

Section 9: Transportation Plan

9.0 TRANSPORTATION PLAN

9.1 SECTION I - INTRODUCTION

9.1.1 Authorization to Report

On October 8, 2001, the City of Rockdale, Texas, authorized the preparation of a Comprehensive City Plan, the elements of which are described in Work Order No. RD-5 and reviewed and updated in 2011-2012. This Thoroughfare Plan is one of the elements included in the Work Order.

The planning area for this study and report consists of the area within the present City Limits and the City's present Extraterritorial Jurisdiction (ETJ). Other parcels of land adjacent to these areas are included where necessary for development of the Plan. The study covers an area which might be expected to develop within the next twenty (20) years.

9.1.2 Purpose

The purpose of this study is to investigate and analyze the existing major street and highway patterns in and around the City and, based upon the street and thoroughfare cross sections and criteria recommended herein, to develop a Thoroughfare Plan for the City. This Plan will provide a very important planning tool to locate routes throughout the City which will have continuity in alignment and right-of-way widths and pavement sections adequate to handle anticipated traffic volumes. Also, this Plan can serve as a guide for formulating capital improvement programs to build a street and thoroughfare system over a period of years as the City's urban area develops. As a result, the City should reserve recommended rights-of-way in the proper locations as future developments occur.

9.1.3 Scope of Study

The general scope of work performed in this study by the Engineer was as follows:

- a) Review all known prior studies, street layouts, plans, and all other available data pertaining to the existing street system
- b) Check, in the field, existing development conditions and potential areas for possible right-of-way acquisition
- c) Review highway plans, traffic counts and projections, and other planning data from the Texas Department of Transportation (TxDOT)
- d) Address all known environmental concerns and elements as they

currently exist

- e) Recommend applicable standards and criteria for thoroughfare planning
- f) Determine alternatives, if any, for the thoroughfare routing, based on the following considerations:
 - 1) Requirements for right-of-way
 - 2) Availability of right-of-way
 - 3) Existing developments, land use, and zoning
 - 4) Natural and man-made restrictions
 - 5) Effects from the alignments of other thoroughfares (existing and future)
 - 6) Street cross sections
 - 7) Other (i.e. storm drainage, railroad and highway requirements, existing utilities, etc.)
- g) Prepare layout(s) for the proposed thoroughfares, and illustrate the general alignments in relation to the existing streets and thoroughfares
- h) Present recommendations for the overall planning for thoroughfares, including right-of-way requirements and typical street cross sections.

9.2 SECTION II – THOROUGHFARE PLANNING AND DESIGN CRITERIA

9.2.1 Design Criteria

In determining the layout of a Thoroughfare Plan, consideration should first be given to the purposes for different types of thoroughfares and the criteria for their right-of-way widths and locations.

Experience has shown that major thoroughfares, or arterials, should be located approximately one mile apart, and their principal purpose is to carry through traffic from one area of the city to another. Direct access from abutting properties to major thoroughfares should be avoided, wherever possible. Major thoroughfares should be straight and continuous, with only gentle curves providing for changes in alignment. They should have sufficient right-of-way to provide for six (6) traffic lanes and a dividing median wide enough to provide for left turn lanes. In Rockdale, the right-of-way widths for major thoroughfares are recommended to vary from 200 feet to 100 feet.

Secondary thoroughfares and collector streets are located about halfway between major thoroughfares and are used to collect traffic which has accumulated in neighborhoods from local streets and carry that traffic to major thoroughfares. This classification of street should have sufficient width for at least two (2) traffic lanes and two (2) parking lanes and should be fairly straight and continuous. The recommended right-of-way widths for these street classifications in Rockdale vary from 80 feet to 60 feet.

The local street classification has a purpose of serving the abutting property only. It should be purposely narrow and curvilinear to discourage through traffic and thereby assist in maintaining property values in neighborhoods. In Rockdale, the recommended minimum right-of-way width for local streets is 50 feet.

9.2.2 Recommended Cross Sections

TxDOT will determine the right-of-way and pavement widths on those roadways in or near the City where the State is providing the funds for the construction. On all other roadways - - and on the future full developments of highways - - in the City, the cross sections for proposed roadways should be as described hereafter and as shown on Figure No.1.

1. Class A - Entrance Roadway

This roadway is planned to connect the proposed U.S. Highway 79

Relief Route to the downtown area. Roadway's FM 487 North and FM 908 North are planned as main entrances into the City from the north. Direct access to abutting properties should be avoided, except onto collector streets.

Main Street and Ackerman Street will be main entrances to the city from the north. These two streets will come together into a Class B Major Thoroughfare on the south side of the City.

Three (3) 12-foot traffic lanes are proposed on each side of the roadway centerline, with provision for an 8-foot parking lane on each side. Sufficient right-of-way width has been provided on each side for berms, winding sidewalks, and planting. The recommended right-of-way width for this class of roadway is 200 feet. The recommended minimum centerline radius is 2,000 feet.

2. Class B – Major Thoroughfare

This roadway is planned to convey traffic along a continuous alignment across the City. Major thoroughfares are usually located about one mile apart in each direction. Direct access to abutting properties should be avoided, wherever possible. Three (3) traffic lanes, each 12 feet wide, are planned on each side of a 16-foot wide median. Left turn lanes are to be provided at major street intersections. Sidewalks, 4 feet in width, are planned on each side of the roadway.

The recommended right-of-way width for this roadway is 120 feet. The recommended minimum centerline radius is 1,000 feet.

3. Class C – Major Thoroughfare

This class of roadway is very similar to the Class B Major Thoroughfare, except that it is planned to convey traffic for somewhat shorter distances from one major thoroughfare or area to another. Three (3) traffic lanes, each 11 feet in width, are planned on each side of a 15-foot wide median. Four-foot wide sidewalks are proposed on each side of the roadway.

The right-of-way width for this roadway is recommended to be 100 feet, while the minimum centerline radius is recommended to be 1,000 feet.

4. Class D – Secondary Thoroughfare

The secondary thoroughfare is proposed to be constructed for four (4) traffic lanes, without a median, on a limited right-of-way width. The secondary thoroughfare is planned to be constructed on some major routes through the presently developed areas of the City and is recommended for all streets in industrial subdivisions. Wherever possible, 8-foot wide parallel parking lanes should be provided on each side. Access to abutting properties is allowed but considered to be secondary in purpose.

This roadway is planned to provide for at least four (4) 11-foot traffic lanes on a right-of-way width of 80 feet. The minimum centerline radius should be 500 feet. Four-foot wide sidewalks are proposed on each side of this roadway in all developments other than in industrial areas.

5. Class E – Collector Street

The collector street is planned to collect traffic generated from residential neighborhoods or developed areas and convey that traffic to major thoroughfares. Access to abutting property is allowed but is considered to be secondary in purpose. Two (2) 12-foot wide traffic lanes and two (2) 8-foot wide parking lanes are proposed on each side of the street centerline. Four-foot wide sidewalks are proposed to be constructed on each side.

A right-of-way width of 60 feet is proposed for this roadway. The minimum centerline radius is recommended to be 500 feet.

6. Class F – Collector Street

This class of roadway is planned to be constructed principally along or around schools, to provide access to parks, or in congested existing residential areas where the right-of-way width is limited. It will provide for two (2) 10-foot wide traffic lanes and two (2) 8-foot wide parking lanes. By design, this street will allow for two traffic lanes but will naturally cause the traffic to move more slowly than in other types of roadways. Also, two parking lanes will be provided around schools or parks, which is of utmost importance. Four-foot wide sidewalks are recommended on each side of the roadway. Access to abutting property is allowed.

Sixty (60) feet of right-of-way width are recommended for this class of roadway. The recommended centerline radius is 300 feet.

7. Class G – Minor Street

The principal purpose for this class of roadway is to serve the abutting property. It should be purposely narrow and curvilinear to discourage through traffic. The pavement can vary from 26 to 30 feet in width to provide for one (1) traffic lane and two (2) parking lanes. Sidewalks 4 feet in width are proposed on each side of the roadway.

Right-of-way width should be a minimum of 50 feet, and the minimum centerline radius should be 150 feet.

9.2.3 Thoroughfare Routing

Over the years, the City of Rockdale has developed and expanded in a linear east-west fashion along U. S. Highway 79. The Union Pacific Railroad has aided in that type of development, since it parallels U.S. Highway 79 through the City, and, through a limited numbers of crossings, has prevented easy flow of traffic and contiguous development in a north-south direction.

Now TxDOT is planning a Relief Route around the north side of the City, approximately two miles north of, and generally parallel to, U.S. Highway 79. This will tend to exacerbate the situation of east-west development and movement within the City unless convenient major north-south thoroughfares and collector streets are constructed.

Several farm-to-market roadways cross through the City, but these are either angular in direction or have major reverse curves or intersections to prevent smooth flow of traffic.

U.S. Highway 77 is located on the eastern edge of the City. Although traffic on this highway flows in a north-south direction, the situation still exists inside the City whereby nearly all traffic must collect into U.S. Highway 79, or into some narrow streets performing as collector streets, in order to be dispersed in other directions.

These situations cause numerous circulation problems. Many unnecessary miles are traveled each day as a result, and it is very difficult for police and fire departments to effectively perform their duties. Public works and utility personnel experience lengthy travel problems. Access to schools, industrial areas, solid waste disposal sites, and many others are greatly hampered due to lack of direct routes upon which to travel.

Therefore, it is recommended that the City include in its Thoroughfare Plan a system of thoroughfares and major connecting roadways that will tend to alleviate the above described circulation problems. These new thoroughfares and roadways should adhere to the original land and property line patterns, wherever possible.

Highways 487 and 908 should be constructed southward from the proposed Relief Route to connect to Main and Ackerman Streets. These Roadways will provide convenient connections to the proposed Relief Route and a direct north- south connection into the downtown area.

It is anticipated that the F.M. Roadways will provide access to the abutting properties along the proposed Relief Route as well.

Major thoroughfares should be fairly straight and continuous and should be located approximately one (1) mile apart in each direction. Collector streets should be located about halfway between major thoroughfares and should be fairly straight and continuous.

By constructing major thoroughfares and collector streets in this manner, the basic and orderly planning of the City can be accomplished. Communities, within the City, with boundary extremities approximately one-half (1/2) mile apart can be formed. The grid pattern for major water mains will be developed. Elementary schools and neighborhood parks can be planned so that smaller children will not be crossing major thoroughfares for these activities. This type of layout can provide convenient breaks for changes in zoning. The listing of the benefits of a well-conceived thoroughfare plan could be voluminous.

Since each highway, thoroughfare, and street location depends on others shown on the Plan, it is recommended that all issues presented herein be considered and kept in mind prior to granting any variances.

9.2.4 Thoroughfare Alignments

The recommended Thoroughfare Plan is shown in Figures No. 2 and No. 3. There are many alignments for thoroughfares and collector streets which are very critical to make the Plan functional. It is imperative that these alignment situations be protected in order for the Thoroughfare Plan to function properly.

9.3 SECTION III – CONCLUSIONS AND RECOMMENDATIONS

Following are conclusions and recommendations from this report which will greatly affect the future traffic patterns and thoroughfare planning for the City of Rockdale and which should be adhered to as future developments occur in and around the City.

1. It is recommended that the City adopt this Thoroughfare Plan as its official plan, so that future developments will adhere to it, so that rights-of-way, extensions, and connections for future highways, roadways, major and secondary thoroughfares, and collector streets can be acquired, dedicated, and/or preserved, and so that the recommended street sections can be developed accordingly.
2. Streets in Rockdale should be developed in classifications of highways, Entrance Roadway, major thoroughfares, secondary thoroughfares, collector streets, and minor streets, according to their intended use and traffic-carrying capabilities.
3. The recommended cross sections for the different classifications should be adopted as standard for the City of Rockdale.
4. Major thoroughfares have the principal purpose of conveying traffic across the City from one sector to another, should be located approximately one mile apart, and should be fairly straight and continuous.
5. Collector streets collect traffic from neighborhoods and convey the traffic to major thoroughfares, should be located about halfway between thoroughfares and around schools, and should be fairly straight and continuous, if at all possible.
6. The principal purpose for minor streets is to serve abutting residential properties, and they should be purposely narrow and curvilinear to discourage through traffic.
7. It is further recommended that the City take immediate steps to extend Murray Avenue from Scarbrough Street to Ackerman Street.
8. It is recommended that the County of Milam and TxDOT be advised of the City's adopted plan so that rights-of-way for future roadways in developments outside the City can be dedicated and preserved.
9. It is recommended that extreme care be exercised in locating future roadways in and around the City of Rockdale so that environmentally sensitive areas can be protected as much as possible.

10. Street improvements in the city plan should be considered in a future bond election.



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 PREPARED BY JAM

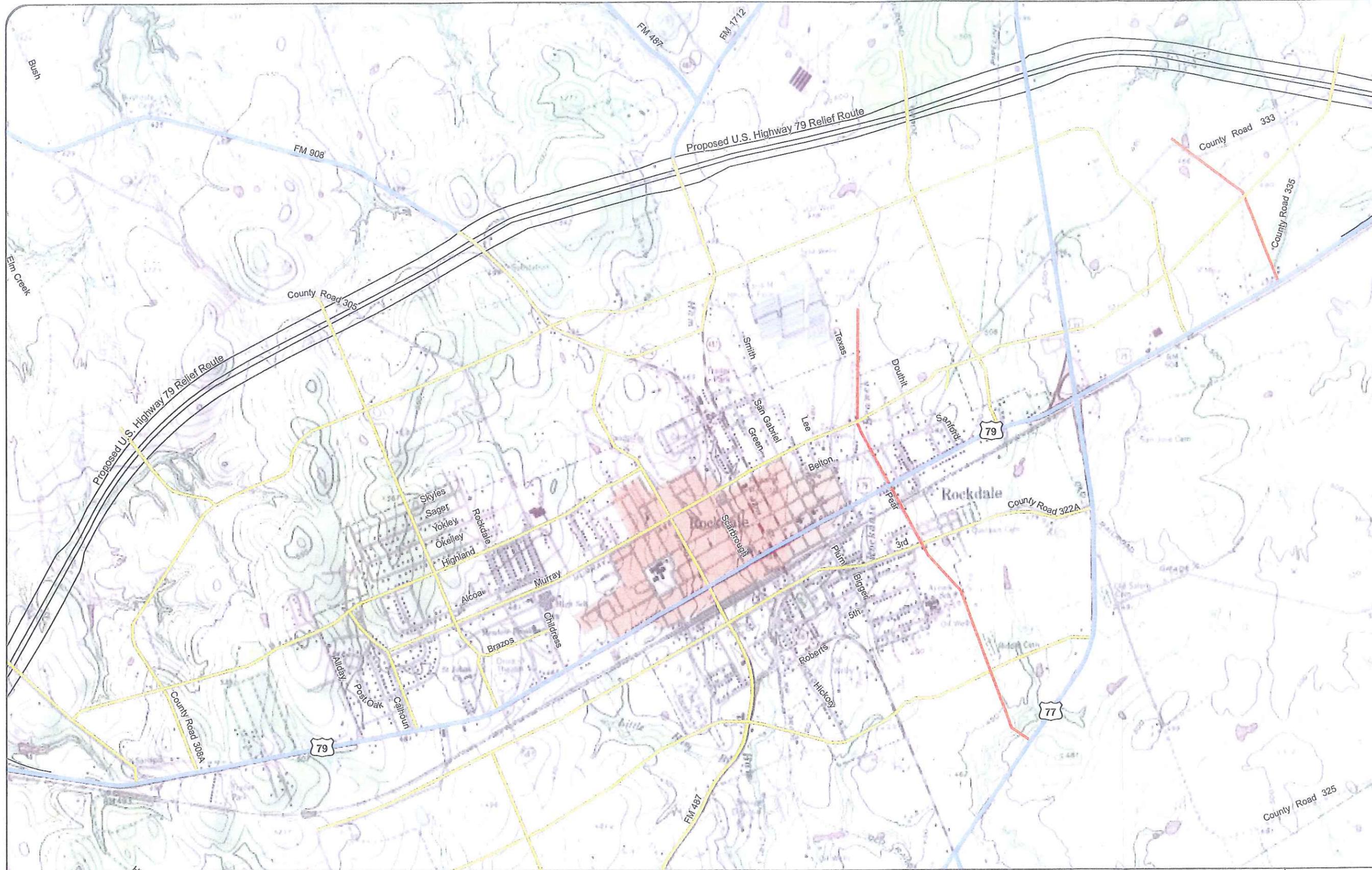
CITY OF ROCKDALE
 Master Plan Update (September 2010)
 Thoroughfare Plan

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- Existing Highway
- Class C Major Thoroughfare Min. 100' ROW
- Collector Street and Secondary Thoroughfare Min. 50' ROW
- U.S. Highway 79 Relief Route



FIGURE
 No. 2



FM PROJECT NO. RND10316
 DATE CREATED August 2010
 DATUM & COORDINATE SYSTEM NAD83 State Plane (feet) Texas Central
 FILE NAME ThoroughfarePlan.mxd
 PREPARED BY JM

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Existing Highway

Class C Major Thoroughfare
Min. 100' ROW

Collector Street and Secondary Thoroughfare
Min. 50' ROW

U.S. Highway 79 Relief Route

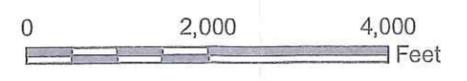


FIGURE
No. 3