completed)
2. Review and modify City's codes and ordinances for compliance with the McKinney Comprehensive Plan document
3. Work with McKinney Independent School District on development of an Educational Facilities and Services Component (completed)
4. Refine module / land use implementation process
5. Refine and tweak fiscal impact / economic development system (completed)
6. Prioritize three (3) items in the Urban Design section that need implementation and provide schedule. Items for consideration include:
    - SH 5 Corridor Plan (completed)
    - US 380 Corridor Plan (in progress)
    - Town Center Module Plan (completed)
    - Design Standards for Community Villages
7. Initiate Parks & Recreation Gateway plan
8. Initiate Sector Plans (Northwest Sector Study completed)
9. Develop intergovernmental support for promoting the Collin County Multimodal Transportation Corridor (in progress)
10. Update the Library Master Plan (completed)

As work plan items are completed, additional work plan items may be added to the queue. During the beginning of the work plan process, groups that should participate in the process must be identified and incorporated in the effort. With each

work plan, the level of participation and the make-up of the group involved will vary. As with other types of projects, the goal should be clearly defined and a timeline and process outline developed.

Monitoring the Plan

The Comprehensive Plan must be monitored to evaluate how well it is providing direction regarding McKinney's growth and development, as well as how much progress is being made to achieve the overall goals and objectives of the Plan. An initial six-month progress review should be undertaken to examine its effectiveness. Periodically thereafter, reports should be provided to City Council.

Monitoring should include both quantitative and qualitative assessments and measurements. Quantitative measurements will include items such as: the percentage of tax base from residential and commercial land, land use mix for each of the modules, parkland per capita, etc. Where established, level of service measurements should also be presented.

Qualitative measurements will evaluate areas such as progress in achieving quality of life goals. These include convenient parking and access in historic McKinney, high quality city services, enhanced thoroughfare landscaping, etc. Additionally, things such as conformance of new development with the urban design principles and recommendations should be assessed.

Level of Service

Achieving and maintaining an established level of service ensures that the Plan's goals and objectives are being implemented to the satisfaction of the residents of McKinney, its City leaders, and City Staff. The level of service for three City services listed below:

- Fire Department
- Police Department
- Library System

As part of the implementation of the plan, levels of service should be established for other aspects of city services. The information listed below is not intended to be comprehensive in nature; rather, it is intended to provide a basic understanding of the standards by which services for fire, police and library services are measured. Specific plans for each of these areas should be consulted where they exist.

Fire Department

Noted below are two emergency response goals provided by the McKinney Fire Department that help to identify the location and timing of opening of new fire stations.

Benchmark #1 - Four-minute response time to 90% of all emergency incidents within the McKinney City limits

Benchmark #2 - New fire stations should be in operation by the time 500 structures are located outside of a four-minute response time from existing fire stations

Providing for a safe community is of the highest priority and that is reflected in Goal I - public safety services consistent with community values - with the first objective being providing for the appropriate levels of service to all areas of the city. In addition

Achieving and maintaining an established level of service ensures that the Plan's goals and objectives are being implemented to the satisfaction of the residents of McKinney, its City leaders, and City Staff.

Levels of service have been considered for fire, police and public library services. Levels of service should be established for additional city services in the future.

to these health and welfare issues (which can be measured via statistics provided to the Fire Department), a common issue involving fire services and development which impacts the fiscal well-being of the City are insurance ratings and premiums. For more information on ISO ratings, please see the land use section of the Comprehensive Plan.

The critical difference between a small, easily controlled fire and a large fire that threatens to destroy the entire building is time. Time is also a critical factor in success for critical EMS emergencies. Achieving a four-minute response time to 90% of emergency incidents is much different than having an average response time of four minutes.

In 1991, the Texas State Board of Insurance established criteria for service area of a fire station as follows:

Distance: Every structure should have a fire station within 1½ miles as the crow flies

Response Time:
A. Maximum three minutes to commercial, industrial and heavy residential and heavy residential (apartment complexes) areas
B. Maximum five minutes to single family residential areas.

ISO's Fire Suppression Rating Schedule states "The built-upon area of the city should have a first-due engine company within 1.5 miles and a ladder-service company within 2.5 miles." Travel distance is measured along the streets as the fire apparatus responds to a fire scene rather than circles, squares, or other geometric shapes.

The National Fire Protection Association (NFPA) has established response time benchmarks. The first-due emergency unit should arrive on scene within four minutes for 90% of the emergency incidents within a community. This is the same for both fire and EMS incidents. NFPA further identifies an eight-minute response time benchmark to 90% of emergency incidents for the remainder of the first alarm assignment for structure fires. They further establish an eight-minute response time for the second two EMS responders and for arrival of Advanced Life Support equipped units. As noted above, using 90% compliance to a four-minute response time standard is much different than using an "average" response time.

The fire station facilities should be sized for staffing 12 people minimum (to staff a fire engine), include community rooms, and generally be a minimum of two-acres in size.

Police Department

Listed below is a selection of police statistics for McKinney and comparable North Texas communities provided by the McKinney Police Department based on 2003 figures.

According to the McKinney Police Department, in 2003 McKinney provided a ratio of 1.3 officers per 1,000 residents. This figure is below the average of 1.72 officers provided by the Federal Bureau of Investigation and the formula range of 1.5 to 1.75 officers provided by the North Central Texas Council of Governments. Both the average response time and the average emergency response in McKinney compare favorably with neighboring communities, while the officer ratio is the lowest of the four communities listed. McKinney also has a smaller fleet size than its neighboring communities. As McKinney expands into the 116 square miles that make up its extraterritorial jurisdiction, issues regarding fleet size and remote fueling

stations will become a greater consideration to provide a level of service McKinney residents expect.

Table 13.1: Police L.O.S. Comparison

	McKinney	Frisco	Allen	Lewisville
Community Population	74,108	55,400	60,195	83,850
Calls for Service	38,607	38,140	31,819	58,666
Total Department Employees	120	100	110	185
Certified Officers	96	76	85	129
2002 Crime Rate (per 1,000 residents)	32.03	26.86	25.1	57.7
Average Response Time	5.6 minutes	7.78 minutes	7 minutes	23.1 minutes
Average Emergency Response	4.1 minutes	5.6 minutes	5 minutes	7.5 minutes
Average Case Load per Detective	35	45	150	34
Total Fleet Size	42	48	66	92
Total Square Feet in Building	17,000 SF	84,000 SF	40,000 SF	20,873 SF
Officer Ratio per 1,000 Residents	1.3	1.37	1.41	1.53
Average Cost per Citizen for PD Budget	$131	$125	$136	$156

Library System

The City of McKinney's last major study into its public library system was done in 2005 with the completion of the Library Long Range Plan 2005-2015. This study represented the City's continued vision for a quality library system. The library along with the consultant has created a new mission statement:

> *The McKinney Memorial Public Library enriches the lives of people in the community by providing open access to a wide variety of materials, services, and information in a responsive and friendly environment that promotes lifelong learning.*

To this end, it is recommended that the new study be utilized as a tool for the City of McKinney to maintain the desired level of service within the City's library system.

The 2005 Long Range Plan highlighted the following issues cited by the focus groups as requiring attention:

- Develop a system of community libraries in locations to serve local populations,
- Purchase more popular titles in demand by teens and adults as well as Books-on-Tape and Books-on-CD,
- Amass a collection which celebrates different cultures and histories, specifically African American literature, culture and history,
- Obtain additional materials serving all age groups in multiple languages notably Spanish,
- Create a more user friendly website, and a larger computer lab with more computers,
- Rework layout of the library to optimize location of age specific material and provide more programming for adults and senior citizens, and
- Employ a staff who better reflects the diversity of the community.

In 2002, the City opened the Memorial Public Library (Roy and Helen Hall Library), a 33,000 square foot library two blocks north of the town square to replace the former town square library facility. A significant increase in usage was seen with the opening of the Memorial Public Library. This library serves as a community library for McKinney east of US 75, with additional space provided for overall administrative and processing needs. When the Memorial Library opened in 2002, population estimates indicated a need to begin planning a second community library located west of US 75. In late 2009, the City opened the John and Judy Gay Library, located on Eldorado Parkway at Gabe Nesbitt Community Park. The Gay Library serves the needs of the McKinney community west of US 75.

The McKinney Memorial Public Library focuses on the following client groups:

1. Children from birth to 11 years of age
2. Young adults from 12 - 18 years of age
3. Adult users from 19 years of age and up
4. Senior citizens
5. Spanish speaking citizens
6. Technology "have-nots" or those citizens without home access to computers

The John and Judy Gay Library focuses on the following client groups:

1. Children from birth to 11 years of age
2. Young adults from 12 - 18 years of age
3. Adult users from 19 years of age and up

The library goals for each group will be to provide these groups with the materials they need for their information, education, and recreational needs. The library provides for these needs through the purchase of materials, the provision of materials through the Internet or from other libraries, and through programming specific to the client group (Story time for children, summer reading programs for young adults, a book club for adult users, AARP tax help for seniors, English-as-a-second language classes for Spanish speaking residents, and small hands-on computer classes for patrons without computer access).

The library system truly serves all citizens of McKinney. Serving the information "have-nots" by providing internet access, serving families with children through story time and summer reading, serving adults and seniors through programming and resources, serving our Spanish speaking population by offering English-as-a-second language courses. In order to continue to provide the high level of service, the library system will have to grow with the City.

For community libraries to serve McKinney residents as planned, these facilities should have good access; good visibility; be near a public park and high traffic areas; and be located within the center of population and employment area it was meant to serve, thereby not requiring users to drive more than four miles to the library site. Ideally, a community library should be within a two-mile radius of the users it was meant to serve. One community library should serve a population ranging from 27,000 to 50,000 people and provide meeting rooms for community needs. The library site should be square or rectangular in shape to suit the design of the library facility and the location should have a positive image within the community with zoning compatible with a library.

Each community library should have an inventory of reading and audio/visual materials to serve the community adequately. According to McKinney's library director, a normal library system should provide 1.5 volumes per capita. Currently, McKinney provides its residents 1.44 volumes per capita. This per capita level puts the library in a good position in terms of state funding where a minimum of 1.00 volumes per capita is required.

13.3 Amendments to the Plan

Amendments to the Plan will be necessary over the life of the Plan in order to adapt to unanticipated changes in the community and to recalibrate the Plan in order to better achieve the goals and objectives. These recalibrations of the Plan are necessary as implementation of the Plan is occurring. A typical time frame for Plan amendments to develop would be a minimum two-year from date of adoption.

Amendments to the Plan should occur only after a thorough review of that element, an evaluation of the goals and objectives related to that element, a clearly defined desired outcome, careful consideration of the implications of the potential changes, and the development of a mechanism for monitoring the change.

An amendment should not occur in order to justify approval of a specific development proposal or to appease a vocal group of citizens whose wishes do not conform to the broader goals and objectives of the city. Caution should be exercised if the primary purpose or benefit of the Plan is to reach a short term gain, as this may come at the price of achieving a long term goal. Amendments will most often occur as the result of monitoring of the Plan for effectiveness or in order to achieve a more clearly defined goal or objective which is the result of a work plan item.

In order to avoid reducing the effectiveness as a result of too numerous changes, the Plan should be updated at the appropriate time as defined in the following section.

13.4 Updating the Plan

McKinney's last Comprehensive Plan was updated in 1990 when the City had a population of 21,283 and the City was experiencing moderate annual growth rates. Since 2000, when McKinney's population was recorded at 54,369, the City has experienced three straight years of double-digit annual growth rates. In 2004, McKinney had an estimated population of 85,865 people and an annual growth rate of 11.6%.

It is recommended that McKinney's Comprehensive Plan be updated when the population reaches 150,000, an additional 7,000 acres have been developed or in seven years, whichever comes first. It is estimated that McKinney will need to conduct a Comprehensive Plan update in the year 2011 or 2012 (after the public release of Census 2010 data).

EXHIBIT N

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Definitions

Access Management: A combination of physical techniques and transportation policies used to control the flow of traffic between roads and the surrounding lands.

Alternative City Form Scenarios: The options or alternatives that were developed during the planning process to solicit input from the community/citizens regarding choices that McKinney could select. The choices are defined as city form alternatives for the more dense patterns of development.

Arterial Streets: The primary function is to provide for continuity and high traffic volume movement between major activity centers. Property access is a medium level priority with an emphasis on the limiting the location of driveways and groups of curb cuts that access this roadway type.

Average Daily Traffic Demand (ADT): The actual number or projected number of cars that pass a point in a 24-hour period.

Calibration and Validation: The process that is used to determine that the transportation model (or any model) is accurate. This process includes a great deal of testing and retesting with existing and forecasted sets of data.

Capital Improvement Plan (CIP): Public dollars earmarked for improvement and extension of infrastructure in the City.

City: The City of McKinney, Texas.

City Council: The governing body of the City of McKinney, Texas.

Collector Streets: The street's primary function is to collect and distribute traffic from local access streets to the arterial or major streets. Collector streets move moderate amounts of traffic volumes and provide limited access to adjacent properties.

McKinney National Airport (formerly known as Collin County Regional Airport): City of McKinney owned airport where aircraft can land and take off, equipped with hangars, facilities for refueling and repair and various accommodations for passengers. Located in the southeast quadrant of the city of McKinney.

Community Park: A community park serves multiple neighborhoods and provides many of the same facilities as neighborhood parks and may include additional fields and facilities.

Community Vision: The comprehensive aspects of the community's desires.

Comprehensive Plan: A document with graphics, text, and tables that forms policies governing the future development of the City and consisting of various components governing specific geographic areas and functions and services of the City. This document is established with the input of citizens, property owners, city staff, and elected / appointed city officials.

Comprehensive Plan Elements: The specific components of the comprehensive plan. These elements combine to create the overall plan. Includes items such as; land use, thoroughfares, parks and recreation, urban design, water, wastewater and other elements.

DART: Dallas Area Rapid Transit

Design Guidelines: Formal set of guidelines for use by developers. Guidelines address character and quality levels.

Design Standards: Formal set of standards for development which require certain development character and quality levels for the built and natural environment.

DU: A single dwelling unit for habitation.

Extraterritorial Jurisdiction (ETJ): An area of unincorporated County land immediately adjacent to an incorporated city. In Texas, the city may exercise certain development powers (subdivision regulations) but not zoning.

Floodplain: An area of land subject to inundation by a 100-year frequency flood, as shown on the floodplain map from the Federal Emergency Management Agency (FEMA).

Functional Classification System: A hierarchical system that recognizes that most vehicular travel involves movement through a network of roads. This road network can be divided into four general classifications for both existing and future roadways by the character of service these roadways provide, from a property access function at one end of the model to maximum mobility and movement function at the opposite end. The four classifications are local streets, collectors, arterials, and highways with local streets providing the greatest levels of property access and minimum levels of movement and highways providing the greatest levels of mobility and limited access to properties.

Future Land Use Plan: The graphic document that illustrates the generalized location of future land uses. This graphic document is supported by a complete section of text in the comprehensive plan that defines and highlights in detail the graphic document. This plan covers land in the city limits and land within the city's ETJ.

Future Land Use Plan Module: In McKinney, the future land use plan is divided into units of land called modules. Each module has a primary land use category that is the majority of the use. The primary land use establishes the desired relationship between other "supporting" land uses in each specific module.

Future Land Use Plan Module Diagram: In McKinney, this is the graphic document that illustrates the generalized location of future land use modules. This diagram communicates intended relationships with other modules and thoroughfares.

Gateway / Portal: An entry design at major and minor entrances to the city usually located along roadways. In McKinney, these city gateways are adjacent to major/regional thoroughfares.

Highways: Major roadways carrying large volumes of traffic usually on controlled access roadways. They are intended to convey vehicles for longer distances (city to city, regionally, and beyond). Highways are the jurisdiction of regional, State, and Federal agencies.

Industrial: Industrial uses include assembly, distribution, manufacturing, outdoor storage, warehousing and other similar uses.

Infill Development: Development of new homes, commercial and/or retail buildings, and public facilities on unused or underused lands in existing communities.

Joint Committee: Committee comprised of the all members of the McKinney City Council and the McKinney Planning and Zoning Commission that was established to advise and assist in the development of the City of McKinney's 2004 Comprehensive Plan.

Level of Service: Describes a range of operating conditions measured for a particular activity. For example, roads within the community are designed to meet specified goals regarding mobility, connectivity, and regional planning and land use development. Level of Service is a measure used to describe street standards necessary to address the role of the street. It also acts as an indicator of the relative level of traffic congestion on a roadway, ranked from "A" (best) to "F" (worst).

Light Rail Transit: A form of railroad that utilizes electrically powered rail cars, as opposed to self contained diesel engines.

Local Streets: Intended for low volume and low speed traffic movement, local streets provide access to residential lots and building sites.

Mixed Use: A compatible mix of residential and non-residential uses allowed on the same property, or within the same structure. Horizontally mixed-use developments may include any combination of office, retail and residential uses sited adjacent to one another within the same structure or within adjacent structures, on the same property. Vertically mixed use developments may include any combination of office, retail and residential uses sited above or below one another within the same structure.

Multi-Family Residential: Attached dwelling units designed to be occupied by three or more families living independently of one another, exclusive of boarding houses, hotels, or motels.

NCTCOG: North Central Texas Council of Governments

Neighborhood Retail: Local retail serves populations within a 2 mile radius and usually comprised of a major anchor tenant (such as a grocery store) and multiple inline lease spaces.

Office: Office uses include multi-tenant lease spaces and single occupant buildings that house professional businesses.

Overlay Zone (i.e. historic, parking): Designated area superimposed on one or more existing zoning districts; designed to protect or enhance an area's special qualities; governmental review of all developments, with the power to approve design according to standards contained in the ordinance or in a district plan or design guidelines.

Parks and Open Space: Areas reserved for active and/or passive recreation, provided either by the City or by private development.

Pedestrian Environment: Commercial and/or neighborhood environment designed to accommodate needs of pedestrians, as well as through and destination traffic, by incorporating select infrastructure improvements, design elements, and traffic management mechanisms. Methods to achieve include: separating traffic through use of parallel streets; limiting access points; linking parking lots; coordinating traffic signals; adding alternative transportation lanes; widening sidewalks; providing crosswalks; providing street lights and furniture; preventing "deadening" uses without building front; and incorporating transit stops.

Planned Development (PD): Planned associations of uses developed as integral land use units such as industrial parks or industrial districts, offices, commercial or service centers, shopping centers, residential developments of multiple or mixed housing, including attached single family dwellings or any appropriate combination of uses which may be planned, developed or operated or integral land use units either by a single owner or a combination of owners.

Planning Process: The process used to develop a document, plan or policy.

Planning and Zoning Commission: An appointed group of individuals that work together to review proposals and act on items for the city. Decisions by the commission move ahead to City Council.

Redevelopment: Restoration of existing buildings and properties blighted and/or which diminish the character and function of a neighborhood including adaptive use and historic preservation properties.

Regional Retail: Regional Retail serves a larger population radius - generally about 5 miles. These developments may have multiple anchor tenants along with many pad sites developed on the fringe of the center.

Retail: Retail uses include stores, restaurants, service businesses (banks, salons, etc.), and business-to-business companies.

Right-of-Way (ROW): Land provided for the purpose of vehicular access.

Single-Family Residential: A detached dwelling unit designed to be occupied by not more than one family.

Slope: The percentage of rise or fall of land in its natural undisturbed state.

Smart Growth: Growth management program which combines incentives, disincentives, and traditional planning techniques to promote a pattern of growth that achieves economic, environmental, and quality-of-life objectives.

Strategic Regional Arterial (SRA): A roadway with the operational characteristics between those of a freeway and those of other arterials. These roadways have characteristics associated with freeways, including grade separations at intersections and speeds limits of 50 miles-per-hour, but require less right-of-way. These roadways should not penetrate residential neighborhoods and are recommended in corridors characterized by high through traffic volumes or those which service land use of regional significance.

Street: Any dedicated public thoroughfare which affords the principal means of access to abutting property for automobiles.

Street Intersection: Any street which joins another street at an angel, whether or not it crosses the other.

Street Median: The non-pavement or pavement area between the moving traffic lanes of a street, typically the area for landscaping.

Technology: Businesses which specialize in the research, development, and/or production of technically advanced products (usually electronically or digitally based).

Thoroughfare, Major: Major Thoroughfares are the largest local roadways and car-

ry vehicles within and through the City. They are intended to funnel traffic from Minor Thoroughfares and Collector Streets to Highways, or to other Major Thoroughfares, and generally serve long trip lengths.

Thoroughfare, Minor: Minor Thoroughfares are slightly smaller than Major Thoroughfares and are intended to convey traffic from neighborhoods and Collector Streets to Major Thoroughfares, and generally serve moderate trip-lengths.

Traffic Impact Analysis (TIA): A process that helps the community understand the demands and impacts placed on the City's transportation network from development. There are two types of TIA. The first assesses the effects that a particular development's traffic will have on the transportation network resulting from a change in land use different from the future land use plan, while the second type assesses the specific site and roadway improvements needed resulting from a proposed development.

Traffic Survey Zone (TSZ): The land use analysis units of the travel demand forecasting model, TSZ's can vary in size from a city block in highly urbanized downtown areas to several miles in the rural periphery. The zone structure consist of combinations of either census blocks or block groups, while the land use structure within each zone maintains a homogeneity in terms of type, intensity, and location. The data is used to estimate the number of trips that a typical household or business employee will produce and attract from / to each TSZ.

Transportation System Management (TSM): Strategies used to help alleviate traffic congestion by increasing the efficiency, safety, or flow of traffic on the City's existing transportation facilities.

Travel Demand-Forecasting Model: A method for considering changes in future travel patterns based on the projected changes in employment and population in the comprehensive plan. The model requires subdividing the entire area into traffic survey zones and then allocating population and employment projections to these zones. The allocation produces traffic volume forecast on roadway segments.

Travel Demand Management (TDM): Strategies to help alleviate automobile traffic demand through ridesharing, peak-period spreading, enhanced transit and Para transit use, and parking management programs. Travel demand management strategies are complementary to transportation system management strategies.

TxDOT: Texas Department of Transportation

Utilities: Services provided by public and private agencies that support development. Utility services include water, sanitary sewer, storm drainage, electrical, natural gas, telephone and telecommunications, and other similar services.

Wetlands: Areas identified by the National Wetland Inventory (NWI) with a high potential for wetland habitats. The NWI is not an exact location but a guide to areas that may exhibit wetland conditions.

Work Plans: Commonly called action plans. These are the documents in which direction is established to act on an issue or topic. Work plans help to provide the solution to an issue.

Zoning Districts: The districts established in the Zoning Ordinance of the City.

Zoning District Map: An integral part of the Zoning Ordinance, the Zoning District Map serves as the official map upon which the boundaries of the various Zoning

EXHIBIT N

Districts are drawn.