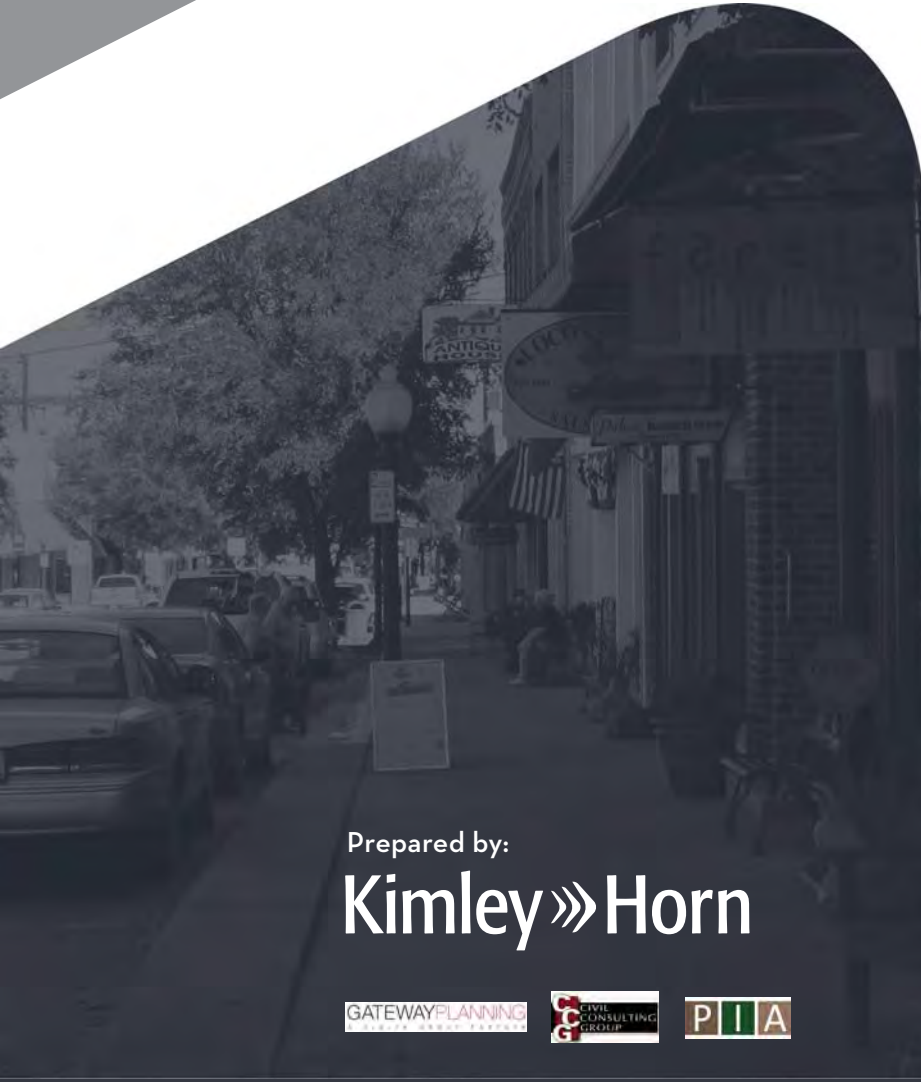




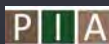
Travel Lane	Travel Lane
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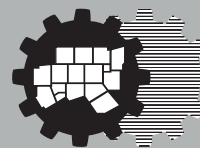
# State Highway 5 Corridor Context Sensitive Master Plan



Prepared by:  
**Kimley»»Horn**



Prepared for:



North Central Texas  
Council Of Governments





# State Highway 5 Corridor Context Sensitive Master Plan

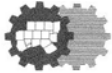
ADOPTED | June 17, 2014 (Resolution 2014-06-071)

Prepared for:

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and



North Central Texas Council Of Governments

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**GATEWAYPLANNING**  
Design • Implementation • Value Capture







# State Highway 5 Corridor Context Sensitive Master Plan

## Special thanks to:

**The successful development of the State Highway 5 Corridor Context Sensitive Transportation Master Plan reflects the collaborative effort of individuals who contributed their time and expertise for the purpose of transforming State Highway 5 into a functional urban thoroughfare that balances safety, mobility and character. The City of McKinney would like to express its appreciation to those individuals who provided time, input and assistance in the development of this plan, and provided feedback throughout the process.**

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## Executive Summary

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Imagine driving through McKinney on State Highway 5 (SH 5). As you travel from south to north, the roadway seamlessly transitions from an attractive suburban boulevard into a vibrant walkable urban street through the core of the city and then back into a suburban boulevard towards the northern city limits. The purpose of the State Highway 5 Corridor Context Sensitive Master Plan (SH 5 Master Plan) is to establish a framework that will achieve this seamless transition and inform a transformation of the entire length of SH 5 into a revitalized and multi-modal thoroughfare that provides a strong economic basis for development and improves mobility and safety for all users. To do this, the Master Plan takes guidance from the Institute of Transportation Engineer's Designing Walkable Urban Thoroughfare Report (which was approved as a recommended practice in 2010) and makes a series of recommendations that are intended to address both the public and private realm in order to renew the corridor and its adjoining properties.

Using the Town Center Master Plan (approved 2008) as the cornerstone, the vision for SH 5 builds out from the urban core of McKinney and recognizes its changing character both north and south of downtown. Through the use of character-defined context zones, a series of design parameters and conceptual design solutions reflect the preferred role of SH 5 through certain segments, as well as its interaction with adjacent land uses. In other words, the design parameters reflect a desired range of components for the design of the roadway and the design criteria reflect a preferred cross-section for a particular segment of the corridor.

For the SH 5 Corridor Context Sensitive Master Plan to have a positive impact on the growth and development of the corridor, an approach for implementation should be explored and developed so that the conceptual vision is able to translate into meaningful change over the short, mid and long term. Because much of the vision is centered on the functional design elements of the roadway itself (i.e. the reconstruction of SH 5), implementation will inherently focus on cost considerations, funding strategies, timing priorities, and agency coordination. However, equally as important is the recognition that land uses and land use patterns also play an integral part in shaping the role of SH 5 through its six-mile stretch in McKinney.



## Chapter 1: Introduction

### What is the State Highway 5 Corridor Context Sensitive Master Plan?

A decade ago, the North Central Texas Council of Governments' (NCTCOG) Regional Transportation Council (RTC) created the Sustainable Development Competitive Grant Funding Program to positively address existing transportation system capacity, rail access, air quality concerns, mixed land uses, and to encourage public/private partnerships that foster compact growth and development in/around historic downtowns, main streets, infill areas, and existing/future passenger rail stations. To support this effort, the RTC designated more than \$40 million for sustainable infrastructure projects and \$1 million for sustainable planning projects throughout the North Texas region through its 2009-2010 Call for Projects.

Given the bold and urbane vision already established for McKinney's Town Center as part the Town Center Study Initiative and approved Town Center Study Master Plan (2008), the City saw the NCTCOG program as a prime opportunity to secure outside funding that would support more nuanced planning studies, infrastructure improvements, and catalyst projects within the Town Center. As a result, the City of McKinney sought grant funding through the Sustainable Development Program in order to study ways to revitalize the State Highway 5 (SH 5) Corridor into a functional urban thoroughfare that fits its physical setting, preserves aesthetic, historic and environmental resources, while still maintaining mobility and safety throughout the length of the roadway.

In 2010, the RTC selected the State Highway 5 Corridor Context Sensitive Transportation Study (commonly known as the SH 5 Corridor Master Plan) for grant funding through the Sustainable Development Call for Projects.

The Study is intended to establish a meaningful and complementary relationship between the geometric design characteristics of SH 5, its functional cross-section, and the context/character of private development along the frontages of the corridor. Coordination with the Texas Department of Transportation (TxDOT) to ensure that SH 5 balances its regional mobility role with the City's redevelopment goals for the corridor has been paramount to the Study.

### What is the Study Area?

SH 5 was constructed in the 1950's and runs through the center of McKinney's downtown core. Historically, SH 5 was the main north-south highway through the City. However, with the construction and expansion of US 75 (North Central Expressway/Sam Johnson Highway) in the 1960's, it no longer serves its role as a major regional connection. Nonetheless, SH 5 still supports a large portion of local traffic as well as a concentration of retail, office, industrial, and residential uses, including many typically auto-centric sites such as gas stations, drive-in restaurants, repair shops, and used car lots throughout the downtown area.

While the boundaries of the Town Center Initiative represent an important segment of the SH 5 corridor (see **Exhibit 1**), the SH 5 Corridor Master Plan addresses the entire six-mile stretch of the corridor through the City limits of McKinney, generally extending from Frisco Road at the southern end of the corridor to Weston Road (FM 543) at the northern City limits.

### What is the Purpose of the Study?

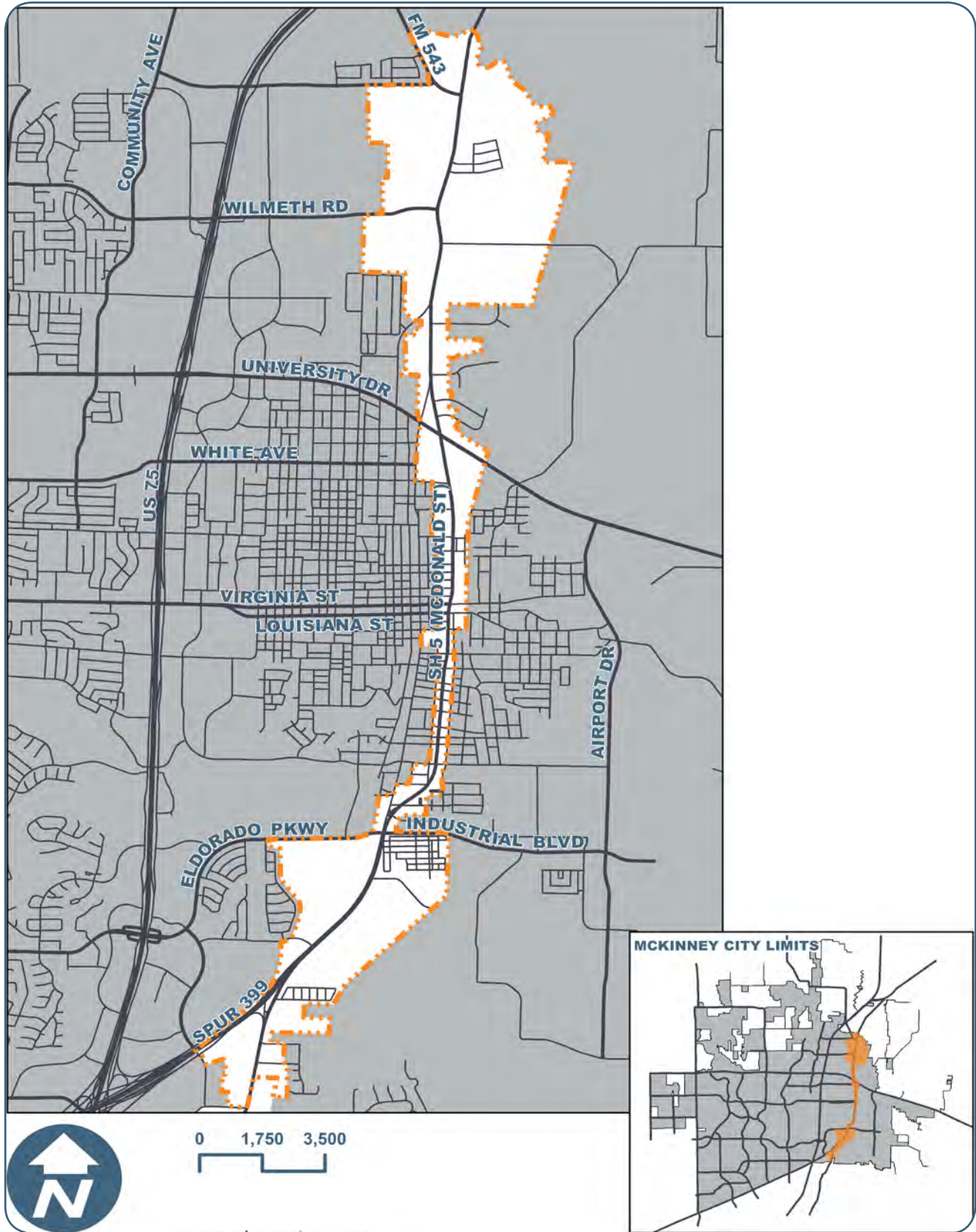
Imagine traveling through McKinney on SH 5. As you travel from south to north, it seamlessly transitions from an attractive suburban boulevard into a vibrant walkable urban street through the historic Town Center and then back into a suburban boulevard towards the northern city limits. The purpose of the SH 5 Corridor Study is to formulate a corridor master plan that helps to achieve this seamless transition and inform a transformation of the entire length of SH 5 into a revitalized and multi-modal thoroughfare that provides a strong economic basis for development and redevelopment, while improving mobility and safety for all users.

As such, the goal of this planning study is to create a master plan for SH 5 that will illustrate ways to improve access to adjacent properties and transportation modes, establish key roadway linkages, fuse the corridor into a seamless roadway both north and south of downtown, better integrate pedestrian-oriented design features, and enhance connectivity to US 75, future rail stops, and the McKinney National Airport.



# Chapter 1

Exhibit 1: Map of Study Area





The vision established in this context sensitive corridor master plan is intended to address both the public and private realm in order to renew and revitalize the corridor and its adjoining properties. The Study is set to lay the groundwork for incremental change that will, over the long-term, transform the corridor into a thriving thoroughfare that enhances the corridor aesthetics, balances mobility and safety, creates a sustainable framework that is a continuation of the Town Center vision established in 2008, and fulfills citywide goals and objectives with regard to mobility, safety, economic development and place making.



Existing mid-block pedestrian crosswalk along SH 5 just south of Davis Street

## What are the Sections of the Master Plan?

The SH 5 Corridor Context Sensitive Master Plan provides a comprehensive summary of the SH 5 Corridor Study, analysis and recommendations that, together, form the preferred concepts and vision for the corridor. In particular:

**Chapter 2** focuses on the preliminary analysis and assessment of existing physical characteristics of the corridor, including a background assessment of land uses and traffic characteristics within the study area. This provides a snapshot as to how the corridor currently functions from a vehicular mobility standpoint.



SH 5 at Elm Street looking south

In addition, this section of the report summarizes the applicability of local and national guidelines which provide a framework for the technical recommendations in the Master Plan. The traffic and land use analysis led to identification of key issues and opportunities along the corridor. Some of the key issues and opportunities include traffic congestion, right-of-way (ROW) constraints, and declining character of the predominantly auto-oriented land uses along the corridor.

**Chapter 3** focuses on the Public Involvement process and its effect on the Study. The process was designed to be inclusive, providing users, property owners, and other stakeholders with information about the project as well as opportunities to be actively engaged and provide feedback and direction on the ultimate conceptual vision. This was accomplished using public workshops and forums, as well as additional outreach meetings with various key stakeholders at critical times during the process. This Public Involvement approach helped to capture informed consent from stakeholders and build sustained relationships that will help carry the project through to implementation.



Engineering consultant, Trevor Castilla chats with a stakeholder at a 2013 SH 5 Corridor Study public event

**Chapter 4** outlines the conceptual plan and details the technical aspects of the vision. The conceptual plan includes the design parameters that recognize the current minimum standards versus the preferred potential design alternatives for the corridor. Recognized design parameters included bicycle and pedestrian accommodations, curb radii, and parking. The design parameters were then adapted and transformed into preliminary cross-sections for the ultimate roadway conceptual design that serve to balance all users of the facility.

In addition to traditional vehicle mobility, the cross-sections aim to illustrate facilities for other users like pedestrians, cyclists and transit.

# Chapter 1

**Chapter 5** focuses on the interagency coordination between the City of McKinney, TxDOT, and NCTCOG. Because SH 5 is a regional, state-maintained roadway, interagency coordination was an important component of the project and critical to determining the reality and functionality of the ultimate Master Plan. This section discusses the process used to coordinate with all of these agencies; including the establishment of a Project Review Committee and the execution of a Memorandum of Understanding signed by all three parties.

**Chapter 6** focuses on potential implementation strategies for realizing the vision along SH 5 and concludes with a discussion of some of the next steps required to revitalize the corridor. Specifically, within the public ROW, the Study and Master Plan are anticipated to lead directly into formal engineering for the highest priority segment of roadway generally between Eldorado Parkway and US Highway 380. Outside of the public ROW, the Study and Master Plan are set to inform possible amendments to the City's development regulations along the corridor. The end goal is to maximize private investment along the corridor through the synchronization and leveraging of public investment in the redesign/reconstruction of the roadway.



*Pedestrians walking in the shoulder on SH 5 north of Powerhouse Street*

## Chapter 2: Preliminary Analysis

Before looking to the future of the State Highway 5 (SH 5) Corridor, it is important to understand how the roadway functions today. The information gathered as part of the preliminary analysis provides a foundation for understanding the existing traffic and land use conditions as well as the function, dynamics, and character of the study area. This foundation helps provide guidance in identifying future needs and opportunities along the length of the roadway.

In general, SH 5 can be characterized as a major commercial corridor that carries high volumes of traffic. South of US 380, SH 5 is primarily a 4-lane concrete arterial that includes a shared center turn lane. North of US 380, the roadway narrows to 2 undivided lanes and is primarily asphalt construction. Although there are some locations along the corridor where sidewalks are present, these locations are fragmented and, overall, provide little to no real benefit to the pedestrian environment given the severe lack of connectivity. There are no marked bike facilities or pedestrian trails existing along the corridor.



SH 5 at US 380

### Population and Traffic Growth

The City's 2012-2013 Land Use Assumptions report (approved 2013) indicates that the general area along SH 5 is expected to see a projected growth of roughly 15 percent over the next 10 years. The majority of this growth is anticipated to occur north of US 380 (University Drive). Undoubtedly, this will impact travel on SH 5; however, other regional corridors will also see some impacts.



SH 5 at Wilmeth Road

Existing daily traffic volumes on SH 5 vary from 7,600 (just south of Weston Road) to 22,000 (just south of Virginia Street). As shown in **Table 1**, historic growth patterns show a reduction in volume in 2008 which corresponds to the downturn in the economy. However, there has been a gradual uptick in volume since 2008.

# Chapter 2

**Table 1: Historic Average Annual Traffic Counts on SH 5**

Year	South of Spur 399	North of Eldorado Parkway	South of Virginia Street	South of US 380	North of US 380	South of Weston Road (FM 543)
2007	8,600	21,000	25,000	20,000	13,200	8,000
2008	7,100	16,700	19,700	15,700	12,000	6,900
2009	8,400	17,200	19,700	15,300	11,000	7,400
2010	10,000	18,700	21,000	17,400	12,000	8,200
2011	9,700	19,700	21,000	17,000	11,400	7,400
2012	8,500	19,500	22,000	17,400	11,200	7,600

Source: Texas Department of Transportation, Average Daily Traffic Counts

Traffic volumes along SH 5 can be expected to increase with the continued growth in population and regional traffic patterns. The potential outcomes of TxDOT’s recently initiated US 75 Corridor Study will also provide valuable insight as to the role and relationship of SH 5 south of McKinney, as well as any possible overflow traffic that may be expected given its parallel location to US 75.

In 2013, the City also collected traffic counts along the SH 5 corridor. They were generally higher than the TxDOT historic counts. With current construction and widening of US 75 and McKinney’s active downtown infrastructure improvement projects, some possible traffic is likely diverting to SH 5 attributing to the higher local counts. For the long term, alternative routes to SH 5 should be explored to accommodate any substantial additional population and traffic growth in the City and region. Due to ROW constraints, continued widening of SH 5 to handle future regional traffic growth is not feasible.

## Local and Regional Planning Efforts

There are a number of existing local plans, studies and projects that help to inform the future of the SH 5 Corridor through McKinney. Below is a summary of these previous planning and engineering studies based on their relevance to the SH 5 Corridor.

## McKinney Comprehensive Plan

The McKinney Comprehensive Plan is the guiding document for decision makers, City staff, and elected and appointed officials as they consider issues relating to land use, transportation, urban design, parks and recreation, and infrastructure. Therefore, it serves as an important input for the SH 5 Corridor Context Sensitive Transportation Study and Master Plan. The City’s currently adopted Comprehensive Plan has several policy goals, objectives and recommendations that relate to SH 5. Specifically, the following is clearly identified in the Comprehensive Plan:

**Goal H:** Attractive Urban Design Elements (gateways, corridor treatments, edges, and view sheds). A sub-goal to this is Goal H4: SH 5 as an attractive north-south entry into central McKinney.

**Goal J:** A Managed Traffic Flow and Thoroughfare System

## Future Land Use Plan

Within the Comprehensive Plan, preferred future land use designations are illustrated in the Future Land Use Plan (**Exhibit 2:** McKinney’s Future Land Use Plan), corresponding Future Land Use Plan Module Diagram (**Exhibit 3:** McKinney’s Future Land Use Plan Module Diagram), and related text. Along SH 5, preferred future land use designations vary from “suburban mix” at the south end of the corridor to “regional commercial” at the northern end of the corridor. This variation in future anticipated land uses indicates a clear need to design and engineer SH 5 so that it can appropriately accommodate changes in character.

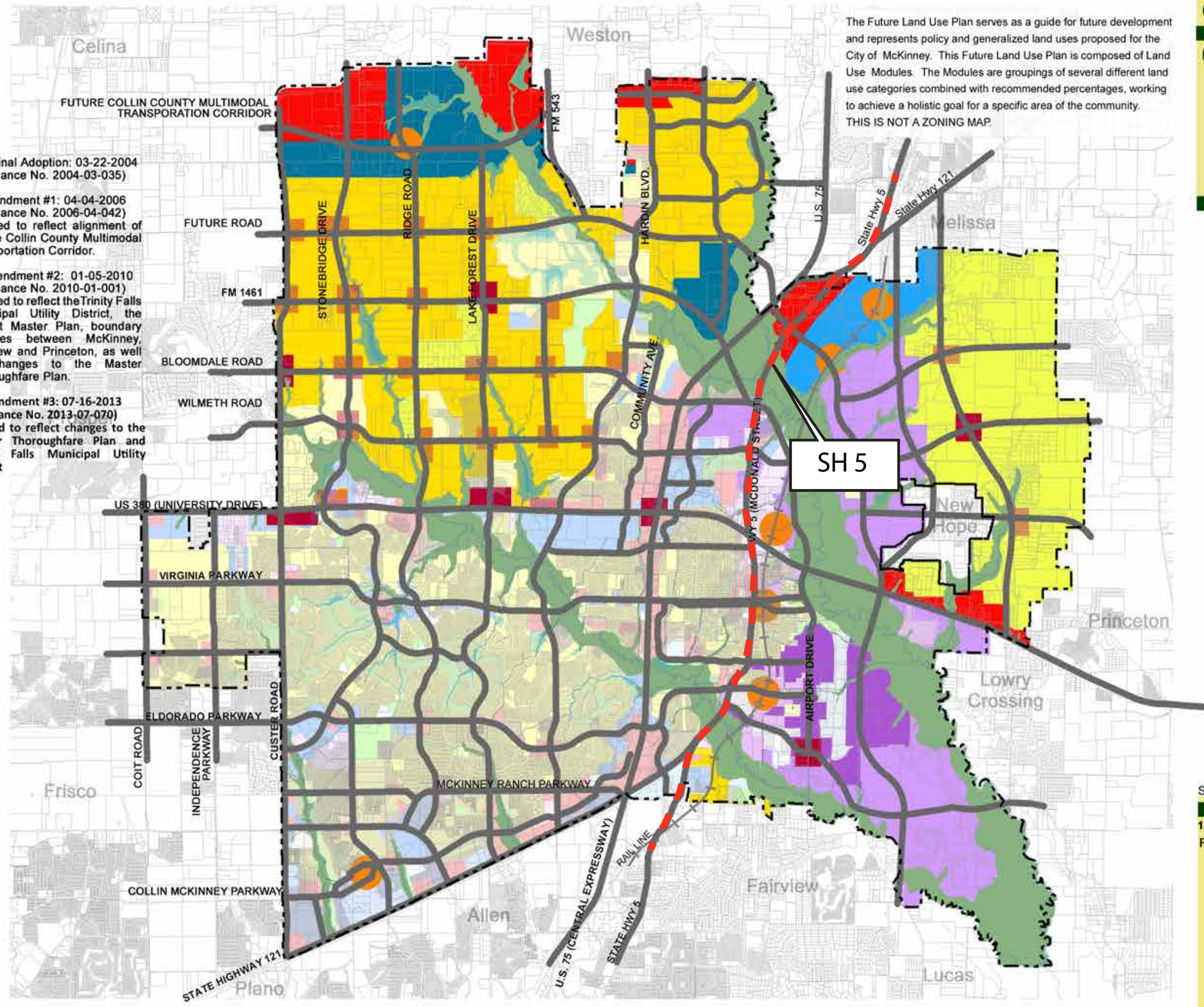
The Land Use section of the Comprehensive Plan also provides the team with the City’s general vision for future development along the SH 5 corridor. Along with community input and changing market conditions, the general vision for SH 5 that is illustrated in the Comprehensive Plan provides the basis for any recommended changes to street cross-sections and/or land use and context considerations.



# CITY OF MCKINNEY COMPREHENSIVE PLAN FUTURE LAND USE PLAN

The Future Land Use Plan serves as a guide for future development and represents policy and generalized land uses proposed for the City of McKinney. This Future Land Use Plan is composed of Land Use Modules. The Modules are groupings of several different land use categories combined with recommended percentages, working to achieve a holistic goal for a specific area of the community. THIS IS NOT A ZONING MAP.

- \* 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.
- \* 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 changes to the Master Thoroughfare Plan and Trinity Falls Municipal Utility District



- LEGEND**
- Existing and Future Thoroughfares
  - Extraterritorial Jurisdiction
  - Rail
  - Floodplain
- FUTURE LAND USE MODULES**
- Estate Mix
  - Suburban Mix
  - Town Center
  - Transit Village (1/4 mile radius)
  - Community Village
  - Regional Commercial
  - Regional Employment Center
  - Regional Employment
  - Office Park
  - Industrial
  - Airport Industrial
  - Potential Commercial within the Residential Module (Based on Locational Criteria)
- ANTICIPATED LAND USES / ZONING**
- Floodplain
  - Golf Course
  - Park / 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

Source: City of McKinney GIS Department Data

16 July 2013  
Figure 7.4

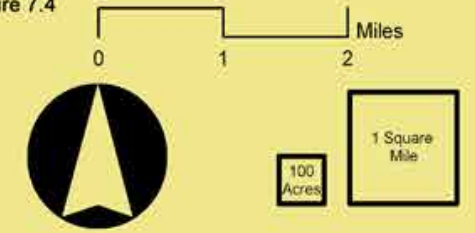




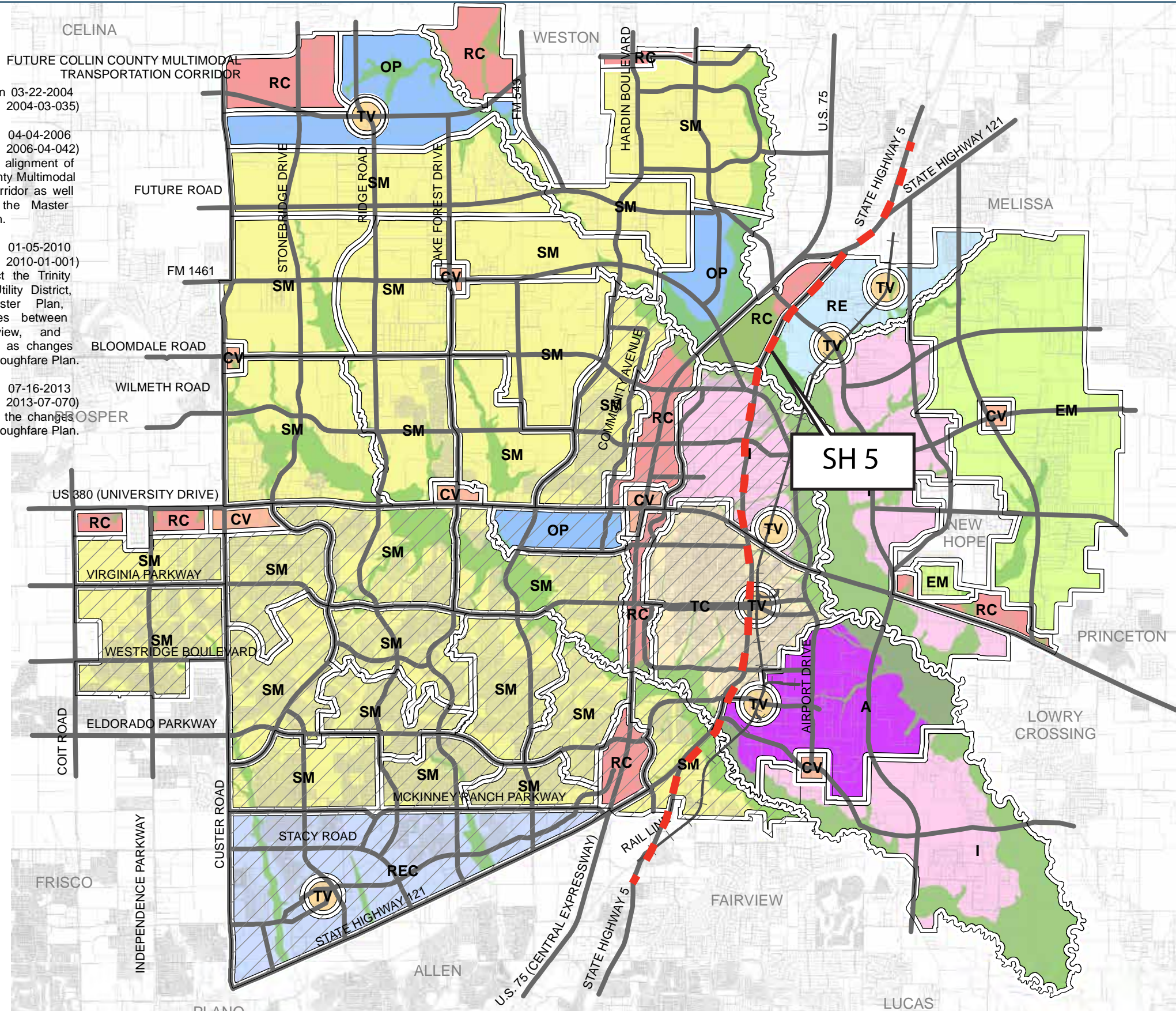
Exhibit 3: McKinney's Future Land Use Plan Module Diagram

\* 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.

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\* Amendment #3 07-16-2013  
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**CITY OF MCKINNEY  
COMPREHENSIVE PLAN**

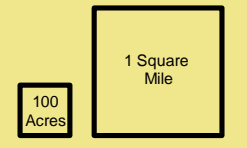
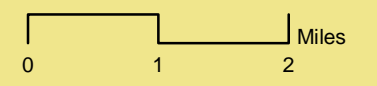
**FUTURE LAND USE PLAN  
MODULE DIAGRAM**

**Legend**

- +— Rail Line
  - Existing and Future Thoroughfares
  - Floodplain
- FUTURE LAND USE MODULES**
- EM Estate Mix
  - SM Suburban Mix
  - TC Town Center
  - TV Transit Village
  - CV Community Village
  - RC Regional Commercial
  - REC Regional Employment Center
  - RE Regional Employment
  - OP Office Park
  - I Industrial
  - A Airport Industrial
- MODULE TYPES**
- ▨ Existing Modules
  - Future Modules

Source: City of McKinney GIS Department Data

16 July 2013  
FIGURE 7.6



A summary of the preferred future land uses, as illustrated in the Future Land Use Plan Module Diagram, is included in **Table 2**:

**Table 2: Preferred Land Uses Along SH 5**

SH 5 Segment	Future Land Use Module	Summary
South of Frisco Road	N/A	Not in the City limits or the City's Extraterritorial Jurisdiction (ETJ).
Frisco Road to Eldorado Parkway	Suburban Mix	Predominantly single-family allowing for medium density residential as well as neighborhood office and retail that support the residential component.
Eldorado Parkway to US 380 (University Drive)	Town Center, including Transit Village	Mix of residential housing types with both neighborhood and regional office and commercial uses as well as significant amounts of community facilities. Transit village component anticipates development based around a transit center, including a mix of medium density residential, office and retail uses.
US 380 (University Drive) to FM 543 (Weston Road)	Industrial	Industrial and manufacturing with supporting office and retail uses.
FM 543 (Weston Road) to East Fork Trinity River	Regional Commercial (east) / Regional Employment (west)	Regional commercial anticipates large scale commercial development providing for retail and service uses on a regional level. Regional employment anticipates large scale office and potentially light industrial/research development.

### Master Thoroughfare Plan

Also included in the Comprehensive Plan is the Master Thoroughfare Plan, which classifies SH 5 as a Major Arterial (6 lanes). However, the Comprehensive Plan also recognizes that SH 5 has varying characteristics such that it functions as a principal arterial in some segments and a minor arterial in others. In addition, the Town Center Master Plan and Illustrative Vision (approved in 2008) emphasize the importance of better connecting the development context of the east and west sides of SH 5 through the Town Center. This opportunity would be lost if the street were widened to six lanes. As a result, there is general community and stakeholder buy-in to retaining the current four-lane capacity through the Town Center. Widening of the rural two-lane sections north and south of the downtown area would be limited to four lanes as well.

### Town Center Study Initiative (2008)

In March 2008, the Town Center Study Phase 1 Report and Illustrative Master Plan were approved and adopted by reference into the Comprehensive Plan to serve as a meaningful policy guide for city officials, staff, property owners, and private developers when considering development decisions in the Town Center. **Appendix 5** provides the Town Center Study Illustrative Vision exhibit.

Some of the key recommendations in the Town Center Master Plan and Illustrative Vision as it pertains to SH 5 are:

- Tame traffic along SH 5 and improve visual quality of the roadway corridor.
- Better connect east and west of the Town Center across SH 5.
- Narrow lanes to encourage traffic calming and provide space for landscaping/medians.
- Maintain roadway capacity (current 4 Lanes) for SH 5 and ensure adequate network capacity in the existing street grid (with the Airport Road addition) for overall regional connectivity.



## Chapter 2



*Town Center Initiative Area Map*

- Outside of the Town Center core area (north of Lamar and south of Standifer), SH 5 may remain more auto-oriented with potential for incremental redevelopment.
  - Provide access from side or back streets.
  - Provide cross access easements to limit driveway cuts on SH 5.
- Better relate the development standards to street frontage. NOTE: This has already been addressed through the downtown core generally between Standifer Street and Watt Street as part of the McKinney Town Center form-based development code.
- Corridor needs to be attractive for more neighborhood servicing businesses.



The SH 5 Corridor Study and Master Plan builds on the momentum seen as part of the Town Center Study Initiative and provides additional guidance on future development beyond the downtown core boundary. In addition, this SH 5 Corridor Master Plan also identifies key development opportunity sites for potential catalytic projects that can take advantage of a new corridor cross-section and context.



*Town Center Initiative Report Cover*

## On-Street Bicycle Transportation Master Plan (2012)

The On-Street Bicycle Transportation Master Plan was adopted in 2012 and provides the City of McKinney with a policy framework needed for the implementation of networks, facilities, projects, and programs related to a safe and successful on-street bicycle network. The On-Street Bicycle Transportation Master Plan does not make a specific recommendation for SH 5, rather it makes reference to the SH 5 Corridor Study and suggests that this Corridor Study is the appropriate venue for recommendations along SH 5. Additionally, the concept of a shared lane facility along the nearby parallel route of Tennessee Street through the Town Center is a reflection of the marriage between the On-Street Bicycle Transportation Master Plan and the SH 5 Corridor Study.



*Recent Virginia Street Improvements*

## Hike and Bike Trails Master Plan (2012)

Trails are part of all parks and add connectivity to the parks system in McKinney as a whole. 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. As it relates to the SH 5 Corridor, the Hike and Bike Trails Master Plan shows two future trail crossings of SH 5 through the Wilson Creek floodplain south of Eldorado Parkway and through the East Trinity River floodplain north of US 380 (University Drive).

## Planned Roadway Projects

### FM 546

FM 546 is a proposed ultimate six-lane divided roadway that will connect SH 5 to Airport Drive south of the Eldorado Parkway/Industrial Boulevard intersection. It will provide an east-west bypass and an alternative to using Industrial Boulevard (currently designated as FM 546). The new FM 546 alignment will intersect with SH 5 at the existing Old Mill Road intersection. This project currently has an approved TxDOT schematic and is funded for design. However, construction funding has not yet been allocated.

### Virginia Street

Funded through the City's (2002 and 2006) bond program, improvements to Virginia Street between Tennessee Street and SH 5 were completed in early 2014 when the City implemented the final block of the one-way downtown couplet. The project improves pedestrian accommodations and adds a traffic signal at the intersection of SH 5 and Virginia Street.

### Louisiana Street

Improvements to Louisiana Street between SH 5 and Throckmorton Street are currently under design. This project will improve pedestrian amenities, landscaping, street lighting, as well as necessary paving and utility improvements along Louisiana Street east of SH 5.

## Chapter 2

### Designing Walkable Urban Thoroughfares Report

The *Designing Walkable Urban Thoroughfares* Report was approved in 2010 as a recommended practice of the Institute of Transportation Engineers (ITE). Its purpose is to help facilitate the recognition that urban streets support multiple functions beyond just mobility. With the recent TxDOT recognition of SH 5 as a viable and important destination, and with the approved Town Center Master Plan in place, the City of McKinney saw a unique opportunity to use the *Designing Walkable Urban Thoroughfares* Report as an important resource for the SH 5 Corridor Study as a means by which to improve the future design, engineering and ultimate function of SH 5.

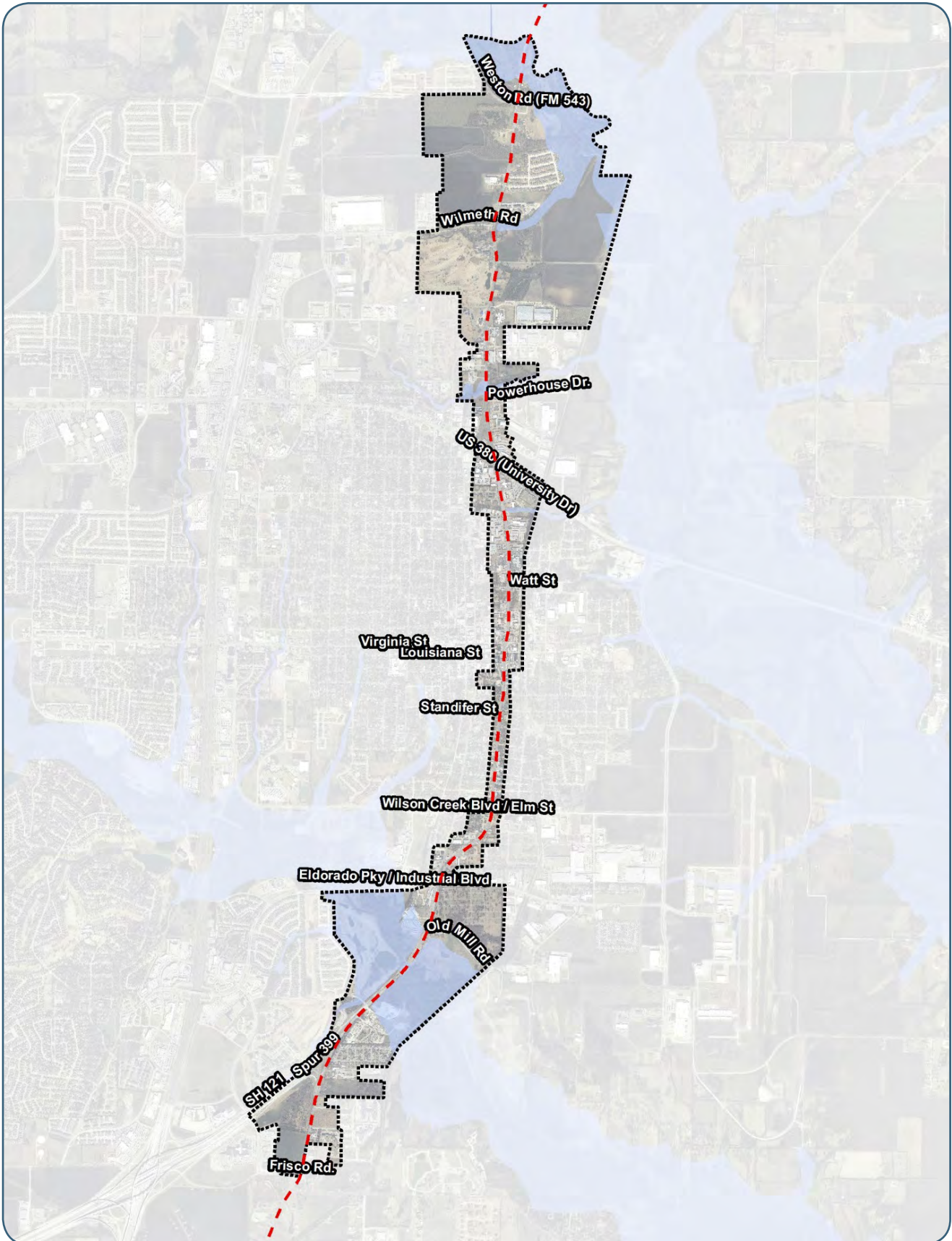
Using the *Designing Walkable Urban Thoroughfares* Report, the Project Review Committee and the consultant team considered existing and future land use conditions, current development plans, and predominant land use patterns to identify general context zones along the SH 5 corridor (see **Exhibit 4**). These context zones are derived from the *Designing Walkable Urban Thoroughfares* Report and help frame the design considerations along segments of SH 5. **Table 3** provides a summary of the context zone characteristics from the ITE report.

**Table 3: Context Zone Characteristics**

Context Zone	Distinguishing Characteristics	General Character
C-2 Rural	Agricultural with scattered development	Agricultural activity and natural features
C-3 Suburban	Primarily single-family residential with walkable development pattern and pedestrian facilities, dominant landscape character. Includes scattered commercial uses that support the residential uses, and connected in walkable fashion	Detached buildings with landscaped yards, normally adjacent to C-4 zone. Commercial uses may consist of neighborhood or community shopping centers, service or office uses with side or rear parking
C-4 General Urban	Mix of housing types including attached units, with a range of commercial and civic activity at the neighborhood and community scale	Predominantly detached buildings, balance between landscape and buildings, presence of pedestrians
C-5 Urban Center	Attached housing types such as townhouses and apartments mixed with retail, workplace and civic activities at the community or sub-regional scale	Predominantly attached buildings, landscaping within the public ROW, substantial pedestrian activity
C-6 Urban Core	Highest-intensity areas in sub-region or region, with high-density residential and workplace uses, entertainment, civic and cultural uses	Attached buildings forming sense of enclosure and continuous street wall, landscaping within the public ROW, highest pedestrian and transit activity

(Excerpted from the ITE *Designing Walkable Urban Thoroughfares* Report Table 4.1)

Exhibit 4: SH 5 Corridor





# Chapter 2

## Existing Conditions and Opportunities

A site visit was performed on March 5, 2013 with the Project Review Committee and the consultant team. This was a half-day long field visit that included a driving tour of the corridor. During the site visit, the Project Review Committee and consultant team discussed the following issues:

- Adjoining land uses and development context, including opportunities for redevelopment, if any
- Roadway cross-section and traffic conditions
- Pedestrian and bicycle accommodations
- Intersection operations

Based on the data collected, background assessment and field observations, the following issues and opportunities were identified along the corridor and helped to identify natural transitions based on context, catalyst sites, targeted intersection improvements, and possible gateways. An "Issues and Opportunities Map" was created for the entire corridor and is provided in **Appendix 1**.

### South of Frisco Road



SH 5 at Country Club Road

This area is technically outside of the study area, but is important to understand because of how SH 5 transitions from the Town of Fairview into the City of McKinney. Observations include the following:

- **Existing:**
  - Existing land uses are generally low intensity residential uses and vacant/undeveloped land.
  - The current cross-section is a 2-lane undivided rural roadway with no curb and gutter, and no sidewalks.
- **Planned:**
  - Per the Town of Fairview Master Thoroughfare Plan, SH 5 is envisioned to be a 4-lane divided roadway. Adjacent land uses, per the Town of Fairview Future Land Use Plan, include a mix of commercial and professional office.

- **Opportunities:**

- The appropriate context zone is C-3 Suburban.
- The recommended cross-section is a 3-lane or 4-lane divided section with curb and gutter.
- A 12' wide multi-use trail along the east side of the roadway and a 5' sidewalk on the west side could accommodate pedestrians.
- Frisco Road (to the west) and Country Club Road (to the east) are slightly offset as they intersect with SH 5. If possible, they should be realigned to meet as one intersection at SH 5.
- Coordinate with the Town of Fairview on the extension of Fairview Parkway, the 4-lane divided roadway that runs parallel to SH 5.

### Frisco Road to Spur 399

This is the gateway into the City and provides access to SH 121 via Spur 399.



SH 5 northbound approaching Spur 399 intersection

- **Existing:**

- Existing land uses along this segment are predominately undeveloped with agricultural uses to the west, and a new planned senior living center to the east.
- The current cross-section is a 2-lane undivided rural section with no curb and gutter, and no sidewalks.
- The property at the southwest corner of Spur 399 and SH 5 has poor access to SH 121/Spur 399 going southwest.

- **Planned:**

- Per the Future Land Use Plan Module Diagram, the preferred future land use in this area is "Suburban Mix," which includes a mix of single-family residential, office, and commercial uses.
- Existing zoning along this eastern segment of SH 5 is predominately for Planned Development Districts, which include senior multi-family components as well as office, retail, and residential components.
- Existing zoning at the northwest corner of Frisco Road and SH 5 calls for a mixed use development with retail and office uses along the frontage of SH 121 and urban residential components that are vertically integrated with ground floor non-residential uses along the frontage of SH 5.

■ **Opportunities:**

- The appropriate Context Zone is C-3 Suburban.
- The recommended cross-section is a 3-lane or 4-lane divided section with curb and gutter.
- A 12' wide shared use path along the east side of the roadway and a 5' wide sidewalk along west side of the roadway could accommodate pedestrians.
- The existing geometry of the intersection at SH 5 and Spur 399 is antiquated and rural in nature. Various alternatives could be evaluated to reconfigure the intersection to provide open space, a possible vertical element to create a gateway feature, and a multi-use trail going through it.
- Given the segment's close proximity to SH 121 and US 75 via Spur 399, the future development context for this segment is generally auto-oriented and suburban in nature.
- Streetscape priorities should be the development of aesthetic improvements such as landscaping (i.e., street trees, median trees, pavers, and street screens along surface parking lots).

■ **Planned:**

- Per the Future Land Use Plan Module Diagram, the preferred future land use in this area is "Suburban Mix," which includes a mix of single-family residential, office, and commercial uses.

■ **Opportunities:**

- The appropriate Context Zone is C-3 Suburban.
- The recommended cross-section is a 6-lane divided section. There is a potential "funnel" effect that will occur if additional capacity along SH 5 is not provided between Spur 399 and the future FM 546 (8 lanes to 4 lanes); as such, the recommended cross-section on SH 5 between Spur 399 and future FM 546 is 6 lanes (or 4 lanes with 2 auxiliary lanes).
- A 12' wide shared use path along the east side of the roadway and a 5' wide sidewalk along west side of the roadway could accommodate pedestrians.
- The future development context for this segment is generally suburban, single-use in nature with landscaping to improve the aesthetics.
- There is potential for long-term redevelopment of existing industrial sites.
- Streetscape priorities should be the development of aesthetic improvements through landscaping (i.e., street trees, median trees, pavers, and street screens along surface parking lots).
- A connection under the existing SH 5 bridge that crosses Wilson Creek could create a possible hike-and-bike trail link to the greenway along the Golf Club of McKinney and Wilson Creek.

## Spur 399 to Old Mill Road



SH 5 northbound approaching Pecan Grove Cemetery

This area acts as a transition from the high speed, limited access function of Spur 399 to the more urbanized area that emerges just north of Stewart Road. This segment includes the planned intersection at Old Mill Road for the new alignment of FM 546.

■ **Existing:**

- Existing land uses are a mix of older industrial sites, storage complexes, and a mobile home park (fairly screened from the roadway by existing vegetation) to the east, with newer residential homes and a golf course to the west.
- The current cross-section is 4-lane divided section.

## Chapter 2

### Old Mill Road to Eldorado Parkway/ Industrial Boulevard

This segment includes the intersection of SH 5 and Eldorado Parkway/Industrial Boulevard.



*Intersection with Eldorado Parkway looking south*

- **Existing:**
  - Existing land uses include a small mix of self-storage buildings and a gas station to the west of SH 5 and the historic Pecan Grove cemetery located at the southeast corner of SH 5 and Eldorado Parkway/Industrial Boulevard.
  - The current cross-section is a 4-lane divided section.
- **Planned:**
  - Per the Future Land Use Plan Module Diagram, the preferred future land use to the west is “Town Center,” which includes a mix of residential housing types and neighborhood and regional office and commercial uses. To the east, the preferred future land use type is “Airport Industrial,” which includes a range of supporting retail and service uses.
- **Opportunities:**
  - The appropriate Context Zone is C-4 General Urban.
  - The recommended cross-section is a 4-lane divided section with curb and gutter.
  - A 12’ wide shared use path along the east side of the roadway and a 5’ wide sidewalk along west side of the roadway could accommodate pedestrians.
  - The future development context for this segment is generally suburban, single-use in nature with landscaping to improve the aesthetics.
  - There is potential for long-term redevelopment of existing industrial sites.
  - Streetscape priorities should be the development of aesthetic improvements through landscaping (i.e., street trees, median trees, pavers, and street screens along surface parking lots), including the possible screening of gas stations.

### Eldorado Parkway to Wilson Creek Parkway/Elm Street

This segment includes the historic Cotton Mill complex, which is identified as an opportunity site. It also includes the intersection of SH 5 and Tennessee Street, which is also seen as an opportunity site.



*Intersection with South Tennessee Street looking north*

- **Existing:**
  - Existing land uses include a mix of older auto-oriented commercial sites along the western edge of the roadway. Along the east, existing land uses include older residential neighborhoods and the Cotton Mill complex, which have limited frontage along SH 5.
  - The current cross-section is a 4-lane divided section with discontinuous sidewalks.
- **Planned:**
  - Per the Future Land Use Plan Module Diagram, the preferred future land use in this area is “Town Center” which includes a mix of office, residential, and destination and neighborhood commercial uses in a pedestrian-oriented context.
  - Plans for redevelopment of the Cotton Mill complex into an “entrepreneurial village” are envisioned by the city.



■ **Opportunities:**

- The appropriate Context Zone is C-4 General Urban.
- The recommended cross-section is a 4-lane divided section with curb and gutter.
- Wide, buffered sidewalks on both sides of SH 5 could accommodate pedestrian activity.
- The roadway geometry and intersection with Tennessee Street should be realigned for improved safety and potential redevelopment around the intersection. There is a possible “gateway” and/or redevelopment opportunity with a reconfigured intersection of Tennessee Street and SH 5.
- There is potential for long-term redevelopment or rehabilitation of older auto-oriented commercial sites to create a mix of commercial and office uses with some light industrial/flex office uses.
- Streetscape priorities should be the development of aesthetic improvements through landscaping, gateway feature, and street trees.

## Elm Street/Wilson Creek Parkway to Standifer Street

This segment is the major transition into the downtown core of McKinney. It includes historic residential properties a block east and west of SH 5.



Person jaywalking across SH 5

■ **Existing:**

- Existing land uses include a mix of older auto-oriented commercial sites along both sides of the street with residential neighborhoods immediately behind commercial uses.
- Existing land uses also include a sporadic mix of older residential properties with rear yards facing SH 5.
- The current cross-section is a 5-lane undivided section with a continuous 2-way left turn lane. There are discontinuous sidewalks along this section and some blocks have continuous curb cuts with no designated sidewalks.

■ **Planned:**

- Per the Future Land Use Plan Module Diagram, the preferred future land use in this area is “Town Center,” which includes a mix of office, residential, destination and neighborhood commercial uses in a pedestrian-oriented context.

■ **Opportunities:**

- The appropriate Context Zone is C-4 General Urban.
- The recommended cross-section is a 4-lane divided section, including the consolidation of driveways, raised medians to manage access, and the possibility of on-street parking where appropriate.
- Wide buffered sidewalks on both sides of SH 5 could accommodate pedestrian activity. A bike route could run parallel to SH 5 in this area along Tennessee Street.
- There is potential for long-term redevelopment or rehabilitation of older auto-oriented commercial sites to create a mix of commercial, office, and small scale urban uses to serve as transitions to existing single-family residential.
- A combination of allowance for on-street parking and reducing parking requirements for commercial uses should be explored to accommodate future parking needs.
- Service uses should have access along east-west streets to minimize visual impact along SH 5 and conflicts with adjoining neighborhoods.
- Streetscape priorities – continuous sidewalks, street trees, screening of surface parking along the roadway; consolidation of continuous driveway frontages.

## Chapter 2

### Standifer Street to Watt Street

This segment includes the downtown core of McKinney, where the McKinney Town Center (MTC) form-based code was recently adopted. The code covers both sides of SH 5.



*Mid-block crosswalk south of Davis Street*

#### ■ Existing:

- Existing land uses include a mix of older commercial (office, retail, industrial) uses. There are several single-family structures that were converted to commercial uses, especially south of the downtown. North of Louisiana Street, there are several commercial strip centers to the west with parking along SH 5 and older, underutilized or vacant industrial uses to the east.
- The current cross-section is a 5-lane undivided section that includes a continuous 2-way left turn lane. There are discontinuous narrow sidewalks along this segment and some blocks have continuous curb cuts with no designated sidewalks.
- Improvements just completed include the construction at the Virginia Street and Louisiana Street intersections with SH 5 to provide a one-way east-west couplet and traffic signals at each intersection.

#### ■ Planned:

- Per the Future Land Use Plan Module Diagram, the preferred future land use in this area is “Town Center,” which includes a mix of office, residential, destination and neighborhood commercial uses in a pedestrian-oriented context.

#### ■ Opportunities:

- The appropriate Context Zone is C-5 Urban Center.
- The recommended cross-section is a 4-lane divided section with on-street parking where appropriate.
- There is an opportunity to consider median placement that seamlessly interacts with the one-way couplet design of Louisiana and Virginia.
- Wide, buffered sidewalks on both the east and west sides of SH 5 could accommodate pedestrian activity. A bike route could run parallel to SH 5 in this area along Tennessee Street.
- There is potential for mid-term redevelopment of older auto-oriented commercial sites to create a mix of commercial, office, and smaller scale urban residential as transitions to existing single-family residential.
- Given the recent adoption of the MTC code, consider implementing on-street parking with the reinvention of SH 5 through this area.
- Service uses should have access along east-west streets to minimize visual impact along SH 5 and conflicts with adjoining neighborhoods.
- Streetscape priorities should include continuous and wider sidewalks with a minimum width of 6 feet, street trees, screening of surface parking along the roadway, and consolidation of continuous driveway frontages.



## Watt Street to US 380 (University Drive)

This segment is the transition out of the urban core that includes the major intersection of SH 5 and US 380.



SH 5 at Erwin Avenue

- **Existing:**
  - Existing land uses include auto-oriented commercial uses, small shopping centers, some industrial sites, and public housing.
  - The current cross-section is a 5-lane undivided section that includes a continuous 2-way left turn lane. There are discontinuous sidewalks along this section (especially along the eastern edge) and some blocks have continuous curb cuts with no designated sidewalks.
- **Planned:**
  - Per the Future Land Use Plan Module Diagram, the preferred future land use for this area is “Town Center,” which includes a mix of office, residential, destination and neighborhood commercial uses in a pedestrian-oriented context.
- **Opportunities:**
  - The appropriate Context Zone is C-4 General Urban.
  - The recommended cross-section is a 4-lane divided section with a consolidation of driveways and the possibility of some on-street parking, where appropriate.
  - Wide, buffered sidewalks on both the east and west sides of SH 5 could accommodate pedestrian activity. A bike route could run parallel to SH 5 in this area along Tennessee Street.
  - There is potential for long-term, incremental redevelopment or rehabilitation of older commercial sites to create a mix of commercial and office uses with some light industrial/flex office uses.
  - There is also potential for coordination with the McKinney Housing Authority for the redevelopment of the Merritt Homes public housing property (north of Erwin) into a mixed income, walkable neighborhood (possible opportunity site).
  - Streetscape priorities should include continuous sidewalks, street trees, screening of surface parking along the roadway, and consolidation of continuous driveway frontages.

## US 380 (University Drive) to Powerhouse Street

This segment predominantly includes industrial uses along the eastern stretch of the roadway. It also includes the merging of Tennessee Street into SH 5.



A truck turning onto SH 5 near US 380 intersection

- **Existing:**
  - Existing land uses include mostly industrial and flex office uses with some commercial retail at the intersection of US 380 and SH 5.
  - The current cross-section is a 2-lane undivided roadway north of Tennessee Street and a 4-lane divided section south of Tennessee Street. There are no sidewalks.
- **Planned:**
  - Per the Future Land Use Plan Module Diagram, preferred future land uses in this area are “Industrial,” which includes a mix of light and heavy manufacturing uses and supporting office and retail.
- **Opportunities:**
  - The appropriate Context Zone is C-3 Suburban.
  - The recommended cross-section is a 3-lane or 4-lane divided section with curb and gutter.
  - A 12’ wide shared use path along the east side of the roadway and a 5’ wide sidewalk along west side of the roadway could accommodate pedestrians.
  - Streetscape priorities should be based on development context.
  - The intersection of Tennessee Street and SH 5 should be evaluated and possibly reconfigured for safety and better circulation. The intersection could become a location of an entry feature/monument from the north.

## Chapter 2

### Powerhouse Street to FM 543 (Weston Road)

This segment begins transitioning into a more rural context, with several large undeveloped parcels.



SH 5 looking south from Twin Knoll Drive

- **Existing:**
  - Existing land uses include industrial and flex office uses, a golf course, a multi-family development, and a residential neighborhood.
  - The current cross-section is a 2-lane undivided rural cross-section with no sidewalks.
- **Planned:**
  - Per the Future Land Use Plan Module Diagram, preferred future land uses in this area are “Industrial,” which includes a mix of light and heavy manufacturing uses and supporting office and retail.
- **Opportunities:**
  - The appropriate Context Zone is C-3 Suburban.
  - The recommended cross-section is a 3-lane or 4-lane divided section with curb and gutter.
  - A 12’ wide shared use path along the east side of the roadway and a 5’ wide sidewalk along west side of the roadway could accommodate pedestrians.
  - Streetscape priorities should be based on development context.
  - There is potential to retain existing industrial development south of the floodplain. However, recent rezoning requests indicate that there is an interest in expanding residential uses north of those existing industrial developments. Potential expansion of residential uses should be better understood in the context of the existing land uses and the future land use plan.
  - A high-level analysis was undertaken to gain a better understanding of the market for industrial potential and general planning considerations so that potential land use conflicts in this area are not inadvertently exacerbated. See **Chapter 5** (Opportunity Site #5) and **Appendix 6** for a summary of the analysis.

### FM 543 (Weston Road) to Northern City Limits (East Fork Trinity River)

This segment is a predominantly rural context as it moves north out of the existing McKinney city limits.



SH 5 at the East Fork Trinity River

- **Existing:**
  - Existing land uses are mostly rural and undeveloped.
  - The current cross-section is a 2-lane undivided rural cross-section with no sidewalks.
- **Planned:**
  - Per the Future Land Use Plan Module Diagram, the preferred future land use for this area is “Regional Commercial” and “Regional Employment,” which includes a mix of retail, service, large-scale office, light industrial and research and development uses.
- **Opportunities:**
  - The appropriate Context Zone is C-3 Suburban.
  - The recommended cross-section is a 3-lane or 4-lane divided section with curb and gutter.
  - A 12’ wide shared use path along the east side of the roadway and a 5’ wide sidewalk along west side of the roadway could accommodate pedestrians.
  - Streetscape priorities should be based on development context.
  - Similar to the potential for exacerbated land use conflicts between industrial and residential uses along the segment of the corridor between Powerhouse Drive and Weston Road, there is a need to better understand industrial potential north of Weston Road in order to provide guidance on future land use considerations.

## Chapter 3: Public Involvement Process

An important component to the SH 5 Corridor Study was to actively engage stakeholders throughout the public planning process in order to capture informed feedback, gauge community-based consent, and build sustained relationships. To achieve this, public workshops, meetings and open houses were held throughout the planning phase and were designed to encourage public input through a variety of different ways, including round table discussions, formal presentations, direct question and answers, and collaborative workshops where ideas and discussions between stakeholders, staff and the consultant team were free-flowing.

In addition to helping facilitate an active public participation process, the approach for Public Involvement was also aimed specifically to:

- Increase awareness of the Study
- Provide early and ongoing communication with all appropriate stakeholders and the community
- Provide ample opportunities for input through structured mechanisms
- Encourage a collaborative process with stakeholders and others
- Identify a consensus among stakeholders

A variety of audiences were invited to participate in the Study. These included:

- Elected and public officials
- Property owners
- Business owners
- Residents
- Chamber of Commerce and the business community
- Special interest groups
- Media
- Agencies

Public Involvement centered around two major events. The first was a set of stakeholder workshops held early in the process in May 2013. The second was a public Open House later in the process in April 2014. The goal of the May 2013 Stakeholder Workshops was to provide stakeholders with an opportunity to learn about the preliminary analysis of SH 5 and provide early direction and feedback on emerging concepts. These workshops provided the necessary initial direction needed in order to craft a series of recommendations and design criteria for the SH 5 Corridor (see Chapter 4).

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### McKinney to hold Highway 5 corridor workshops, study

**Staff report**  
Published: Wednesday, May 1, 2013 12:54 PM CDT

On Saturday, May 4, the city of McKinney and North Central Texas Council of Governments will host a series of workshops to develop a transportation study for the State Highway 5 corridor.

The study focuses on approximately six miles of Highway 5 through McKinney as it extends from the southern to northern city limits.

Workshops will be in the following time slots: Highway 5 "central zone" (Eldorado Parkway to U.S. Highway 380) from 9 to 11 a.m.; "northern zone" (U.S. 380 to the East Fork Trinity River) from 12:30 to 2 p.m.; and "southern zone" (south of Spur 399 to Eldorado Parkway) from 2:30 to 4 p.m.

At the workshops, attendees will have the opportunity to share their thoughts, knowledge, concerns and feedback for the future of Highway 5 through McKinney. The purpose of the workshops is to gain informed insight and input to create a preferred vision for the redevelopment and function of the Highway 5 corridor.

"The goal of the study is to establish a well-rounded plan that will shape how this important corridor develops in the future," said Barry Shelton, McKinney development services director. "Community input is extremely valuable to help us create and shape that vision."

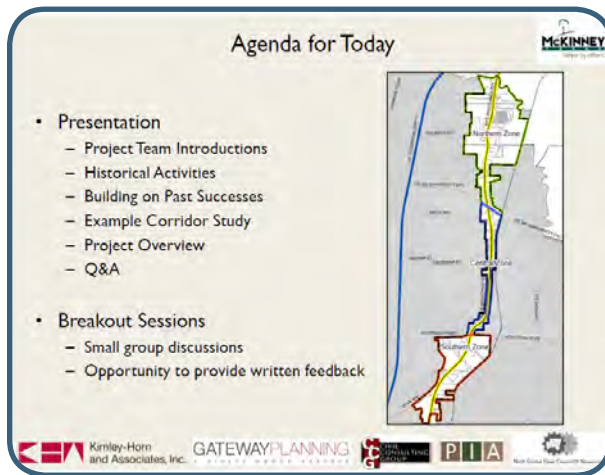
To view a map of the study area and for more information, visit the city's website at [www.mckinneytexas.org/sh5corridorstudy](http://www.mckinneytexas.org/sh5corridorstudy).

Screenshot of McKinney Courier-Gazette SH 5 Corridor Study Workshop article

The screenshot shows the McKinney City website's 'Public Open House 2014' page. The main heading is 'Public Open House 2014' with a sub-heading 'SH 5 Corridor Study Open House April 2, 2014'. The text describes the event where the city hosted a public open house to review and discuss the progress of the State Highway 5 Corridor Context Sensitive Transportation Study. It mentions that approximately 60 stakeholders and residents were in attendance, including Council member Day and County Commissioner Hill. A photo shows a group of people seated around a table in a meeting room. Below the text, there are sections for 'Recommended Cross-Sections' and 'Redevelopment Opportunity Boundaries' with lists of specific street segments.

SH 5 Corridor Study web page





Slides from the Stakeholder Workshop presentation

## Stakeholder Workshops (May 4, 2013)

At the onset of the SH 5 Corridor Study, approximately 65 residents and stakeholders attended a series of stakeholder workshops on Saturday, May 4, 2013 at McKinney City Hall. This included three separate sessions for three distinct areas of focus: the Southern Segment (South of Spur 399 to Eldorado Parkway), the Central Segment (Eldorado Parkway to US 380), and the Northern Segment (US 380 to East Fork Trinity River) of the corridor.

To solicit attendance at the Stakeholder Workshops, City Staff distributed more than 700 invitations to property owners within the study area. In addition, the city issued a news release and email blast to individuals who indicated an interest in the project. Throughout the entire planning process, the City also maintained an active webpage dedicated to hosting information about the SH 5 Corridor Study process and providing a constant opportunity for interested stakeholders to provide feedback.

Each Stakeholder Workshop began with a brief presentation made by the project team that included a project overview, history, examples of similar projects, and the goals and objectives for the SH 5 Corridor Study. Following the introductory presentation, workshop participants moved into small breakout sessions that were facilitated by the consultant team. During these breakout sessions, stakeholders were asked to describe their current impressions of SH 5, what they think the role of the corridor should be in McKinney and how they would like to see SH 5 develop/change over time.

Maps and images showing known issues and opportunities, existing and standard cross-sections (per TxDOT standards), and preliminary design alternatives. Potential intersection improvements were also presented and discussed during the breakout sessions. The purpose of the first meeting was to communicate the goals of the project, provide initial recommendations, and create an opportunity for the public to provide feedback. Materials from the 2013 stakeholder workshops are provided in **Appendix 1**.

Key concepts from each breakout session are summarized below. A record of all public comments from the May 2013 Public Workshops are provided in **Appendix 1**.

**Residents can offer input Saturday on SH 5 project**

Residents will have a chance to lend their voices to the redevelopment of the State Highway 5 corridor in a series of Saturday workshops hosted by the city.

The sessions at City Hall, 222 N. Tennessee St., are part of a planning study on Highway 5 launched by city and regional officials in February. The highway, supplanted in recent years by Central Expressway, runs east of downtown and is lined by retail and office buildings.

Residents can provide input at the three workshops, grouped according to residential area:

- 9-11 a.m.: Eldorado Parkway to Highway 380
- 12:30-2 p.m.: U.S. 380 to the East Fork Trinity River
- 2:30-4 p.m.: South of Spur 399 to Eldorado Parkway

Proposed potential improvements include new building developments, wider sidewalks, landscaped medians and added street lighting. The study is expected to last 12 months.

For more information on the study and workshops, go to [mckinney.texas.org/sh5corridorstudy](http://mckinney.texas.org/sh5corridorstudy).

*Andrew Scaggin*



Planning Manager, Jennifer Arnold presenting at one of the Stakeholder Workshops

## Public Workshop #1: Central Zone Summary (Eldorado Parkway to US 380)

An estimated 32 stakeholders attended the Central Zone workshop, including three elected officials: McKinney Mayor Brian Loughmiller, Mayor Pro Tem Travis Ussery and Councilmember Don Day.

Few attendees expressed satisfaction with the existing function and feel of SH 5; however, some appreciated the easy access to SH 121 and the mixed-use of structures. Some indicated they would like to see more landscaping, and sidewalks — making it safer for pedestrians. Others noted they would like the corridor to connect and feel more like the downtown area.

Overall, some of the key concepts that emerged for the central zone include:

- Good area for local business because of proximity to downtown and nearby residential
- Pedestrian access and safety should be at the forefront
- Lack of sidewalks and landscaping should be addressed
- Area should serve as a gateway into the historic east side of McKinney and encourage new development and investment
- SH 5 in this area should be treated as a destination
- Slower traffic would be ideal
- Improve aesthetics by burying existing overhead utilities and improving landscaping
- On-street parking and wider sidewalks are more appropriate than bike lanes in this area

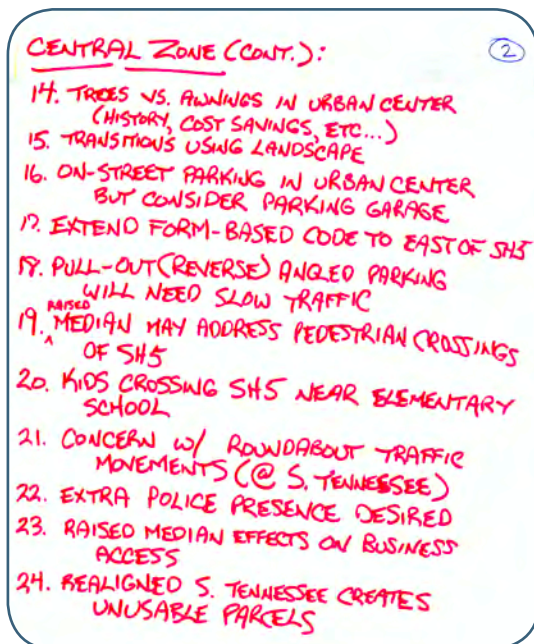
## Public Workshop #2: Northern Zone Summary (US 380 to East Fork Trinity River)

An estimated sixteen stakeholders attended the Northern Zone workshop.

Few attendees expressed satisfaction with the existing function and feel of SH 5. However, some indicated that they appreciated the easy access to US 75 and most preferred the concept of a four-lane divided cross-section in this area. There was significant discussion dedicated to traffic safety, flow and queues occurring at the Wilmeth Road intersection. Many participants stated that they would like to see road improvements that specifically address these safety and mobility issues. Another major point of discussion for this area centered on the transportation — land use connection and future potential opportunities related to land use.

Overall, some of the key concepts that emerged for the northern zone include:

- Re-consideration of the Future Land Use Plan is needed to acknowledge residential/mixed use potential
- Stacking and safety issues at the SH 5/Wilmeth intersection should be addressed
- There is concern over traffic, high speeds and the number of accidents in the area. Vehicular safety should be evaluated and addressed.
- Four-lane cross-section that does not encroach on existing neighborhood(s) is desirable



Comments from the Stakeholder Workshops



Breakout session at the Stakeholder Workshops



# Chapter 3

## Public Workshop #3: Southern Zone Summary (South of Spur 399 to Eldorado Parkway)

An estimated fourteen representatives including city staff, the North Central Texas Council of Governments (NCTCOG), the Texas Department of Transportation (TxDOT) and the project team attended the Southern Zone workshop.

Attendees appreciated the access SH 5 provides to SH 121 (the Sam Rayburn Tollway), US 75 (Sam Johnson Highway) and the downtown McKinney area. Attendees encouraged improvements with landscaping, multimodal transportation access and an improved downtown gateway near Pecan Grove Cemetery.

Overall, some of the key concepts that emerged for the southern zone include:

- Existing limited access to Pecan Grove Cemetery should be addressed
- Noise and aesthetics should be addressed through landscaping and screening
- Historic elements and locations should be preserved

McKinney State Highway 5 Corridor Study  
Comment Card

Stakeholder Workshops - May 4, 2013

Please check all that apply:	Please check the zone that applies:
<input type="checkbox"/> I live in the study area.	<input checked="" type="checkbox"/> Southern Zone (South of SPUR 399 to Eldorado Pkwy)
<input type="checkbox"/> I own property or a business in the study area.	<input checked="" type="checkbox"/> Central Zone (Eldorado to US 380)
<input type="checkbox"/> I work in the study area.	<input checked="" type="checkbox"/> Northern Zone (US 380 to East Fork Trinity River)
<input checked="" type="checkbox"/> Other live in McKinney/USE BUSINESS	

What do you like about State Highway 5?  
*Home town Feeling - to have busness to utilize to keep. Lively heart of the brick*

What do you not like about State Highway 5?  
*The discontenpanty; looks rundown - right to the pavement.*

What should the role be for State Highway 5?  
*Entrance to Downtown; Develop - Sidewalks, Lighting, Ample parking - Pedestrian cross lights (Traffic lights) also - Pedestrian Bridges*

What improvements would you like to see along State Highway 5?  
*Median/parking in University - the same way, sidewalk, Utilities, Lighting -*

Comment card from the Stakeholder Workshops

## Additional Community Outreach

In addition to the May 4, 2013 public workshop, staff and the consultant team also hosted or attended several small-group meetings as listed below:

- On Wednesday, June 5, 2013, staff and the consultant team hosted a targeted stakeholder input session with the Trinity Heights Homeowners Association to gain a better understanding of this neighborhood's interaction with the corridor north of US 380, their preferred vision for its future, and how it may impact development potential.



Trinity Heights breakout session

- On Thursday, June 6, 2013, staff presented information to the PRIDE communities at their regular meeting to gain feedback from the PRIDE neighborhoods regarding their interaction with and preferred vision for SH 5 south of US 380.



Presentation to PRIDE Communities

- July 29, 2013 Joint Work Session with City Council and Planning & Zoning Commission to summarize and present stakeholders feedback, agency participation, and conceptual elements.

During the stakeholder workshops and public input sessions, the consultant team and staff facilitated discussion regarding existing conditions along the corridor and presented a series of conceptual design alternatives (i.e. cross-sections). At each meeting, there was a robust dialogue about the existing conditions along SH 5 in terms of function and safety. There was also stakeholder discussion regarding the future preferred land uses adjacent to the corridor, particularly north of US 380. Comments from the Trinity Heights Homeowners Association and PRIDE neighborhoods are provided in **Appendix 1**.

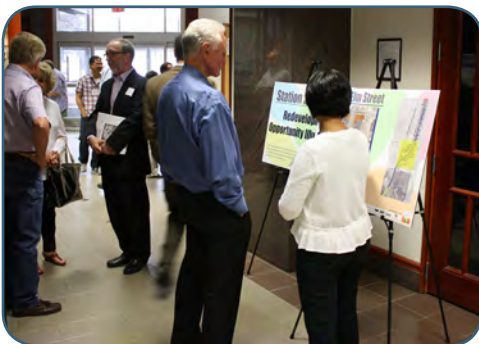
## Public Open House (April 2, 2014)

Following the 2013 public workshops and community outreach, the project team spent several months compiling, synthesizing and summarizing stakeholder input in order to begin crafting a series of recommendations that outlined and discussed specific context zones along the corridor, a detailed characterization of needs and opportunity, design parameters and, ultimately, conceptual cross-section alternatives for the corridor. Following the 2013 public workshops, the project team also focused a tremendous amount of effort on interagency coordination with state and federal entities (discussed in detail in **Chapter 5**).

With these activities underway, in early 2014, the project team hosted a public Open House. In advance of the Open House, the City of McKinney reached out to the community using its electronic newsletter, Facebook page, news release, direct email blasts, and City's website presence.

On Wednesday, April 2, 2014, more than 50 residents and business owners attended the public Open House at McKinney City Hall. The purpose of the event was to present refined drafts associated with the creation of a corridor master plan for SH 5, including conceptual cross-sections, intersection improvements, and illustrative redevelopment/opportunity concepts that were developed and explored during and following the May 2013 Public Workshops.

At the Open House, there was also a brief presentation to recap the work that had previously been completed and to discuss the upcoming steps in order to formalize a SH 5 Corridor Master Plan and ensure implementation of the Master Plan over the mid- to long term. Feedback from the stakeholders was generally supportive.



Open House photo

Information from the Public Open House, including public comments are provided in **Appendix 2**.

The public Open House also provided an opportunity for attendees to provide written comments. The following is a summary of the comments that were submitted (as written by the attendees):

1. *The proposed urban idea – planted median, street parking & bike lane moved to a safer location looks (sic) very good.*
2. *Good informative meeting. We have land in the north corridor. Looking forward to improvements.*
3. *SH 5 @ Spur 399 intersection I would prefer alternate 1 over #2 – This should provide for less noise going into the McKinney Greens subdivision. Road/traffic noise is a major concern for the McKinney Greens Home Owners Association and homeowners. Great presentation – thank you for (sic) taking our comments into consideration.*
4. *I understand the beauty of the trees & grass but I see the expense of maintaining it all over town. More employees & more water which we don't have. The efficient way is just the way it is right now. You will slow traffic down with every stop light you put up. The traffic will only get worse as Anna (sic) and Melissa grow and you are not planning ahead.*
5. *Regarding SH 5 @ Spur 399 Alternative #1 would cut cost and eliminate noise from overpass ramp of Alternative #2. Residents in the area are concerned about noise level!*

The comments and questions received at the end of the public presentation were primarily geared toward the next steps and implementation of the vision. Some of the questions and comments received are characterized below:

- Any future/potential city-initiated re-zoning sought in order to implement the SH 5 Corridor Master Plan should not force existing tenants or businesses out of existing locations
- Implementation of the SH 5 Master Plan and infrastructure improvements should stay within existing ROW
- Traffic growth along the corridor should be monitored in order to maintain an effective level of service. Potential future north-south routes should begin to be explored in order to accommodate future potential growth in traffic beyond a level of service that SH 5 can support
- Intersection improvements and improved signalization along the corridor should be explored as reconstruction becomes a reality
- Project funding and timing should be the focus for implementation of the vision
- The City should strive to quantify the benefits of bicycle improvements throughout the City
- Recommended cross-sections should serve the purpose of connecting the historic downtown west of SH 5 with the future transit village east of SH 5





Open House photos



## Chapter 4: Conceptual Plan

### Visioning

Visioning is the first step in redefining the State Highway 5 (SH 5) Corridor, and any conceptual plans should be rooted in this vision. While much of the visioning efforts for SH 5 were achieved through the Town Center Study Initiative, a broader sense of the preferred future for the entire corridor (beyond just the Town Center) was developed as part of the SH 5 Corridor Study.

Using the Town Center Master Plan as the cornerstone, the vision for SH 5 builds out from the urban core of McKinney and recognizes its changing character both north and south of the historic downtown. The vision calls for a seamless transition of function and character that emphasizes the importance of synergy between the public and private realm.

To achieve this, the vision for SH 5 is articulated through character-defined context zones (as described by the *Designing Walkable Urban Thoroughfares* Report) that serve as the primary consideration for basic design criteria and parameters along the corridor. These context zones are defined by the physical form and character of place within corridor. Features that create context not only include land use, but also aspects of site design and urban form.

The context zones that were developed along the SH 5 Corridor are illustrated in **Exhibit 5**, and are generally described as follows:

#### Rural Transition Context Zone (SH 5 South of Spur 399 and SH 5 North of Powerhouse Street)

While existing land uses along SH 5 south of Spur 399 are predominately undeveloped and agricultural in nature, per the Future Land Use Plan Module Diagram, the preferred future land use in this area is “Suburban Mix,” which includes a mix of single-family residential, office, and commercial uses. As well, there are several planned developments within this area that will include senior multi-family components, office, retail, and residential components.

North of Powerhouse Street existing land uses include industrial and flex office uses, a golf course, a multi-family development, and a residential neighborhood and, per the Future Land Use Plan Module Diagram, preferred future land uses in this area are “Industrial,” which includes a mix of light and heavy manufacturing uses and supporting office and retail.

Given that the existing and future built environment will be a mix of more auto-oriented, single-use development patterns, the context through these areas lends itself to a more rural function.

#### Suburban Context Zone (Spur 399 to existing Old Mill Road)

At the southern end of the corridor between Spur 399 and existing Old Mill Road, the existing land use character can be described as a mix of older industrial sites and storage complexes, a mobile home park to the east that is fairly screened from the roadway by existing vegetation, and some newer residential homes and golf course to the west of SH 5. In the future, the preferred land use mix in this area is designated for “Suburban Mix,” which includes a mix of single-family residential, office and commercial uses. Given the existing auto-oriented form of this segment of SH 5 and the future context of more suburban style of development, recognition of this segment as a Suburban Context Zone will allow it to more appropriately address things such as varying lot widths, dominant landscape areas, scattered commercial, and single-use development patterns.

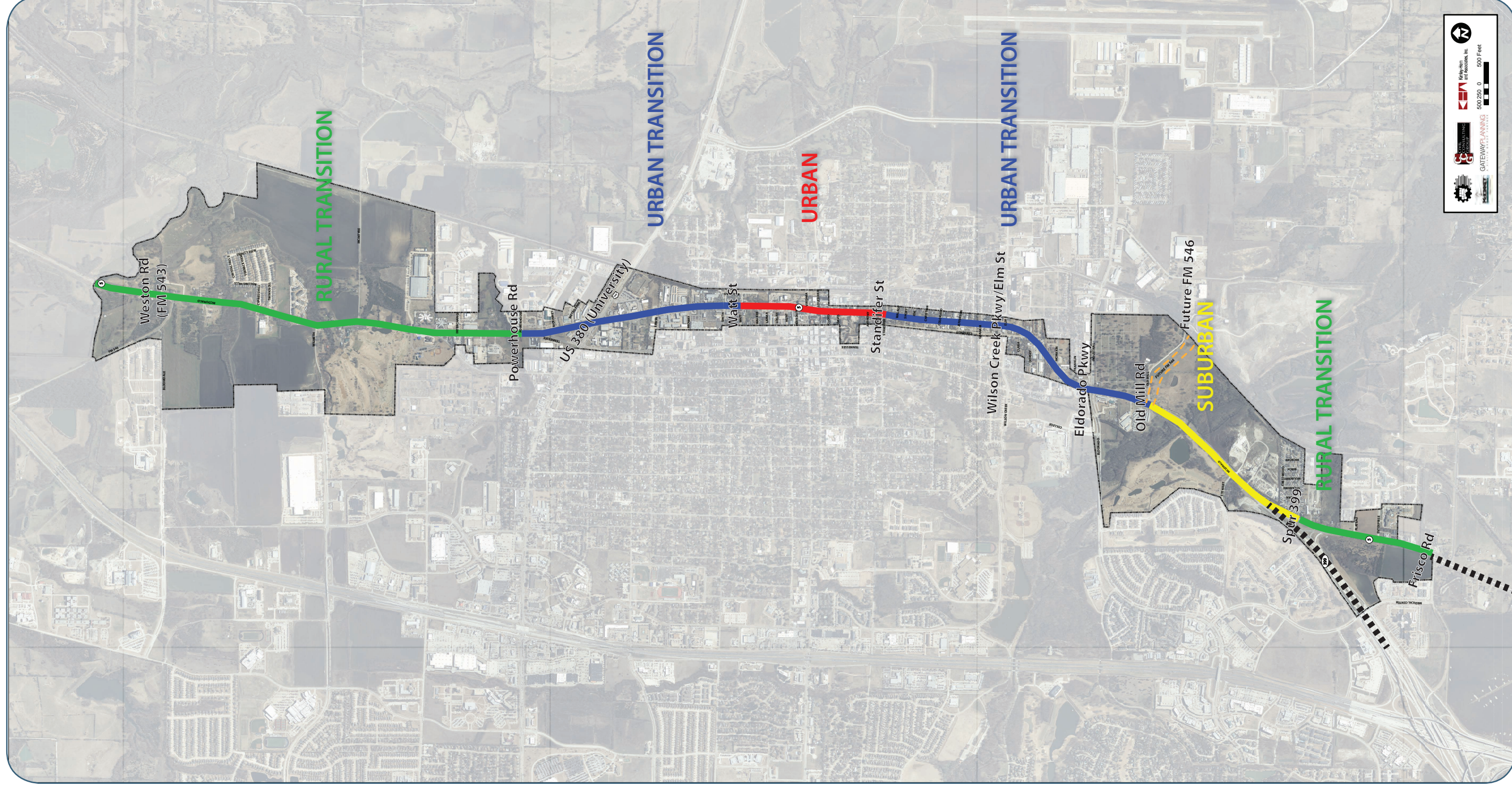
#### Urban Transition Zone South (Existing Old Mill Road to Standifer Street)

Along the segment of SH 5 between existing Old Mill Road (just south of Pecan Grove Cemetery) and Standifer Street there is a noticeable change in the feel and function along the corridor as the development form becomes slightly more dense and less suburban in nature. Existing land uses include a mix of older auto-oriented commercial sites along the western edge of the roadway and older residential neighborhoods with limited frontage along the east. Notably, the Cotton Mill complex and historic Pecan Grove cemetery are also located within this segment. The City’s Future Land Use Plan Module Diagram recognizes this area as the “Town Center,” which indicates an urban form that includes a mix of residential housing types as well as neighborhood and regional commercial uses.

Though this area is not overtly urban in form, it is a segment of roadway that serves as a transition from a distinct suburban character (south) to the urban center of McKinney (north). Because of this, any improvements to SH 5 should articulate this change through appropriate cross-section design.



Exhibit 5: SH 5 Context Zones





## Urban Transition Zone North (Watt Street to Powerhouse Street)

Similar to the Urban Transition Zone South, the segment of SH 5 between Watt Street and Powerhouse Street (just north of historic downtown) also serves to transition from a suburban character (north) to the urban character seen within historic downtown McKinney (south). Existing land uses within this segment are auto-oriented commercial uses, small shopping centers, some industrial uses, and public housing. As this segment of SH 5 transitions out of the downtown core, the Future Land Use Plan Module Diagram characterizes south of US 380 as “Town Center,” with a preferred future mix of land uses that include office, residential, destination and neighborhood commercial all within a pedestrian-oriented context. North of US 380, the Future Land Use Plan Module Diagram recognizes a preferred future land use pattern for “Industrial” uses that include light and heavy manufacturing and supporting office and retail.

Given the area’s function as a transition out of downtown, there is potential for long-term, incremental redevelopment or rehabilitation of older commercial sites to create a mix of commercial and office uses with some light industrial/flex office uses.

With this in mind, any improvements to SH 5 should accommodate streetscape priorities that include continuous sidewalks, street trees, screening of surface parking along the roadway, and consolidation of continuous driveway frontages.

## Urban (Watt Street to Standifer Street)

The segment of SH 5 from Watt Street to Standifer Street runs through the heart of McKinney’s Town Center. Existing land uses in this zone include a mix of older commercial (office, retail, industrial) uses. There are several single-family structures that have been converted to commercial uses, especially south of the downtown. North of Louisiana Street, there are several commercial strip centers to the west with parking along SH 5 and older, underutilized or vacant industrial uses to the east.

Given the Future Land Use Plan Module Diagram, Town Center Study and form-based zoning in place, future development in this zone will continue to be a mix of office, residential, destination and neighborhood commercial uses in a more pedestrian-oriented context. As a result, the Urban Context Zone needs to create a safe and vibrant pedestrian streetscape, facilitate connections between the western and eastern halves of the Town Center, and accommodate on-street parking.

## Design Parameters

Equally important to the vision is quantifying what it means in terms of design. As such, the goals heard throughout the public outreach process can be addressed through both design parameters and cross-section design. The design parameters reflect the desired range of components for the design of the roadway, whereas the cross-sections reflect the typical sections desired for each design at a certain section of the corridor. **Table 4** discusses these design parameters and compares the preferred design elements for SH 5 to the typical TxDOT standard criteria for each context zone.

Many of the conceptual design criteria and parameters are aligned with the ITE *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* Report in order to appropriately address the different context zones that exist (or will exist) along SH 5. These cross-sections attempt to capture the character of each zone by using a context sensitive approach as outlined in the TxDOT Project Development Process Manual. **Appendix 3** provides a discussion on the cross-sections — existing, recommended, TxDOT typical, and a modified version that meets TxDOT criteria that is closer to the recommended.

Preliminary analysis, stakeholder feedback, and the project review team also played a part in establishing the design parameters for SH 5. Moving forward into actual design work, these design parameters will help guide future discussions with TxDOT for the redesign of SH 5.

With this in mind, the preferred design approach for SH 5 is to not expand its capacity to such a degree as to induce cut-through regional traffic along the corridor. In fact, the recommended cross-sections generally fit within the existing ROW for the corridor. The rural sections should be widened to four lanes to accommodate future development needs, but the existing ROW in these areas is generally sufficient to allow this widening. Between Eldorado Parkway and US 380, the roadway should not be widened beyond its current four-lane divided cross-section.

# Chapter 4

Table 4: Design Parameters

Design Items	Rural Transition		Suburban		Urban Transition		Urban	
	Recommended	TxDOT Criteria	Recommended	TxDOT Criteria <sup>1</sup>	Recommended	TxDOT Criteria	Recommended <sup>2,3</sup>	TxDOT Criteria
Curbed/ Not Curbed (Urban/Rural Section)	Curbed	Not Curbed	Curbed	Not Curbed	Curbed	Curbed	Curbed	Curbed
Target Speed	45 mph	60 mph / 50 mph minimum	40-45 mph	60 mph / 50 mph minimum	30-35 mph	40 mph/ 30 mph minimum	30-35 mph	40 mph/ 30 mph minimum
Number of Through Lanes	4L		6L		4L		4L	
Width of Travel Lanes	11'	12' desirable / 11' minimum; 14' minimum outside lane	12'	12' desirable / 11' minimum; 14' minimum outside lane	11'	12' desirable / 11' minimum; 14' minimum outside lane	11'	12' desirable / 11' minimum; 14' minimum outside lane
Offset to Face of Curb	1'	N/A	1'	N/A	1'	2' desirable / 1' minimum	0'	2' desirable / 1' minimum
Width of Turn Lanes	11' minimum	11-12' desirable / 10' minimum	11' minimum	11-12' desirable / 10' minimum	11' minimum	11-12' desirable / 10' minimum	11' minimum	11-12' desirable / 10' minimum
Shoulder Width	N/A	10' desirable / 4' minimum	N/A	10' desirable / 4' minimum	N/A	N/A	N/A	N/A
Raised Median Width	15' minimum	16' desirable / 14' minimum	15' minimum	16' desirable / 14' minimum	15' minimum	16' desirable / 14' minimum	15' minimum	16' desirable / 14' minimum
Center Two-Way Left Turn Lane Width	12' minimum	12'-14' desirable / 11' minimum	14' minimum	12'-14' desirable / 11' minimum	12' minimum	12'-14' desirable / 11' minimum	12' minimum	12'-14' desirable / 11' minimum
On-Street Parking	No	None	No	None	No		Yes	
Parking Width	N/A		N/A		N/A		8' parallel; 18' angle (back-in)	12' desirable / 8' minimum parallel
Sidewalk Width	10' on both sides	6-8' desirable / 5' minimum	10' on both sides	6-8' desirable / 5' minimum	10' on both sides	6-8' desirable / 5' minimum	10-17'	6-8' desirable / 5' minimum
Bicycle Accommodations <sup>4</sup>	10' sidepath on SH 5; Parallel route on Tennessee St	14' minimum outside lane or bike lane	10' sidepath on SH 5	14' minimum outside lane or bike lane	10' sidepath on SH 5; Parallel route on Tennessee St.	14' minimum outside lane or bike lane	10' sidepath on SH 5; Parallel route on Tennessee St.	14' minimum outside lane or bike lane
Access Management	Raised median desirable/ two-way left turn lane minimum	Surface/depressed median or two-way left turn lane	Raised median	Surface/depressed median or two-way left turn lane	Raised median desirable/ two-way left turn lane minimum	Raised median or two-way left turn lane	Raised median desirable/ two-way left turn lane minimum	Raised median or two-way left turn lane
Horizontal Clearances	4' from face of curb / (2' from face of curb for landscaping)	30' minimum (no curb)	4' from face of curb / (2' from face of curb for landscaping)	30' desirable / 20' minimum (no curb)	4' from face of curb / (2' from face of curb for landscaping)	3.0' desirable / 1.5' minimum from face of curb	4' from face of curb / (2' from face of curb for landscaping)	3.0' desirable / 1.5' minimum from face of curb
Width of Existing ROW	100'		172'		100'		90-100'	
Curb Return Radii	25' minimum	30-50'	30' minimum	30-50'	25' minimum	30' minimum for trucks; 15' minimum for cars	20' minimum	30' minimum for trucks; 15' minimum for cars

NOTES:

<sup>1</sup> This area is currently rural in character, so TxDOT Rural Criteria were applied. If TxDOT's Suburban Criteria were used, it would use curb and gutter.

<sup>2</sup> A 5' easement is proposed through this segment to provide a wider pedestrian zone.

<sup>3</sup> Recommend buried utilities along this segment. For other areas, overhead utilities should be provided in the buffer (2' minimum) on the edge of the right-of-way.

<sup>4</sup> Preference is to provide a shared use path within the right-of-way on the east side of SH 5 south of Eldorado and north of University. Connections should be made to the future trail crossings through the flood plains. Between Eldorado and University, the preference is to have on-street bikes use Tennessee Street as a parallel route, with sidepaths on SH 5 available for lower speed bicyclists.

A shared use path is recommended along the east side of SH 5 south of Eldorado Parkway and north of US 380 (University Drive) and connections should be made to the future trail crossings through the flood plains. Along the segment that extends through the Town Center, which is generally between Eldorado Parkway and US 380 (University Drive), an on-street bike lane is recommended along Tennessee Street as a parallel route, with wide sidewalks available for lower speed bicyclists.

Currently, the highest daily traffic volumes along SH 5 in McKinney occur south of Louisiana Street (approximately 22,000 vehicles per day, 2012). The approximate capacity of a four-lane divided roadway is sufficient for carrying the anticipated future traffic on SH 5 based on current growth projections. South of existing Old Mill Road (to Spur 399), the conceptual designs call for a six-lane divided cross-section in order to adequately transition from Spur 399 to SH 5, which includes 4 lanes of travel and 2 auxiliary lanes for merging and turning vehicles. Other potential design treatments for SH 5 that were explored include:

- Multi-lane roundabout at/near the intersection of Tennessee Street/ SH 5 (south)
- Landscaped medians
- Shared-use paths and wide sidewalks
- Curb extensions at intersections
- Use of a variety of paving materials, especially at cross-walks and intersections, and possibly at two-way, left-turn lanes in the rural transition context zone
- Street lighting and landscaping
- On-street parallel parking in the Urban context zone
- Enhanced mid-block crosswalks for pedestrians and bicyclists, especially at the proposed mid-block crosswalks (Rectangular Rapid Flashing Beacons or Pedestrian Hybrid Beacon)

# Chapter 4

## Recommended Cross-Sections

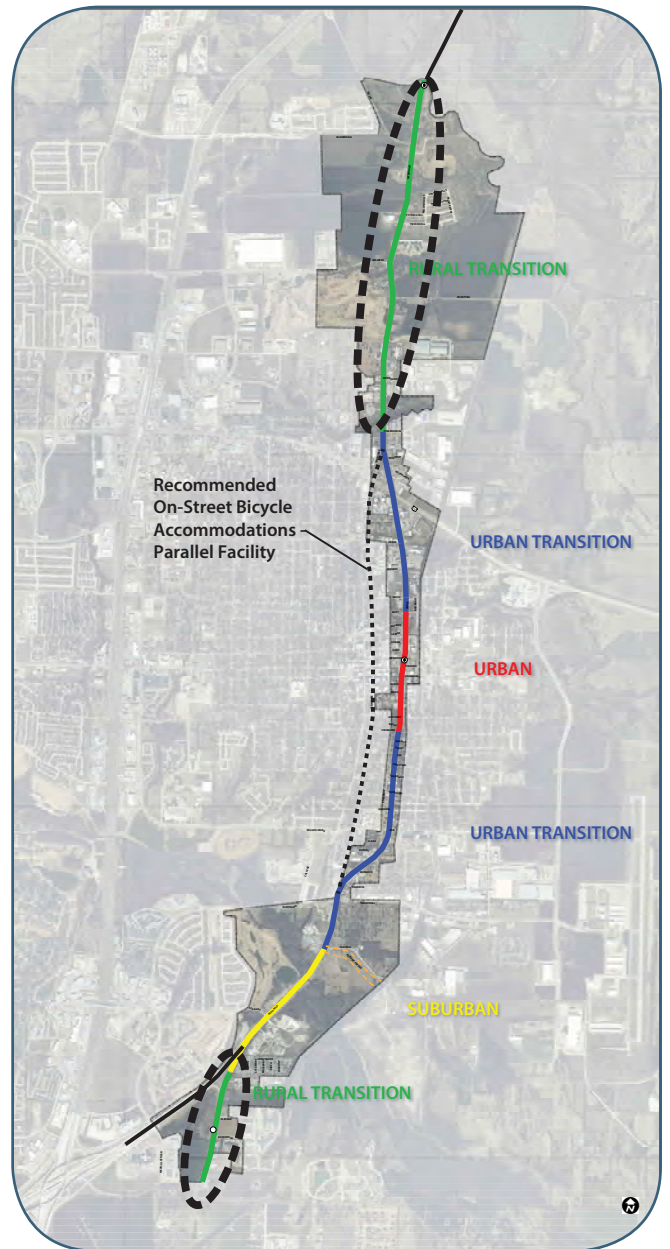
### Rural Transition Zone Cross-Section

The rural transition zones are located at the north and south ends of the corridor. Because the multimodal goals and context of the corridor both north and south are the same, the cross-section design is also the same.

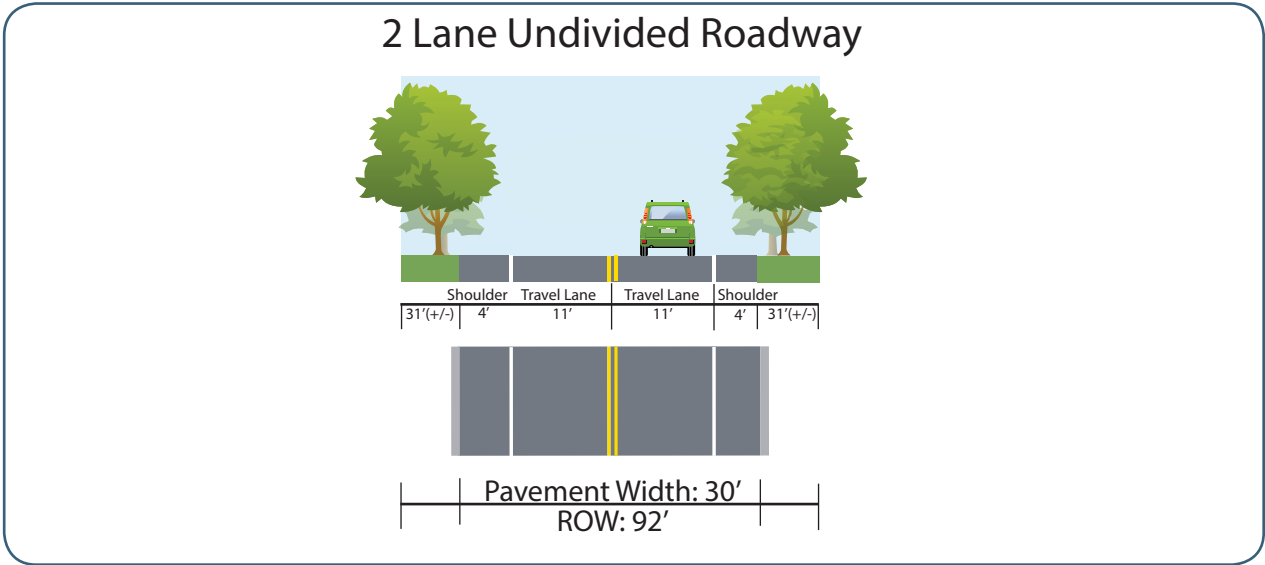
Presently, the rural transition zones consist of a two-lane undivided roadway with no sidewalks. This plan recommends that an ultimate four-lane divided roadway with shared use paths be realized. This recommended cross-section will accommodate anticipated growth as the area transitions with additional development and provide needed additional capacity for commuter traffic.

The recommendations include shared use paths on both sides of the roadway and a landscaped median. The shared use paths should be buffered from the roadway and adjacent developments through landscaped areas.

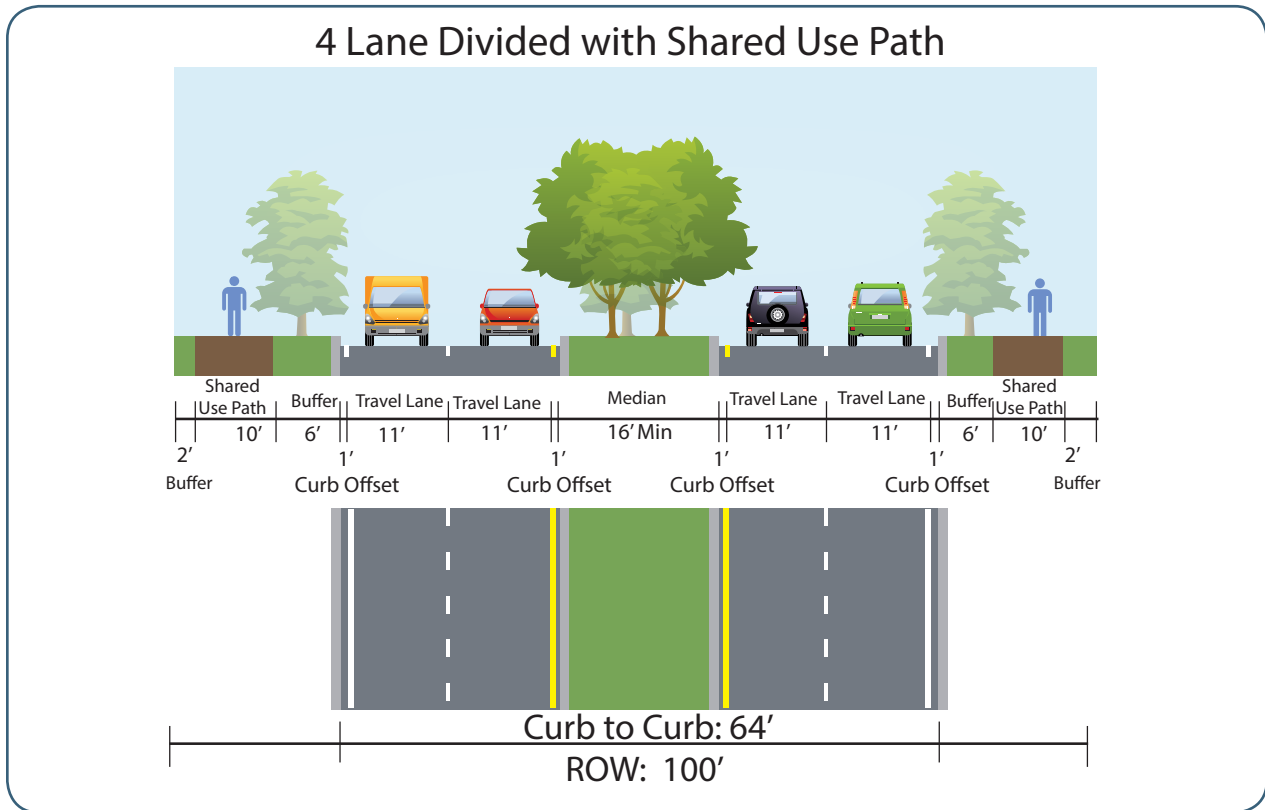
## Rural Transition Context Zone



### Existing Rural Transition Cross-Section



### Recommended Rural Transition Cross-Section





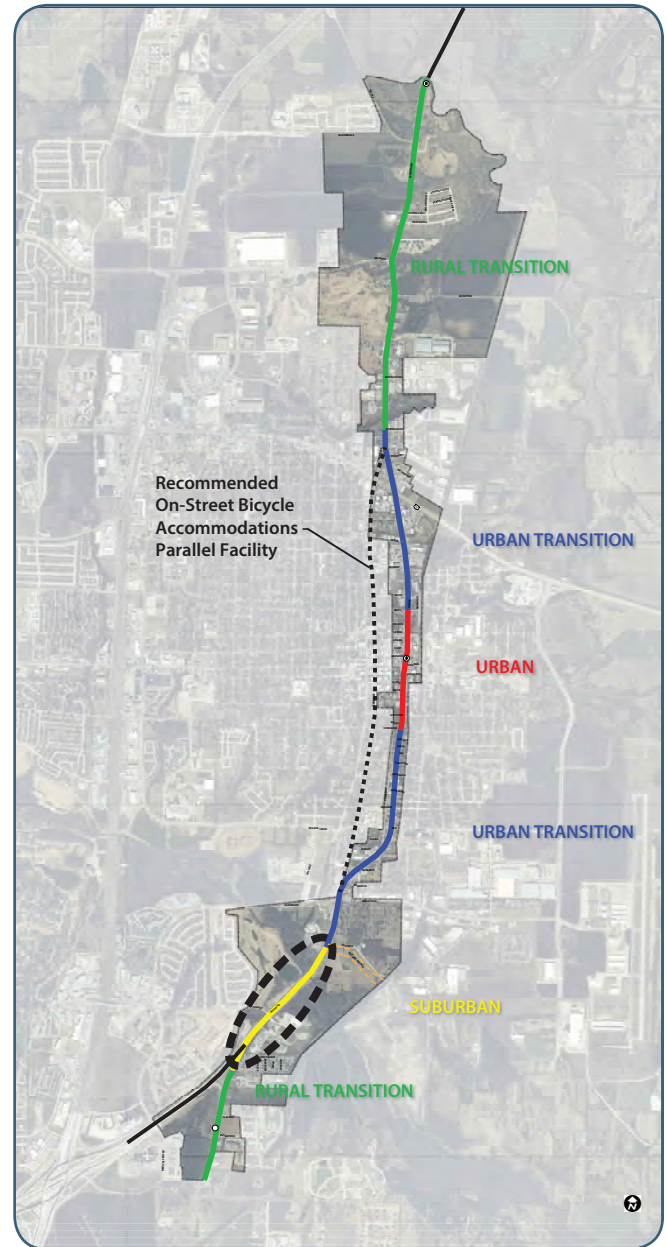
# Chapter 4

## Suburban Zone Cross-Section

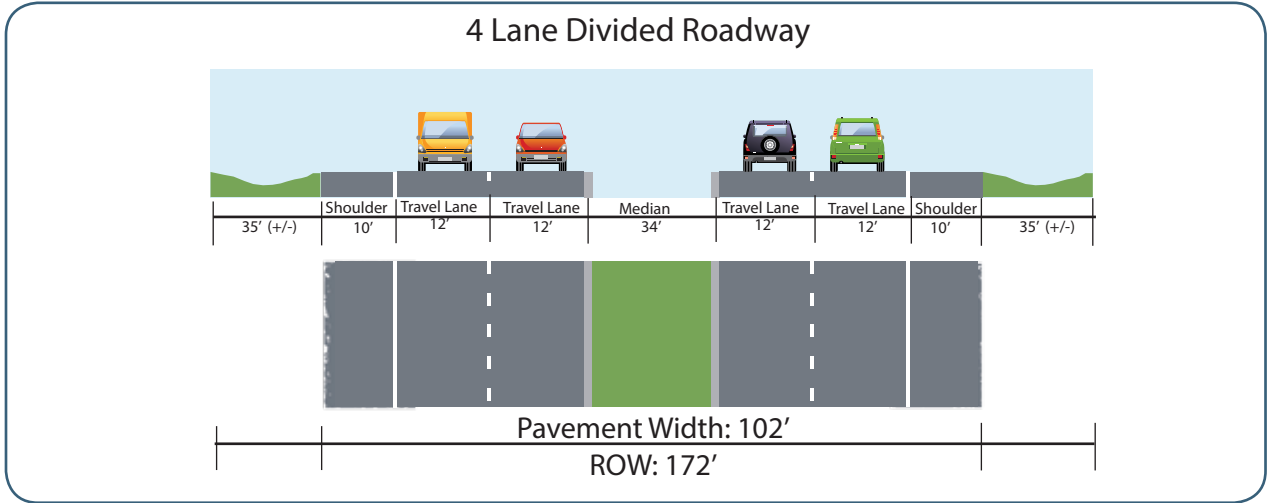
The suburban zone is located near the south end of the corridor between existing Old Mill Road and the Spur 399 split. This segment is similar to the urban transition and rural transition zones in terms of the recommended cross-section. However, the main difference is the available ROW and the context through the area. Future development in this zone will generally be auto-oriented, with a mixture of single-use developments. The existing ROW through this area is 172', whereas the other three zones range from 90-100'. This extra ROW supplements the pedestrian and vehicular facilities, and allows for the necessary transition from Spur 399 to SH 5.

The recommended cross-section is a 6-lane divided section. There is a potential "funnel" effect that will occur if additional capacity along SH 5 is not provided between Spur 399 and the future FM 546 as the movement of traffic reduces from 8 lanes to 4 lanes. As such, the recommended cross-section of 6 lanes (4 lanes with 2 auxiliary lanes) allows for an additional auxiliary right turn lane in order to improve vehicular access and capacity. The extra outside lane will also provide added capacity for the traffic continuing on SH 121/Spur 399 to SH 5. The auxiliary lane will then end via a right turn only near the terminus of the suburban context zone.

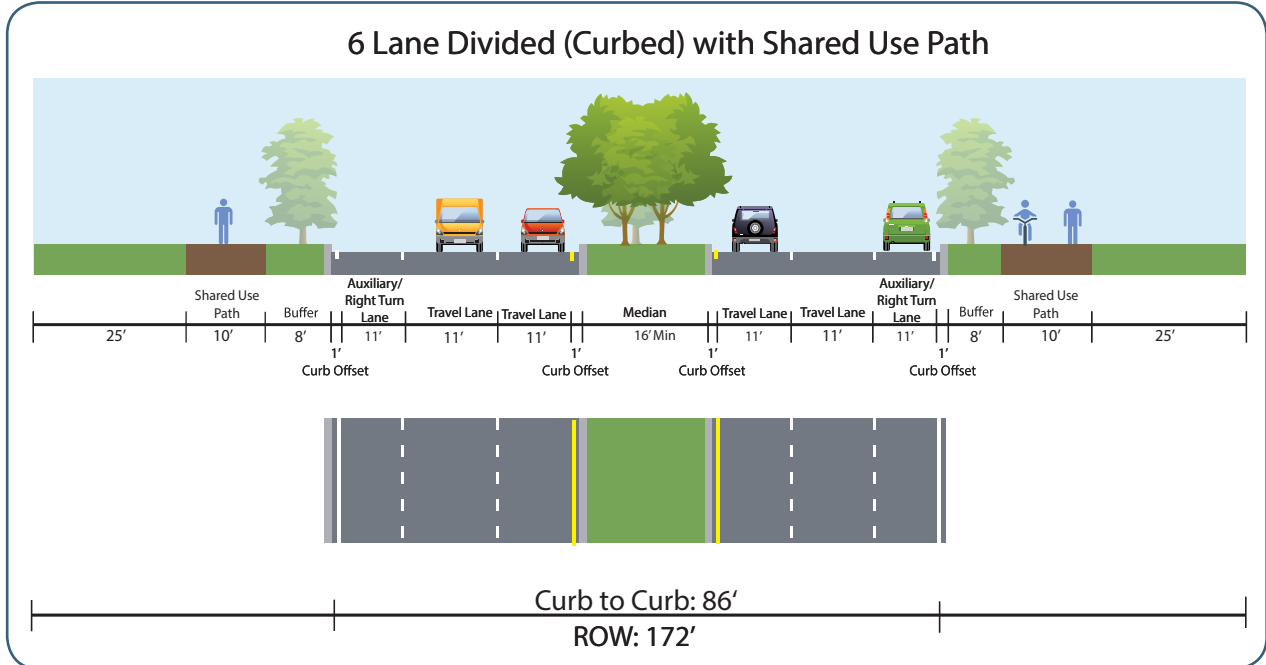
## Suburban Context Zone



### Existing Suburban Cross-Section



### Recommended Suburban Cross-Section

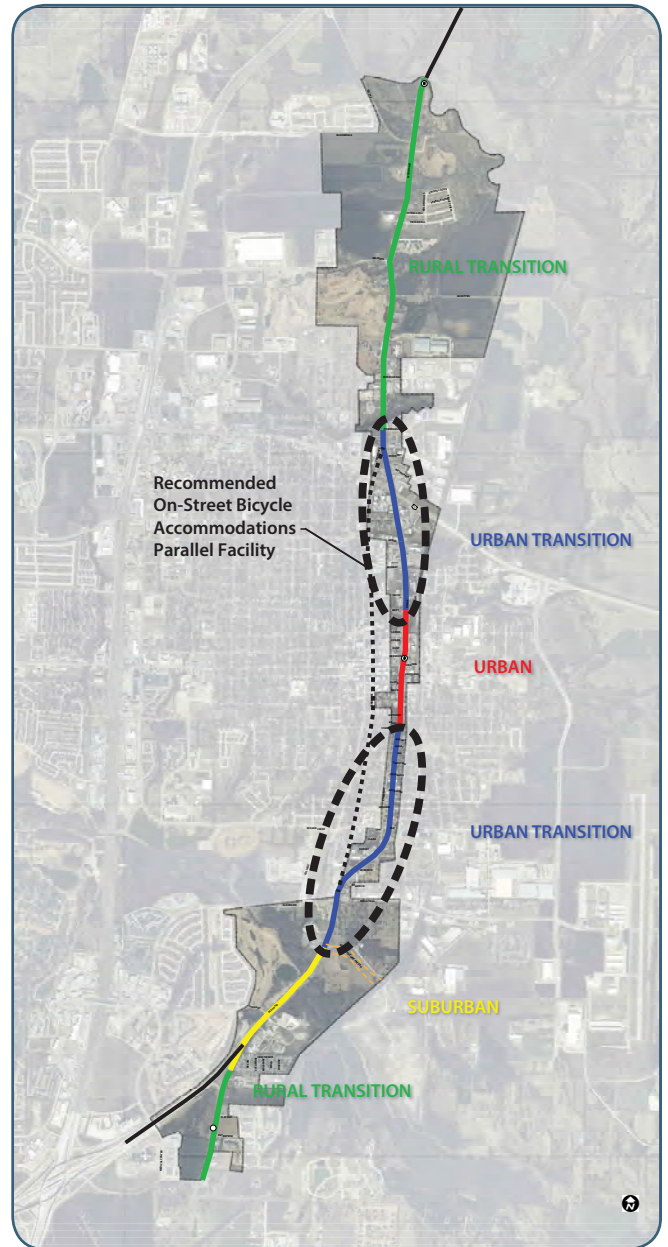


# Chapter 4

## Urban Transition Zone Cross-Section

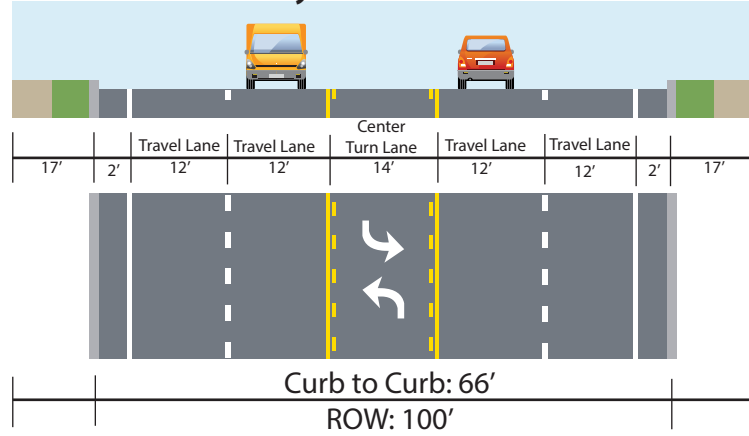
The urban transition zone stretches north and south of the downtown core of McKinney. The limits of this zone are Watt Street to Powerhouse Road north of downtown, and Old Mill Road to Standifer Street south of downtown. With their natural change from the urban core to less dense development patterns, these segments of SH 5 represent areas with similar land use and development goals. As such the urban transition zone cross-section emphasizes a slightly more auto-focused design in that it eliminates the on-street parallel parking seen within the urban zone, but still encourages traffic calming through narrow travel lanes and a wide median. The wide trails and planting zones along the corridor serve as a buffer between the pedestrian area and the roadway, which encourages a more recreational use on the shared use path due to the visual and spatial separation from the roadway.

## Urban Transition Context Zone



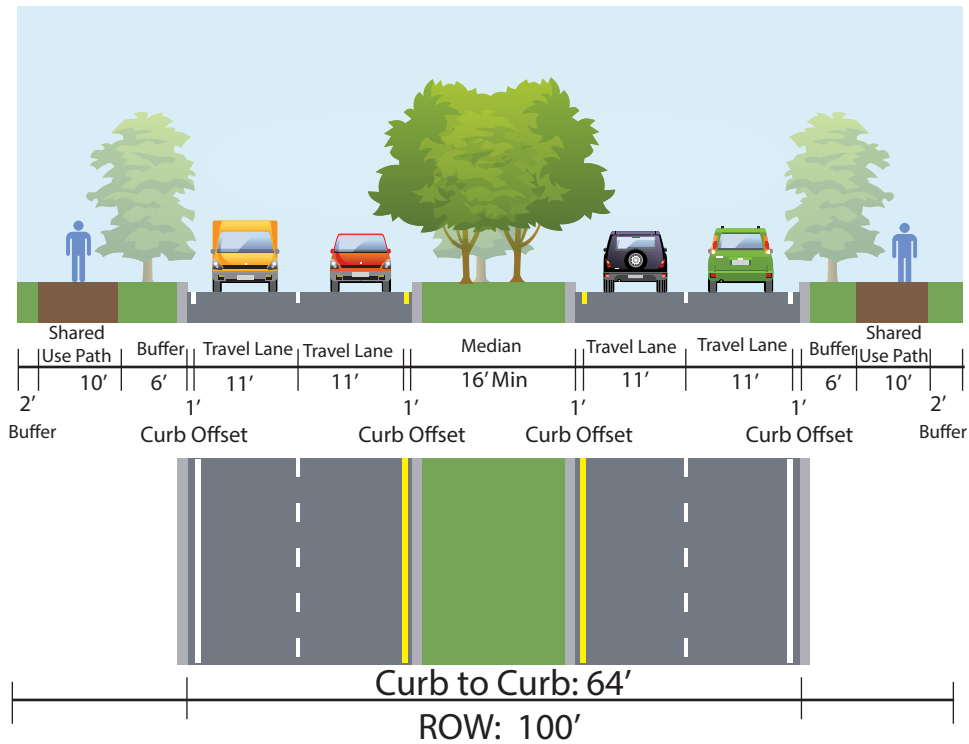
### Existing Urban Transition Cross-Section

#### 4 Lane Undivided Roadway with Two-Way-Left Turn Lane



### Recommended Urban Transition Cross-Section

#### 4 Lane Divided with Shared Use Path





# Chapter 4

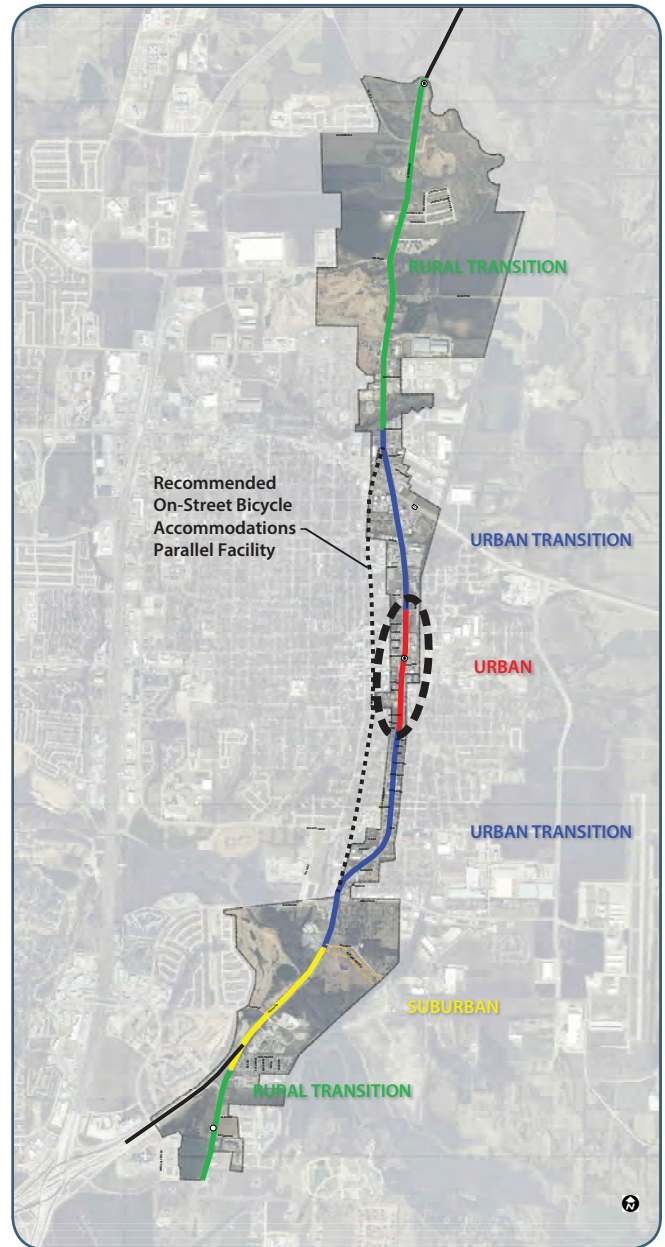
## Urban Zone Cross-Section

The Urban Zone stretches from Standifer Street to Watt Street and is directly adjacent to the historic downtown. The conceptual cross-section is consistent with the Town Center Master Plan and recognizes the desire to expand the historic downtown square to the east of SH 5 rather than having the roadway divide the core of McKinney. Through new urban design features such as wide pedestrian walkways, on-street parking for easy access and street trees, the cross-section calms traffic and encourages pedestrian activity by creating an area that promotes walkability and, more importantly, commercial revitalization and redevelopment. In addition, these improvements will help reconnect the eastern and western sections of downtown which is one of the most important goals of the Town Center Master Plan.

The main difference between the conceptual cross-section illustrated as part of the Town Center Master Plan and the conceptual cross-section created through the SH 5 Corridor Study is the use of parallel on-street parking. While the Town Center Master Plan recommended a 10 foot buffer with trees and landscaping between the roadway and the pedestrian realm, the concept of using tree wells in the pedestrian realm instead of the 10-foot wide landscaped parkway emerged from the SH 5 Corridor Study. The added on-street parking replaces the landscape buffer conceptualized through the Town Center Study, leaving space to widen the pedestrian realm while still maintaining trees as a buffer between the roadway and pedestrian zone. Pedestrian safety and comfort is also improved with the use of on-street parking as a physical and visual barrier between the pedestrian and the roadway. This variation could also lessen the maintenance requirements of the corridor with less landscaping to maintain.

The key aspects of the urban zone cross-section are the wide street side zone, on-street parallel parking, 11' travel lanes, and a landscaped median. The wide sidewalks / shared use path will provide mobility and access for pedestrian and bicyclists along the corridor. The on-street parking will provide much needed, high-turnover parking for the businesses along this corridor section and will also increase the friction with moving traffic, thus calming it. The proposed narrow travel lanes will act as additional traffic calming for the vehicular traffic which improves safety for vehicles, bicyclists, and pedestrians crossing the street. Though a wide outside lane is not proposed as part of the Urban Transition Zone Cross-section, cyclists would still have the right to utilize the entire outside lane for travel, as opposed to a shared-use lane. Perhaps more importantly, is the recommendation through this segment for a parallel bicycle facility along Tennessee Street which is discussed in more detail on page 42. Studies have shown that when amenities are properly planned and implemented, people will use them, which supports and encourages commercial revitalization and redevelopment.

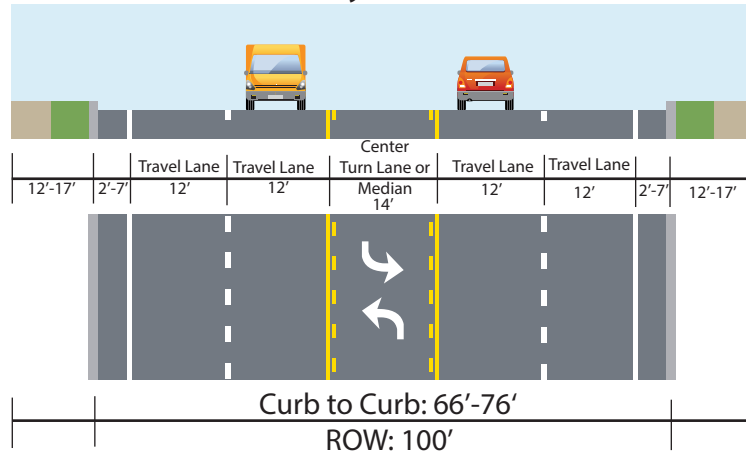
## Urban Context Zone





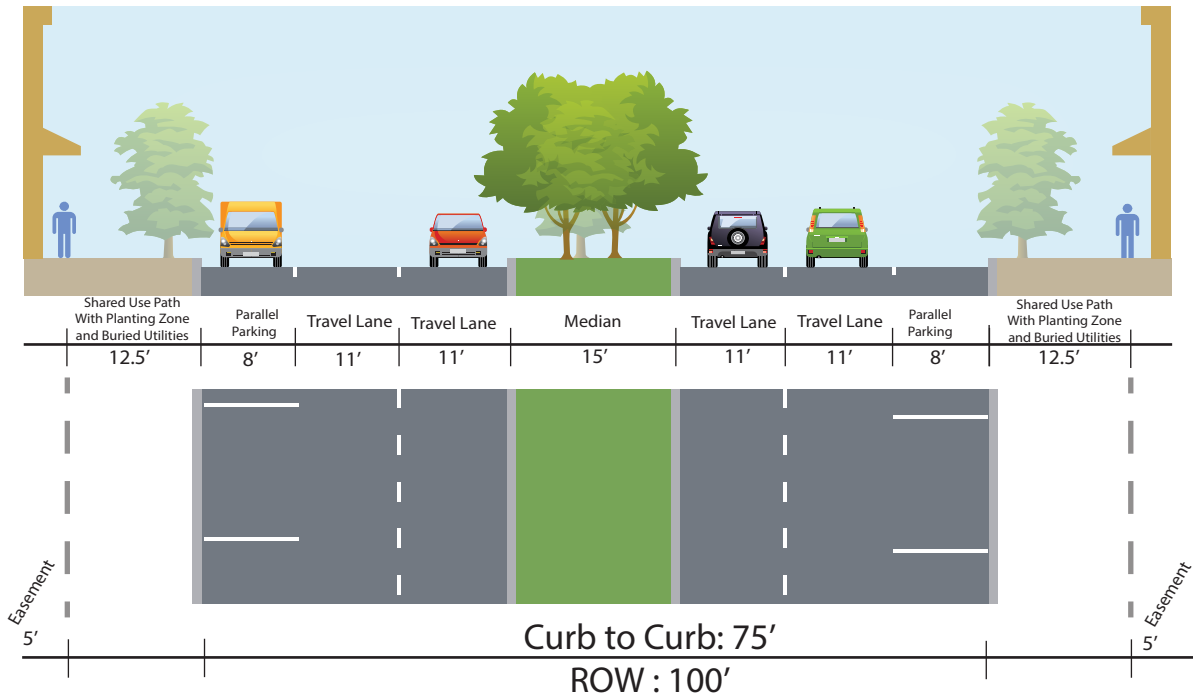
### Existing Urban Cross-Section

#### 4 Lane Undivided Roadway with Two-Way-Left Turn Lane

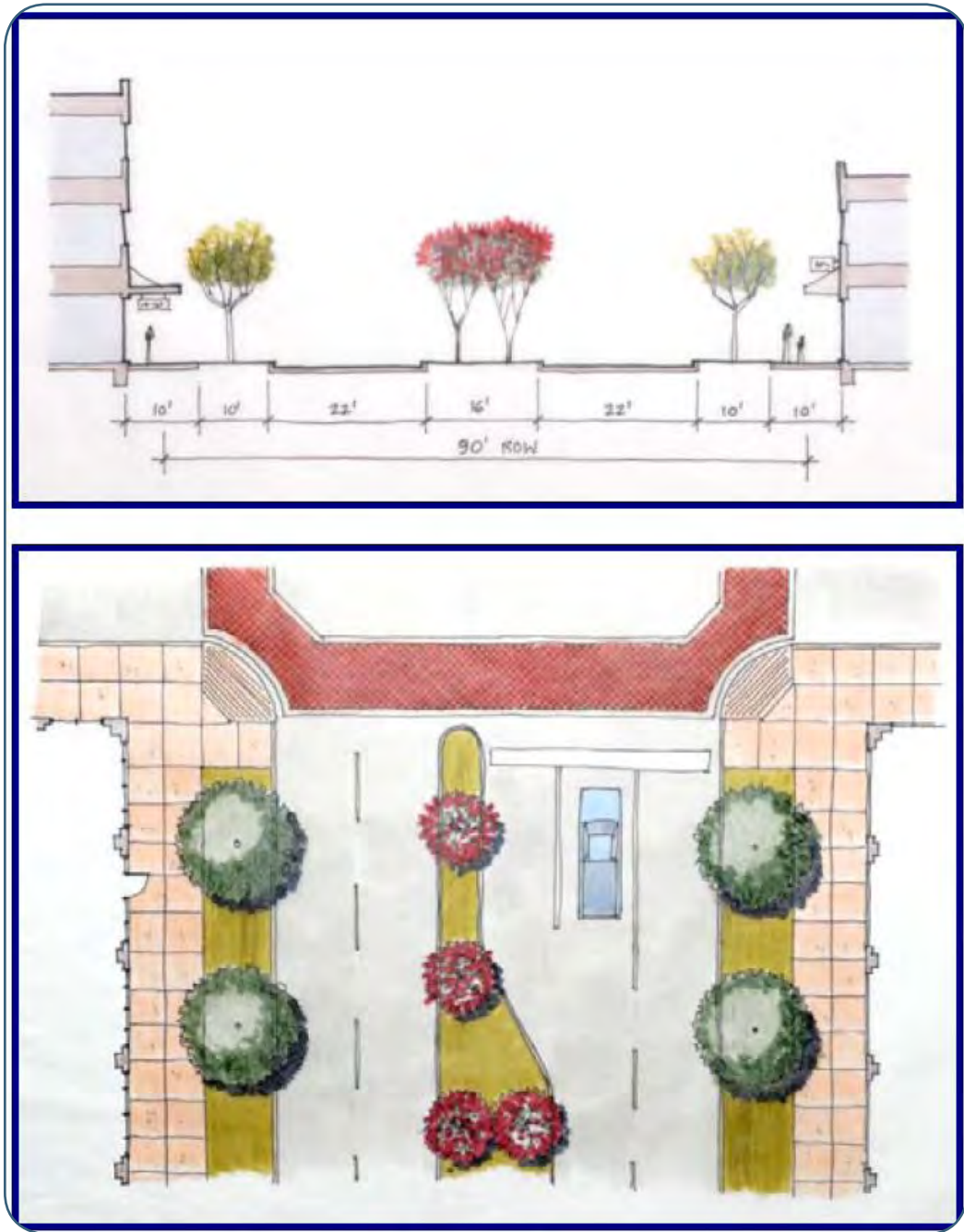


### Recommended Urban Cross-Section

#### 4 Lane Divided with Parallel Parking and Shared Use Path



# Chapter 4



*Recommended SH 5 Cross-Section from the Town Center Master Plan*

## Recommended Functional Accommodations

### Truck Accommodations

The traffic in the study area is not just made up of personal motor vehicles; heavy trucks often use the corridor to access the industrial uses in the vicinity, such as the airport, concrete batch plant, and environmental waste services. An alternative route for trucks should be considered in order to bypass the urban zone. The construction of FM 546 could become a primary bypass route for trucks to Airport Drive which would accommodate this diversion of truck traffic. An interim alternative could be to restrict pass-through trucks along SH 5 between Eldorado Parkway and US 380 and require the use of US 75 for trucks passing through McKinney. Another alternative could be to use Airport Rd from Industrial/Eldorado to US 380.

In the meantime, truck traffic will need to be considered in the Urban Zone but is not the ultimate priority of movement on this corridor. Non-vehicular accommodations are an integral part of the vision of the corridor, and the type of facilities that are truck friendly are often in conflict with bicycle and pedestrian friendliness. Through the detailed design process, there will inherently be some give and take as large vehicular traffic is considered.



Concept drawing of the transit village from the Town Center Master Plan

### Transit Accommodations

Transit accommodations are a future potential amenity to the Historic Town Center. For example, a shuttle service may be considered to circulate between parking and entertainment destinations. In addition, the McKinney Comprehensive Plan and NCTCOG Mobility 2035 - 2013 Update Report identifies future passenger rail that would run parallel to SH 5 (along the existing railroad) and include a transit village just east of the corridor between Louisiana Street and Virginia Street. The recommended cross-section in this segment supports the general concepts of this transit village and establishes a clear connection point from the historic downtown to the future rail stop. As well, circulator shuttle service could service this potential transit village. The pedestrian priority elements in the Urban Zone of SH 5 will help aid the corridor in being transit ready. For example, wider sidewalks and bulb-outs on intersection

corners would allow for locations of future bus shelters. In addition, on-street parking spaces could be utilized for a bus stop location as demand increases.

### Pedestrian Accommodations



ADA crosswalks in the Town Center

Pedestrian accommodations and enhancements connect all travel modes and introduce walking as a viable form of transportation. These accommodations are essential to the success of many of the strategies identified for corridors such as SH 5, including things such as mixed-use development opportunities, main streets, and walkable access to community parking that serves multiple businesses and destinations. The future use of pedestrian enhancements for SH 5 will focus on improving non-vehicular access to new development and existing destinations and neighborhoods.

In the rural transition and suburban zones, sidewalks are virtually non-existent. Providing a continuous pedestrian path through these areas will create opportunities for recreational users as well as a safer walking environment for everyone. The shared-use paths are also expected to link to regional trail networks which aims to promote and advance the City's Hike and Bike Trails Master Plan and improve connectivity. In the urban and urban transition zones, sidewalks currently exist, but are discontinuous. This plan calls for continuous shared-use paths and wide sidewalks that provide connectivity to the businesses along SH 5 and the Town Center. This recommendation is heavily rooted in the Town Center Master Plan and the notion of creating an improved urban environment within the Town Center.



Pedestrians walking in the shoulder on SH 5 north of Powerhouse Street

## Chapter 4

Through the urban zone of SH 5, ROW within the area becomes limited. Recognizing this existing limitation, priorities had to be determined and input through the public process made those priorities clear: make SH 5 less of a barrier between east and west; and accommodate this revitalization within the existing ROW. In order to accomplish this goal, SH 5 would need to become more pedestrian friendly and operate at a lower travel speed. With these priorities as a guiding force, a second tier of priorities was also established in order to increase walkability, allow for on-street parking, and slow down vehicles.

### Bicycle Accommodations

Bicycle facilities help provide a viable alternative to driving for the commuter cyclist and helps to facilitate travel for the recreational cyclist. Successful enhancements emphasize adequate, well-maintained, continuous, and secure facilities that are connected to other modes of transportation. The implementation of corridors with multimodal elements such as cycling amenities is essential to creating a multimodal corridor. Many bicycle facilities, especially separated facilities, have multiple commuter and recreational users and should be designed as such. A bicycle-friendly environment consists of significant regional trails linked to a network of major streets with separated/striped bicycle lanes and/or signed bicycle routes. This kind of system maximizes connections to other modes (such as pedestrian routes and transit) and minimizes unsafe interactions with auto traffic at intersections. It also has the ability to reinforce the awareness of other modes as travelers approach intersections.

Benefits of bicycling include:

- Fewer vehicle miles traveled and less environmental pollution
- Reduced land and financial resources devoted to vehicle parking and travel lanes
- Improved health through exercise and stress reduction
- Reduced individual travel costs (auto maintenance, parking, fuel)

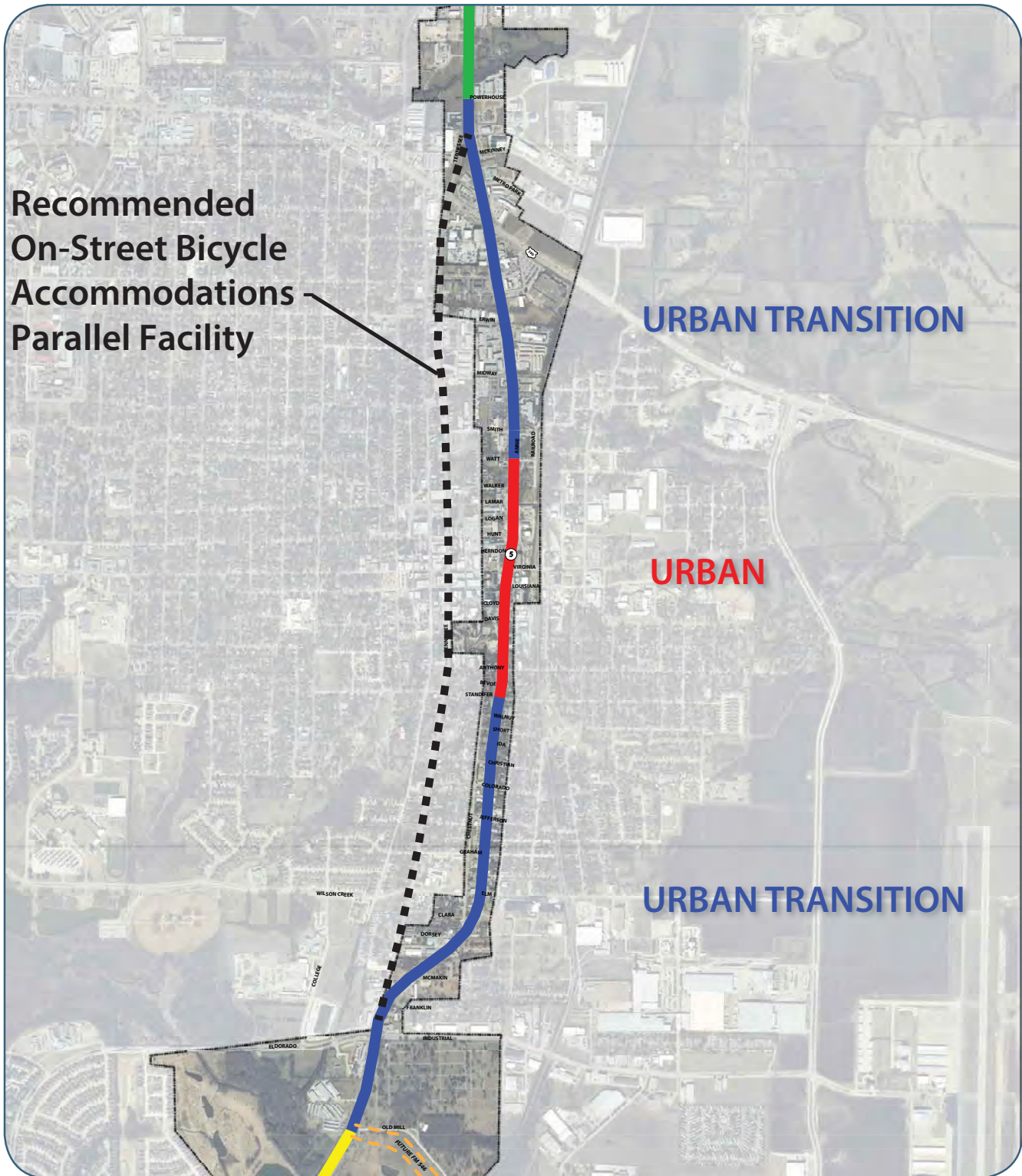
The transition and suburban zones offer improved recreational bicycle facilities by using wide shared use paths outside the roadway. Typically, advanced users prefer to use on-street facilities, like bike lanes or a shared lane. The SH 5 Corridor Study recommends off-street bicycle accommodations on all cross-sections. For the rural and suburban areas, however, the high travel speeds are not conducive to most on-street bicyclists and the shared-use path provides a safer accommodation. Through most of the urban transition and urban areas, a parallel facility on Tennessee Street is recommended as an alternative for on-street bicyclists (see **Exhibit 6**).

Bicycling has proven to be an important concept in the City of McKinney and in historic downtown McKinney. However, with the limited ROW through the Town Center and with other known priorities in place, a dedicated bicycle facility (within the curbs) was not feasible within the urban zone. Providing a wide outside lane (14') in order to accommodate cyclists was evaluated, but was deemed an unviable solution for this segment of SH 5 because it would entice higher travel speeds and would not provide the desired safety benefit for this type of facility. As a result, an alternate priority route for bicyclists through the historic Town Center was evaluated and the vision for a parallel bicycle facility on Tennessee Street between its connection to SH 5 south and north was born. This facility would be a bicycle priority corridor that could provide an improved environment for all users, while a wide outside lane on SH 5 would be comfortable only to a limited ridership. As a result, the parallel facility would be more conducive to the overall goals of the corridor and offer a much preferred alternative (to SH 5) in terms of safety, access, and comfort due to the lower traffic volumes on Tennessee Street. The route on Tennessee Street is also identified in McKinney's On-Street Bicycle Master Plan. More so, the historic Town Center is built on a grid street network with relatively short block widths (200 feet). As a result, a rider using Tennessee Street has continuous and easy access to SH 5 to visit the various developments located along this segment.

While the parallel facility is the most viable alternative through the urban transition and urban zones of SH 5, it should be noted that a shared-use path is proposed to extend the entire length of the corridor, which could be used by pedestrians and bicyclists along both sides of the street. With the anticipated reduced speed, the cyclist who would be comfortable with a wide outside lane would likely also be comfortable with taking the lane.



### Exhibit 6: Recommended On-Street Bicycle Accommodations – Parallel Facility



# Chapter 4

## Shared Accommodations

A shared-use path can be constructed on available ROW providing uses for multiple purposes concurrently. Shared-use paths should be constructed a minimum of 10 feet wide, with a desired width of 12 feet, and should be hard-surfaced to facilitate their variety of users. Signed and striped to ensure they operate as designed, multiuse paths are used by walkers, joggers, and bicyclists. Properly designed and maintained paths will provide a safe, efficient place for travel and recreation. The ultimate vision for the corridor calls for a shared-use path to be constructed along both sides of the corridor, throughout the entire length.



*Example of a Shared Use Path*

## Intersection Improvements

While the design parameters and roadway cross-sections help determine the general design elements of the corridor, intersection improvements provide an opportunity to break off manageable parts of the project into early implementation opportunities. Intersections are often the choke points along a corridor and intersection improvements can have a benefit for capacity improvements within the corridor itself. Because of this, critical intersections were examined for possible improvements that could enhance intersection operations.

The three critical intersections identified were:

- SH 5 and Spur 399
- SH 5 and Tennessee Street South
- SH 5 and Tennessee Street North

It is important to point out that the intersection improvements included in this Master Plan are intended to illustrate design features and options that demonstrate key improvement concepts. The connection points and curve locations shown in each illustration are conceptual in nature and do not necessarily reflect an exact location for a particular connection.

### SH 5 and Spur 399 Intersection

The existing intersection of SH 5 and Spur 399 is actually a series of multiple intersections with severe and awkward angles that are not ideal for either motorists or pedestrians. The current alignment of free moving direct connector ramps with two intersections is not conducive to driver expectations. The unsignalized intersection is also under-designed for the types of vehicles using the facility; this is apparent by the off tracking trailer wheel marks often seen in the grass at the southwest corner of the intersection.

The proposed alternatives looked at two different options (see **Exhibit 7**). The first alternative is a design that simplifies the junction down to one signalized intersection. All movements would progress through the signal, but travelers would be able to perform a free northbound right turn from Spur 399 to SH 5. This alignment would utilize a majority of the existing pavement with intersection modifications.

The second alternative would be substantially more expensive, but may provide the best solution from an ultimate vehicular capacity standpoint. This alternative would grade-separate the Spur 399 to/from SH 5 north movements, where the two roadways merge together. This would provide significant capacity to the intersection. The Collin County Mobility Plan identifies a large vehicular demand at this junction, so the grade-separated alternative would be the most beneficial for long-term traffic accommodations.



Exhibit 7: Intersection Improvement Alternatives for SH 5 and Spur 399



Existing Intersection



Alternative 1:  
Realigned Intersection



Alternative 2:  
Grade-Separated Intersection



## Chapter 4

### SH 5 at North Tennessee Street

The intersection of North Tennessee Street at SH 5 is another skewed intersection where two facilities running parallel to each other merge back into one facility. The existing configuration uses one unsignalized intersection and two other yield points to move traffic through the junction. This intersection is not ideal due to the high skew angles of merging traffic as well as the lack of visibility for some movements. Also there is not a fully controlled approach, which makes the intersection uncondusive for pedestrians.

The proposed realignment (see **Exhibit 8**) would maintain the existing SH 5 alignment but would tie North Tennessee Street perpendicular to SH 5 at the intersection of McKinney Parkway. This improvement would simplify the intersection, improving driver expectations through the area. One by-product of this improvement is a small parcel of land that would gain development potential. This roadway improvement would require mainly intersection improvements for SH 5, but a new alignment and roadway would be required for North Tennessee Street as well.

Exhibit 8: Intersection Improvement Alternatives for SH 5 and North Tennessee Street



Existing Intersection



Alternative 1:  
Realigned Intersection

## Chapter 4

### SH 5 at South Tennessee Street

The intersection of SH 5 at South Tennessee Street is complicated, in part, because of the existing wide medians and visual barriers due to the trees and landscaping. Recently redesigned, the existing intersection is better designed than the previous Tennessee Street configuration, but it could still benefit from some critical refinements in order to become more intuitive for drivers.

For both potential future options (see **Exhibit 9**), the proposed alignments would simplify the intersection by maintaining SH 5 as the major roadway and realigning South Tennessee Street to intersect at a perpendicular angle to SH 5 near the intersection of the existing McMakin Street. McMakin Street would also be slightly realigned to intersect perpendicular to SH 5, just north of the existing intersection.

The modern roundabout (Alternative 1) has become an increasingly popular alternative to conventionally configured intersections with signal controls. The SH 5/Tennessee Street intersection is especially conducive to a roundabout due to the current angled approach of South Tennessee with SH 5. The advantage to a roundabout is the increase in safety as well as their natural tendency to calm traffic. This option may also provide an opportunity to create a gateway to the City and more specifically the Town Center area. However, with this alternative, a thorough understanding of traffic volumes on SH 5 and Tennessee Street would need to be evaluated to ensure that a balanced flow was present and able to support the natural breaks necessary for the roundabout to function effectively.

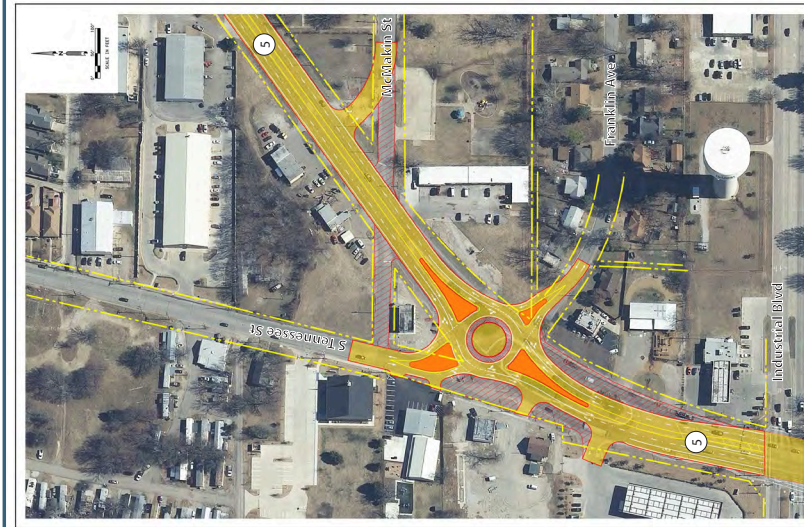
Realigning SH 5 and the connecting driveways (Alternative 2) would provide a more traditional approach to improving the skewed intersection at SH 5 and south Tennessee Street. The SH 5 and driveway realignment could occur within the existing ROW. Alternative 2 would convert the skewed intersections to a more ideal perpendicular intersection. Correcting a skewed intersection to perpendicular can improve the safety for motorists using the intersection due to improved visibility and driver expectation.



Exhibit 9: Intersection Improvement Alternatives for SH 5 and South Tennessee Street



Existing Intersection



Alternative 1:  
Roundabout



Alternative 2:  
Realigned Intersection

# Chapter 4

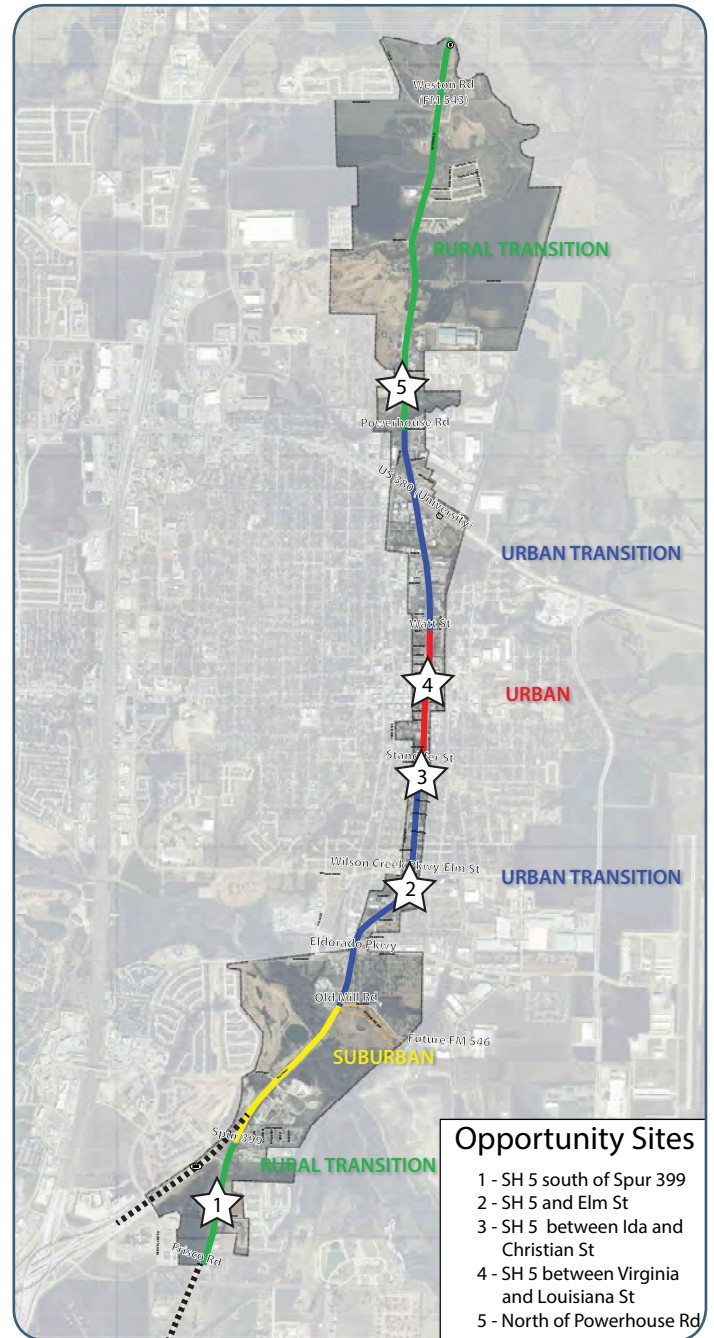
## Redevelopment Opportunities

The added value of the CSS approach can be better understood by looking at the potential redevelopment opportunities that are thereby created. In order to evaluate this potential, five areas were identified along the corridor and either create illustrative redevelopment concepts or corridor context was evaluated based on future anticipated land uses. The utility of these concepts are two-fold: first, they can provide stakeholders and decision makers with direction on the desirable scale, orientation, and land uses of a particular area; and second, they serve to inform any potential implementation recommendations that would encourage redevelopment.

The five locations chosen are in three different context zones so that the development focus in each could be illustrated appropriately. The Urban Transition context zone has two examples, each giving distinct redevelopment opportunities at the two chosen locations. **Exhibit 10** shows the general location for each opportunity site (marked with a star).

It is important to note that the redevelopment illustrations shown are illustrative in nature and are not the only approach that could be utilized to capture redevelopment opportunity. The elements shown could be some of the many options that work for a particular concept and provide a framework for key concepts to be implemented.

### Exhibit 10: Opportunity Site Locations





## Opportunity Site #1 - SH 5 south of Spur 399:

This segment of SH 5 is within the rural transition context zone of the corridor. Given the auto-oriented nature of future development and roadway function in this segment, opportunities focus on the improvement of roadway aesthetics through landscaping and streetscaping (see recommended cross-section in **Exhibit 11**).

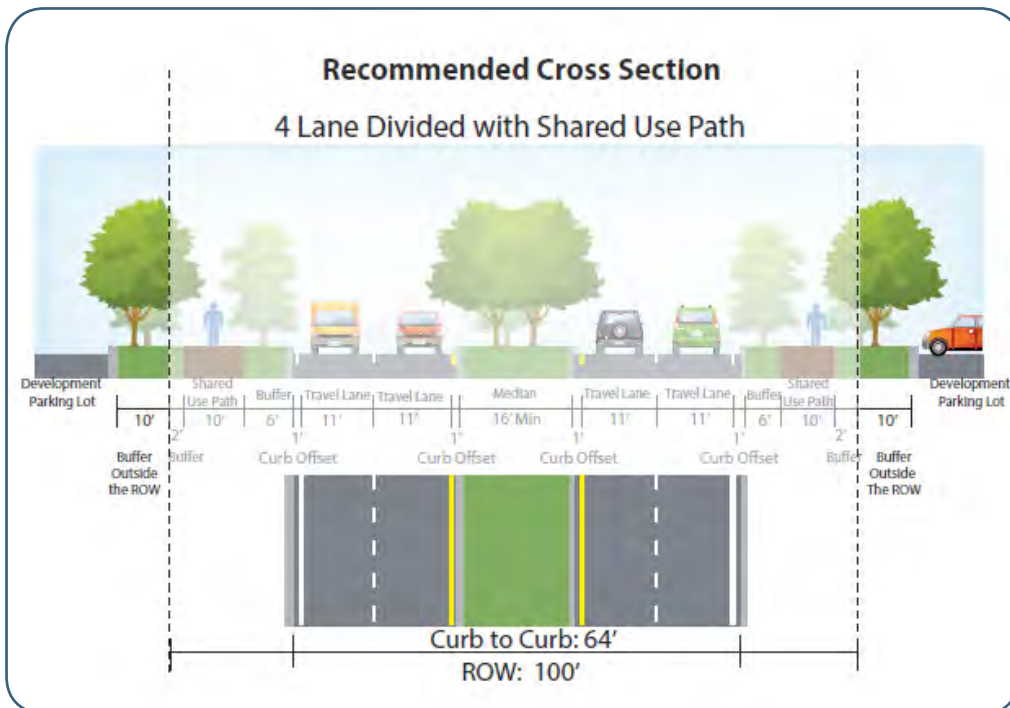
Streetscape and landscape improvements include:

- Wide shared use path on both sides of the roadway separated by a landscaped buffer from the travel lane or curb
- Street trees (canopy trees with higher branching patterns) planted at frequent intervals within the landscaped area in order to buffer the shared use path from development elements such as parking lots

Frontage improvements along the private realm include:

- Street screens with elements of shrubs and canopy trees in order to screen surface parking along the street frontage
- Pedestrian lighting at regular intervals
- Signage should be limited to monument signs
- Surface parking to be setback far enough from the front property/ROW line in order to accommodate the landscaped buffer

**Exhibit 11: Opportunity Site #1**





## Chapter 4

### Opportunity Site #2 – SH 5 and Elm Street:

This opportunity site was chosen due to its proximity to the historic Cotton Mill redevelopment site, the McKinney Housing Authority redevelopment project, and its incremental opportunity to recapture underutilized commercial properties. The blocks between SH 5 and Chestnut Street are characterized by shallow block depths (less than 200') with smaller lots and older, auto-oriented buildings. With the redevelopment vision for the Cotton Mill site into a future entrepreneurial village, the concept below explores how a redesign at this key location could take advantage of the Cotton Mill adjacency, and proposed Senior Multi-family development project.

The redevelopment concept (**Exhibit 12**) generally proposes commercial mixed uses with direct frontage on SH 5. Surface parking should be located in the middle of the block or to the side or rear of the buildings. Any surface parking along SH 5 should be screened by vegetative buffers that soften the character along the roadway.

Private redevelopment on the blocks south and west of Elm Street should be sensitive to the adjoining neighborhood context. Transitions could be in the form of townhomes and live work units along Chestnut Street which can effectively buffer the single-family homes from the traffic, dust and noise on SH 5. In addition, the section of Chestnut Street from Clara to Dorsey could be vacated to eliminate the awkward intersection and block configuration at SH 5. This street vacation could be an opportunity to create a pocket park that serves as an informal space and gateway into the Town Center in addition to serving as an amenity to the adjoining neighborhood.

### Exhibit 12: Opportunity Site #2





# Chapter 4

## Opportunity Site #3 – SH 5 between Ida Street and Christian Street:

This area was selected as an opportunity site due to its largely underutilized/vacant parcels. In addition, the selected blocks share some of the same typical characteristics of the blocks immediately east and west of SH 5 within the urban transition zone south of the Town Center. Some of these typical characteristics are:

- Short, shallow block depths
- Older, auto-oriented uses that are declining (building and site improvements are often obsolete)
- Current zoning requirements (parking, setbacks, etc.) make the blocks difficult to redevelop
- Immediate adjacency to single-family neighborhoods
- Some single-family residential buildings are still located with direct SH 5 frontage

The redevelopment concept (Exhibit 13) for these blocks illustrates the following ideas:

- Focus on development of small commercial buildings (office and low-intensity retail) with SH 5 frontage
- Parking located along the side streets (head-in parking) and behind the buildings (in the middle of the block). The head-in parking on the east-west streets would allow for increased parking for new and improved businesses on SH 5. Since the east-west streets are generally narrower, low traffic streets, the head-in parking would be a good fit within the overall neighborhood context.
- Where block depths permit (between SH 5 and Chestnut), townhomes or live-work units integrated as transitions between the commercial on SH 5 and the single-family neighborhood.
- Single-family buildings on SH 5 and on the blocks immediately east and west of SH 5 (between SH5 and Chestnut and between SH 5 and Wilcox) to be converted to commercial (office and low intensity retail) uses as a transition to the adjacent single-family neighborhood blocks. In addition, allow townhomes and live-work units as infill in these blocks.

Exhibit 13: Opportunity Site #3





### Opportunity Site #4 – SH 5 between Virginia Street and Louisiana Street:

This block was selected as an opportunity area in order to directly illustrate the master plan concepts created as part of the Town Center Study Initiative. These blocks are the heart of the Town Center and are the critical link between the eastern and western sections of the downtown core, which is currently divided by SH 5.

The development concept (**Exhibit 14**) shows buildings close to or at the SH 5 frontage with existing parking lots either redeveloped into mixed-use developments or transformed into parks, plazas, or squares to add vibrancy and improve the character along SH 5. Improvements to Virginia Street between Tennessee Street and SH 5 were completed in 2014 when the City implemented the final block of the one-way downtown couplet with Louisiana Street.

**Exhibit 14: Opportunity Site #4**



# Chapter 4

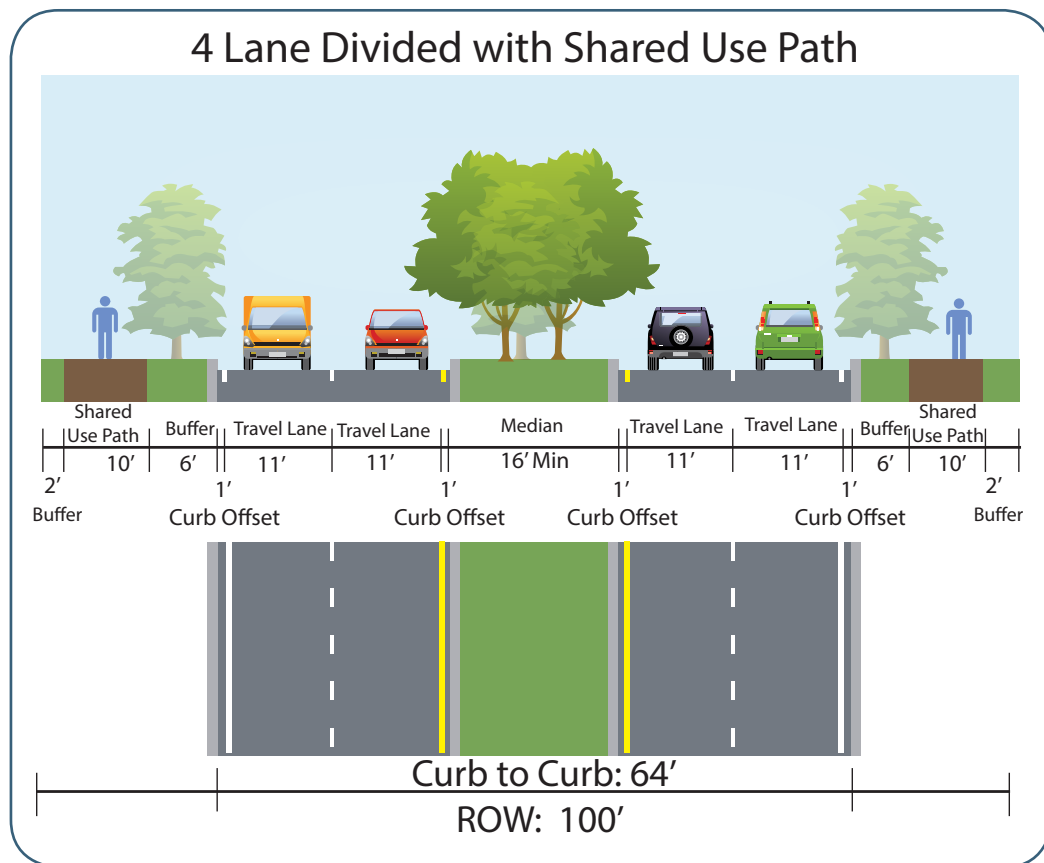
## Opportunity Site #5 – SH 5 North of Powerhouse Road:

Chapter 2 provided an assessment of the current Future Land Use designation for the entire stretch of the SH 5 corridor. With this, one of the issues identified early on in the process was that future land use designations identified in the northern section of the study area should accurately accommodate current market realities and future development opportunities.

While most other segments of SH 5 have already seen defining growth, redevelopment and activity, the segment of SH 5 north of Powerhouse Street is still early in its development lifecycle, making its future land use potential somewhat uncharacterized given ever-changing market demands. Therefore, the purpose of evaluating opportunity site #5 was not necessarily to address appropriate future land uses, but rather to understand what the best potential cross-section design (Exhibit 15) should be in order to accommodate a variety of land uses based on market changes and future development context.

Preferred future land uses in this area are predominately industrial in nature (per the Future Land Use Plan Module Diagram). To support the opportunity assessment effort, a high level evaluation of current industrial market demand for the McKinney/Allen Submarket was explored and is included in Appendix 6. While a more detailed assessment would still be needed to best understand industrial market realities within this area, the broad evaluation did indicate that the City is currently accommodating current demand for industrial uses through existing land use designations and zoning entitlements. Based on the broad analysis, future industrial and warehouse demand is likely to occur along the SH 5 / US 380 corridor or on existing zoned property south of Powerhouse Street and along Airport Road over the next 10+ years. In this context, the most appropriate opportunity for SH 5 within this area is to design a cross-section that can accommodate a range of future land uses that may not necessarily be limited to just industrial. This opportunity is inherently reflected in the recommended 4-lane divided cross-section that not only appropriately accommodates existing development and future industrial land uses, but also any other future growth, regardless of the exact permutations of future land uses that may become viable over time.

Exhibit 15: Opportunity Site #5



## Chapter 5: Interagency Coordination

### Process of Coordination

Coordination with the different agency stakeholders both locally and from a regional standpoint is critical to the success of this initiative. These organizations include TxDOT, NCTCOG, and FHWA. Each has played a critical role in developing the initial recommended cross-sections and strategies for the City of McKinney. Moving forward into implementation, these agencies will continue to play a key role as focus moves to final design and reconstruction.

Communication has been vital to making sure all agency stakeholders have been actively involved in the process. Regular outreach and communication kept these stakeholders aware of the issues and opportunities identified throughout the process. Regular communication also created an informed context in which major decisions were considered. Not only did this approach promote communication, but it also created a brainstorming opportunity that led to a comprehensive outcome greater than the sum of the parts.

One tool for increasing communication between the City and the agency stakeholders was regular conference calls with the project team and Project Review Committee. Predominantly comprised of the City of McKinney, TxDOT, and NCTCOG, this committee helped steer the project to achieve the greatest value for the goals set from inception of the Study. These calls enabled dialogue on the progress on the Study as well as key discussion points that arose along the way. Also included was discussion on the issues impacting the recommended cross-sections, the influence of the ITE *Designing Walkable Urban Thoroughfares* manual on the project, and the foundation of coordination in regards to the schedule of the project.

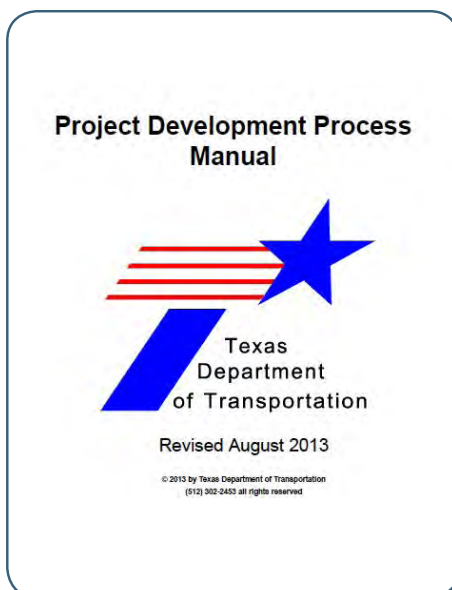
Throughout the process, the project team used these conference calls for informal and formal oversight. This encouraged a thorough understanding of the project paths and goals.

After initial outreach to FHWA, the federal agency opted to utilize the role of TxDOT as a means by which to remain informed about the project. With this in mind, TxDOT has committed to bringing FHWA into the process at the appropriate time moving forward.

### Corridor Plan Integration

SH 5 is a complex regional corridor with varied conditions and implications for development potential on surrounding parcels and neighborhoods, as well as for regional traffic. Accordingly, each stakeholder agency holds priorities and interests in the corridor that are intrinsically important, but that also relate to other areas of responsibility as held by their agency. For example, NCTCOG is interested in both sustainable development patterns but also the related regional transportation network. Similarly, TxDOT has an interest in the corridor because of the State and U.S. Roadway System, but has also taken a stronger interest in supporting local economic development, and integration of CSS solutions.

Finally, the City of McKinney has been focused on redevelopment and sustained investment on the east side of the city including the Town Center, thus defining a new vision for the corridor. SH 5 has been a main corridor through the City for many years. The vision for the corridor has recently changed due to the Town Center Initiative (2008) which identified a conceptual cross-section to consider near the city's downtown area. This vision and the initial conceptual cross-section was the genesis for this Corridor Study. The Town Center Initiative created a vision for economic development that included SH 5 as a key mechanism for the growth and development of the City as it grows substantially in population.



*TxDOT's Project Development Process Manual includes a context sensitive process*



# Chapter 5

In the context of those multi-agency interests, while this project sets up SH 5 for future implementation, it should also respect the fact that SH 5 is an on-system facility and will need to be delivered in a manner consistent with TxDOT’s Project Development Process. The ultimate funding source(s) for various sections may drive the exact process, but the project objectives certainly respect, and are consistent with, setting up this corridor to allow for future TxDOT or local implementation.

The TxDOT project development process includes steps that are designed to address and integrate all issues as early and as comprehensively as possible. The following is a key step suggested in the Project Development Process: *“Early coordination with resource and regulatory agencies and other stakeholders is vital in obtaining concerns and opportunities for a proposed project. Sometimes opportunities may be identified to perform joint activities with a project planned by an agency.”*

## Memorandum of Understanding

Accordingly, the City worked early to secure full participation by TxDOT and NCTCOG. This early engagement resulted in a Memorandum of Understanding (provided in **Appendix 4**) that establishes agreement among the City, TxDOT and NCTCOG to work together to consider all factors in a context sensitive approach so that all of the respective agencies’ needs are met in an organic way in the details of the engineering and final design. This will provide better shared outcomes; a more complete understanding of the project from the public’s perspective; and a set of conceptual cross-sections that will form the basis of the design strategy during the final design process.

**MEMORANDUM OF UNDERSTANDING**  
**BETWEEN**  
**THE CITY OF MCKINNEY, TEXAS and THE REGIONAL TRANSPORTATION COUNCIL OF THE**  
**NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS and TEXAS DEPARTMENT OF**  
**TRANSPORTATION**  
**FOR**  
**STATE HIGHWAY 5 CORRIDOR IN MCKINNEY, TEXAS**

**I. Purpose & Authority**

The purpose of this Memorandum of Understanding (MOU) is to develop a cooperative partnership between the City of McKinney (City), Regional Transportation Council (RTC) of the North Central Texas Council of Governments (NCTCOG), and Texas Department of Transportation (TxDOT) in establishing a preferred approach for integrating Context Sensitive Solutions into future design and engineering level schematics for the SH 5 (McDonald Street) Corridor through the City of McKinney, Texas.

This partnership will facilitate the integration of regional transportation needs, local public and private development plans, economic development opportunities, redevelopment considerations, multimodal integration, transit-oriented development, safety improvements and a leveraging of limited public resources into a comprehensive project.

*Memorandum of Understanding for SH 5*

## Chapter 6: Planning for Implementation

For the State Highway 5 Corridor Context Sensitive Master Plan to have a positive impact on the growth and development of the SH 5 corridor, an approach for implementation should be explored and developed so that the conceptual vision is able to translate into meaningful change over the short-, mid- and long-term. Because much of the vision is centered on the functional design elements of the roadway itself (i.e., the reconstruction of SH 5), the approach for implementation will inherently focus on cost considerations, funding strategies, and agency coordination. However, equally as important is the recognition that land uses and land use patterns also play an integral part in shaping SH 5 throughout its six-mile stretch in McKinney. With this in mind, there is also a need to explore and understand the role that development regulations play in realizing the vision (within the private realm).

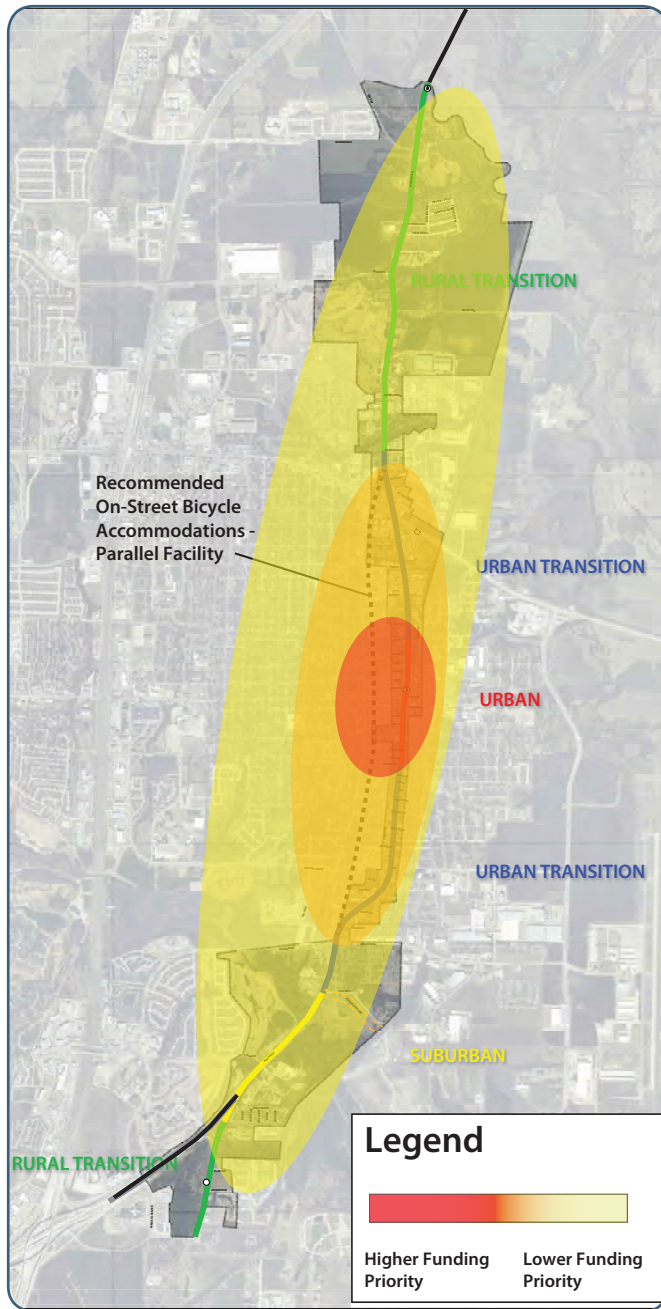
### Planning Level Costs

An understanding of preliminary construction costs is one of the driving forces for implementation. Without this understanding, funding prioritization and the allocation of limited city resources is impractical to evaluate. As such, **Table 5** presents a summary of the preliminary opinion of probable construction costs for the reconstruction of the corridor based on the conceptual designs generated in the SH 5 Master Plan (full project cost sheets are provided in **Appendix 7**). These cost estimates assume that sufficient ROW generally exists along the corridor in order to construct the identified improvements. It should be noted that, as segments of SH 5 go under design in anticipation of construction, identified elements such as topographic and boundary survey information will impact the cost considerations. Refinements to design options through a design phase may also influence cost estimates. However, with the known conceptual cross-sections in place, the opinions of probable construction costs described in **Table 5** provide a general expectation for the costs that could be expected for the reconstruction of SH 5.

**Table 5: SH 5 Segment Costs**

Segment	Project Cost
Frisco Road to Spur 399	\$22,915,000
Spur 399 to Old Mill Road / Future FM 546	\$16,150,000
Old Mill Road / Future FM 546 to Standifer Street	\$18,613,000
Standifer Street to Watt Street	\$12,060,000
Watt Street to Powerhouse Drive	\$12,915,000
Powerhouse Drive to Honey Creek Bridge	\$22,744,000
<b>Total:</b>	<b>\$105,397,000</b>

## Exhibit 16: Funding Prioritization



## Funding

In today's funding realities, a combination of funding resources will be needed for the reinvention of SH 5. For some projects, a public-private approach could generate funding resources from the private sector and leverage city dollars for the reconstruction of key segments of the corridor. However, in other instances, a combination of public funding resources (i.e., City, County, State, etc.) will be necessary in order to bring about the complete change envisioned as part of this Master Plan. In any case, the need to be creative and comprehensive for funding is critical. To help inform the prioritization of funding for the corridor, **Exhibit 16** demonstrates a hierarchy of priority segments in an effort to help the City focus available resources in a strategic approach.

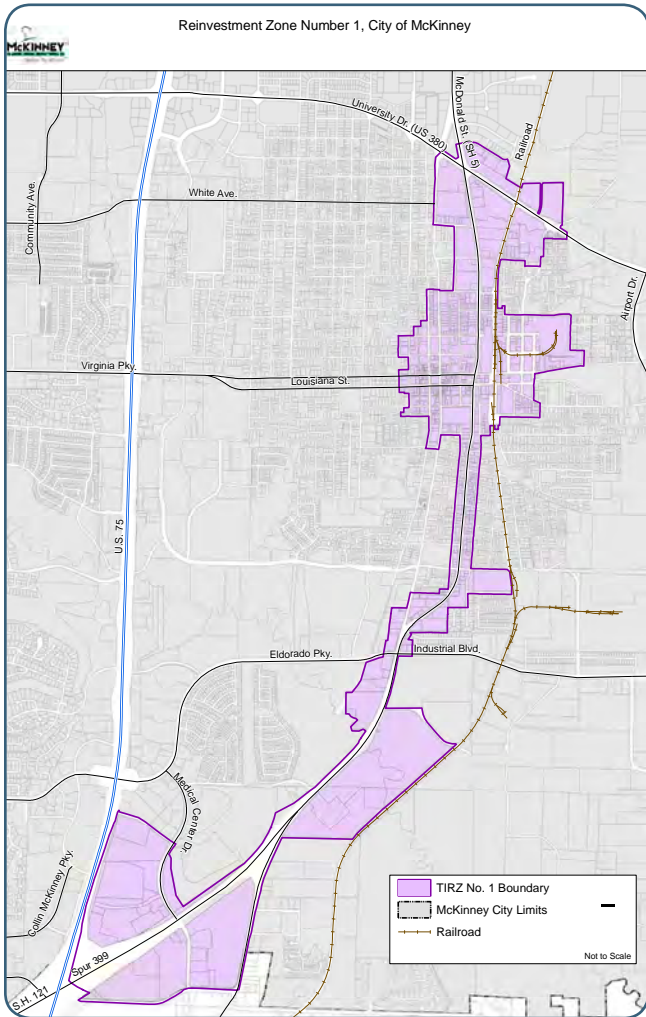
While funding strategies and segment prioritization will play a critical role in guiding future decision making, these things must be balanced with a clear understanding of existing system realities. In other words, the City must also consider the existing role that SH 5 plays in supporting traffic flow for the entire transportation system. This will provide city leaders and city staff with the information needed to identify the most appropriate time for certain projects/segment reconstruction. The timing and completion of projects such as future FM 546 and the reconstruction of US 75 are two examples of key projects that will likely have direct impacts on SH 5 and should be considered as the City seeks to improve the highest priority segments of the corridor.

The City has already been very successful in securing some funding for the Corridor through bond elections and grant opportunities. However, other strategies that could be utilized to secure the additional funding needed to complete final design and reconstruction of the corridor are explored below.

**Tax Increment Financing (TIF):** To provide a focused funding source for transportation and other infrastructure investments in the Town Center, the City and Collin County created a Tax Increment Reinvestment Zone (TIRZ) in 2010. In Texas a TIRZ is the technical district used to facilitate TIF funding. The Town Center TIRZ roughly covers the same area as the SH 5 Corridor Study, as seen in **Exhibit 17**.



## Exhibit 17: TIRZ No. 1 Boundary Map



The TIRZ does not create new tax revenue funds, but rather it captures new ad valorem and sales taxes at the rate set during the formation of the TIRZ within the district. As the tax revenue is generated, the funds in the TIRZ accumulate for investments consistent with the adopted TIRZ Project and Finance Plan.

When the TIRZ was formed, the Town Center Consultant Team and Staff worked with the City Council to prioritize the types of infrastructure investments for the Town Center. It was agreed that some of the funds should be prioritized to provide local match for the redesign and reconstruction of SH 5. Although the TIRZ is still in its infancy, this commitment of funds has improved the City's leverage when it has applied for discretionary grants from NCTCOG.

**Bond Program:** Based on the scale and scope of the improvements proposed for SH 5, funding the project through the city's general bonding authority is a viable source. The benefits from the proposed improvements will be regional and go beyond the corridor itself. In fact, the City of McKinney has \$5,000,000 committed to a first phase (Standifer Street to Watt Street), of the project through a combination of issued general obligation funds and voter authorized non-issued street bonds. The improvements funded through the bond program would include all the improvements proposed within the ROW of SH 5.

**TAP Grants:** Per the Federal Highway Administration (FHWA), the Transportation Alternative Program (TAP) "provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the ROW of former Interstate System routes or other divided highways." Currently, the NCTCOG offers funding from the TAP under three categories:

- Active Transportation
- Urban Thoroughfares / Boulevards
- Improve Safety and Access to Schools

SH 5 is an ideal candidate for the urban thoroughfares/boulevards category. Per the NCTCOG, this category "includes urban thoroughfares/boulevard roadways typically located in urban environments with low traffic speeds and designed with multi-modes of transportation including motor vehicles, bicyclists, pedestrians, and transit. These projects are context sensitive in design and consistent with the recommended practices set forth by the Institute of Transportation Engineers (ITE) *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*, often including "walkable" streetscapes with pedestrian and transit user accommodations, on-street parking, and other amenities and design elements suitable for the adjoining land uses."

**McKinney's Capital Improvement Program:** The Capital Improvements Program (CIP) is a five-year plan for major capital projects, including all probable funding sources for the period. The CIP is reviewed and updated annually. Projects are selected from master plans, the bond committee, citizen boards and other needs identified by staff and council.

The total estimated cost of all current and proposed projects is \$426 million; this amount includes \$122 million for active projects already in progress. The total estimated cost of current and proposed street and traffic projects is \$108 million. Programming for SH 5 should continue to be included in the CIP Planning efforts.

## Chapter 6

**McKinney's Impact Fees:** Impact Fees are defined by Chapter 395 of the Texas Local Government Code as "a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of Roadway improvements or facility expansions necessitated by and attributable to the new development." Through the Roadway Impact Fee Study approved in 2013, the City has identified the City-funded transportation projects needed to accommodate projected growth within the City. SH 5 was not identified as a project in the current Roadway Improvements Plan for Roadway Impact Fees. Only vehicular capacity increasing projects (lanes added) can be included per state law. As a result, the Urban Zone would not be an impact fee eligible project; however, other areas of SH 5 could be included due to increased capacity proposed on those segments.

### Recognizing the Land Use-Transportation Connection

Existing development regulations along the SH 5 corridor should be organized and based on the corresponding roadway context zone.

With the recent adoption of the McKinney Town Center Development Code (2013) and subsequent amendments to the zoning district classification structure (2014), some of the significant challenges associated with compatible development have been improved. However, there is still an opportunity to look at expanding the MTC development principles north and south of downtown through appropriate overlay districts. As well, refinements to key standards could also be of benefit.

Within the southern and northern Rural Transition Context Zones, refinements to development standards should focus mainly on aesthetic and landscape improvements. Recommended streetscape standards could include additional landscaping along the private frontages, such as street trees and screening of surface parking and pedestrian amenities such as trails, sidewalk, and street lighting.

Based on the two sample redevelopment concepts generated within the Urban Transition Context Zone, development regulations along this segment of the corridor should be tailored to address things such as varying setbacks, off-street parking for different land uses, and desirable land uses.

### Final Remarks

In order to make the redevelopment plan for SH 5 a reality, all of the strategies discussed previously should be explored as viable options for implementation. While a significant emphasis should be placed on securing financial resources and ensuring that the prioritization of those resources be programmed in an effective way, functional next steps will also include:

- Coordination with regional, state and federal agencies to identify the roles of each as it relates to implementation of the conceptual design alternatives.
- Preparing design schematic and environmental documentation for the corridor to meet State and Federal requirements.
- Securing additional necessary funding and preparing full design plans for the highest priority segment of SH 5 between Eldorado Parkway and US 380.