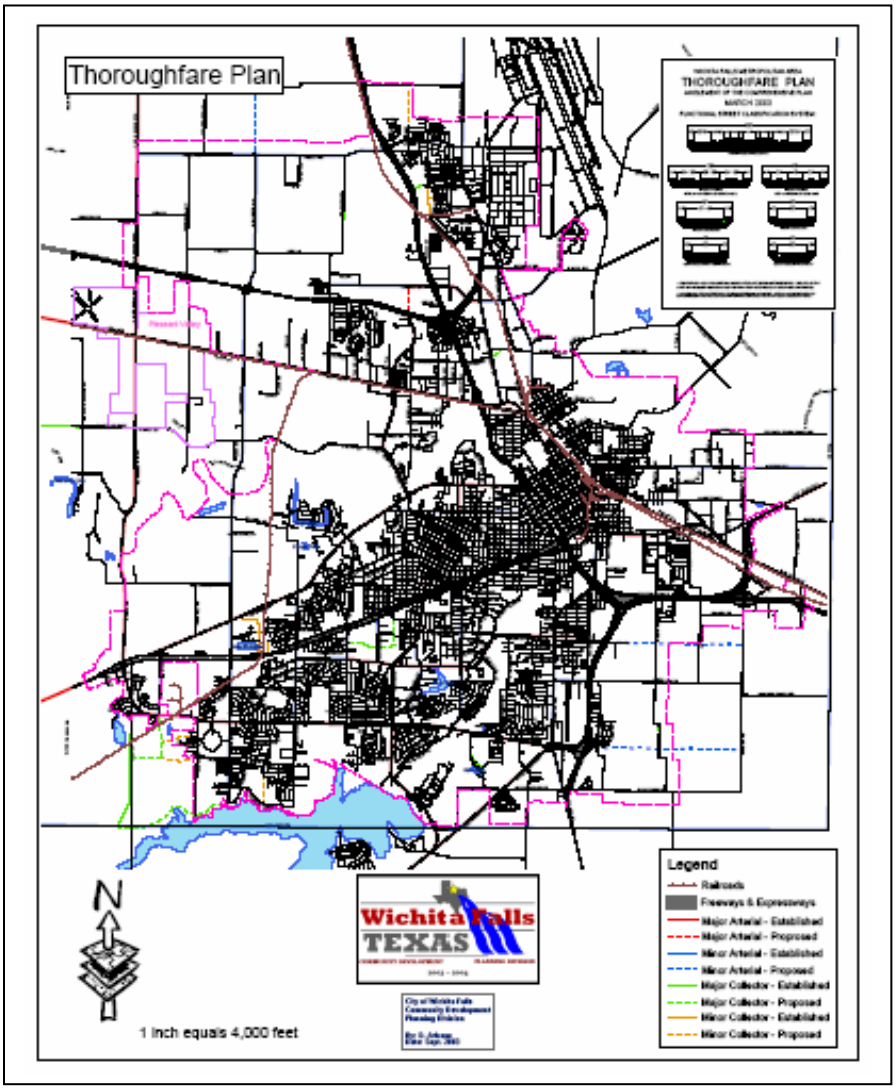
THOROUGHFARE PLAN 2005
CITY OF WICHITA FALLS



THOROUGHFARE PLAN 2005
CITY OF WICHITA FALLS

A. PURPOSE

The City of Wichita Falls Thoroughfare Plan serves two concurrent roles:

1) it outlines the functional classification of existing streets/roadways within the City – classified hierarchy of roadways – from cul-de-sacs through freeways based on levels of mobility and access; and
2) it delineates proposed logical, long-range street connections and reserves anticipated right-of-way widths to meet future demand.

The Plan serves to improve and enhance commercial and industrial development, promote logical land use patterns, and to have streets be utilized for their designed purpose and capacities.

B. BACKGROUND

The City's first attempt at comprehensive transportation planning occurred in 1954 when the area Texas Department of Transportation (TxDOT) researched and conducted a Traffic Origin & Destination Survey. Based on the findings of this research, plans were developed to construct an expressway system (Kell Freeway) to alleviate sub-standard traffic movement. Since that time numerous Transportation Plan updates (1956, 1959, 1964, 1972 and 1975) have occurred. By 1980, the City of Wichita Falls adopted a Community Development Plan that addressed the element of transportation. Subsequently, in 1984 a detailed 20-year Thoroughfare Plan report was developed to outline the City's existing and proposed, future street network along with anticipated, minimum right-of-way widths that would be necessary.

The current City Thoroughfare Plan, which dates from 1996 and 1999, continues to be updated and revised by City Council on an 'as required' basis to keep pace with development needs. A primary criterion for maintaining an adequate street system is the requirement that any new subdivision take into consideration the street layout, arrangement, character, width, grade and location. As subdivision plans and preliminary plats are submitted for review, the Planning Division, Public Works, Emergency Services and public utility companies will consider the proposed streets in relation to: the existing street network, planned streets, topographical/drainage conditions, safety and convenience and their appropriate relation to the proposed land uses.

C. STREET CLASSIFICATION SYSTEM

The efficient operation of highways requires the classification of the functions they are to perform and identification of the most effective facilities to perform them. A given type of

movement can best be accommodated on facilities specially designed for that purpose. Matching design to use helps ensure homogeneous flow, which contributes to efficiency and safety. All street networks have a hierarchy of facilities based on their function – mobility and access. Every class of roadway serves as a collection or distributing facility for the next higher class as illustrated in Figure 1. There is an inverse relationship between mobility and access. The greater the mobility, the less access hence greater access results in decreased mobility within the street network.

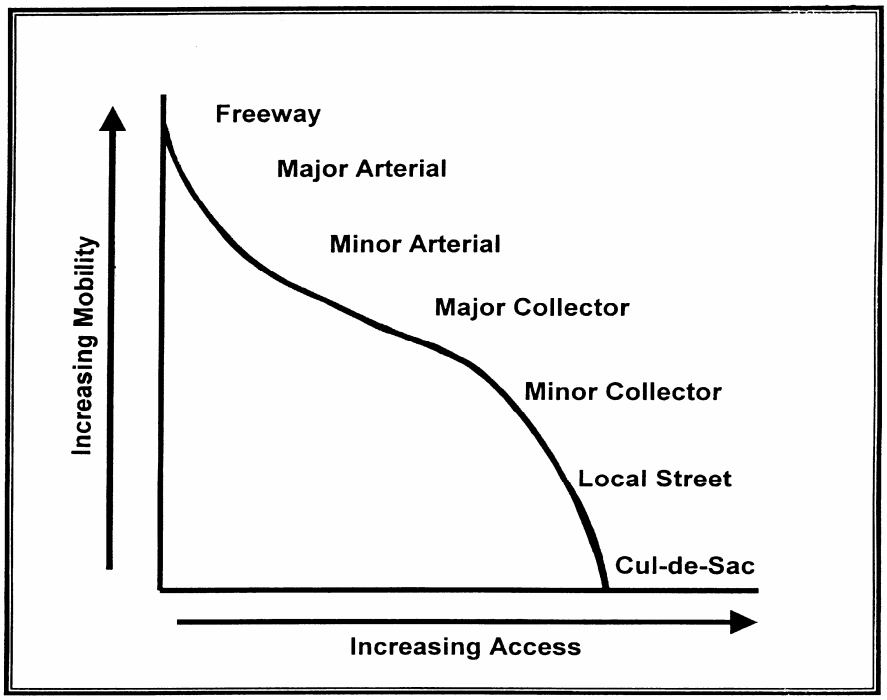


Figure 1 – Hierarchy of Functional Street Classification

The basic functions of the City's street and highway system are:

1) to move traffic between dispersed points; and
2) to provide street access to individual properties.

No individual class of roadway can adequately perform these two opposing functions. The City of Wichita Falls recognizes the standard street classification system established by the U.S. Department of Transportation in 1989 that outlines a series of concepts, criteria and procedures for the functional classification of all roadway facilities. It is necessary for a community to identify and set basic design standards for those streets where land access is the primary function and those streets where traffic movement is the primary function. To this extent Table 1 outlines, by street classification, standard design and function requirements for the City's Thoroughfare Plan.

The City of Wichita Falls Street Classification System for urban transportation includes the following minimum values and requirements.

1. Local Streets & Cul-de-Sacs

These street designs are generally utilized in low-density, residential developments. This street class includes all facilities not found in a higher classification. They provide direct access to adjacent land, access to higher order streets; their design should discourage

through traffic and have the lowest level of mobility. High-density developments are not suitable for this street design.

a. Local Residential Streets

Local residential streets shall be laid out as to discourage their use by through traffic where such traffic does not have its origin or destination within the residential area. This shall not include proposals or needs to connect adjoining residential subdivisions. A secondary function of this street class is to provide an easement for municipal utilities. Examples of this street type include Granada Drive, Gerald, Hayes Street, etc.

b. Cul-de-sacs

The Planning Division, Department of Public Works and Fire Department shall evaluate the length and turn-around for each cul-de-sac by considering emergency access, density of residential, intensity of commercial, topography, sight distance, alternative access and other such issues. The above City departments shall have sole discretion to modify right-of-way and design requirements in the interest of public health, safety and general welfare of the area, adjacent development and future development. An example of this street type would be Willowbend, Warwick Court, Clayton Lane, Charing Court, etc.

Unless stated to the contrary, the City's Subdivision Ordinance (Sec. 6 – Street Standards, Specifications & Conditions) includes the following requirements that shall apply to the development of cul-de-sacs:

Land Use	Maximum Length (feet)	Minimum Turning Radius/Right-of-Way
Residential	600 ft.	100 ft. diameter
Commercial/Industrial	900 ft.	200 ft. diameter

Proposed local streets Arrowhead Drive, Onaway Trail, Canyon Trails Drive, and an unnamed street in Lake Wellington Estates (minimum 50 ft. right-of-way) are incorporated into the Thoroughfare Plan as strong recommendations - not requirements - accomplishing logical residential street connections.

2. Collector Streets

The Collector street system functions to circulate traffic within residential, commercial and industrial areas and may provide direct land access for minor collectors. The City Thoroughfare Plan generally discourages residential development of land that proposes direct access onto major collector streets. This street class collects traffic from residential subdivisions and channels it into the arterial street system.

a. Minor Collectors

The purpose of the minor collector street system is to circulate traffic within neighborhoods and move it to one of the higher street classes (major collector or minor arterial). Minor collectors also serve as an easement for utilities. This street class is designed to accommodate fewer trips per day than major collectors and some examples in this category include York, Grant, Speedway, University, etc.

b. Major Collectors

This street class maintains a similar function to that of the minor collector – it circulates traffic in a neighborhood and moves it to a higher street class (arterials – minor and major). One of the key differences, major collectors provide limited connections, only extending from the arterial street class into the interior of a neighborhood. Generally, this street class allows for some through traffic movement and access to local streets within residential neighborhoods. Intersections with major collectors must be flared (turn-lanes) and improved. Some examples of major collector streets include portions of McNiel, Johnson Rd, Seymour Rd, 10th Street, etc.

3. Arterial Streets

The arterial street system receives traffic from collector streets and channels movement to the principal arterial system (freeways/expressways). Trip service tends to be moderate in length and serves as a connection between various parts of the community. Both minor and major arterials serve similar functions by connecting traffic with the freeway system and accommodating high volume traffic.

a. Minor Arterials

A minor arterial is characterized by a median and/or continuous turn-lanes. Examples of minor arterials include Fairway Blvd, Burk Road, Maplewood, etc.

b. Major Arterials

Major arterials provide a connection between high volume traffic areas, traffic generators (i.e. malls, universities, business/industrial parks, etc.) and principle neighborhoods. Special major arterials include parkways and boulevards; some examples include Seymour Hwy., Loop 11, Midwestern Pkwy., etc.

Unless approved by the Directors of Community Development and Public Works, no residential subdivision shall be platted so that a residence fronts onto or has direct access to an arterial street (minor or major), highway and highway frontage road.

4. Freeways & Expressways

Principal arterials have the highest level of mobility and the lowest accessibility with connections controlled through frontage roads and on/off ramps. These routes are designed to support heavy traffic volumes and provide connections to other communities and often provide a by-pass around the central city (i.e. IH-44, Kell Freeway, Henry Grace Freeway, etc). The frequency of freeways and expressways is dependent on the size/density of a city and its proximity to other major urban areas. This street class should be continuous without any street or railroad grade crossings.

Note: Frontage roads that parallel freeways/expressways should be classified independently of the main, controlled-access lanes. Frontage roads function as collector/feeder streets to the freeway class of roads.

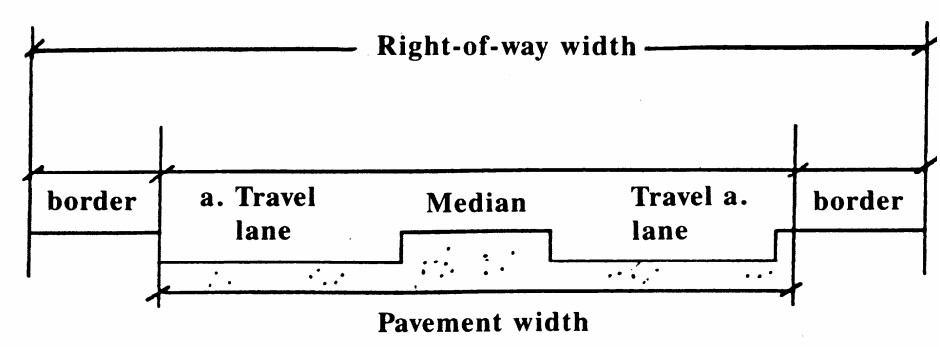
5. Existing Street Right-of-Way Re-Classifications

To assist with the interpretation of the Thoroughfare Plan Map, specific streets were identified in *Table 2 – Existing Thoroughfare Plan Streets Proposed for Re-designation'* that will remain on the Map at their current functional classification (i.e. Local Street, Collector or Arterial). While their existing right-of-way width may not meet the minimum standards for their functional classification no additional right-of-way is being sought nor is widening anticipated.

Table 1 - Functional Street Classification & Design Standards

Category	**Local Street** *(Residential o Commercial)*	**Minor Collector**	**Major Collector**	**Minor Arterial**	**Major Arterial**	**Freeways & Interstates**
Accessibility	Uncontrolled	Uncontrolled	Uncontrolled	Partial control	Partial control	Full Control
Right of Way Width (minimum)	Residential – 50 ft. Commercial - 60 ft.	60 ft.	70 ft.	90 ft.	120 ft.	330 ft.
Dwelling No. Served	Maximum 150 dwellings **Cul-de-sac:** Max. 25 dwellings	151 plus dwellings	N/A	N/A	N/A	N/A
Street Spacing (minimum intervals) and Speed Limits	At blocks Under 25 mph	¼ - ½ mile (1,320-2,640 ft.) 25-30 mph	½ mile (2,604 ft.) 30-35 mph	Under 1 mile (< or = 5,280 ft.) 35-45 mph	1 mile (5,280 ft.) 35-50 mph	Variable: CBD - 1m Urban - up to 5m IH – 45-70 mph
Maximum Length	As required **Cul-de-sac:** Residential - 600 ft. Com/Industrial – 900 ft.	N/A	N/A	N/A	N/A	N/A
Parkway/Border (each side)	Residential - 10 ft. Com/Industrial – 13 ft.	12 ft.	11½ – 12 ft.	14 ft.	14 ft.	13 ft.
Sidewalk (each side)	4 ft. (min. 3ft. barrier-free)	4 ft.	4 ft.	4 ft.	4 ft.	4 ft.
Pavement Width	30 ft.	36 ft.	46-48 ft.	48 ft.	72 – 96 ft.	112 – 160 ft.
Parking Lanes	1 lane – 8 ft.	2 lanes – 8 ft.	0–2 lanes – 9 ft.	Prohibited	Prohibited	Prohibited
Traffic Lanes (No. & Width, approx)	2 lanes – 11 ft.	2 lanes – 10 ft.	2-4 lanes – 12 ft.	4 lanes – 12 ft.	4-6 lanes – 12 ft.	4-8 lanes – 12 ft.
Median Width	N/A	N/A	N/A	16 ft. or turn lane	20 – 30 ft. or drive lanes	30 ft.
Breakdown Lanes	N/A	N/A	N/A	None	2 lanes – 12 ft.	2 lanes – 10 ft.
Design Speed (mph)	25 mph	25 – 35 mph	30 - 35 mph	35 – 45 mph	30 – 45 mph	45 – 70 mph
Min. Cul-de-sac Turning Radius/Right-of-Way	Residential – 100 ft. Com/Industrial – 200 ft.	N/A	N/A	N/A	N/A	N/A
Recommended Traffic Flow Volumes (Minimum to Maximum)	**Undivided** **2-lane:** 7,700 to 11,000 **4-lane:** 12,600 to 18,000	**Undivided** **4-lane:** 12,600 – 18,000	**Undivided** **4-lane:** 12,600-18,000 **6-lane:** 19,800 – 28,300	**Divided** **4-lane:** 16,100-23,000 **6-lane:** 23,500-33,000	**Divided** **4-lane:** 16,100 - 23,000 **6-lane:** 23,500 - 33,000	**Divided:** **6-lane:** 66,000 - 96,600 **8-lane:** 88,000 - 128,800

D. STREET DESIGN DEFINITIONS



Access Control:

Full control - The authority to limit access in order to give preference to through traffic with access points only at selected public roads. At-grade crossings and direct private driveway connections are prohibited.

Partial control – The authority to limit access in order to give preference to through traffic to a degree that, in addition to access at selected public roads, it may permit some at-grade crossings along with some private driveway connections.

Uncontrolled access – The jurisdictional authority does not limit the number of points of ingress/egress, except as required through applicable ordinances and as necessary for safety of the traveling public.

Border/Parkway:

The space between the right-of-way line and the face of the roadway curb. In the case where curbs are not provided, the border is measured from the pavement edge. Typically, this is a buffer area for sidewalks and essential utilities.

Breakdown Lane:

A lane for parking disabled or emergency vehicles.

Medians:

Provided to separate traffic, control left.-hand turns, and provide for landscaping areas. Median widths, similar to pavement widths, are measured from curb faces.

Parking Lanes:

A lane provided for on-street vehicular parking.

Spacing:

The desirable interval between streets of the same functional class for an effective street system.

Traffic Volume by Facility:

A recommendation based on the total number of vehicles traveling on a street, in both directions, during a 24-hour time frame (Average Daily Traffic Count). For each functional street class there is a range of service from 'good flow' (quality of service level A-B) through to at 'capacity' (quality of service level E-F).

E. GENERAL STREET STANDARDS

1. Right-of-Way Requirements

For existing subdivisions where a street or road is not classified on the Thoroughfare Plan, it is strongly recommended that it be platted with a right-of-way width indicated in the City of Wichita Falls Subdivision and Development Regulations (Appendix A), Section 6 – Street Standards, Specifications and Conditions.

a. Unless otherwise required or approved by the Department of Public Works, existing or proposed streets or roads within the City limits not addressed in the Thoroughfare Plan or under any other plans, are expected to meet all City standards. If it is a state road or highway, the right-of-way and paving requirements should adhere to state specifications (contact the TxDOT District office), or where no standards or requirements exist, the minimum right-of-way requirement should be the greater of 60-feet or as required by Wichita County. Additional right-of-way and paving width may be required as determined by long range plans, density or intensity of development, historical traffic conditions and counts, and other appropriate factors.

b. The minimum right-of-way width and paving width, if the street is not indicated on the Thoroughfare Plan Map, should be as noted in the written guidelines that accompany the Plan for that proposed street class and function unless additional width is required along state or county roads.

c. The Planning Division and Department of Public Works are responsible for approving the street classification and/or type by considering the nature, density or intensity of proposed or future land uses related to or affecting the street.

Local streets that serve or propose to serve 150 or more dwellings are required to be upgraded to minor collector standards (60-ft. right-of-way) of the Thoroughfare Plan. Density calculations for local streets in adjacent or neighboring residentially zoned areas should be based on 3.5 dwellings units per acre. In evaluating the street classification, consideration will be given to other access points.

d. During the platting process, the City will require dedication of right-of-way equal to the width shown on the Thoroughfare Plan. In cases where the property is located on one side of an existing street, one-half of the required width shall be dedicated. The Directors of Community Development and Public Works may jointly agree in writing to depart from the right-of-way width requirements of the Thoroughfare Plan based on: previous platting patterns, road centerlines, future street plans, existing road conditions, traffic flow and ability to ensure adequate level of service is provided.

2. Connectivity to Adjacent Subdivisions

Where new subdivisions are platted, existing principal streets in adjoining areas should be continued, be at least as wide as the existing streets and maintain similar alignment. Where adjoining areas are not subdivided, the arrangement of streets in the subdivision should provide for the proper projection of streets into undeveloped areas.

Streets projecting into subdivided areas should be provided with a cul-de-sac as outlined in the City Codes of Ordinances. Such temporary cul-de-sacs should be constructed to meet City standards and shown on the preliminary and final plat or be separate instrument. The Director of Public Works may approve a waiver of the requirement for a temporary cul-de-sac.

Table 2
Existing Thoroughfare Plan Streets Proposed for Re-designation

Roadway Segment	From	To	Required Thoroughfare Plan ROW & Designation*	Existing Paving Width	Actual ROW	Recommended Action
Ave I	Seymour Rd	Monroe St	60 ft. min. Minor Collector	30-33-30 ft.	60 ft.	Change to local residential street classification (50 ft.)
Briargrove Drive	Misty Valley West	Johnson	60 ft. min. Minor Collector	30 ft.	50 ft.	Change to local residential street classification (50 ft.)
Lucas Ave	Sunnyside	Hines Blvd.	60 ft. min. Minor Collector	30 ft.	50 ft.	Change to local residential street classification (50 ft.)
Pawnee Pathway	Fairway	Kell Frontage Rd	60 ft. min. Minor Collector	30 ft.	50 ft.	Change to local residential street classification (50 ft.)
Sunnyside	Old Windthorst Rd.	Lucas	60 ft. min. Minor Collector	30 ft.	50 ft.	Change to local residential street classification (50 ft.)
University Ave	Kell East	Southwest Pkwy.	60 ft. min. Minor Collector	44-30 ft.	70/50 ft.	Change local residential street classification (50 ft.)
Wenonah Blvd	Seymour Rd	Kell Frontage Rd	60 ft. min. Minor Collector	30-36-40-33 ft.	100-80 ft. (median)	Change to local residential street classification (50 ft.)
Ave H	Seymour Rd	Monroe St	50 ft. min. Local Residential St.	33-30 ft.	60 ft.	Upgrade from a local street to a minor collector (60 ft.)
Kovarik Rd	FM 369	Barnett Rd	50 ft. min. Local Residential St.	24ft.	100ft.	Upgrade from a local street to a minor collector (60ft.)
Cypress	Southwest Pkwy	Lakeshore Dr	60 ft. min. Minor Collector	45-47 ft.	70 ft.	Upgrade from minor to major collector (70 ft.)
Lake Park Drive	Midwestern Pkwy	Southwest Pkwy	70 ft. min. Major Collector	33 ft.	31/40/50/30/45/54 ft.	Downgrade from major to minor collector (60 ft.)
Lakeshore Drive	Barnett Rd	Fairway	70 ft. min. Major Collector	23 ft.	50/60/50 ft.	Downgrade from major to minor collector (60 ft.)
Sinclair Blvd	Burk Rd	FM 171	70 ft. min. Major Collector	23 ft.	60 ft.	Downgrade from major to minor collector (60 ft.)
McNiel	Kell frontage	Call Field Rd	90 ft. min. Minor Arterial	30-47 ft.	70/60/50 ft.	Downgrade from minor arterial to major collector (70 ft.)

* Minimum Right-of-Way Requirements for Major Collector Streets Upgraded from 65 feet to 70 feet January 2005.