

FINAL DRAFT

EXHIBIT G



**Land Use Assumptions
and
Capital Improvement Plan for the
2009 Roadway Impact Fee Update**

September 2009



MANSFIELD
T E X A S



Kimley-Horn
and Associates, Inc.

Roadway Impact Fee Update



City of Mansfield, TX

Prepared by:



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September 2009



Table of Contents

- I. Introduction..... 1**
- II. Roadway Impact Fee Calculation Inputs..... 2**
 - A. Land Use Assumptions.....2
 - B. Capital Improvements Plan.....5
- III. Methodology for Roadway Impact Fees 12**
 - A. Service Areas..... 12
 - B. Service Units..... 12
 - C. Cost Per Service Unit..... 13
 - D. Cost of the CIP 13
 - E. Service Unit Calculation 16
- IV. Impact Fee Calculations 21**
 - A. Maximum Assessable Impact Fee Per Service Unit.....21
 - B. Plan For Awarding the Roadway Impact Fee Credit23
 - C. Service Unit Demand Per Unit of Development.....25
- V. Sample Calculations 27**
- VI. Conclusion 28**
- APPENDICES 29**
 - A. CIP Service Units of Supply
 - B. Existing Roadway Facilities Inventory
 - C. Plan For Awarding the Roadway Impact Fee Credit



List of Exhibits

| | | |
|---|------------------------|----|
| 1 | Service Areas..... | 4 |
| 2 | Roadway Impact Fee CIP | |
| | Service Area A | 8 |
| | Service Area B | 9 |
| | Service Area C | 10 |
| | Service Area D | 11 |

List of Tables

| | | |
|---|--|----|
| 1 | Residential and Non-Residential Projections for the City of Mansfield | 3 |
| 2 | Roadway Improvements Plan for Roadway Impact Fees | |
| | Service Area A | 5 |
| | Service Area B | 6 |
| | Service Area C | 6 |
| | Service Area D | 7 |
| 3 | Level of Use Table | |
| | Level of Use for Proposed Facilities | 12 |
| | Level of Use for Existing Facilities | 13 |
| 4 | Roadway Improvements Plan for Roadway Impact Fees with Conceptual Level Cost Projections | |
| | Service Area A | 15 |
| | Service Area B | 15 |
| | Service Area C | 16 |
| | Service Area D | 16 |
| 5 | Transportation Demand Factor Calculations..... | 19 |
| 6 | 10-Year Growth Projections | 20 |
| 7 | Maximum Assessable Roadway Impact Fee..... | 24 |
| 8 | Land Use/Vehicle-Mile Equivalency Table (LUVMET)..... | 26 |



I. INTRODUCTION

Chapter 395 of the Texas Local Government Code describes the procedure Texas cities must follow in order to create and implement impact fees. Senate Bill 243 (SB 243) amended Chapter 395 in September 2001 to define an Impact Fee 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.”

Chapter 395 mandates that impact fees be reviewed and updated at least every five (5) years. Accordingly, the City of Mansfield has developed its Land Use Assumptions and Capital Improvements Plan (CIP) with which to update the City’s Roadway Impact Fees. The City has retained Kimley-Horn and Associates, Inc. to provide professional transportation engineering services for the development of the roadway impact fee policy. This report includes details of the impact fee calculation methodology in accordance with Chapter 395, the applicable Land Use Assumptions, development of the CIP, and the refinement of the Land Use Equivalency Table.

This report introduces and references two of the basic inputs to the Roadway Impact Fee: the **Land Use Assumptions** and the **Capital Improvements Plan (CIP)**. Information from these two components is used extensively in the remainder of the report. This report consists of a detailed discussion of the methodology for the computation of impact fees. This discussion - **Methodology for Roadway Impact Fees** and **Impact Fee Calculation** addresses each of the components of the computation and modifications required for the study. The components include:

- Service Areas
- Service Units
- Cost Per Service Unit
- Cost of the CIP
- Service Unit Calculation
- Maximum Assessable Impact Fee Per Service Unit
- Service Unit Demand Per Unit of Development

The report also includes a section concerning the **Plan for Awarding the Roadway Impact Fee Credit**. In the case of Roadway Impact Fees, this involves the calculation of the applicable credit required by law to offset the City’s use of ad valorem taxes to help fund the Impact Fee CIP. This plan, prepared the City of Mansfield, and upon which we relied, details the maximum assessable impact fee per service unit the City of Mansfield may apply under Chapter 395 of the Texas Local Government Code.

II. ROADWAY IMPACT FEE CALCULATION INPUTS

A. LAND USE ASSUMPTIONS

In order to assess an impact fee, Land Use Assumptions must be developed to provide the basis for population and employment growth projections within a political subdivision. As defined by Chapter 395 of the Texas Local Government Code, these assumptions include a description of changes in land uses, densities, and population in the service area. In addition, these assumptions are useful in assisting the City of Mansfield in determining the need and timing of capital improvements to serve future development. The land use assumptions data was provided by the North Central Texas Council of Governments (NCTCOG). Each Service Area is comprised of traffic survey zones (TSZs), which are planning areas used for traveling modeling and demographic estimates and projections. The data contained in each of the TSZs was converted to the necessary demographic information need for Land Use Assumptions.

The residential and non-residential estimates and projections were all compiled in accordance with the following categories:

- Units:* Number of dwelling units, both single and multi-family.
- Population:* Number of people, based on person per dwelling unit factors.
- Employment:* Square feet of building area based on retail, service, and basic land uses. Each classification has unique trip making characteristics.

Retail: Land use activities which provide for the retail sale of goods that primarily serve households and whose location choice is oriented toward the household sector, such as grocery stores and restaurants.

Service: Land use activities which provide personal and professional services such as government and other professional administrative offices.

Basic: Land use activities that produce goods and services such as those that are exported outside of the local economy, such as manufacturing, construction, transportation, wholesale, trade, warehousing, and other industrial uses.

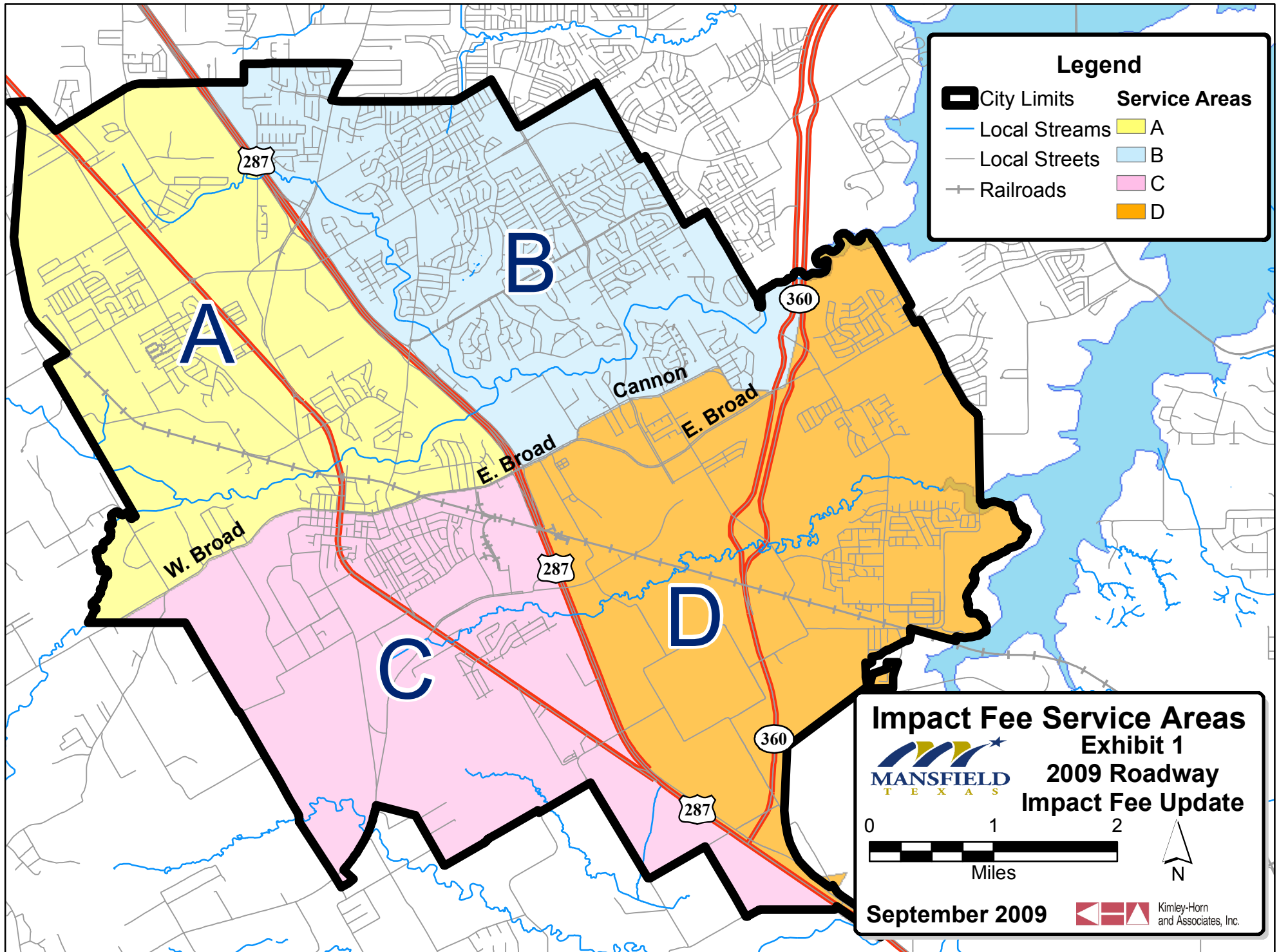
The geographic boundaries of the impact fee service areas for roadway facilities are shown in **Exhibit 1**. The City of Mansfield is divided into four (4) service areas. The Service Areas match those from the 2004 Roadway Impact Fee Update and were based upon input from the City of Mansfield staff. For roadway facilities, the service areas are limited to those areas within the current corporate limits. Therefore, areas within the extraterritorial jurisdiction (ETJ) are excluded from this study. It should be noted that at locations where service area boundaries follow a thoroughfare facility, the proposed boundary is intended to follow the centerline of the roadway. In cases where a service area boundary follows the City Limits, only those portions of the facility within the City Limits are included in the service area.



Table 1 summarizes the residential and non-residential projections by service area within the City of Mansfield for 2009, as well as the residential and non-residential projections by service area within the City of Mansfield for 2019.

**Table 1. Residential and Non-Residential Projections for the City of Mansfield
(Derived from NCTCOG Projections)**

| SA | Year | Dwelling Units | Employment (Square Feet) | | | |
|-------------------|------|----------------|--------------------------|------------------|------------------|-------------------|
| | | | Basic | Service | Retail | Total |
| A | 2009 | 4,848 | 716,100 | 550,200 | 1,492,000 | 2,758,300 |
| | 2019 | 7,646 | 990,000 | 730,100 | 2,107,200 | 3,827,300 |
| B | 2009 | 7,664 | 1,516,600 | 662,400 | 510,400 | 2,689,400 |
| | 2019 | 8,881 | 2,582,800 | 905,500 | 801,600 | 4,289,900 |
| C | 2009 | 2,195 | 2,339,700 | 385,700 | 549,600 | 3,275,000 |
| | 2019 | 5,152 | 3,036,000 | 484,100 | 717,600 | 4,237,700 |
| D | 2009 | 3,469 | 436,700 | 172,600 | 953,600 | 1,562,900 |
| | 2019 | 6,844 | 1,213,300 | 413,700 | 3,362,400 | 4,989,400 |
| Total 2009 | | 18,176 | 5,009,100 | 1,770,900 | 3,505,600 | 10,285,600 |
| Total 2019 | | 28,523 | 7,822,100 | 2,533,400 | 6,988,800 | 17,344,300 |



Legend

| | |
|---------------|-----------------|
| City Limits | Service Areas A |
| Local Streams | Service Areas B |
| Local Streets | Service Areas C |
| Railroads | Service Areas D |

Impact Fee Service Areas
Exhibit 1
2009 Roadway
Impact Fee Update

MANSFIELD TEXAS

0 1 2
 Miles

N

September 2009 Kimley-Horn and Associates, Inc.

B. CAPITAL IMPROVEMENTS PLAN

The City has identified the City-funded transportation projects needed to accommodate the projected growth within the City. The Capital Improvements Plan (CIP) for Roadway Impact Fees is made up of:

- Recently completed projects with excess capacity available to serve new growth;
- Projects currently under construction; and

The CIP includes arterial and collector class roadway facilities as well as intersection improvements. All of the arterial facilities are part of the currently adopted Master Thoroughfare Plan.

The CIP for Roadway Impact Fees for the 2009 Impact Fee Update is listed in **Table 2** and mapped in **Exhibit 2A** through **Exhibit 2D**. The table shows the length of each project as well as the facility's Master Thoroughfare Plan classification. The CIP was developed in conjunction with input from City of Mansfield staff and represents those projects that will be needed to accommodate the growth projected in **Table 1**.

Table 2.A. Capital Improvement Plan for Roadway Impact Fees – Service Area A

| Service Area | Proj. # | Class | Roadway | Limits | Status | Length (mi) | % In Service Area |
|--------------|------------|-------|---------------------------------|--|--------------------|-------------|-------------------|
| A | A-1 | C4U | Mouser Way (1) | Business 287 (Main St.) to House Road | Completed | 0.25 | 100% |
| | A-2 | C4U | Mouser Way (2) | House Rd. to 520 ft. West of US 287 SBFR | Proposed | 0.46 | 100% |
| | A-3 | M5U | Walnut Creek Dr. (1) | Pleasant Rdg. to US 287 (Centerline) | Completed | 0.38 | 100% |
| | A-4, C-1 | M4D | W. Broad St. (1) | Retta Rd. to Cotton Dr. | Proposed | 0.53 | 50% |
| | A-5, C-2 | M4D | W. Broad St. (2) | Cotton Dr. to Business 287 (Main St.) | Construction | 1.07 | 50% |
| | A-6, C-3 | M4D | E. Broad St. (1) | Business 287 (Main St.) to US 287 (Centerline) | Completed | 1.48 | 50% |
| | A-7 | C4U | Callender Rd (1) | Summer Trl. to US 287 (Centerline) | Proposed | 0.45 | 100% |
| | A-8 | C4U | Newt Patterson Rd. (1) | North Street to Business 287 (Main St.) | Completed | 0.24 | 100% |
| | A-9 | C4U | Major E-W Collector | Business 287 (Main St.) to FM 157 | Proposed | 0.14 | 100% |
| | A-10 | P6D | Debbie Ln. (1) | Business 287 (Main St.) to US 287 | Completed/Proposed | 1.10 | 100% |
| | A-11, B-10 | FR | US 287 Frontage Roads | Walnut Creek to E. Broad St. | Proposed | 2.33 | 50% |
| | O-1 | | US 287 at E. Broad & Walnut Ck. | Overpass | Completed | | 38% |
| | S-1 | | Signal System | Citywide | Proposed | | 25% |
| | I-1 | | Intersection - Ramp | Debbie Ln. & US 287 (Analysis & Design) | Proposed | | 50% |
| | I-3 | | Intersection Improvements | Gertie Barrett/FM 1187 | Construction | | 100% |



Table 2.B. Capital Improvement Plan for Roadway Impact Fees – Service Area B

| Service Area | Proj. # | Class | Roadway | Limits | Status | Length (mi) | % In Service Area |
|--------------|------------|---------------------------|-----------------------------------|---|--------------------|-------------|-------------------|
| B | B-1 | P4D | Turner Warnell Rd. (1) | Callender Rd. to 590 ft West of Hunter Oaks Ct. | Proposed | 0.21 | 100% |
| | B-2 | C4U | Callender Rd. (2) | Turner Warnell Rd. to US 287 (Centerline) | Proposed | 0.71 | 50% |
| | B-3 | P6D (1/3) | Debbie Ln. (2) | US 287 (Centerline) to 715 ft E. of Matlock Rd. | Completed/Proposed | 2.01 | 100% |
| | B-4 | P4D | Debbie Ln. (3) | 715 ft E. of Matlock Rd. to East City Limits | Proposed | 0.73 | 100% |
| | B-5 | M4D | Country Club Dr. (1) | Walnut Creek Dr. to Matlock Rd. | Completed | 1.64 | 100% |
| | B-6, D-1 | P6D (1/3) | E. Broad St. (2) | US 287 (Centerline) to Cannon Dr. | Completed/Proposed | 0.55 | 50% |
| | B-7, D-19 | C4U | Cannon Dr. (1) | E. Broad St. to Matlock Rd. | Completed | 0.56 | 50% |
| | B-8 | P6D (1/3) | Matlock Rd. (1) | Mansfield Webb Rd. to Cannon Dr. | Completed/Proposed | 2.43 | 100% |
| | B-9 | M4D | Walnut Creek Dr. (2) | Debbie Ln. to North City Limits | Completed | 0.92 | 100% |
| | A-11, B-10 | FR | US 287 Frontage Roads | Walnut Creek to E. Broad St. | Proposed | 2.33 | 50% |
| | O-1 | | US 287 at E. Broad & Walnut Ck. | Overpass | Completed | | 38% |
| | S-1 | | Signal System | Citywide | Proposed | | 25% |
| | S-2 | | Signal Installation | E. Broad St. & Regency Pkwy. | Proposed | | 50% |
| | S-3 | | Signal Installation | Cannon Dr. & Matlock Rd. | Proposed | | 50% |
| | S-4 | | Signal Installation | E. Broad St. & Cannon Dr. | Proposed | | 50% |
| | S-5 | | Signal Installation | E. Broad St. & SH 360 (2) | Proposed | | 25% |
| | S-7 | | Signal Installation | Matlock Rd. & Ragland Rd. | Proposed | | 100% |
| | I-1 | | Intersection - Ramp | Debbie Ln. & US 287 (Analysis & Design) | Proposed | | 50% |
| | I-2 | | Intersection Improvements | East Broad & US 287 | Proposed | | 50% |
| I-4 | | Intersection Improvements | East. Broad St. btwn SB/NB SH 360 | Completed | | 25% | |

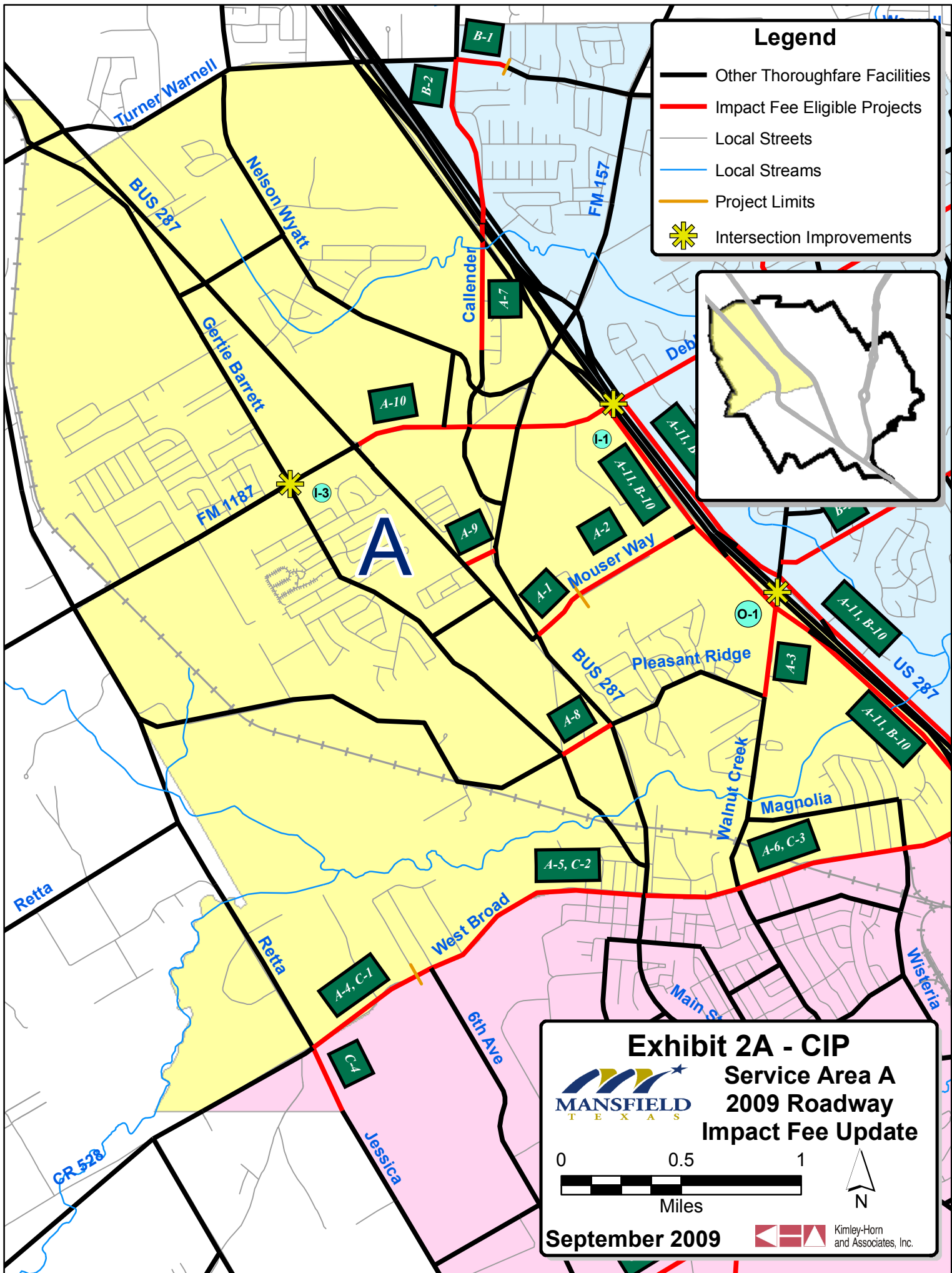
Table 2.C. Capital Improvement Plan for Roadway Impact Fees – Service Area C

| Service Area | Proj. # | Class | Roadway | Limits | Status | Length (mi) | % In Service Area |
|--------------|----------|-------|------------------------------------|---|--------------|-------------|-------------------|
| C | A-4, C-1 | M4D | W. Broad St. (1) | Retta Rd. to Cotton Dr. | Proposed | 0.53 | 50% |
| | A-5, C-2 | M4D | W. Broad St. (2) | Cotton Dr. to Business 287 (Main St.) | Construction | 1.07 | 50% |
| | A-6, C-3 | M4D | E. Broad St. (1) | Business 287 (Main St.) to US 287 (Centerline) | Completed | 1.48 | 50% |
| | C-4 | P4D | Jessica Dr. (1) | W. Broad St. to 1,525 ft S. of Broad St. | Proposed | 0.29 | 100% |
| | C-5 | M4D | Route A (1) | Jessica Dr. to FM 917 | Proposed | 1.15 | 100% |
| | C-6 | P4D | FM 917 | 2nd Ave. to Business 287 (Main St.) | Completed | 1.40 | 100% |
| | C-7 | M4D | Flying L Ln. (Future Business 287) | Business 287 to Lone Star Rd. | Proposed | 0.71 | 100% |
| | C-8 | P4D | Lone Star Rd. | Flying L Ln. (Future Business 287) to US 287 (Centerline) | Proposed | 0.54 | 100% |
| | O-1 | | US 287 at E. Broad & Walnut Ck. | Overpass | Completed | | 13% |
| | O-2 | | US 287 & Heritage Pkwy. | Overpass | Completed | | 50% |
| | S-1 | | Signal System | Citywide | Proposed | | 25% |



Table 2.D. Capital Improvement Plan for Roadway Impact Fees – Service Area D

| Service Area | Proj. # | Class | Roadway | Limits | Status | Length (mi) | % In Service Area |
|--------------|-----------|---------------------------|-----------------------------------|---|--------------------|-------------|-------------------|
| D | B-6, D-1 | P6D (1/3) | E. Broad St. (2) | US 287 (Centerline) to Cannon Dr. | Completed/Proposed | 0.55 | 50% |
| | D-2 | P6D (1/3) | E. Broad St. (3) | Cannon Dr. to SH 360 (Centerline) | Completed/Proposed | 0.55 | 100% |
| | D-3 | P6D (1/3) | E. Broad St. (4) | SH 360 (Centerline) to 800 ft E. of Holland Rd. | Completed/Proposed | 0.48 | 100% |
| | D-4 | P4D | E. Broad St. (5) | 800 ft E. of Holland Rd. to National Pkwy. | Proposed | 0.77 | 100% |
| | D-5 | P4D | Heritage Pkwy. (1) | Mitchell Rd. to Matlock Rd. | Proposed | 0.86 | 100% |
| | D-6 | P4D | Matlock Rd / Heritage Pkwy. | E. Broad St. to SH 360 SBFR | Completed | 0.21 | 100% |
| | D-7 | P4D | Heritage Pkwy. (6) | SH 360 SBFR to SH 360 NBFR | Proposed | 0.34 | 100% |
| | D-8 | P4D | Heritage/National Pkwy. | SH 360 NBFR to Calloway Dr. | Completed | 0.21 | 100% |
| | D-9 | M4D (1/2) | National Pkwy. (1) | Garden Path Ln. to Holland Rd. | Proposed | 0.24 | 100% |
| | D-10 | M4D | National Pkwy. (2) | Holland Rd. to Seeton Rd. | Proposed | 0.50 | 100% |
| | D-11 | M4D (1/2) | National Pkwy. (3) | Seeton Rd. to 500 ft S of Edgewater Trl. | Proposed | 0.37 | 100% |
| | D-12 | C4U | National Pkwy. (4) | 500 ft S of Edgewater Trl. To E. Broad St. | Proposed | 1.87 | 100% |
| | D-13 | P6D (1/3) | Matlock Rd. (2) | Cannon Dr. to E. Broad St. | Completed/Proposed | 0.58 | 100% |
| | D-14 | C4U | Regency Pkwy. (1) | 1,300 ft S. of Fountainview Dr. to Heritage Pkwy. | Proposed | 0.46 | 100% |
| | D-15 | P4D | Holland Rd. (1) | SH 360 NBFR to Grand Meadows Blvd. | Completed | 0.26 | 100% |
| | D-16 | P4D (1/2) | Holland Rd. (2) | Grand Meadows Blvd. to Waterford Oaks Ln. | Proposed | 0.13 | 100% |
| | D-17 | P4D | Holland Rd. (3) | Waterford Oaks Ln. to Waterford Glen Dr. | Proposed | 0.27 | 100% |
| | D-18 | P4D | Holland Rd. (4) | Waterford Glen Dr. to Britton | Proposed | 1.52 | 100% |
| | B-7, D-19 | C4U | Cannon Dr. (1) | E. Broad St. to Matlock Rd. | Completed | 0.56 | 50% |
| | O-1 | | US 287 at E. Broad & Walnut Ck. | Overpass | Completed | | 13% |
| O-2 | | US 287 & Heritage Pkwy. | Overpass | Completed | | 50% | |
| S-1 | | Signal System | Citywide | Proposed | | 25% | |
| S-2 | | Signal Installation | E. Broad St. & Regency Pkwy. | Proposed | | 50% | |
| S-3 | | Signal Installation | Cannon Dr. & Matlock Rd. | Proposed | | 50% | |
| S-4 | | Signal Installation | E. Broad St. & Cannon Dr. | Proposed | | 50% | |
| S-5 | | Signal Installation | E. Broad St. & SH 360 (2) | Proposed | | 75% | |
| S-6 | | Signal Installation | Heritage Pkwy. & SH 360 (2) | Proposed | | 100% | |
| I-2 | | Intersection Improvements | East Broad & US 287 | Proposed | | 50% | |
| I-4 | | Intersection Improvements | East. Broad St. btwn SB/NB SH 360 | Completed | | 75% | |



Legend

- Other Thoroughfare Facilities
- Impact Fee Eligible Projects
- Local Streets
- Local Streams
- Project Limits
- Intersection Improvements

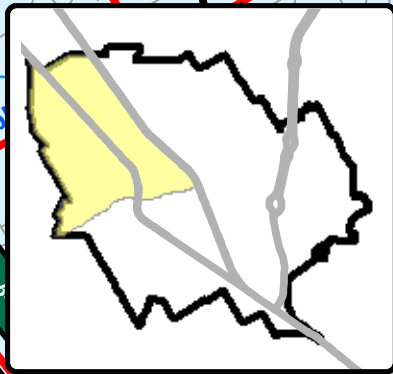


Exhibit 2A - CIP

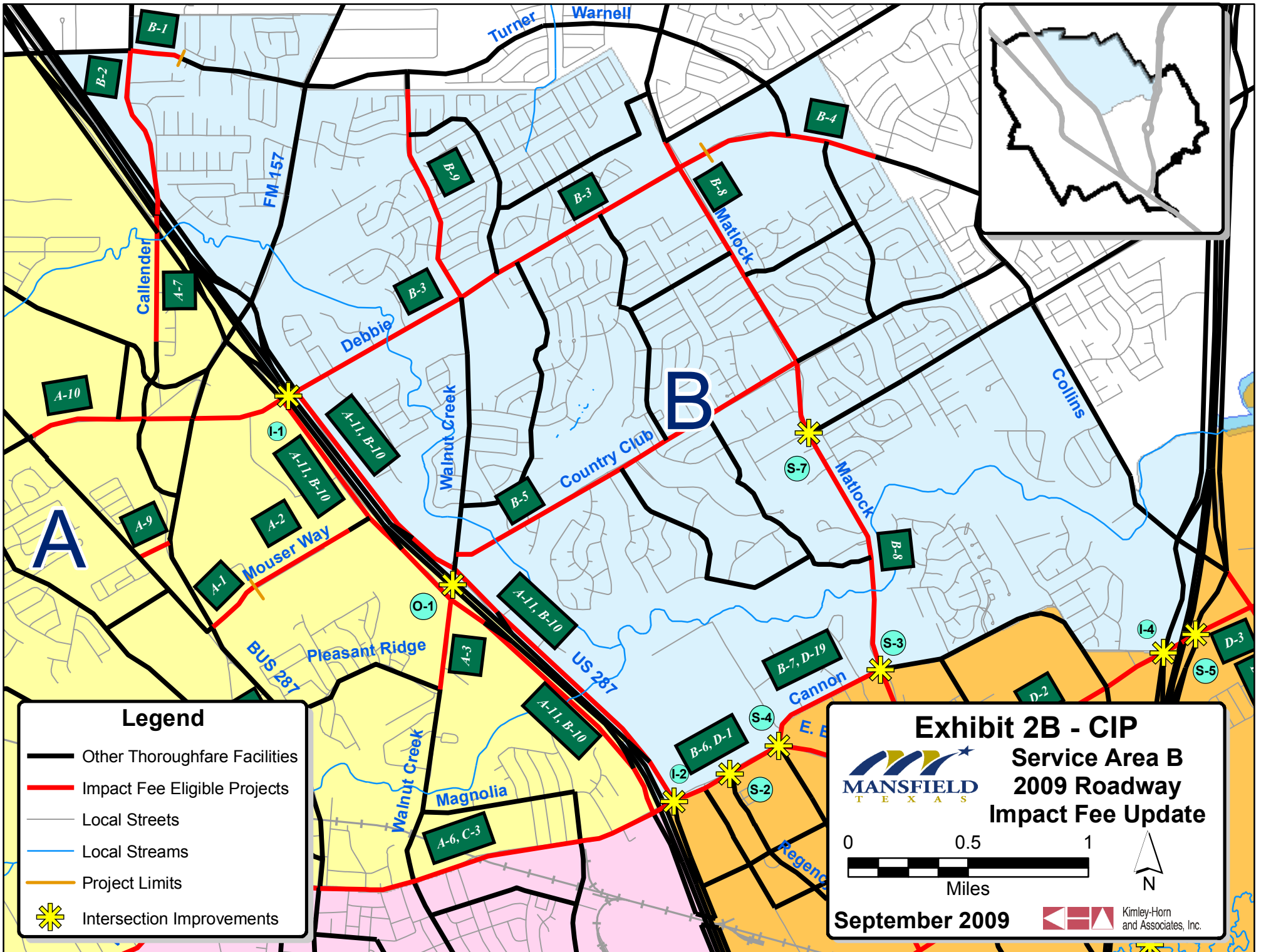
Service Area A 2009 Roadway Impact Fee Update

Miles

N

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A

B



Callender

FM 157

Turner Warnell

Debbie

Walnut Creek

Country Club

Collins

Mouser Way

Pleasant Ridge

US 287

Cannon

Magnolia

Regency

A-10

A-9

A-1

A-2

A-11, B-10

A-11, B-10

B-3

B-3

B-9

B-3

B-4

B-8

A-11, B-10

B-5

B-8

B-8

B-7, D-19

D-3

D-2

D-2

B-6, D-1

A-6, C-3

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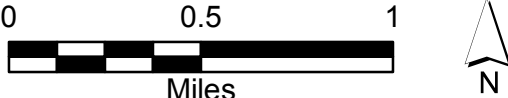
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Exhibit 2C - CIP

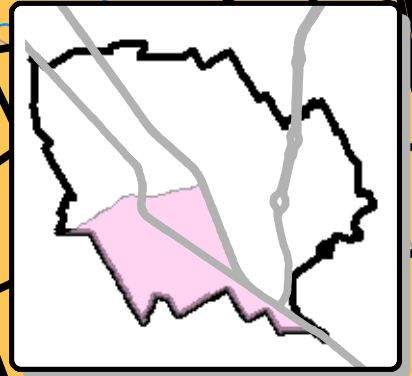
Service Area C 2009 Roadway Impact Fee Update









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Miles

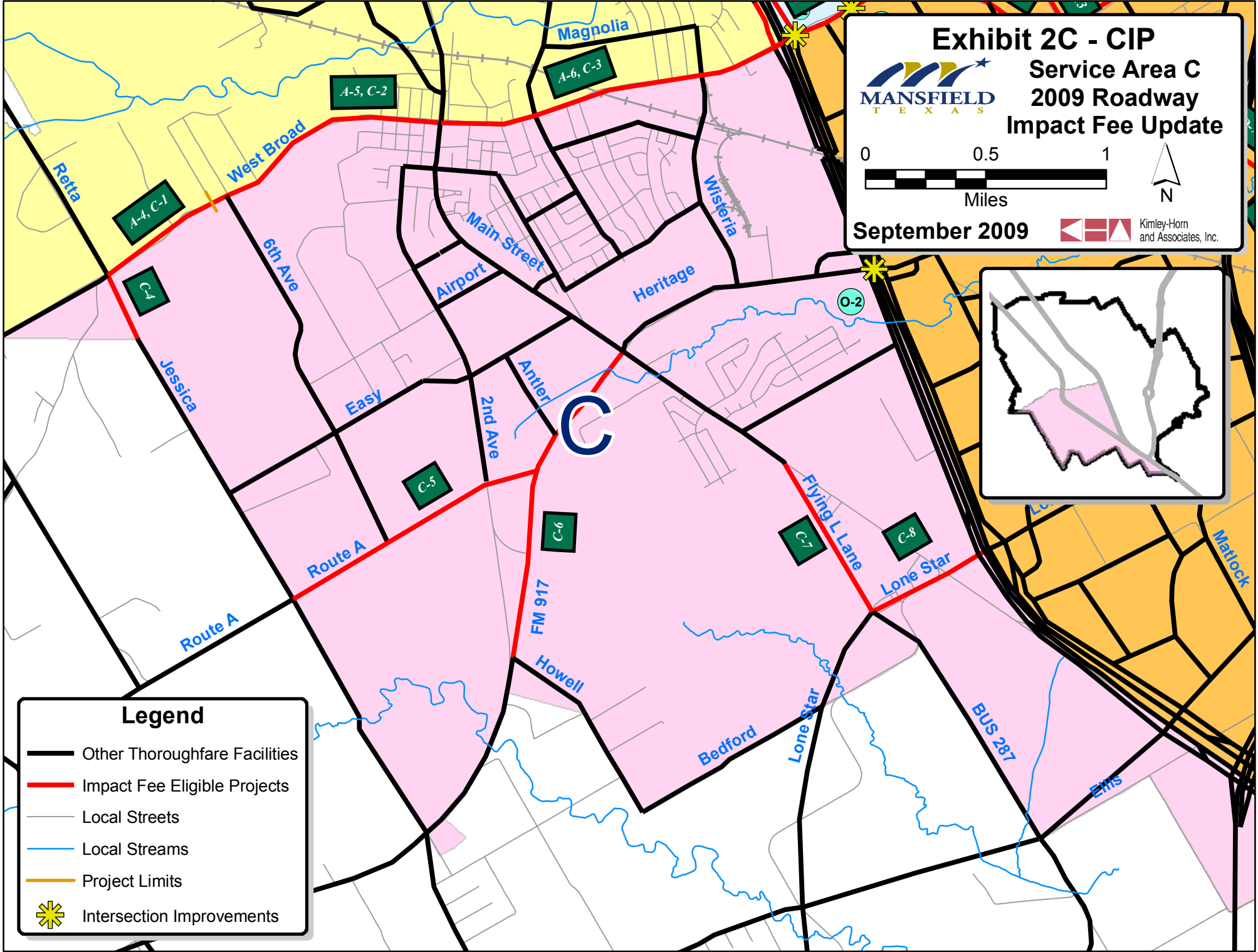


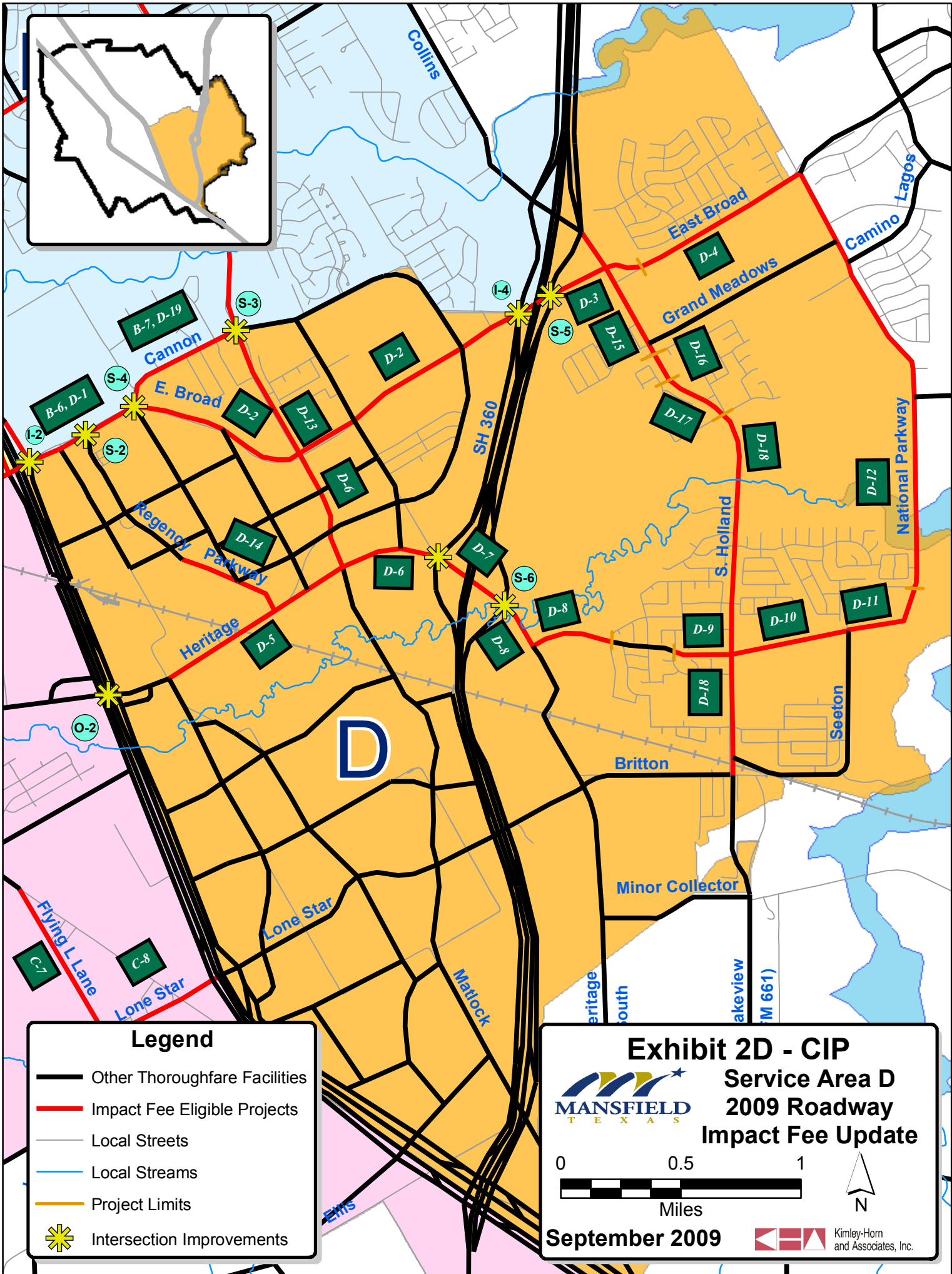
September 2009  Kimley-Horn
and Associates, Inc.



Legend

-  Other Thoroughfare Facilities
-  Impact Fee Eligible Projects
-  Local Streets
-  Local Streams
-  Project Limits
-  Intersection Improvements





Legend










-  Other Thoroughfare Facilities
-  Impact Fee Eligible Projects
-  Local Streets
-  Local Streams
-  Project Limits
-  Intersection Improvements


Exhibit 2D - CIP
Service Area D
2009 Roadway
Impact Fee Update



0 0.5 1

 Miles

September 2009

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 Kimley-Horn and Associates, Inc.

III. METHODOLOGY FOR ROADWAY IMPACT FEES

A. SERVICE AREAS

The four (4) service areas used in the 2009 Roadway Impact Fee Update are shown in the previously referenced **Exhibit 1**. These service areas cover the entire corporate boundary of the City of Mansfield. Chapter 395 of the Texas Local Government Code specifies that “the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles.”

B. SERVICE UNITS

The “service unit” is a measure of consumption or use of the roadway facilities by new development. In other words, it is the measure of supply and demand for roads in the City. For transportation purposes, the service unit is defined as a vehicle-mile. On the supply side, this is a lane-mile of an arterial street. On the demand side, this is a vehicle-trip of one-mile in length. The application of this unit as an estimate of either supply or demand is based on travel during the afternoon peak hour of traffic. This time period is commonly used as the basis for transportation planning and the estimation of trips created by new development.

Another aspect of the service unit is the service volume that is provided (supplied) by a lane-mile of roadway facility. This number, also referred to as capacity, is a function of the facility type, facility configuration, number of lanes, and level of service.

The hourly service volumes used in the Roadway Impact Fee Study are based upon generally accepted thoroughfare capacity criteria. **Table 3A** and **3B** shows the service volumes as a function of the facility type.

**Table 3A. Level of Use for Proposed Facilities
(used in Appendix A – CIP Service Units of Supply)**

| Roadway Type (MTP Classifications) | Median Configuration | Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility |
|---------------------------------------|----------------------|--|
| P6D – Principal Arterial | Divided | 750 |
| M4D – Major Arterial | Divided | 650 |
| M5U – Minor Arterial | Divided | 625 |
| C4U– Major Collector | Undivided | 525 |
| Frontage Road | Undivided | 800 |

**Table 3B. Level of Use for Existing Facilities
(used in Appendix B – Existing Roadway Facilities Inventory)**

| Roadway Type | Description | Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility |
|---------------------|--|---|
| 2U-R | Rural Cross-Section (i.e. gravel, dirt, etc.) | 150 |
| 2U-H | Two lane undivided – Arterial Type | 750 |
| 2U | Two lane undivided | 475 |
| 3U | Three lane undivided (TWLTL) | 525 |
| 4U | Four lane undivided (TWLTL) | 525 |
| 4D | Four lane divided | 650 |
| 5U | Five lane undivided (TWLTL) | 625 |
| 6D | Six lane divided | 750 |

C. COST PER SERVICE UNIT

A fundamental step in the impact fee process is to establish the cost for each service unit. In the case of the roadway impact fee, this is the cost for each vehicle-mile of travel. This cost per service unit is the cost to construct a roadway (lane-mile) needed to accommodate a vehicle-mile of travel at a level of service corresponding to the City’s standards. The cost per service unit is calculated for each service area based on a specific list of projects within that service area.

The second component of the cost per service unit is the number of service units in each service area. This number is the measure of the growth in transportation demand that is projected to occur in the ten-year period. Chapter 395 requires that Impact Fees be assessed only to pay for growth projected to occur in the city limits within the next ten-years, a concept that will be covered in a later section of this report (see **Section III.E**). As noted earlier, the units of demand are vehicle-miles of travel.

D. COST OF THE CIP

The costs that may be included in the cost per service unit are all of the implementation costs for the Impact Fee Study, as well as project costs for arterial system elements within the Capital Improvements Plan. Chapter 395 of the Texas Local Government Code specifies that the allowable costs are “...including and limited to the:

1. Construction contract price;
2. Surveying and engineering fees;
3. Land acquisition costs, including land purchases, court awards and costs, attorney’s fees, and expert witness fees; and
4. Fees actually paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the Capital Improvement Plan who is not an employee of the political subdivision.”

The engineer's opinion of the probable costs of the projects in the CIP is based, in part, on the calculation of a unit cost of construction. This means that a cost per linear foot of roadway is calculated based on an average price for the various components of roadway construction. This allows the probable cost to be determined by the type of facility being constructed, the number of lanes, and the length of the project. The costs for location-specific items such as bridges, highway ramps, drainage structures, and any other special components are added to each project as appropriate. In addition, based upon discussions with City of Mansfield staff, State, Tarrant County, and developer driven projects in which the City has contributed a portion of the total project cost have been included in the CIP as lump sum costs.

A typical roadway project consists of a number of costs, including the following: construction, design engineering, survey, and right-of way acquisition. While the construction cost component of a project may actually consist of approximately 100 various pay items, a simplified approach was used for developing the conceptual level project costs. Each new project's construction cost was divided into two cost components: roadway construction cost and major construction component allowances. The roadway construction components consist of the following pay items: (1) street excavation, (2) lime stabilization, (3) concrete pavement, (4) topsoil, (5) sidewalks, and (6) an allowance for turn lanes and median openings.

Based on the paving construction cost subtotal, a percentage of this total is calculated to allot for major construction component allowances. These allowances include preparation of mobilization, prep of ROW, traffic control, roadway drainage, and special drainage structures. Although recoverable, water and sewer infrastructure costs associated with roadway projects were not included. Based on input from City Staff, minor utility relocations were not included because they are typically funded through the utility revenues. These allowance percentages are also based on historical data. The paving and allowance subtotal is given a fifteen percent (15%) contingency to determine the construction cost total. To determine the total Impact Fee Project Cost, a percentage of the construction cost total is added for engineering, surveying, testing, mobilization, and right-of-way/easement acquisition.

The construction costs are variable based on the proposed Master Thoroughfare Plan classification of the roadway. Additional classifications are utilized in cases where a portion of the facility currently exists. The following indications are used for these projects: (1/2) for facilities where half the facility still needs to be constructed; and (1/3) for future six-lane divided facilities where only the two lanes will be constructed.

Table 4 is the CIP project list for each service area with conceptual level project cost projections. Detailed cost projections and methodology used for each individual project have been provided to the City. It should be noted that these tables reflect only conceptual-level opinions or assumptions regarding the portions of future project costs that are potentially recoverable through impact fees. Actual costs of construction are likely to change with time and are dependent on market and economic conditions that cannot be precisely predicted at this time.

This CIP establishes the list of projects for which Impact Fees may be utilized. Essentially, it establishes a list of projects for which an impact fee funding program can be established. This is different from a City's construction CIP, which provides a broad list of capital projects for which the City is committed to building. The cost projections utilized in this study should not be utilized for the City's building program or construction CIP.



Table 4.A – 10-Year Roadway Improvements Plan for Roadway Impact Fees with Conceptual Level Project Cost Projections – Service Area A

| Service Area | Proj. # | Class | Roadway | Limits | Status | Length (mi) | % In Service Area | Total Project Cost | Cost in Service Area | |
|--------------|---|-------|--------------------------------|--|--------------------|-------------|-------------------|--------------------|----------------------|--|
| A | A-1 | C4U | Mouser Way (1) | Business 287 (Main St.) to House Road | Completed | 0.25 | 100% | \$ 211,833 | \$ 211,833 | |
| | A-2 | C4U | Mouser Way (2) | House Rd. to 520 ft. West of US 287 SBFR | Proposed | 0.46 | 100% | \$ 3,849,000 | \$ 3,849,000 | |
| | A-3 | M5U | Walnut Creek Dr. (1) | Pleasant Rdg. to US 287 (Centerline) | Completed | 0.38 | 100% | \$ 1,183,787 | \$ 1,183,787 | |
| | A-4, C-1 | M4D | W. Broad St. (1) | Retta Rd. to Cotton Dr. | Proposed | 0.53 | 50% | \$ 3,561,424 | \$ 1,780,712 | |
| | A-5, C-2 | M4D | W. Broad St. (2) | Cotton Dr. to Business 287 (Main St.) | Construction | 1.07 | 50% | \$ 6,685,396 | \$ 3,342,698 | |
| | A-6, C-3 | M4D | E. Broad St. (1) | Business 287 (Main St.) to US 287 (Centerline) | Completed | 1.48 | 50% | \$ 5,144,008 | \$ 2,572,004 | |
| | A-7 | C4U | Callender Rd (1) | Summer Trl. to US 287 (Centerline) | Proposed | 0.45 | 100% | \$ 3,657,000 | \$ 3,657,000 | |
| | A-8 | C4U | Newt Patterson Rd. (1) | North Street to Business 287 (Main St.) | Completed | 0.24 | 100% | \$ 1,158,296 | \$ 1,158,296 | |
| | A-9 | C4U | Major E-W Collector | Business 287 (Main St.) to FM 157 | Proposed | 0.14 | 100% | \$ 823,000 | \$ 823,000 | |
| | A-10 | P6D | Debbie Ln. (1) | Business 287 (Main St.) to US 287 | Completed/Proposed | 1.10 | 100% | \$ 1,970,164 | \$ 1,970,164 | |
| | A-11, B-10 | FR | US 287 Frontage Roads | Walnut Creek to E. Broad St. | Proposed | 2.33 | 50% | \$ 7,322,581 | \$ 3,661,291 | |
| | O-1 | | US 287 at E. Broad & Walnut Ck | Overpass | Completed | 0.00 | 38% | \$ 951,000 | \$ 361,380 | |
| | S-1 | | Signal System | Citywide | Proposed | 0.00 | 25% | \$ 650,000 | \$ 162,500 | |
| | I-1 | | Intersection - Ramp | Debbie Ln. & US 287 (Analysis & Design) | Proposed | 0.00 | 50% | \$ 3,900,000 | \$ 1,950,000 | |
| | I-3 | | Intersection Improvements | Gertie Barrett/FM 1187 | Construction | 0.00 | 100% | \$ 249,000 | \$ 249,000 | |
| | Service Area Project Cost Subtotal | | | | | | | | \$ 26,932,665 | |
| | 2009 Roadway Impact Fee Study Update Cost Per Service Area | | | | | | | | \$ 14,125 | |
| | Total Cost in SERVICE AREA A | | | | | | | | \$ 26,946,790 | |

Table 4.B – 10-Year Roadway Improvements Plan for Roadway Impact Fees with Conceptual Level Project Cost Projections – Service Area B

| Service Area | Proj. # | Class | Roadway | Limits | Status | Length (mi) | % In Service Area | Total Project Cost | Cost in Service Area |
|---|------------|-----------|--------------------------------|---|--------------------|-------------|-------------------|----------------------|----------------------|
| B | B-1 | P4D | Turner Warnell Rd. (1) | Callender Rd. to 590 ft West of Hunter Oaks Ct. | Proposed | 0.21 | 100% | \$ 1,496,000 | \$ 1,496,000 |
| | B-2 | C4U | Callender Rd. (2) | Turner Warnell Rd. to US 287 (Centerline) | Proposed | 0.71 | 50% | \$ 2,259,000 | \$ 1,129,500 |
| | B-3 | P6D (1/3) | Debbie Ln. (2) | US 287 (Centerline) to 715 ft E. of Matlock Rd. | Completed/Proposed | 2.01 | 100% | \$ 10,648,000 | \$ 10,648,000 |
| | B-4 | P4D | Debbie Ln. (3) | 715 ft E. of Matlock Rd. to East City Limits | Proposed | 0.73 | 100% | \$ 2,833,000 | \$ 2,833,000 |
| | B-5 | M4D | Country Club Dr. (1) | Walnut Creek Dr. to Matlock Rd. | Completed | 1.64 | 100% | \$ 5,691,242 | \$ 5,691,242 |
| | B-6, D-1 | P6D (1/3) | E. Broad St. (2) | US 287 (Centerline) to Cannon Dr. | Completed/Proposed | 0.55 | 50% | \$ 2,019,000 | \$ 1,009,500 |
| | B-7, D-19 | C4U | Cannon Dr. (1) | E. Broad St. to Matlock Rd. | Completed | 0.56 | 50% | \$ 1,907,030 | \$ 953,515 |
| | B-8 | P6D (1/3) | Matlock Rd. (1) | Mansfield Webb Rd. to Cannon Dr. | Completed/Proposed | 2.43 | 100% | \$ 13,970,000 | \$ 13,970,000 |
| | B-9 | M4D | Walnut Creek Dr. (2) | Debbie Ln. to North City Limits | Completed | 0.92 | 100% | \$ 347,577 | \$ 347,577 |
| | A-11, B-10 | FR | US 287 Frontage Roads | Walnut Creek to E. Broad St. | Proposed | 2.33 | 50% | \$ 7,322,581 | \$ 3,661,291 |
| | O-1 | | US 287 at E. Broad & Walnut Ck | Overpass | Completed | | 38% | \$ 951,000 | \$ 361,380 |
| | S-1 | | Signal System | Citywide | Proposed | | 25% | \$ 650,000 | \$ 162,500 |
| | S-2 | | Signal Installation | E. Broad St. & Regency Pkwy. | Proposed | | 50% | \$ 195,000 | \$ 97,500 |
| | S-3 | | Signal Installation | Cannon Dr. & Matlock Rd. | Proposed | | 50% | \$ 195,000 | \$ 97,500 |
| | S-4 | | Signal Installation | E. Broad St. & Cannon Dr. | Proposed | | 50% | \$ 195,000 | \$ 97,500 |
| | S-5 | | Signal Installation | E. Broad St. & SH 360 (2) | Proposed | | 25% | \$ 260,000 | \$ 65,000 |
| | S-7 | | Signal Installation | Matlock Rd. & Ragland Rd. | Proposed | | 100% | \$ 195,000 | \$ 195,000 |
| | I-1 | | Intersection - Ramp | Debbie Ln. & US 287 (Analysis & Design) | Proposed | | 50% | \$ 3,900,000 | \$ 1,950,000 |
| | I-2 | | Intersection Improvements | East Broad & US 287 | Proposed | | 50% | \$ 520,000 | \$ 260,000 |
| | I-4 | | Intersection Improvements | East. Broad St. btwn SB/NB SH 360 | Completed | | 25% | \$ 512,000 | \$ 128,000 |
| Service Area Project Cost Subtotal | | | | | | | | \$ 45,154,005 | |
| 2009 Roadway Impact Fee Study Update Cost Per Service Area | | | | | | | | \$ 14,125 | |
| Total Cost in SERVICE AREA B | | | | | | | | \$ 45,168,130 | |



Table 4.C – 10-Year Roadway Improvements Plan for Roadway Impact Fees with Conceptual Level Project Cost Projections – Service Area C

| Service Area | Proj. # | Class | Roadway | Limits | Status | Length (mi) | % In Service Area | Total Project Cost | Cost in Service Area | |
|--------------|---|-------|------------------------------------|---|--------------|-------------|-------------------|--------------------|----------------------|--|
| C | A-4, C-1 | M4D | W. Broad St. (1) | Retta Rd. to Cotton Dr. | Proposed | 0.53 | 50% | \$ 3,561,424 | \$ 1,780,712 | |
| | A-5, C-2 | M4D | W. Broad St. (2) | Cotton Dr. to Business 287 (Main St.) | Construction | 1.07 | 50% | \$ 6,685,396 | \$ 3,342,698 | |
| | A-6, C-3 | M4D | E. Broad St. (1) | Business 287 (Main St.) to US 287 (Centerline) | Completed | 1.48 | 50% | \$ 5,144,008 | \$ 2,572,004 | |
| | C-4 | P4D | Jessica Dr. (1) | W. Broad St. to 1,525 ft S. of Broad St. | Proposed | 0.29 | 100% | \$ 2,010,000 | \$ 2,010,000 | |
| | C-5 | M4D | Route A (1) | Jessica Dr. to FM 917 | Proposed | 1.15 | 100% | \$ 7,669,000 | \$ 7,669,000 | |
| | C-6 | P4D | FM 917 | 2nd Ave. to Business 287 (Main St.) | Completed | 1.4 | 100% | \$ 650,000 | \$ 650,000 | |
| | C-7 | M4D | Flying L Ln. (Future Business 287) | Business 287 to Lone Star Rd. | Proposed | 0.71 | 100% | \$ 4,757,000 | \$ 4,757,000 | |
| | C-8 | P4D | Lone Star Rd. | Flying L Ln. (Future Business 287) to US 287 (Centerline) | Proposed | 0.54 | 100% | \$ 3,696,000 | \$ 3,696,000 | |
| | O-1 | | US 287 at E. Broad & Walnut Ck | Overpass | Completed | | 13% | \$ 951,000 | \$ 123,630 | |
| | O-2 | | US 287 & Heritage Pkwy. | Overpass | Completed | | 50% | \$ 723,000 | \$ 361,500 | |
| | S-1 | | Signal System | Citywide | Proposed | | 25% | \$ 650,000 | \$ 162,500 | |
| | Service Area Project Cost Subtotal | | | | | | | | \$ 27,125,044 | |
| | 2009 Roadway Impact Fee Study Update Cost Per Service Area | | | | | | | | \$ 14,125 | |
| | Total Cost in SERVICE AREA C | | | | | | | | \$ 27,139,169 | |

Table 4.D – 10-Year Roadway Improvements Plan for Roadway Impact Fees with Conceptual Level Project Cost Projections – Service Area D

| Service Area | Proj. # | Class | Roadway | Limits | Status | Length (mi) | % In Service Area | Total Project Cost | Cost in Service Area | |
|--------------|---|-----------|--------------------------------|---|--------------------|-------------|-------------------|--------------------|----------------------|--|
| D | B-6, D-1 | P6D (1/3) | E. Broad St. (2) | US 287 (Centerline) to Cannon Dr. | Completed/Proposed | 0.55 | 50% | \$ 2,019,000 | \$ 1,009,500 | |
| | D-2 | P6D (1/3) | E. Broad St. (3) | Cannon Dr. to SH 360 (Centerline) | Completed/Proposed | 0.55 | 100% | \$ 5,450,000 | \$ 5,450,000 | |
| | D-3 | P6D (1/3) | E. Broad St. (4) | SH 360 (Centerline) to 800 ft E. of Holland Rd. | Completed/Proposed | 0.48 | 100% | \$ 5,507,000 | \$ 5,507,000 | |
| | D-4 | P4D | E. Broad St. (5) | 800 ft E. of Holland Rd. to National Pkwy. | Proposed | 0.77 | 100% | \$ 2,126,000 | \$ 2,126,000 | |
| | D-5 | P4D | Heritage Pkwy. (1) | Mitchell Rd. to Matlock Rd. | Proposed | 0.86 | 100% | \$ 268,000 | \$ 268,000 | |
| | D-6 | P4D | Matlock Rd / Heritage Pkwy. | E. Broad St. to SH 360 SBFR | Completed | 0.21 | 100% | \$ 8,965,000 | \$ 8,965,000 | |
| | D-7 | P4D | Heritage Pkwy. (6) | SH 360 SBFR to SH 360 NBFR | Proposed | 0.34 | 100% | \$ 2,356,000 | \$ 2,356,000 | |
| | D-8 | P4D | Heritage/National Pkwy. | SH 360 NBFR to Calloway Dr. | Completed | 0.21 | 100% | \$ 1,365,000 | \$ 1,365,000 | |
| | D-9 | M4D (1/2) | National Pkwy. (1) | Garden Path Ln. to Holland Rd. | Proposed | 0.24 | 100% | \$ 660,000 | \$ 660,000 | |
| | D-10 | M4D | National Pkwy. (2) | Holland Rd. to Seeton Rd. | Proposed | 0.5 | 100% | \$ 3,349,000 | \$ 3,349,000 | |
| | D-11 | M4D (1/2) | National Pkwy. (3) | Seeton Rd. to 500 ft S of Edgewater Trl. | Proposed | 0.37 | 100% | \$ 1,010,000 | \$ 1,010,000 | |
| | D-12 | C4U | National Pkwy. (4) | 500 ft S of Edgewater Trl. To E. Broad St. | Proposed | 1.87 | 100% | \$ 10,882,000 | \$ 10,882,000 | |
| | D-13 | P6D (1/3) | Matlock Rd. (2) | Cannon Dr. to E. Broad St. | Completed/Proposed | 0.58 | 100% | \$ 2,883,000 | \$ 2,883,000 | |
| | D-14 | C4U | Regency Pkwy. (1) | 1,300 ft S. of Fountainview Dr. to Heritage Pkwy. | Proposed | 0.46 | 100% | \$ 2,690,000 | \$ 2,690,000 | |
| | D-15 | P4D | Holland Rd. (1) | SH 360 NBFR to Grand Meadows Blvd. | Completed | 0.26 | 100% | \$ 3,315,000 | \$ 3,315,000 | |
| | D-16 | P4D (1/2) | Holland Rd. (2) | Grand Meadows Blvd. to Waterford Oaks Ln. | Proposed | 0.13 | 100% | \$ 384,000 | \$ 384,000 | |
| | D-17 | P4D | Holland Rd. (3) | Waterford Oaks Ln. to Waterford Glen Dr. | Proposed | 0.27 | 100% | \$ 1,872,000 | \$ 1,872,000 | |
| | D-18 | P4D | Holland Rd. (4) | Waterford Glen Dr. to Britton | Proposed | 1.52 | 100% | \$ 9,676,000 | \$ 9,676,000 | |
| | B-7, D-19 | C4U | Cannon Dr. (1) | E. Broad St. to Matlock Rd. | Completed | 0.56 | 50% | \$ 1,907,030 | \$ 953,515 | |
| | O-1 | | US 287 at E. Broad & Walnut Ck | Overpass | Completed | | 13% | \$ 951,000 | \$ 123,630 | |
| | O-2 | | US 287 & Heritage Pkwy. | Overpass | Completed | | 50% | \$ 723,000 | \$ 361,500 | |
| | S-1 | | Signal System | Citywide | Proposed | | 25% | \$ 650,000 | \$ 162,500 | |
| | S-2 | | Signal Installation | E. Broad St. & Regency Pkwy. | Proposed | | 50% | \$ 195,000 | \$ 97,500 | |
| | S-3 | | Signal Installation | Cannon Dr. & Matlock Rd. | Proposed | | 50% | \$ 195,000 | \$ 97,500 | |
| | S-4 | | Signal Installation | E. Broad St. & Cannon Dr. | Proposed | | 50% | \$ 195,000 | \$ 97,500 | |
| | S-5 | | Signal Installation | E. Broad St. & SH 360 (2) | Proposed | | 75% | \$ 260,000 | \$ 195,000 | |
| | S-6 | | Signal Installation | Heritage Pkwy. & SH 360 (2) | Proposed | | 100% | \$ 260,000 | \$ 260,000 | |
| | I-2 | | Intersection Improvements | East Broad & US 287 | Proposed | | 50% | \$ 520,000 | \$ 260,000 | |
| | I-4 | | Intersection Improvements | East. Broad St. btwn SB/NB SH 360 | Completed | | 75% | \$ 512,000 | \$ 384,000 | |
| | Service Area Project Cost Subtotal | | | | | | | | \$ 66,760,145 | |
| | 2009 Roadway Impact Fee Study Update Cost Per Service Area | | | | | | | | \$ 14,125 | |
| | Total Cost in SERVICE AREA D | | | | | | | | \$ 66,774,270 | |

Notes:

- The planning level cost projections have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Mansfield.
- The planning level cost projections shall not supersede the City's design standards contained within the Subdivision Ordinance or the determination of the City Engineer for a specific project.
- The project cost total within each Service Area may differ from the total shown in the Summary sheets provided to the City due to some projects that are split between multiple service areas.

E. SERVICE UNIT CALCULATION

The basic service unit for the computation of Mansfield's roadway impact fees is the vehicle-mile of travel during the afternoon peak-hour. To determine the cost per service unit, it is necessary to project the growth in vehicle-miles of travel for the service area for the ten-year period.

The growth in vehicle-miles from 2009 to 2019 is based upon projected changes in residential and non-residential growth for the period. In order to determine this growth, baseline estimates of population, basic square feet, service square feet, and retail square feet for 2009 were made by



the City, along with projections for each of these demographic statistics through 2019. **Table 1** details the growth estimates used for impact fee determination.

The residential and non-residential statistics in the Land Use Assumptions provide the “independent variables” that are used to calculate the existing (2009) and projected (2019) transportation service units used to establish the roadway impact fee maximum rates within each service area. The roadway demand service units (vehicle-miles) for each service area are the sum of the vehicle-miles “generated” by each category of land use in the service area.

For the purpose of impact fees, all developed and developable land is categorized as either residential or non-residential. For residential land uses, the existing and projected population is converted to dwelling units. The number of dwelling units in each service area is multiplied by a *transportation demand factor* to compute the vehicle-miles of travel that occur during the afternoon peak hour. This factor computes the average amount of demand caused by the residential land uses in the service area. The *transportation demand factor* is discussed in more detail below.

For non-residential land uses, the process is similar. The Land Use Assumptions provide existing and projected number of building square footages for three (3) categories of non-residential land uses—basic, service, and retail. These categories correspond to an aggregation of other specific land use categories based on the NAICS (North American Industrial Classification System).

Building square footage is the most common independent variable for the estimation of non-residential trips in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 8th Edition*. This statistic is more appropriate than the number of employees because building square footage is tied more closely to trip generation and is known at the time of application for any development or development modification that would require the assessment of an impact fee.

The existing and projected Land Use Assumptions for the dwelling units and the square footage of basic, service, and retail land uses provide the basis for the projected increase in vehicle-miles of travel. As noted earlier, a *transportation demand factor* is applied to these values and then summed to calculate the total peak hour vehicle-miles of demand for each service area.

The *transportation demand factors* are aggregate rates derived from two sources – the *ITE Trip Generation Manual, 8th Edition* and the regional Origin-Destination Travel Survey performed by North Central Texas Council of Governments (NCTCOG) and the National Household Travel Survey (NHTS). The *ITE Trip Generation Manual, 8th Edition* provides the number of trips that are produced or attracted to the land use for each dwelling unit, square foot of building, or other corresponding unit. For the retail category of land uses, the rate is adjusted to account for the fact that a percentage of retail trips are made by people who would otherwise be traveling past that particular establishment anyway, such as a trip between work and home. These trips are called pass-by trips, and since the travel demand is accounted for in the land use calculations relative to the primary trip, it is necessary to discount the retail rate to avoid double counting trips.

The next component of the *transportation demand factor* accounts for the length of each trip. The average trip length for each category is based on the region-wide travel characteristics survey conducted by the NCTCOG and the National Household Travel Survey (NHTS).



The computation of the *transportation demand factor* is detailed in the following equation:

$$TDF = T * (1 - P_b) * L_{max}$$

$$\text{where... } L_{max} = \min(L * OD \text{ or } SA_L)$$

Variables:

- TDF = Transportation Demand Factor,
- T = Trip Rate (peak hour trips / unit),
- P_b = Pass-By Discount (% of trips),
- L_{max} = Maximum Trip Length (miles),
- L = Average Trip Length (miles), and
- OD = Origin-Destination Reduction (50%)
- SA_L = Max Service Area Trip Length (see **Table 5**)

For land uses which are characterized by longer average trip lengths (primarily residential uses), the maximum trip length has been limited to a length based on the nature of the roadway network within the service area, along with consideration of the existing City boundaries. Although Chapter 395 of the Texas Local Government Code allows for a service area diameter of six (6) miles, the City of Mansfield service area boundaries were set using approximately a four (4) mile limit. Therefore, the maximum trip length was assumed to be four (4) miles.

The adjustment made to the average trip length statistic in the computation of the maximum trip length is the origin-destination reduction. This adjustment is made because the roadway impact fee is charged to both the origin and destination end of the trip. For example, impact fee methodology will account for a trip from home to work within Mansfield to both residential and non-residential land uses. To avoid counting these trips as both residential and non-residential trips, a 50% origin-destination (OD) reduction factor is applied. Therefore, only half of the trip length is assessed to each land use.

Table 5 shows the derivation of the *Transportation Demand Factor* for the residential land uses and the three (3) non-residential land uses. The values utilized for all variables shown in the *transportation demand factor* equation are also shown in the table.



Table 5. Transportation Demand Factor Calculations

| Variable | Residential | Basic | Service | Retail |
|-------------------------|--------------------|--------------|----------------|---------------|
| T | 1.01 | 0.97 | 1.49 | 5.00 |
| P_b | 0% | 0% | 0% | 30% |
| L | 11.65 | 11.65 | 11.65 | 7.05 |
| L_{max}* | 4.00 | 4.00 | 4.00 | 3.53 |
| TDF | 4.04 | 3.88 | 5.96 | 11.25 |

* L_{max} is less than 4 miles for retail land uses; therefore this lower trip length is used for calculating the TDF for non-residential land uses

The application of the demographic projections and the *transportation demand factors* are presented in the 10-Year Growth Projections in **Table 6**. This table shows the total vehicle-miles by service area for the years 2009 and 2019. These estimates and projections lead to the vehicle-miles of travel for both 2009 and 2019.

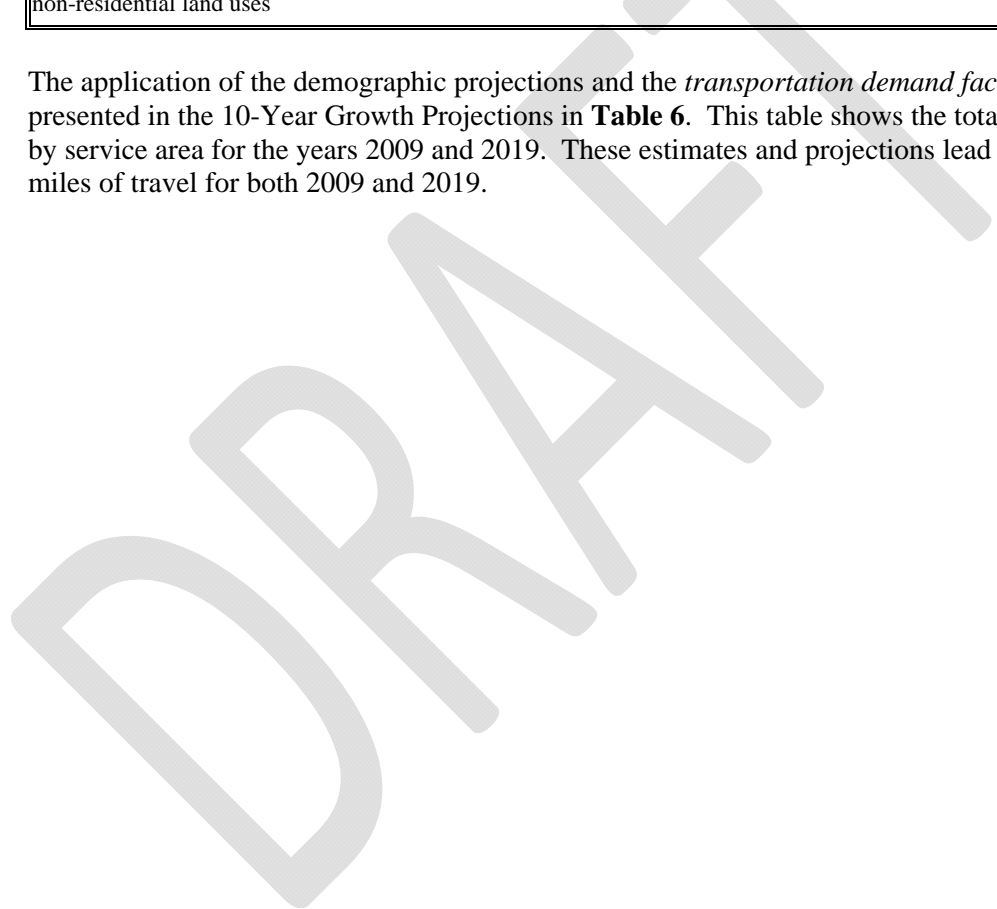




Table 6. 10-Year Growth Projections

| Year 2009 | | RESIDENTIAL VEHICLE-MILES | | SQUARE FEET ¹ | | | TRANS. DEMAND FACTOR ⁵ | | | NON-RESIDENTIAL VEHICLE-MILES ⁹ | | | TOTAL | |
|---------------|---------------|-----------------------------|------------------|----------------------------|------------------|------------------|-----------------------------------|--------------------|----------------------|--|---------------|---------------|---------------|-----------------------------|
| | | DWELLING UNITS ¹ | TDF ² | VEHICLE MILES ³ | BASIC | SERVICE | RETAIL | BASIC ⁶ | SERVICE ⁷ | RETAIL ⁸ | BASIC | SERVICE | RETAIL | VEHICLE MILES ¹⁰ |
| A | 4,848 | 1.01 | 19,586 | 716,100 | 550,200 | 1,492,000 | 0.98 | 1.49 | 3.54 | 2,778 | 3,279 | 16,789 | 22,846 | 42,432 |
| B | 7,664 | 4.04 | 30,963 | 1,516,600 | 662,400 | 510,400 | 3.88 | 5.96 | 11.25 | 5,884 | 3,948 | 5,743 | 15,575 | 46,538 |
| C | 2,195 | 4.04 | 8,868 | 2,339,700 | 385,700 | 549,600 | 3.88 | 5.96 | 11.25 | 9,078 | 2,299 | 6,184 | 17,561 | 26,429 |
| D | 3,469 | 4.04 | 14,015 | 436,700 | 172,600 | 953,600 | 3.88 | 5.96 | 11.25 | 1,694 | 1,029 | 10,730 | 13,453 | 27,468 |
| Totals | 18,176 | | 73,431 | 5,009,100 | 1,770,900 | 3,505,600 | | | | 19,434 | 10,555 | 39,446 | 69,435 | 142,866 |

| Year 2019 | | RESIDENTIAL VEHICLE-MILES | | SQUARE FEET ¹ | | | TRANS. DEMAND FACTOR ⁵ | | | NON-RESIDENTIAL VEHICLE-MILES ⁹ | | | TOTAL | |
|---------------|---------------|-----------------------------|------------------|----------------------------|------------------|------------------|-----------------------------------|--------------------|----------------------|--|---------------|---------------|----------------|-----------------------------|
| | | DWELLING UNITS ¹ | TDF ² | VEHICLE MILES ³ | BASIC | SERVICE | RETAIL | BASIC ⁶ | SERVICE ⁷ | RETAIL ⁸ | BASIC | SERVICE | RETAIL | VEHICLE MILES ¹⁰ |
| A | 7,646 | 1.01 | 30,890 | 990,000 | 730,100 | 2,107,200 | 0.98 | 1.49 | 3.54 | 3,841 | 4,351 | 23,711 | 31,903 | 62,793 |
| B | 8,881 | 4.04 | 35,879 | 2,582,800 | 905,500 | 801,600 | 3.88 | 5.96 | 11.25 | 10,021 | 5,397 | 9,020 | 24,438 | 60,317 |
| C | 5,152 | 4.04 | 20,814 | 3,036,000 | 484,100 | 717,600 | 3.88 | 5.96 | 11.25 | 11,780 | 2,885 | 8,075 | 22,740 | 43,554 |
| D | 6,844 | 4.04 | 27,650 | 1,213,300 | 413,700 | 3,362,400 | 3.88 | 5.96 | 11.25 | 4,708 | 2,466 | 37,835 | 45,009 | 72,659 |
| Totals | 28,523 | | 115,233 | 7,822,100 | 2,533,400 | 6,988,800 | | | | 30,350 | 15,099 | 78,641 | 124,090 | 239,323 |

VEHICLE-MILES OF INCREASE¹¹ (2009 - 2019)

| SERVICE AREA | VEH-MILES |
|--------------|----------------|
| A | 20,361 |
| B | 13,780 |
| C | 17,125 |
| D | 45,191 |
| Total | 153,503 |

- Notes:**
- ¹ From Land Use Assumptions (included in 2009 Roadway Impact Fee Update Report)
 - ² Transportation Demand Factor for each Service Area (from LUVMET) using Single Family Detached Housing land use and trip generation rate
 - ³ Calculated by multiplying TDF by the number of dwelling units
 - ⁴ From Land Use Assumptions included in 2009 Roadway Impact Fee Update Report
 - ⁵ Trip generation rate and Transportation Demand Factors from LUVMET for each land use
 - ⁶ 'Basic' corresponds to General Light Industrial land use and trip generation rate
 - ⁷ 'Service' corresponds to General Office land use and trip generation rate
 - ⁸ 'Retail' corresponds to Free-Standing Retail land use and trip generation rate
 - ⁹ Calculated by multiplying Transportation Demand Factor by the number of thousand square feet for each land use
 - ¹⁰ Residential plus non-residential vehicle-mile totals for each Service Area
 - ¹¹ Total Vehicle-Miles (2009) subtracted from Total Vehicle-Miles (2019)

IV. IMPACT FEE CALCULATIONS

A. MAXIMUM ASSESSABLE IMPACT FEE PER SERVICE UNIT

This section presents the maximum assessable impact fee rate calculated for each service area. The maximum assessable impact fee is the sum of the eligible Impact Fee CIP costs for the service area divided by the growth in travel attributable to new development projected to occur within the 10-year period. A majority of the components of this calculation have been described and presented in previous sections of this report. The purpose of this section is to document the computation for each service area and to demonstrate that the guidelines provided by Chapter 395 of the Texas Local Government Code have been addressed. **Table 7** illustrates the computation of the maximum assessable impact fee computed for each service area. Each row in the table is numbered to simplify explanation of the calculation.

| Line | Title | Description |
|----------|---|--|
| 1 | <i>Total Vehicle-Miles of Capacity Added by the CIP</i> | The total number of vehicle-miles added to the service area based on the capacity, length, and number of lanes in each project (from Appendix A – CIP Service Units of Supply) |

Each project identified in the Impact Fee CIP will add a certain amount of capacity to the City's roadway network based on its length and classification. This line displays the total amount added within each service area.

| | | |
|----------|---|---|
| 2 | <i>Total Vehicle-Miles of Existing Demand</i> | A measure of the amount of traffic currently using the roadway facilities upon which capacity is being added. (from Appendix A – CIP Service Units of Supply) |
|----------|---|---|

A number of facilities identified in the Impact Fee CIP have traffic currently utilizing a portion of their existing capacity. This line displays the total amount of capacity along these facilities currently be used by existing traffic.

| | | |
|----------|---|--|
| 3 | <i>Total Vehicle-Miles of Existing Deficiencies</i> | Number of vehicle-miles of travel that are not accommodated by the existing roadway system (from Appendix B – Existing Roadway Facilities Inventory) |
|----------|---|--|

In order to ensure that existing deficiencies on the City's roadway network are not recoverable through impact fees, this line is based on the entire roadway network within the service area. Any roadway within the service area that is deficient – even those not identified on the Impact Fee CIP – will have these additional trips removed from the calculation.

| | | |
|----------|--|--|
| 4 | <i>Net Amount of Vehicle-Miles of Capacity Added</i> | A measurement of the amount of vehicle-miles added by the CIP that will not be utilized by existing demand (Line 1 – Line 2 – Line 3) |
|----------|--|--|

This calculation identifies the portion of the Impact Fee CIP (in vehicle-miles) that may be recoverable through the collection of impact fees.



| | | |
|----------|--|---|
| 5 | <i>Total Cost of the CIP within the Service Area</i> | The total cost of the projects within each service area (from Table 4: 10-Year Roadway Improvements Plan with Conceptual Level Cost Opinions) |
|----------|--|---|

This line simply identifies the total cost of all of the projects identified in each service area.

| | | |
|----------|--------------------------------------|---|
| 6 | <i>Cost of Net Capacity Supplied</i> | The total CIP cost (Line 5) prorated by the ratio of Net Capacity Added (Line 4) to Total Capacity Added (Line 1). [(Line 4 / Line 1) * (Line 5)] |
|----------|--------------------------------------|---|

Using the ratio of vehicle-miles added by the Impact Fee CIP available to serve future growth to the total vehicle-miles added, the total cost of the Impact Fee CIP is reduced to the amount available for future growth (i.e. excluding existing usage and deficiencies).

| | | |
|----------|--|--|
| 7 | <i>Cost to Meet Existing Needs and Usage</i> | The difference between the Total Cost of the CIP (Line 5) and the Cost of the Net Capacity supplied (Line 6). (Line 5 – Line 6) |
|----------|--|--|

This line is provided for information purposes only – it is to present the portion of the total cost of the Impact Fee CIP that is required to meet existing demand.

| | | |
|----------|---|---|
| 8 | <i>Total Vehicle-Miles of New Demand over Ten Years</i> | Based upon the growth projection provided in the Land Use Assumptions , an estimate of the number of new vehicle-miles within the service area over the next ten years. (from Table 6) |
|----------|---|---|

This line presents the amount of growth (in vehicle-miles) projected to occur within each service area over the next ten years.

| | | |
|-----------|---|---|
| 9 | <i>Percent of Capacity Added Attributable to New Growth</i> | The result of dividing Total Vehicle-Miles of New Demand (Line 8) by the Net Amount of Capacity Added (Line 4), limited to 100% (Line 10). This calculation is required by Chapter 395 to ensure capacity added is attributable to new growth. |
| 10 | <i>Chapter 395 Check</i> | |

In order to ensure that the vehicle-miles added by the Impact Fee CIP do not exceed the amount needed to accommodate growth beyond the ten-year window, a comparison of the two values is performed. If the amount of vehicle-miles added by the Impact Fee CIP exceeds the growth projected to occur in the next ten years, the Impact Fee CIP cost is reduced accordingly.

| | | |
|-----------|--|--|
| 11 | <i>Cost of Capacity Added Attributable to New Growth</i> | The result of multiplying the Cost of Net Capacity Added (Line 6) by the Percent of Capacity Added Attributable to New Growth, limited to 100% (Line 9). |
|-----------|--|--|

In order to ensure that the vehicle-miles added by the Impact Fee CIP do not exceed the amount needed to accommodate growth beyond the ten-year window, a comparison of the two values is performed. If the amount of vehicle-miles added by the Impact Fee CIP exceeds the growth projected to occur in the next ten years, the Impact Fee CIP cost is reduced accordingly.

| | | |
|-----------|--|--|
| 12 | <i>Pre-Credit Maximum Fee Per Service Unit</i> | Found by dividing the Cost of the CIP by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8). (Line 11 / Line 8). |
|-----------|--|--|

This value is the total pre-credit maximum fee per service unit prior to a credit for the portion of ad valorem tax generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan that may be recovered through impact fees.



B. PLAN FOR AWARDING THE ROADWAY IMPACT FEE CREDIT

Chapter 395 of the Texas Local Government Code requires the Capital Improvements Plan for Roadway Impact Fees contain specific enumeration of a plan for awarding the impact fee credit. Section 395.014 of the Code states:

“(7) A plan for awarding:

- (A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or
- (B) In the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan...”

The City of Mansfield has prepared the plan for awarding the roadway impact fee credit. The plan following 395.014(7)(A) is summarized in **Appendix C**, Plan for Awarding the Roadway Impact Fee Credit. The following table summarizes the portions of **Table 7** that utilize this credit calculation. Therefore, the *Maximum Assessable Fee Per Service Unit* (Line 13) is obtained by applying the credit for ad valorem taxes.



Table 7. Maximum Assessable Fee Per Service Unit by Service Area

| SERVICE AREA: | | A | B | C | D |
|---------------|---|---------------|---------------|---------------|---------------|
| 1 | TOTAL VEH-MI OF CAPACITY ADDED BY THE CIP (FROM CIP UNITS OF SUPPLY, APPENDIX A) | 15,934 | 34,447 | 14,638 | 29,525 |
| 2 | TOTAL VEH-MI OF EXISTING DEMAND (FROM CIP UNITS OF SUPPLY, APPENDIX A) | 5,601 | 20,445 | 3,931 | 5,700 |
| 3 | TOTAL VEH-MI OF EXISTING DEFICIENCIES (FROM EXISTING FACILITIES INVENTORY, APPENDIX B) | 1,553 | 1,324 | 106 | 17 |
| 4 | NET AMOUNT OF VEH-MI OF CAPACITY ADDED (LINE 1 - LINE 2 - LINE 3) | 8,780 | 12,678 | 10,601 | 23,808 |
| 5 | TOTAL COST OF THE CIP WITHIN SERVICE AREA (FROM TABLE 4) | \$ 26,946,790 | \$ 45,168,130 | \$ 27,139,169 | \$ 66,774,270 |
| 6 | COST OF NET CAPACITY SUPPLIED (LINE 4 / LINE 1) * (LINE 5) | \$ 14,848,300 | \$ 16,623,844 | \$ 19,654,484 | \$ 53,844,929 |
| 7 | COST TO MEET EXISTING NEEDS AND USAGE (LINE 5 - LINE 6) | \$ 12,098,490 | \$ 28,544,286 | \$ 7,484,685 | \$ 12,929,341 |
| 8 | TOTAL VEH-MI OF NEW DEMAND OVER TEN YEARS (FROM TABLE 6 and Land Use Assumptions) | 20,361 | 13,780 | 17,125 | 45,191 |
| 9 | PERCENT OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 8 / LINE 4) | 231.9% | 108.6% | 161.5% | 189.8% |
| 10 | IF LINE 8 > LINE 4, REDUCE LINE 9 TO 100%, OTHERWISE NO CHANGE | 100.0% | 100.0% | 100.0% | 100.0% |
| 11 | COST OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 6 * LINE 10) | \$ 14,848,300 | \$ 16,623,844 | \$ 19,654,484 | \$ 53,844,929 |
| 12 | PRE-CREDIT MAX FEE PER SERVICE UNIT (\$ PER VEH-MI) (LINE 11 / LINE 8) | \$ 729 | \$ 1,206 | \$ 1,148 | \$ 1,191 |
| 13 | MAX ASSESSABLE FEE PER SERVICE UNIT (\$ PER VEH-MI) (FROM Plan for Awarding the Impact Fee Credit, Appendix C) | \$ 694 | \$ 1,184 | \$ 1,132 | \$ 1,179 |



C. SERVICE UNIT DEMAND PER UNIT OF DEVELOPMENT

The roadway impact fee is determined by multiplying the impact fee rate by the number of service units projected for the proposed development. For this purpose, the City utilizes the Land Use/Vehicle-Mile Equivalency Table (LUVMET), presented in **Table 8**. This table lists the predominant land uses that may occur within the City of Mansfield. For each land use, the development unit that defines the development's magnitude with respect to transportation demand is shown. Although every possible use cannot be anticipated, the majority of uses are found in this table. If the exact use is not listed, one similar in trip-making characteristics can serve as a reasonable proxy. The individual land uses are grouped into categories, such as residential, office, commercial, industrial, and institutional.

The trip rates presented for each land use is a fundamental component of the LUVMET. The trip rate is the average number of trips generated during the afternoon peak hour by each land use per development unit. The next column, if applicable to the land use, presents the number of trips to and from certain land uses reduced by pass-by trips, as previously discussed.

The source of the trip generation and pass-by statistics is the *ITE Trip Generation Manual, 8th Edition*, the latest edition of the definitive source for trip generation data. This manual utilizes trip generation studies for a variety of land uses throughout the United States, and is the standard used by traffic engineers and transportation planners for traffic impact analysis, site design, and transportation planning.

To convert vehicle trips to vehicle-miles, it is necessary to multiply trips by trip length. The adjusted trip length values are based on the *Regional Origin-Destination Travel Survey* regional Origin-Destination Travel Survey performed by the NCTCOG and the NHTS. The other adjustment to trip length is the 50% origin-destination reduction to avoid double counting of trips. At this stage, another important aspect of the state law is applied – the limit on transportation service unit demand. If the adjusted trip length is above the maximum trip length within the service area, the maximum trip length used for calculation is reduced to the corresponding value. This reduction, as discussed previously, limits the maximum trip length to the approximate size of the service areas.

The remaining column in the LUVMET shows the vehicle-miles per development unit. This number is the product of the trip rate and the maximum trip length. This number, previously referred to as the *Transportation Demand Factor*, is used in the impact fee estimate to compute the number of service units consumed by each land use application. The number of service units is multiplied by the impact fee rate (established by City ordinance) in order to determine the impact fee for a development.



Table 8. Land Use / Vehicle-Mile Equivalency Table

| Land Use Category | ITE Land Use Code | Development Unit | Trip Gen Rate (PM) | Pass-by Rate | Pass-by Source | Trip Rate | NCTCOG Trip Length (mi) | Adj. For O-D | Adj. Trip Length (mi) | Max Trip Length (mi) | Veh-Mi Per Dev-Unit |
|--|-------------------|--------------------------|--------------------|--------------|----------------|-----------|-------------------------|--------------|-----------------------|----------------------|---------------------|
| PORT AND TERMINAL | | | | | | | | | | | |
| Truck Terminal | 030 | Acre | 6.55 | | | 6.55 | 10.02 | 50% | 5.01 | 4.00 | 26.20 |
| INDUSTRIAL | | | | | | | | | | | |
| General Light Industrial | 110 | 1,000 SF GFA | 0.97 | | | 0.97 | 10.02 | 50% | 5.01 | 4.00 | 3.88 |
| General Heavy Industrial | 120 | 1,000 SF GFA | 0.68 | | | 0.68 | 10.02 | 50% | 5.01 | 4.00 | 2.72 |
| Industrial Park | 130 | 1,000 SF GFA | 0.86 | | | 0.86 | 10.02 | 50% | 5.01 | 4.00 | 3.44 |
| Warehousing | 150 | 1,000 SF GFA | 0.32 | | | 0.32 | 10.83 | 50% | 5.42 | 4.00 | 1.28 |
| Mini-Warehouse | 151 | 1,000 SF GFA | 0.26 | | | 0.26 | 10.83 | 50% | 5.42 | 4.00 | 1.04 |
| RESIDENTIAL | | | | | | | | | | | |
| Single-Family Detached Housing | 210 | Dwelling Unit | 1.01 | | | 1.01 | 17.21 | 50% | 8.61 | 4.00 | 4.04 |
| Apartment/Multi-family | 220 | Dwelling Unit | 0.62 | | | 0.62 | 17.21 | 50% | 8.61 | 4.00 | 2.48 |
| Residential Condominium/Townhome | 230 | Dwelling Unit | 0.52 | | | 0.52 | 17.21 | 50% | 8.61 | 4.00 | 2.08 |
| Mobile Home Park / Manufactured Housing | 240 | Occupied Dwelling Unit | 0.59 | | | 0.59 | 17.21 | 50% | 8.61 | 4.00 | 2.36 |
| Senior Adult Housing-Detached | 251 | Dwelling Unit | 0.27 | | | 0.27 | 17.21 | 50% | 8.61 | 4.00 | 1.08 |
| Senior Adult Housing-Attached | 252 | Occupied Dwelling Unit | 0.16 | | | 0.16 | 17.21 | 50% | 8.61 | 4.00 | 0.64 |
| Assisted Living | 254 | Beds | 0.22 | | | 0.22 | 17.21 | 50% | 8.61 | 4.00 | 0.88 |
| LODGING | | | | | | | | | | | |
| Hotel | 310 | Room | 0.59 | | | 0.59 | 6.43 | 50% | 3.22 | 3.22 | 1.90 |
| Motel / Other Lodging Facilities | 320 | Room | 0.47 | | | 0.47 | 6.43 | 50% | 3.22 | 3.22 | 1.51 |
| RECREATIONAL | | | | | | | | | | | |
| Golf Driving Range | 432 | Tee | 1.25 | | | 1.25 | 6.43 | 50% | 3.22 | 3.22 | 4.02 |
| Golf Course | 430 | Acre | 0.30 | | | 0.30 | 6.43 | 50% | 3.22 | 3.22 | 0.96 |
| Recreational Community Center | 495 | 1,000 SF GFA | 1.45 | | | 1.45 | 6.43 | 50% | 3.22 | 3.22 | 4.66 |
| Ice Skating Rink | 465 | 1,000 SF GFA | 2.36 | | | 2.36 | 6.43 | 50% | 3.22 | 3.22 | 7.59 |
| Miniature Golf Course | 431 | Hole | 0.33 | | | 0.33 | 6.43 | 50% | 3.22 | 3.22 | 1.06 |
| Multiplex Movie Theater | 445 | Screens | 13.64 | | | 13.64 | 6.43 | 50% | 3.22 | 3.22 | 43.85 |
| Racquet / Tennis Club | 491 | Court | 3.35 | | | 3.35 | 6.43 | 50% | 3.22 | 3.22 | 10.77 |
| INSTITUTIONAL | | | | | | | | | | | |
| Church | 560 | 1,000 SF GFA | 0.55 | | | 0.55 | 4.20 | 50% | 2.10 | 2.10 | 1.16 |
| Day Care Center | 565 | 1,000 SF GFA | 12.46 | 30% | B | 8.72 | 4.20 | 50% | 2.10 | 2.10 | 18.31 |
| Middle School/Junior High School | 522 | Students | 0.16 | | | 0.16 | 4.20 | 50% | 2.10 | 2.10 | 0.34 |
| High School | 530 | Students | 0.13 | | | 0.13 | 4.20 | 50% | 2.10 | 2.10 | 0.27 |
| Junior / Community College | 540 | Students | 0.12 | | | 0.12 | 4.20 | 50% | 2.10 | 2.10 | 0.25 |
| University / College | 550 | Students | 0.21 | | | 0.21 | 4.20 | 50% | 2.10 | 2.10 | 0.44 |
| MEDICAL | | | | | | | | | | | |
| Clinic | 630 | 1,000 SF GFA | 5.18 | | | 5.18 | 7.55 | 50% | 3.78 | 3.78 | 19.55 |
| Hospital | 610 | Beds | 1.31 | | | 1.31 | 7.55 | 50% | 3.78 | 3.78 | 4.95 |
| Nursing Home | 620 | Beds | 0.22 | | | 0.22 | 7.55 | 50% | 3.78 | 3.78 | 0.83 |
| Animal Hospital/Veterinary Clinic | 640 | 1,000 SF GFA | 4.72 | 30% | B | 3.30 | 7.55 | 50% | 3.78 | 3.78 | 12.46 |
| OFFICE | | | | | | | | | | | |
| Corporate Headquarters Building | 714 | 1,000 SF GFA | 1.40 | | | 1.40 | 10.92 | 50% | 5.46 | 4.00 | 5.60 |
| General Office Building | 710 | 1,000 SF GFA | 1.49 | | | 1.49 | 10.92 | 50% | 5.46 | 4.00 | 5.96 |
| Medical-Dental Office Building | 720 | 1,000 SF GFA | 3.46 | | | 3.46 | 10.92 | 50% | 5.46 | 4.00 | 13.84 |
| Single Tenant Office Building | 715 | 1,000 SF GFA | 1.73 | | | 1.73 | 10.92 | 50% | 5.46 | 4.00 | 6.92 |
| Office Park | 750 | 1,000 SF GFA | 1.48 | | | 1.48 | 10.92 | 50% | 5.46 | 4.00 | 5.92 |
| COMMERCIAL | | | | | | | | | | | |
| Automobile Related | | | | | | | | | | | |
| Automobile Care Center | 942 | 1,000 SF Occ. GLA | 3.38 | 40% | B | 2.03 | 6.43 | 50% | 3.22 | 3.22 | 6.52 |
| Automobile Parts Sales | 843 | 1,000 SF GFA | 5.98 | 43% | A | 3.41 | 6.43 | 50% | 3.22 | 3.22 | 10.96 |
| Gasoline/Service Station | 944 | Vehicle Fueling Position | 13.87 | 42% | A | 8.04 | 1.20 | 50% | 0.60 | 0.60 | 4.83 |
| Gasoline/Service Station w/ Conv Market | 945 | Vehicle Fueling Position | 13.38 | 56% | B | 5.89 | 1.20 | 50% | 0.60 | 0.60 | 3.53 |
| Gasoline/Service Station w/ Conv Market and Car Wash | 946 | Vehicle Fueling Position | 13.94 | 56% | A | 6.13 | 1.20 | 50% | 0.60 | 0.60 | 3.68 |
| New Car Sales | 841 | 1,000 SF GFA | 2.59 | 20% | B | 2.07 | 6.43 | 50% | 3.22 | 3.22 | 6.66 |
| Quick Lubrication Vehicle Shop | 941 | Servicing Positions | 5.19 | 40% | B | 3.11 | 6.43 | 50% | 3.22 | 3.22 | 10.01 |
| Self-Service Car Wash | 947 | Stall | 5.54 | 40% | B | 3.32 | 1.20 | 50% | 0.60 | 0.60 | 1.99 |
| Tire Store | 848 | 1,000 SF GFA | 4.15 | 28% | A | 2.99 | 6.43 | 50% | 3.22 | 3.22 | 9.61 |
| Dining | | | | | | | | | | | |
| Fast Food Restaurant with Drive-Thru Window | 934 | 1,000 SF GFA | 33.84 | 50% | A | 16.92 | 4.79 | 50% | 2.40 | 2.40 | 40.52 |
| Fast Food Restaurant without Drive-Thru Window | 933 | 1,000 SF GFA | 26.15 | 50% | B | 13.08 | 4.79 | 50% | 2.40 | 2.40 | 31.31 |
| High Turnover (Sit-Down) Restaurant | 932 | 1,000 SF GFA | 11.15 | 43% | A | 6.36 | 4.79 | 50% | 2.40 | 2.40 | 15.22 |
| Quality Restaurant | 931 | 1,000 SF GFA | 7.49 | 44% | A | 4.19 | 4.79 | 50% | 2.40 | 2.40 | 10.05 |
| Coffee/Donut Shop with Drive-Thru Window | 937 | 1,000 SF GFA | 42.93 | 70% | A | 12.88 | 4.79 | 50% | 2.40 | 2.40 | 30.85 |
| Other Retail | | | | | | | | | | | |
| Free-Standing Discount Store | 815 | 1,000 SF GFA | 5.00 | 30% | C | 3.50 | 6.43 | 50% | 3.22 | 3.22 | 11.25 |
| Nursery (Garden Center) | 817 | 1,000 SF GFA | 3.80 | 30% | B | 2.66 | 6.43 | 50% | 3.22 | 3.22 | 8.55 |
| Home Improvement Superstore | 862 | 1,000 SF GFA | 2.37 | 48% | A | 1.23 | 6.43 | 50% | 3.22 | 3.22 | 3.96 |
| Pharmacy/Drugstore w/o Drive-Thru Window | 880 | 1,000 SF GFA | 8.42 | 53% | A | 3.96 | 6.43 | 50% | 3.22 | 3.22 | 12.72 |
| Pharmacy/Drugstore w/ Drive-Thru Window | 881 | 1,000 SF GFA | 10.35 | 49% | A | 5.28 | 6.43 | 50% | 3.22 | 3.22 | 16.97 |
| Shopping Center | 820 | 1,000 SF GFA | 3.73 | 34% | A | 2.46 | 6.43 | 50% | 3.22 | 3.22 | 7.91 |
| Supermarket | 850 | 1,000 SF GFA | 10.50 | 36% | A | 6.72 | 6.43 | 50% | 3.22 | 3.22 | 21.60 |
| Toy/Children's Superstore | 864 | 1,000 SF GFA | 4.99 | 30% | B | 3.49 | 6.43 | 50% | 3.22 | 3.22 | 11.23 |
| Department Store | 875 | 1,000 SF GFA | 1.78 | 30% | B | 1.25 | 6.43 | 50% | 3.22 | 3.22 | 4.01 |
| Video Rental Store | 896 | 1,000 SF GFA | 13.60 | 50% | B | 6.80 | 6.43 | 50% | 3.22 | 3.22 | 21.86 |
| SERVICES | | | | | | | | | | | |
| Walk-In Bank | 911 | 1,000 SF GFA | 12.13 | 40% | B | 7.28 | 3.39 | 50% | 1.70 | 1.70 | 12.34 |
| Drive-In Bank | 912 | Drive-in Lanes | 27.41 | 47% | A | 14.53 | 3.39 | 50% | 1.70 | 1.70 | 24.62 |
| Hair Salon | 918 | 1,000 SF GLA | 1.45 | 30% | B | 1.02 | 3.39 | 50% | 1.70 | 1.70 | 1.72 |

Key to Sources of Pass-by Rates:

A: ITE Trip Generation Handbook 2nd Edition (June 2004)

B: Estimated by Kimley-Horn based on ITE rates for similar categories

C: ITE rate adjusted upward by KHA based on logical relationship to other categories



V. SAMPLE CALCULATIONS

The following section details two (2) examples of maximum assessable roadway impact fee calculations.

Example 1:

- **Development Type - One (1) Unit of Single-Family Housing in Service Area A**

| Roadway Impact Fee Calculation Steps – Example 1 | |
|---|---|
| Step 1 | Determine Development Unit and Vehicle-Miles Per Development Unit |
| | <i>From Table 8 [Land Use – Vehicle-mile Equivalency Table]</i> Development Type: 1 Dwelling Unit of Single-Family Detached Housing Number of Development Units: 1 Dwelling Unit Veh-Mi Per Development Unit: 4.04 |
| Step 2 | Determine Maximum Assessable Impact Fee Per Service Unit |
| | <i>From Table 7, Line 13 [Maximum Assessable Fee Per Service Unit]</i> Service Area A: \$694 |
| Step 3 | Determine Maximum Assessable Impact Fee |
| | Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit |
| | Impact Fee = 1 * 4.04 * \$694 Maximum Assessable Impact Fee = \$2,803.76 |

Example 2:

- **Development Type – 125,000 square foot Home Improvement Superstore in Service Area D**

| Roadway Impact Fee Calculation Steps – Example 2 | |
|---|---|
| Step 1 | Determine Development Unit and Vehicle-Miles Per Development Unit |
| | <i>From Table 8 [Land Use – Vehicle-mile Equivalency Table]</i> Development Type: 125,000 square feet of Home Improvement Superstore Development Unit: 1,000 square feet of Gross Floor Area Veh-Mi Per Development Unit: 3.96 |
| Step 2 | Determine Maximum Assessable Impact Fee Per Service Unit |
| | <i>From Table 7, Line 13 [Maximum Assessable Fee Per Service Unit]</i> Service Area D: \$1,179 |
| Step 3 | Determine Maximum Assessable Impact Fee |
| | Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit |
| | Impact Fee = 125 * 3.96 * \$1,179 Maximum Assessable Impact Fee = \$583,605.00 |

VI. CONCLUSION

The City of Mansfield has established a process to implement the assessment and collection of roadway impact fees through the adoption of an impact fee ordinance that is consistent with Chapter 395 of the Texas Local Government Code.

This report establishes the maximum allowable roadway impact fee that could be assessed by the City of Mansfield within four (4) service areas. The maximum assessable roadway impact fees calculated in this report are presented in **Table 7**.

This document serves as a guide to the assessment of roadway impact fees pertaining to future development and the City's need for roadway improvements to accommodate that growth. Following the public hearing process, the City Council may establish an amount to be assessed (if any) up to the maximum established within this report and update the Roadway Impact Fee Ordinance accordingly.

In conclusion, it is our opinion that the data and methodology used in this study are appropriate and consistent with Chapter 395 of the Texas Local Government Code. Furthermore, the Land Use Assumptions and the proposed Roadway Improvements Plan are appropriately incorporated into the process.



APPENDICES

- A. CIP SERVICE UNITS OF SUPPLY**
- B. EXISTING ROADWAY FACILITIES INVENTORY**
- C. PLAN FOR AWARDING THE ROADWAY IMPACT FEE CREDIT**

DRAFT



Appendix A – CIP Service Units of Supply

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City of Mansfield - 2009 Roadway Impact Fee Update

CIP Service Units of Supply

Service Area A

9/1/2009

| Project ID # | ROADWAY | LIMITS | LENGTH (MI) | LANES | IMPACT FEE CLASSIFICATION | PEAK HOUR VOLUME | % IN SERVICE AREA | VEH-MI CAPACITY PK-HR PER LN | VEH-MI SUPPLY PK-HR TOTAL | VEH-MI TOTAL DEMAND PK-HR | EXCESS CAPACITY PK-HR VEH-MI | TOTAL PROJECT COST | TOTAL PROJECT COST IN SERVICE AREA |
|-----------------|---------------------------------|--|-------------|-------|---------------------------|------------------|-------------------|------------------------------|---------------------------|---------------------------|------------------------------|----------------------|------------------------------------|
| A-1 | Mouser Way (1) | Business 287 (Main St.) to House Road | 0.25 | 4 | C4U | 100 | 100% | 525 | 525 | 25 | 500 | \$ 211,833 | \$ 211,833 |
| A-2 | Mouser Way (2) | House Rd. to 520 ft. West of US 287 SBFR | 0.46 | 4 | C4U | 10 | 100% | 525 | 966 | 5 | 961 | \$ 3,849,000 | \$ 3,849,000 |
| A-3 | Walnut Creek Dr. (1) | Pleasant Rdg. to US 287 (Centerline) | 0.38 | 4 | M5U | 2,676 | 100% | 625 | 950 | 1,017 | -67 | \$ 1,183,787 | \$ 1,183,787 |
| A-4, C-1 | W. Broad St. (1) | Retta Rd. to Cotton Dr. | 0.53 | 4 | M4D | 611 | 50% | 650 | 689 | 162 | 527 | \$ 3,561,424 | \$ 1,780,712 |
| A-5, C-2 | W. Broad St. (2) | Cotton Dr. to Business 287 (Main St.) | 1.07 | 4 | M4D | 611 | 50% | 650 | 1,391 | 327 | 1,064 | \$ 6,685,396 | \$ 3,342,698 |
| A-6, C-3 | E. Broad St. (1) | Business 287 (Main St.) to US 287 (Centerline) | 1.48 | 4 | M4D | 2,006 | 50% | 650 | 1,924 | 1,484 | 440 | \$ 5,144,008 | \$ 2,572,004 |
| A-7 | Callender Rd (1) | Summer Trl. to US 287 (Centerline) | 0.45 | 4 | C4U | 207 | 100% | 525 | 945 | 93 | 852 | \$ 3,657,000 | \$ 3,657,000 |
| A-8 | Newt Patterson Rd. (1) | North Street to Business 287 (Main St.) | 0.24 | 4 | C4U | 100 | 100% | 525 | 504 | 24 | 480 | \$ 1,158,296 | \$ 1,158,296 |
| A-9 | Major E-W Collector | Business 287 (Main St.) to FM 157 | 0.14 | 4 | C4U | 0 | 100% | 525 | 294 | 0 | 294 | \$ 823,000 | \$ 823,000 |
| A-10 | Debbie Ln. (1) | Business 287 (Main St.) to US 287 | 1.10 | 6 | P6D | 2,240 | 100% | 750 | 4,950 | 2,464 | 2,486 | \$ 1,970,164 | \$ 1,970,164 |
| A-11, B-10 | US 287 Frontage Roads | Walnut Creek to E. Broad St. | 2.33 | 3 | FR | 0 | 50% | 800 | 2,796 | 0 | 2,796 | \$ 7,322,581 | \$ 3,661,291 |
| O-1 | US 287 at E. Broad & Walnut Ck. | Overpass | | | | | 38% | | | | | \$ 951,000 | \$ 361,380 |
| S-1 | Signal System | Citywide | | | | | 25% | | | | | \$ 650,000 | \$ 162,500 |
| I-1 | Intersection - Ramp | Debbie Ln. & US 287 (Analysis & Design) | | | | | 50% | | | | | \$ 3,900,000 | \$ 1,950,000 |
| I-3 | Intersection Improvements | Gertie Barrett/FM 1187 | | | | | 100% | | | | | \$ 249,000 | \$ 249,000 |
| SUBTOTAL | | | | | | | | | 15,934 | 5,601 | 10,333 | \$ 41,316,489 | \$ 26,932,665 |

2009 Roadway Impact Fee Study Update Cost Per Service Area \$ 14,125

TOTAL COST IN SERVICE AREA A \$ 26,946,790

City of Mansfield - 2009 Roadway Impact Fee Update

CIP Service Units of Supply

Service Area B

9/1/2009

| Project ID # | ROADWAY | LIMITS | LENGTH (MI) | LANES | IMPACT FEE CLASSIFICATION | PEAK HOUR VOLUME | % IN SERVICE AREA | VEH-MI CAPACITY PK-HR PER LN | VEH-MI SUPPLY PK-HR TOTAL | VEH-MI TOTAL DEMAND PK-HR | EXCESS CAPACITY PK-HR VEH-MI | TOTAL PROJECT COST | TOTAL PROJECT COST IN SERVICE AREA |
|-----------------|---------------------------------|---|-------------|-------|---------------------------|------------------|-------------------|------------------------------|---------------------------|---------------------------|------------------------------|----------------------|------------------------------------|
| B-1 | Turner Warnell Rd. (1) | Callender Rd. to 590 ft West of Hunter Oaks Ct. | 0.21 | 4 | P4D | 0 | 100% | 650 | 546 | 0 | 546 | \$ 1,496,000 | \$ 1,496,000 |
| B-2 | Callender Rd. (2) | Turner Warnell Rd. to US 287 (Centerline) | 0.71 | 4 | C4U | 227 | 50% | 525 | 746 | 81 | 665 | \$ 2,259,000 | \$ 1,129,500 |
| B-3 | Debbie Ln. (2) | US 287 (Centerline) to 715 ft E. of Matlock Rd. | 2.01 | 6 | P6D (1/3) | 2,757 | 100% | 750 | 9,045 | 5,542 | 3,503 | \$ 10,648,000 | \$ 10,648,000 |
| B-4 | Debbie Ln. (3) | 715 ft E. of Matlock Rd. to East City Limits | 0.73 | 4 | P4D | 1,851 | 100% | 650 | 1,898 | 1,351 | 547 | \$ 2,833,000 | \$ 2,833,000 |
| B-5 | Country Club Dr. (1) | Walnut Creek Dr. to Matlock Rd. | 1.64 | 4 | M4D | 1,762 | 100% | 650 | 4,264 | 2,890 | 1,374 | \$ 5,691,242 | \$ 5,691,242 |
| B-6, D-1 | E. Broad St. (2) | US 287 (Centerline) to Cannon Dr. | 0.55 | 6 | P6D (1/3) | 2,662 | 50% | 750 | 1,238 | 732 | 505 | \$ 2,019,000 | \$ 1,009,500 |
| B-7, D-19 | Cannon Dr. (1) | E. Broad St. to Matlock Rd. | 0.56 | 4 | C4U | 679 | 50% | 525 | 588 | 190 | 398 | \$ 1,907,030 | \$ 953,515 |
| B-8 | Matlock Rd. (1) | Mansfield Webb Rd. to Cannon Dr. | 2.43 | 6 | P6D (1/3) | 2,849 | 100% | 750 | 10,935 | 6,923 | 4,012 | \$ 13,970,000 | \$ 13,970,000 |
| B-9 | Walnut Creek Dr. (2) | Debbie Ln. to North City Limits | 0.92 | 4 | M4D | 2,975 | 100% | 650 | 2,392 | 2,737 | -345 | \$ 347,577 | \$ 347,577 |
| A-11, B-10 | US 287 Frontage Roads | Walnut Creek to E. Broad St. | 2.33 | 3 | FR | 0 | 50% | 800 | 2,796 | 0 | 2,796 | \$ 7,322,581 | \$ 3,661,291 |
| O-1 | US 287 at E. Broad & Walnut Ck. | Overpass | | | | | 38% | | | | | \$ 951,000 | \$ 361,380 |
| S-1 | Signal System | Citywide | | | | | 25% | | | | | \$ 650,000 | \$ 162,500 |
| S-2 | Signal Installation | E. Broad St. & Regency Pkwy. | | | | | 50% | | | | | \$ 195,000 | \$ 97,500 |
| S-3 | Signal Installation | Cannon Dr. & Matlock Rd. | | | | | 50% | | | | | \$ 195,000 | \$ 97,500 |
| S-4 | Signal Installation | E. Broad St. & Cannon Dr. | | | | | 50% | | | | | \$ 195,000 | \$ 97,500 |
| S-5 | Signal Installation | E. Broad St. & SH 360 (2) | | | | | 25% | | | | | \$ 260,000 | \$ 65,000 |
| S-7 | Signal Installation | Matlock Rd. & Ragland Rd. | | | | | 100% | | | | | \$ 195,000 | \$ 195,000 |
| I-1 | Intersection - Ramp | Debbie Ln. & US 287 (Analysis & Design) | | | | | 50% | | | | | \$ 3,900,000 | \$ 1,950,000 |
| I-2 | Intersection Improvements | East Broad & US 287 | | | | | 50% | | | | | \$ 520,000 | \$ 260,000 |
| I-4 | Intersection Improvements | East. Broad St. btwn SB/NB SH 360 | | | | | 25% | | | | | \$ 512,000 | \$ 128,000 |
| SUBTOTAL | | | | | | | | | 34,447 | 20,445 | 14,002 | \$ 55,554,430 | \$ 45,154,005 |

2009 Roadway Impact Fee Study Update Cost Per Service Area \$ 14,125

TOTAL COST IN SERVICE AREA B \$ 45,168,130

City of Mansfield - 2009 Roadway Impact Fee Update

CIP Service Units of Supply

9/21/2009

Service Area C

| Project ID # | ROADWAY | LIMITS | LENGTH (MI) | LANES | IMPACT FEE CLASSIFICATION | PEAK HOUR VOLUME | % IN SERVICE AREA | VEH-MI CAPACITY PK-HR PER LN | VEH-MI SUPPLY PK-HR TOTAL | VEH-MI TOTAL DEMAND PK-HR | EXCESS CAPACITY PK-HR VEH-MI | TOTAL PROJECT COST | TOTAL PROJECT COST IN SERVICE AREA |
|-----------------|------------------------------------|---|-------------|-------|---------------------------|------------------|-------------------|------------------------------|---------------------------|---------------------------|------------------------------|----------------------|------------------------------------|
| A-4, C-1 | W. Broad St. (1) | Retta Rd. to Cotton Dr. | 0.53 | 4 | M4D | 610 | 50% | 650 | 689 | 162 | 527 | \$ 3,561,424 | \$ 1,780,712 |
| A-5, C-2 | W. Broad St. (2) | Cotton Dr. to Business 287 (Main St.) | 1.07 | 4 | M4D | 1,488 | 50% | 650 | 1,391 | 796 | 595 | \$ 6,685,396 | \$ 3,342,698 |
| A-6, C-3 | E. Broad St. (1) | Business 287 (Main St.) to US 287 (Centerline) | 1.48 | 4 | M4D | 1,181 | 50% | 650 | 1,924 | 874 | 1,050 | \$ 5,144,008 | \$ 2,572,004 |
| C-4 | Jessica Dr. (1) | W. Broad St. to 1,525 ft S. of Broad St. | 0.29 | 4 | P4D | 0 | 100% | 650 | 754 | 0 | 754 | \$ 2,010,000 | \$ 2,010,000 |
| C-5 | Route A (1) | Jessica Dr. to FM 917 | 1.15 | 4 | M4D | 0 | 100% | 650 | 2,990 | 0 | 2,990 | \$ 7,669,000 | \$ 7,669,000 |
| C-6 | FM 917 | 2nd Ave. to Business 287 (Main St.) | 1.40 | 4 | P4D | 1,110 | 100% | 650 | 3,640 | 1,554 | 2,086 | \$ 650,000 | \$ 650,000 |
| C-7 | Flying L Ln. (Future Business 287) | Business 287 to Lone Star Rd. | 0.71 | 4 | M4D | 390 | 100% | 650 | 1,846 | 277 | 1,569 | \$ 4,757,000 | \$ 4,757,000 |
| C-8 | Lone Star Rd. | Flying L Ln. (Future Business 287) to US 287 (Centerline) | 0.54 | 4 | P4D | 497 | 100% | 650 | 1,404 | 268 | 1,136 | \$ 3,696,000 | \$ 3,696,000 |
| O-1 | US 287 at E. Broad & Walnut Ck. | Overpass | | | | | 13% | | | | | \$ 951,000 | \$ 123,630 |
| O-2 | US 287 & Heritage Pkwy. | Overpass | | | | | 50% | | | | | \$ 723,000 | \$ 361,500 |
| S-1 | Signal System | Citywide | | | | | 25% | | | | | \$ 650,000 | \$ 162,500 |
| SUBTOTAL | | | | | | | | | 14,638 | 3,931 | 10,707 | \$ 36,496,828 | \$ 27,125,044 |

2009 Roadway Impact Fee Study Update Cost Per Service Area \$ 14,125

TOTAL COST IN SERVICE AREA C \$ 27,139,169

City of Mansfield - 2009 Roadway Impact Fee Update

CIP Service Units of Supply

Service Area D

9/1/2009

| Project ID # | ROADWAY | LIMITS | LENGTH (MI) | LANES | IMPACT FEE CLASSIFICATION | PEAK HOUR VOLUME | % IN SERVICE AREA | VEH-MI CAPACITY PK-HR PER LN | VEH-MI SUPPLY PK-HR TOTAL | VEH-MI TOTAL DEMAND PK-HR | EXCESS CAPACITY PK-HR VEH-MI | TOTAL PROJECT COST | TOTAL PROJECT COST IN SERVICE AREA |
|-----------------|---------------------------------|---|-------------|-------|---------------------------|------------------|-------------------|------------------------------|---------------------------|---------------------------|------------------------------|----------------------|------------------------------------|
| B-6, D-1 | E. Broad St. (2) | US 287 (Centerline) to Cannon Dr. | 0.55 | 6 | P6D (1/3) | 2,662 | 50% | 750 | 1,238 | 732 | 506 | \$ 2,019,000 | \$ 1,009,500 |
| D-2 | E. Broad St. (3) | Cannon Dr. to SH 360 (Centerline) | 0.55 | 6 | P6D (1/3) | 1,941 | 100% | 750 | 2,475 | 1,068 | 1,407 | \$ 5,450,000 | \$ 5,450,000 |
| D-3 | E. Broad St. (4) | SH 360 (Centerline) to 800 ft E. of Holland Rd. | 0.48 | 6 | P6D (1/3) | 914 | 100% | 750 | 2,160 | 439 | 1,721 | \$ 5,507,000 | \$ 5,507,000 |
| D-4 | E. Broad St. (5) | 800 ft E. of Holland Rd. to National Pkwy. | 0.77 | 4 | P4D | 914 | 100% | 650 | 2,002 | 704 | 1,298 | \$ 2,126,000 | \$ 2,126,000 |
| D-5 | Heritage Pkwy. (1) | Mitchell Rd. to Matlock Rd. | 0.86 | 4 | P4D | 0 | 100% | 650 | 2,236 | 0 | 2,236 | \$ 268,000 | \$ 268,000 |
| D-6 | Matlock Rd / Heritage Pkwy. | E. Broad St. to SH 360 SBFR | 0.21 | 4 | P4D | 365 | 100% | 650 | 546 | 77 | 469 | \$ 8,965,000 | \$ 8,965,000 |
| D-7 | Heritage Pkwy. (6) | SH 360 SBFR to SH 360 NBFR | 0.34 | 4 | P4D | 508 | 100% | 650 | 884 | 173 | 711 | \$ 2,356,000 | \$ 2,356,000 |
| D-8 | Heritage/National Pkwy. | SH 360 NBFR to Calloway Dr. | 0.21 | 4 | P4D | 508 | 100% | 650 | 546 | 107 | 439 | \$ 1,365,000 | \$ 1,365,000 |
| D-9 | National Pkwy. (1) | Garden Path Ln. to Holland Rd. | 0.24 | 6 | M4D (1/2) | 250 | 100% | 650 | 936 | 60 | 876 | \$ 660,000 | \$ 660,000 |
| D-10 | National Pkwy. (2) | Holland Rd. to Seeton Rd. | 0.50 | 4 | M4D | 0 | 100% | 650 | 1,300 | 0 | 1,300 | \$ 3,349,000 | \$ 3,349,000 |
| D-11 | National Pkwy. (3) | Seeton Rd. to 500 ft S of Edgewater Trl. | 0.37 | 6 | M4D (1/2) | 250 | 100% | 650 | 1,443 | 93 | 1,351 | \$ 1,010,000 | \$ 1,010,000 |
| D-12 | National Pkwy. (4) | 500 ft S of Edgewater Trl. To E. Broad St. | 1.87 | 4 | C4U | 250 | 100% | 525 | 3,927 | 468 | 3,460 | \$ 10,882,000 | \$ 10,882,000 |
| D-13 | Matlock Rd. (2) | Cannon Dr. to E. Broad St. | 0.58 | 6 | P6D (1/3) | 560 | 100% | 750 | 2,610 | 325 | 2,285 | \$ 2,883,000 | \$ 2,883,000 |
| D-14 | Regency Pkwy. (1) | 1,300 ft S. of Fountainview Dr. to Heritage Pkwy. | 0.46 | 4 | C4U | 179 | 100% | 525 | 966 | 82 | 884 | \$ 2,690,000 | \$ 2,690,000 |
| D-15 | Holland Rd. (1) | SH 360 NBFR to Grand Meadows Blvd. | 0.26 | 4 | P4D | 633 | 100% | 650 | 676 | 165 | 511 | \$ 3,315,000 | \$ 3,315,000 |
| D-16 | Holland Rd. (2) | Grand Meadows Blvd. to Waterford Oaks Ln. | 0.13 | 4 | P4D (1/2) | 618 | 100% | 650 | 338 | 80 | 258 | \$ 384,000 | \$ 384,000 |
| D-17 | Holland Rd. (3) | Waterford Oaks Ln. to Waterford Glen Dr. | 0.27 | 4 | P4D | 0 | 100% | 650 | 702 | 0 | 702 | \$ 1,872,000 | \$ 1,872,000 |
| D-18 | Holland Rd. (4) | Waterford Glen Dr. to Britton | 1.52 | 4 | P4D | 618 | 100% | 650 | 3,952 | 940 | 3,012 | \$ 9,676,000 | \$ 9,676,000 |
| B-7, D-19 | Cannon Dr. (1) | E. Broad St. to Matlock Rd. | 0.56 | 4 | C4U | 679 | 50% | 525 | 588 | 190 | 398 | \$ 1,907,030 | \$ 953,515 |
| O-1 | US 287 at E. Broad & Walnut Ck. | Overpass | | | | | 13% | | | | | \$ 951,000 | \$ 123,630 |
| O-2 | US 287 & Heritage Pkwy. | Overpass | | | | | 50% | | | | | \$ 723,000 | \$ 361,500 |
| S-1 | Signal System | Citywide | | | | | 25% | | | | | \$ 650,000 | \$ 162,500 |
| S-2 | Signal Installation | E. Broad St. & Regency Pkwy. | | | | | 50% | | | | | \$ 195,000 | \$ 97,500 |
| S-3 | Signal Installation | Cannon Dr. & Matlock Rd. | | | | | 50% | | | | | \$ 195,000 | \$ 97,500 |
| S-4 | Signal Installation | E. Broad St. & Cannon Dr. | | | | | 50% | | | | | \$ 195,000 | \$ 97,500 |
| S-5 | Signal Installation | E. Broad St. & SH 360 (2) | | | | | 75% | | | | | \$ 260,000 | \$ 195,000 |
| S-6 | Signal Installation | Heritage Pkwy. & SH 360 (2) | | | | | 100% | | | | | \$ 260,000 | \$ 260,000 |
| I-2 | Intersection Improvements | East Broad & US 287 | | | | | 50% | | | | | \$ 520,000 | \$ 260,000 |
| I-4 | Intersection Improvements | East. Broad St. btwn SB/NB SH 360 | | | | | 75% | | | | | \$ 512,000 | \$ 384,000 |
| SUBTOTAL | | | | | | | | | 29,525 | 5,700 | 23,825 | \$ 71,145,030 | \$ 66,760,145 |

2009 Roadway Impact Fee Study Update Cost Per Service Area \$ 14,125

TOTAL COST IN SERVICE AREA D \$ 66,774,270



Appendix B – Existing Facilities Inventory

DRAFT

**City of Mansfield - 2009 Roadway Impact Fee Update
Existing Roadway Facilities Inventory**

9/1/2009

Service Area A

| ROADWAY | FROM | TO | LENGTH (ft) | LENGTH (mi) | EXIST LANES | | TYPE | PM PEAK HOUR VOL | | % IN SERVICE AREA | VEH-MI CAPACITY PK-HR PER LN | | VEH-MI SUPPLY PK-HR TOTAL | | VEH-MI DEMAND PK-HR TOTAL | | EXCESS CAPACITY PK-HR VEH-MI | | EXISTING DEFICIENCIES PK-HR VEH-MI | | | |
|--------------------|--------------------------------------|------------------------------------|----------------|----------------|----------------|-------|------|---------------------------|-------|-------------------------|---------------------------------------|-------|------------------------------------|---------------|------------------------------------|--------------|---------------------------------------|-------|---|-------|-------|-------|
| | | | | | NB/EB | SB/WB | | NB/EB | SB/WB | | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB |
| | | | | | | | | | | | | | | | | | | | | | | |
| Turner Warnell Rd. | BNSF Railroad | Business 287 | 925 | 0.18 | 1 | 1 | 2U | 100 | 100 | 100% | 475 | 475 | 83 | 83 | 18 | 18 | 66 | 66 | | | | |
| Callender Rd. | 1,900 ft North of Russell Ln. | US 287 (Centerline) | 2,360 | 0.45 | 1 | 1 | 2U | 118 | 89 | 100% | 475 | 475 | 212 | 212 | 53 | 40 | 160 | 173 | | | | |
| Dick Price Rd. | BNSF Railroad | Gertie Barrett Rd. | 215 | 0.04 | 1 | 1 | 2U | 100 | 100 | 100% | 475 | 475 | 19 | 19 | 4 | 4 | 15 | 15 | | | | |
| FM 1187 | Newt Patterson Rd. | BNSF Railroad | 960 | 0.18 | 1 | 1 | 2U-H | 1096 | 1,144 | 50% | 750 | 750 | 68 | 68 | 100 | 104 | -31 | -36 | 31 | 36 | | |
| FM 1187 | BNSF Railroad | Hyview Dr. | 2,180 | 0.41 | 1 | 1 | 2U-H | 1096 | 1,144 | 100% | 750 | 750 | 310 | 310 | 453 | 472 | -143 | -163 | 143 | 163 | | |
| FM 1187 | Hyview Dr. | Gertie Barrett Rd. | 2,305 | 0.44 | 1 | 1 | 2U-H | 1096 | 1,144 | 100% | 750 | 750 | 327 | 327 | 478 | 499 | -151 | -172 | 151 | 172 | | |
| FM 1187 | Gertie Barrett Rd. | Business 287 | 1,685 | 0.32 | 2 | 2 | 5U | 1096 | 1,144 | 100% | 625 | 625 | 399 | 399 | 350 | 365 | 49 | 34 | | | | |
| Debbie Ln. | Business 287 | Russell Ln. | 2,680 | 0.51 | 2 | 2 | 5U | 1243 | 1,339 | 100% | 625 | 625 | 634 | 634 | 631 | 680 | 4 | -45 | | 45 | | |
| Debbie Ln. | Russell Ln. | FM 157 | 1,035 | 0.20 | 2 | 2 | 5U | 1145 | 1,223 | 100% | 625 | 625 | 245 | 245 | 224 | 240 | 21 | 5 | | | | |
| Debbie Ln. | FM 157 | US 287 (Centerline) | 2,206 | 0.42 | 2 | 2 | 5U | 1034 | 993 | 100% | 625 | 625 | 522 | 522 | 432 | 415 | 90 | 107 | | | | |
| Newt Patterson Rd. | Newt Patterson Rd. | FM 1187 | 2,835 | 0.54 | 1 | 1 | 2U | 50 | 50 | 50% | 475 | 475 | 128 | 128 | 13 | 13 | 114 | 114 | | | | |
| Retta Rd. | Broad St. | 3,800 ft North of Broad St. | 3,800 | 0.72 | 1 | 1 | 2U | 50 | 50 | 100% | 475 | 475 | 342 | 342 | 36 | 36 | 306 | 306 | | | | |
| Pleasant Rdg. | Business 287 | Walnut Creek Dr. | 3,865 | 0.73 | 2 | 2 | 4U | 100 | 100 | 100% | 525 | 525 | 769 | 769 | 73 | 73 | 695 | 695 | | | | |
| Mouser Way | Business 287 | House Rd. | 1,360 | 0.26 | 2 | 2 | 4U | 50 | 50 | 100% | 525 | 525 | 270 | 270 | 13 | 13 | 258 | 258 | | | | |
| Mouser Way | House Rd. | 1,682 ft East of House Rd. | 1,682 | 0.32 | 1 | 1 | 2U-R | 5 | 5 | 100% | 150 | 150 | 48 | 48 | 2 | 2 | 46 | 46 | | | | |
| Walnut Creek Dr. | Pleasant Rdg. | Pleasant Rdg. | 4,310 | 0.82 | 2 | 2 | 4U | 555 | 615 | 100% | 525 | 525 | 857 | 857 | 453 | 502 | 404 | 355 | | | | |
| Walnut Creek Dr. | Pleasant Rdg. | US 287 (SBFR) | 2,005 | 0.38 | 2 | 2 | 5U | 1338 | 1,338 | 100% | 625 | 625 | 475 | 475 | 508 | 508 | -33 | -33 | 33 | 33 | | |
| Walnut Creek Dr. | US 287 (SBFR) | US 287 (Centerline) | 340 | 0.06 | 2 | 2 | 5U | 1338 | 1,338 | 100% | 625 | 625 | 80 | 80 | 86 | 86 | -6 | -6 | 6 | 6 | | |
| Broad St. | Johnson Dr. | Morgan Rd. | 4,570 | 0.87 | 1 | 1 | 2U | 287 | 289 | 50% | 475 | 475 | 206 | 206 | 124 | 125 | 81 | 80 | | | | |
| Broad St. | Morgan Rd. | 4th Ave. | 5,350 | 1.01 | 2 | 2 | 4D | 301 | 310 | 50% | 650 | 650 | 659 | 659 | 152 | 157 | 506 | 502 | | | | |
| Broad St. | 4th Ave. | Business 287 | 1,325 | 0.25 | 2 | 2 | 4D | 754 | 734 | 50% | 650 | 650 | 163 | 163 | 95 | 92 | 69 | 71 | | | | |
| Broad St. | Business 287 | Sycamore St. | 995 | 0.19 | 2 | 2 | 4D | 580 | 601 | 50% | 650 | 650 | 122 | 122 | 55 | 57 | 68 | 66 | | | | |
| Broad St. | Sycamore St. | Walnut Creek Dr. | 1,090 | 0.21 | 2 | 2 | 4D | 941 | 1,065 | 50% | 650 | 650 | 134 | 134 | 97 | 110 | 37 | 24 | | | | |
| Broad St. | Walnut Creek Dr. | Wisteria St. | 3,790 | 0.72 | 2 | 2 | 4D | 537 | 548 | 50% | 650 | 650 | 467 | 467 | 193 | 197 | 274 | 270 | | | | |
| Broad St. | Wisteria St. | US 287 (Centerline) | 1,965 | 0.37 | 2 | 2 | 4D | 754 | 734 | 50% | 650 | 650 | 242 | 242 | 140 | 137 | 102 | 105 | | | | |
| Business 287 | 1,670 ft North of Turner Warnell Rd. | Turner Warnell Rd. | 1,670 | 0.32 | 1 | 1 | 2U-H | 428 | 397 | 50% | 750 | 750 | 119 | 119 | 68 | 63 | 51 | 56 | | | | |
| Business 287 | Turner Warnell Rd. | 520 ft South of Wood River Pkwy. | 6,280 | 1.19 | 1 | 1 | 2U-H | 428 | 397 | 100% | 750 | 750 | 892 | 892 | 509 | 472 | 383 | 420 | | | | |
| Business 287 | 520 ft South of Wood River Pkwy. | 1,620 ft South of Wood River Pkwy. | 1,100 | 0.21 | 1 | 1 | 2U-H | 428 | 397 | 100% | 750 | 750 | 156 | 156 | 89 | 83 | 67 | 74 | | | | |
| Business 287 | 1,830 ft South of Wood River Pkwy. | 650ft South of FM 1187 | 2,695 | 0.51 | 2 | 2 | 4U | 428 | 397 | 100% | 525 | 525 | 536 | 536 | 218 | 203 | 317 | 333 | | | | |
| Business 287 | 650ft South of FM 1187 | 470 ft South of Wildrose | 2,095 | 0.40 | 1 | 1 | 2U-H | 534 | 503 | 100% | 750 | 750 | 298 | 298 | 212 | 200 | 86 | 98 | | | | |
| Business 287 | 470 ft South of Wildrose | Mouser Way | 3,205 | 0.61 | 1 | 1 | 2U-H | 534 | 503 | 100% | 750 | 750 | 455 | 455 | 324 | 305 | 131 | 150 | | | | |
| Business 287 | Mouser Way | Pleasant Rdg. | 2,632 | 0.50 | 2 | 2 | 5U | 534 | 503 | 100% | 625 | 625 | 623 | 623 | 266 | 251 | 357 | 372 | | | | |
| Business 287 | Pleasant Rdg. | Broad St. | 3,895 | 0.74 | 2 | 2 | 4U | 912 | 863 | 100% | 525 | 525 | 775 | 775 | 673 | 637 | 102 | 138 | | | | |
| FM 157 | Mouser Way | FM 1187 | 4,770 | 0.90 | 2 | 2 | 4U | 1338 | 1,378 | 100% | 525 | 525 | 949 | 949 | 1,209 | 1,245 | -260 | -296 | 260 | 296 | | |
| FM 157 | FM 1187 | US 287 (SBFR) | 1,865 | 0.35 | 2 | 2 | 4D | 1537 | 1,565 | 100% | 650 | 650 | 459 | 459 | 543 | 553 | -84 | -94 | 84 | 94 | | |
| FM 157 | US 287 (SBFR) | US 287 (Centerline) | 400 | 0.08 | 3 | 3 | 6D | 1537 | 1,565 | 100% | 750 | 750 | 170 | 170 | 116 | 119 | 54 | 52 | | | | |
| SUBTOTAL | | | 85,515 | 16.37 | | | | | | | | | | 26,427 | 18,083 | 8,344 | 1,553 | | | | | |

**City of Mansfield - 2009 Roadway Impact Fee Update
Existing Roadway Facilities Inventory**

9/1/2009

Service Area B

| ROADWAY | FROM | TO | LENGTH (ft) | LENGTH (mi) | EXIST LANES | | TYPE | PM PEAK HOUR VOL | | % IN SERVICE AREA | VEH-MI CAPACITY PK-HR PER LN | | VEH-MI SUPPLY PK-HR TOTAL | | VEH-MI DEMAND PK-HR TOTAL | | EXCESS CAPACITY PK-HR VEH-MI | | EXISTING DEFICIENCIES PK-HR VEH-MI | | | |
|--------------------|---------------------------------|----------------------------------|----------------|----------------|-------------|-------|------|------------------|-------|-------------------|------------------------------|-------|---------------------------|---------------|---------------------------|---------------|------------------------------|--------------|------------------------------------|-------|-------|-------|
| | | | | | NB/EB | SB/WB | | NB/EB | SB/WB | | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB |
| | | | | | | | | | | | | | | | | | | | | | | |
| Turner Warnell Rd. | 590 ft West of Hunter Oaks Ct. | Cooper | 2,815 | 0.53 | 2 | 2 | 4D | 139 | 124 | 100% | 650 | 650 | 693 | 693 | 74 | 66 | 619 | 627 | | | | |
| Calender Rd. | US 287 (Centerline) | Turner Warnell Rd. | 3,760 | 0.71 | 1 | 1 | 2U | 116 | 111 | 100% | 475 | 475 | 338 | 338 | 83 | 79 | 256 | 259 | | | | |
| Calender Rd. | Turner Warnell Rd. | Turner Way | 745 | 0.14 | 1 | 1 | 2U | 116 | 111 | 50% | 475 | 475 | 34 | 34 | 8 | 8 | 25 | 26 | | | | |
| Cooper | US 287 (Centerline) | Tanglewood Dr. | 3,090 | 0.59 | 3 | 3 | 6D | 1568 | 1,515 | 100% | 750 | 750 | 1,317 | 1,317 | 918 | 887 | 399 | 430 | | | | |
| Cooper | Tanglewood Dr. | Turner Warnell Rd. | 2,430 | 0.46 | 3 | 3 | 6D | 1499 | 1,524 | 100% | 750 | 750 | 1,036 | 1,036 | 690 | 701 | 346 | 334 | | | | |
| Cooper | Turner Warnell Rd. | Turner Way | 1,690 | 0.32 | 3 | 3 | 6D | 1655 | 1,662 | 50% | 750 | 750 | 360 | 360 | 265 | 266 | 95 | 94 | | | | |
| Walnut Creek Dr. | US 287 (Centerline) | Shannon Ck. | 5,075 | 0.96 | 2 | 2 | 4U | 1412 | 1,563 | 100% | 650 | 650 | 1,009 | 1,009 | 1,357 | 1,502 | -348 | -493 | 348 | 493 | | |
| Walnut Creek Dr. | Shannon Ck. | Debbie Ln. | 1,250 | 0.24 | 2 | 2 | 4D | 1412 | 1,563 | 100% | 650 | 650 | 308 | 308 | 334 | 370 | -27 | -62 | 27 | 62 | | |
| Walnut Creek Dr. | Debbie Ln. | 150 ft North of Rock Meadow Trl. | 4,875 | 0.92 | 2 | 2 | 4D | 1412 | 1,563 | 100% | 650 | 650 | 1,200 | 1,200 | 1,304 | 1,443 | -103 | -243 | 103 | 243 | | |
| Debbie Ln. | US 287 (Centerline) | Walnut Creek Dr. | 4,360 | 0.83 | 2 | 2 | 4D | 1093 | 1,143 | 100% | 650 | 650 | 1,073 | 1,073 | 903 | 944 | 171 | 130 | | | | |
| Debbie Ln. | Walnut Creek Dr. | 715 ft East of Matlock Rd. | 10,635 | 2.01 | 2 | 2 | 4D | 1369 | 1,388 | 100% | 650 | 650 | 2,618 | 2,618 | 2,757 | 2,796 | | | | | | |
| Debbie Ln. | 715 ft East of Matlock Rd. | 290 ft West of Tabasco Trl. | 3,830 | 0.73 | 1 | 1 | 2U | 900 | 951 | 100% | 475 | 475 | 345 | 345 | 653 | 690 | | | | | | |
| Country Club Dr. | Walnut Creek Dr. | Muirfield Dr. | 4,130 | 0.78 | 2 | 2 | 4D | 915 | 847 | 100% | 650 | 650 | 1,017 | 1,017 | 716 | 663 | 301 | 354 | | | | |
| Country Club Dr. | Muirfield Dr. | Matlock Rd. | 4,510 | 0.85 | 2 | 2 | 4D | 631 | 690 | 100% | 650 | 650 | 1,110 | 1,110 | 539 | 589 | 571 | 521 | | | | |
| Country Club Dr. | Matlock Rd. | 160 ft East of Hillary Trl. | 4,040 | 0.77 | 2 | 2 | 4D | 407 | 364 | 100% | 650 | 650 | 995 | 995 | 311 | 279 | 683 | 716 | | | | |
| Broad St. | US 287 (Centerline) | Cannon Dr. | 2,880 | 0.55 | 2 | 2 | 4D | 1309 | 1,353 | 50% | 650 | 650 | 355 | 355 | 357 | 369 | -2 | -14 | 2 | 14 | | |
| Cannon Dr. | Broad St. | Matlock Rd. | 2,970 | 0.56 | 2 | 2 | 4U | 320 | 359 | 50% | 525 | 525 | 295 | 295 | 90 | 101 | 205 | 194 | | | | |
| Cannon Dr. | Matlock Rd. | 1000 ft East of Arbors Dr. | 3,500 | 0.66 | 1 | 1 | 2U | 320 | 359 | 50% | 475 | 475 | 157 | 157 | 106 | 119 | 51 | 38 | | | | |
| Cannon Dr. | 230 ft North of Lake Creek Trl. | 400 ft South of Lake Creek Trl. | 630 | 0.12 | 1 | 1 | 2U | 320 | 359 | 50% | 475 | 475 | 28 | 28 | 19 | 21 | 9 | 7 | | | | |
| Matlock Rd. | Cannon Dr. | Country Club Dr. | 7,180 | 1.36 | 2 | 2 | 4D | 878 | 745 | 100% | 650 | 650 | 1,768 | 1,768 | 1,194 | 1,013 | 574 | 755 | | | | |
| Matlock Rd. | Country Club Dr. | Windcastle Dr. | 2,265 | 0.43 | 2 | 2 | 4D | 937 | 927 | 100% | 650 | 650 | 558 | 558 | 402 | 398 | 156 | 160 | | | | |
| Matlock Rd. | Windcastle Dr. | Debbie Ln. | 2,720 | 0.52 | 2 | 2 | 4D | 1207 | 1,185 | 100% | 650 | 650 | 670 | 670 | 622 | 610 | 48 | 59 | | | | |
| Matlock Rd. | Debbie Ln. | Mansfield Webb Rd. | 655 | 0.12 | 2 | 2 | 4D | 1426 | 1,423 | 100% | 650 | 650 | 161 | 161 | 177 | 177 | -16 | -15 | 16 | 15 | | |
| Holland Rd. | Ragland Rd. | 550 ft South of Ridge Trace Cr. | 4,325 | 0.82 | 1 | 1 | 2U | 350 | 283 | 50% | 475 | 475 | 195 | 195 | 143 | 116 | 51 | 79 | | | | |
| Holland Rd. | SH 360 (SBFR) | SH 360 (Centerline) | 450 | 0.09 | 1 | 1 | 2U | 350 | 283 | 100% | 475 | 475 | 40 | 40 | 30 | 24 | 11 | 16 | | | | |
| SUBTOTAL | | | 81,995 | 16.06 | | | | | | | | | | 35,360 | | 28,282 | | 8,048 | 1,324 | | | |

**City of Mansfield - 2009 Roadway Impact Fee Update
Existing Roadway Facilities Inventory**

9/1/2009

Service Area C

| ROADWAY | FROM | TO | LENGTH (ft) | LENGTH (mi) | EXIST LANES | | TYPE | PM PEAK HOUR VOL | | % IN SERVICE AREA | VEH-MI CAPACITY PK-HR PER LN | | VEH-MI SUPPLY PK-HR TOTAL | | VEH-MI DEMAND PK-HR TOTAL | | EXCESS CAPACITY PK-HR VEH-MI | | EXISTING DEFICIENCIES PK-HR VEH-MI | | | |
|-----------------|------------------|-----------------------|----------------|----------------|-------------|-------|------|------------------|-------|-------------------|------------------------------|-------|---------------------------|---------------|---------------------------|--------------|------------------------------|---------------|------------------------------------|-------|-------|-------|
| | | | | | NB/EB | SB/WB | | NB/EB | SB/WB | | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB |
| | | | | | | | | | | | | | | | | | | | | | | |
| Broad St. | Johnson Dr. | Morgan Rd. | 4,570 | 0.87 | 1 | 1 | 2U | 287 | 289 | 50% | 475 | 475 | 206 | 206 | 124 | 125 | 81 | 81 | | | | |
| Broad St. | Morgan Rd. | 4th Ave. | 5,350 | 1.01 | 2 | 2 | 4D | 301 | 310 | 50% | 650 | 650 | 659 | 659 | 152 | 157 | 506 | 502 | | | | |
| Broad St. | 4th Ave. | Business 287 | 1,325 | 0.25 | 2 | 2 | 4D | 754 | 734 | 50% | 650 | 650 | 163 | 163 | 95 | 92 | 69 | 71 | | | | |
| Broad St. | Business 287 | Sycamore St. | 995 | 0.19 | 2 | 2 | 4D | 580 | 601 | 50% | 650 | 650 | 122 | 122 | 55 | 57 | 68 | 66 | | | | |
| Broad St. | Sycamore St. | Walnut Creek Dr. | 1,090 | 0.21 | 2 | 2 | 4D | 941 | 1,065 | 50% | 650 | 650 | 134 | 134 | 97 | 110 | 37 | 24 | | | | |
| Broad St. | Walnut Creek Dr. | Wisteria St. | 3,790 | 0.72 | 2 | 2 | 4D | 537 | 548 | 50% | 650 | 650 | 467 | 467 | 193 | 197 | 274 | 270 | | | | |
| Broad St. | Wisteria St. | US 287 (Centerline) | 1,965 | 0.37 | 2 | 2 | 4D | 754 | 734 | 50% | 650 | 650 | 242 | 242 | 140 | 137 | 102 | 105 | | | | |
| FM 917 | 2nd Ave. | Business 287 | 7,390 | 1.40 | 2 | 2 | 4D | 555 | 555 | 100% | 650 | 650 | 1,820 | 1,820 | 777 | 777 | 1,043 | 1,043 | | | | |
| Heritage Pkwy. | Business 287 | US 287 (Centerline) | 6,050 | 1.15 | 2 | 2 | 4D | 555 | 555 | 100% | 650 | 650 | 1,490 | 1,490 | 636 | 636 | 854 | 854 | | | | |
| Lone Star Rd. | Business 287 | US 287 (Centerline) | 2,825 | 0.54 | 1 | 1 | 2U-R | 188 | 309 | 100% | 150 | 150 | 80 | 80 | 101 | 165 | -20 | -85 | 20 | 85 | | |
| Business 287 | Broad St. | Dallas St. | 1,020 | 0.19 | 2 | 2 | 4U | 856 | 899 | 100% | 525 | 525 | 203 | 203 | 165 | 174 | 38 | 29 | | | | |
| Business 287 | Dallas St. | Sentry Dr. | 4,710 | 0.89 | 1 | 1 | 2U-H | 625 | 625 | 100% | 750 | 750 | 669 | 669 | 558 | 558 | 112 | 112 | | | | |
| Business 287 | Sentry Dr. | Heritage Pkwy. | 1,360 | 0.26 | 1 | 1 | 2U-H | 355 | 355 | 100% | 750 | 750 | 193 | 193 | 91 | 91 | 102 | 102 | | | | |
| Business 287 | Heritage Pkwy. | Lone Star Rd. | 8,100 | 1.53 | 1 | 1 | 2U-H | 195 | 195 | 100% | 750 | 750 | 1,151 | 1,151 | 299 | 299 | 851 | 851 | | | | |
| Howell Dr. | English Trl. | Bedford St. | 4,530 | 0.86 | 1 | 1 | 2U | 50 | 50 | 50% | 475 | 475 | 204 | 204 | 21 | 21 | 182 | 182 | | | | |
| Bedford St. | Howell Dr. | 340 ft West of FM 157 | 4,600 | 0.87 | 1 | 1 | 2U | 50 | 50 | 50% | 475 | 475 | 207 | 207 | 22 | 22 | 185 | 185 | | | | |
| Jessica Dr. | Driveway | FM 917 | 10,290 | 1.95 | 1 | 1 | 2U | 50 | 50 | 50% | 475 | 475 | 463 | 463 | 49 | 49 | 414 | 414 | | | | |
| Business 287 | Lone Star Rd. | Ellis St. | 5,110 | 0.97 | 1 | 1 | 2U-H | 50 | 50 | 50% | 750 | 750 | 363 | 363 | 24 | 24 | 339 | 339 | | | | |
| SUBTOTAL | | | 75,070 | 14.22 | | | | | | | | | | 17,668 | | 7,288 | | 10,379 | 106 | | | |

**City of Mansfield - 2009 Roadway Impact Fee Update
Existing Roadway Facilities Inventory**

Service Area D

9/1/2009

| ROADWAY | FROM | TO | LENGTH (ft) | LENGTH (mi) | EXIST LANES | | TYPE | PM PEAK HOUR VOL | | % IN SERVICE AREA | VEH-MI CAPACITY PK-HR PER LN | | VEH-MI SUPPLY PK-HR TOTAL | | VEH-MI DEMAND PK-HR TOTAL | | EXCESS CAPACITY PK-HR VEH-MI | | EXISTING DEFICIENCIES PK-HR VEH-MI | | | |
|-----------------|---------------------------------|------------------------------------|----------------|----------------|----------------|-------|------|---------------------------|-------|-------------------------|---------------------------------------|-------|------------------------------------|-------|------------------------------------|-------|---------------------------------------|-------|---|-------|-------|-------|
| | | | | | NB/EB | SB/WB | | NB/EB | SB/WB | | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB | NB/EB | SB/WB |
| | | | | | | | | | | | | | | | | | | | | | | |
| Broad St. | US 287 (Centerline) | Cannon Dr. | 2,880 | 0.55 | 2 | 2 | 4D | 1,309 | 1,353 | 50% | 650 | 650 | 355 | 355 | 357 | 369 | -2 | -15 | 2 | 15 | | |
| Broad St. | Cannon Dr. | 2,010 ft East of Cannon Dr. | 2,010 | 0.38 | 2 | 2 | 4D | 909 | 964 | 100% | 650 | 650 | 495 | 495 | 346 | 367 | 149 | 128 | | | | |
| Broad St. | 2,010 ft East of Cannon Dr. | Matlock Rd. | 1,940 | 0.37 | 2 | 2 | 4D | 922 | 954 | 100% | 650 | 650 | 478 | 478 | 339 | 350 | 139 | 127 | | | | |
| Broad St. | Matlock Rd. | 685 ft West of Matlock Rd. | 685 | 0.13 | 2 | 2 | 4D | 978 | 963 | 100% | 650 | 650 | 169 | 169 | 127 | 125 | 42 | 44 | | | | |
| Broad St. | 685 ft West of Matlock Rd. | Miller Rd. | 712 | 0.13 | 2 | 2 | 4D | 915 | 939 | 100% | 650 | 650 | 175 | 175 | 123 | 127 | 52 | 49 | | | | |
| Broad St. | Miller Rd. | Cannon Dr. | 3,670 | 0.70 | 2 | 2 | 4D | 857 | 865 | 100% | 650 | 650 | 904 | 904 | 596 | 601 | 308 | 303 | | | | |
| Broad St. | Cannon Dr. | SH 360 (SBFR) | 665 | 0.13 | 2 | 2 | 4D | 866 | 902 | 50% | 650 | 650 | 82 | 82 | 55 | 57 | 27 | 25 | | | | |
| Broad St. | SH 360 (SBFR) | SH 360 (Centerline) | 450 | 0.09 | 2 | 2 | 4D | 866 | 902 | 100% | 650 | 650 | 111 | 111 | 74 | 77 | 37 | 34 | | | | |
| Broad St. | SH 360 (Centerline) | Holland Rd. | 1,715 | 0.32 | 2 | 2 | 4D | 442 | 472 | 100% | 650 | 650 | 422 | 422 | 144 | 153 | 279 | 269 | | | | |
| Broad St. | Holland Rd. | 800 ft East of Holland Rd. | 800 | 0.15 | 2 | 2 | 4D | 442 | 472 | 100% | 650 | 650 | 197 | 197 | 67 | 72 | 130 | 125 | | | | |
| Broad St. | 800 ft East of Holland Rd. | Bankston Ln. | 3,640 | 0.69 | 1 | 1 | 2U | 442 | 472 | 100% | 475 | 475 | 327 | 327 | 305 | 325 | 23 | 2 | | | | |
| Broad St. | Bankston Ln. | Day Mar Rd. | 420 | 0.08 | 1 | 1 | 2U | 442 | 472 | 50% | 475 | 475 | 19 | 19 | 18 | 19 | 1 | 0 | | | | |
| Cannon Dr. | Broad St. | Matlock Rd. | 2,970 | 0.56 | 2 | 2 | 4U | 320 | 359 | 50% | 525 | 525 | 295 | 295 | 90 | 101 | 205 | 194 | | | | |
| Cannon Dr. | Matlock Rd. | 1000 ft East of Arbors Dr. | 3,500 | 0.66 | 1 | 1 | 2U | 320 | 359 | 50% | 475 | 475 | 157 | 157 | 106 | 119 | 51 | 39 | | | | |
| Cannon Dr. | 1000 ft East of Arbors Dr. | 400 ft South of Lake Creek Trl. | 900 | 0.17 | 1 | 1 | 2U | 320 | 359 | 100% | 475 | 475 | 81 | 81 | 55 | 61 | 26 | 20 | | | | |
| Cannon Dr. | 230 ft North of Lake Creek Trl. | 400 ft South of Lake Creek Trl. | 630 | 0.12 | 1 | 1 | 2U | 320 | 359 | 50% | 475 | 475 | 28 | 28 | 19 | 21 | 9 | 7 | | | | |
| Heritage Pkwy. | US 287 (Centerline) | Mitchell Rd. | 1,390 | 0.26 | 2 | 2 | 4D | 50 | 50 | 100% | 650 | 650 | 342 | 342 | 13 | 13 | 329 | 329 | | | | |
| Heritage Pkwy. | Matlock Rd. | SH 360 (SBFR) | 2,200 | 0.42 | 2 | 2 | 4D | 190 | 175 | 100% | 650 | 650 | 542 | 542 | 79 | 73 | 462 | 469 | | | | |
| Heritage Pkwy. | SH 360 (SBFR) | SH 360 (NBFR) | 1,800 | 0.34 | 1 | 1 | 3U | 265 | 243 | 100% | 525 | 525 | 179 | 179 | 90 | 83 | 89 | 96 | | | | |
| Heritage Pkwy. | SH 360 (NBFR) | National Pkwy. | 1,105 | 0.21 | 2 | 2 | 4D | 265 | 243 | 100% | 650 | 650 | 272 | 272 | 55 | 51 | 217 | 221 | | | | |
| Miller Rd. | National Pkwy. | Railroad | 1,705 | 0.32 | 1 | 1 | 2U | 125 | 125 | 100% | 475 | 475 | 153 | 153 | 40 | 40 | 113 | 113 | | | | |
| Miller Rd. | Railroad | Britton Rd. | 1,760 | 0.33 | 1 | 1 | 2U-R | 125 | 125 | 100% | 150 | 150 | 50 | 50 | 42 | 42 | 8 | 8 | | | | |
| National Pkwy. | Heritage Pkwy. | Garden Path Ln. | 3,205 | 0.61 | 2 | 2 | 4D | 125 | 125 | 100% | 650 | 650 | 789 | 789 | 76 | 76 | 713 | 713 | | | | |
| National Pkwy. | Garden Path Ln. | Holland Rd. | 1,285 | 0.24 | 1 | 1 | 2U | 125 | 125 | 100% | 475 | 475 | 116 | 116 | 30 | 30 | 85 | 85 | | | | |
| National Pkwy. | 1,230 ft S of Edgewater Trl. | Edgewater Trl. | 1,230 | 0.23 | 1 | 1 | 2U | 125 | 125 | 100% | 475 | 475 | 111 | 111 | 29 | 29 | 82 | 82 | | | | |
| Lone Star Rd. | US 287 (Centerline) | Johnson St. | 2,140 | 0.41 | 1 | 1 | 2U-R | 125 | 125 | 100% | 150 | 150 | 61 | 61 | 51 | 51 | 10 | 10 | | | | |
| Lone Star Rd. | Lowe Rd. | Miller Rd. | 2,950 | 0.56 | 1 | 1 | 2U-R | 125 | 125 | 100% | 150 | 150 | 84 | 84 | 70 | 70 | 14 | 14 | | | | |
| Britton Rd. | Miller Rd. | Holland Rd. | 3,300 | 0.63 | 1 | 1 | 2U-R | 50 | 50 | 100% | 150 | 150 | 94 | 94 | 31 | 31 | 63 | 63 | | | | |
| National Pkwy. | Edgewater Trl. | 900 ft North of Edgewater Trl. | 900 | 0.17 | 1 | 1 | 2U | 150 | 150 | 100% | 475 | 475 | 81 | 81 | 26 | 26 | 55 | 55 | | | | |
| National Pkwy. | 900 ft North of Edgewater Trl. | Broad St. | 8,480 | 1.61 | 1 | 1 | 2U | 150 | 150 | 50% | 475 | 475 | 381 | 381 | 120 | 120 | 261 | 261 | | | | |
| Matlock Rd. | Cannon Dr. | Broad St. | 3,050 | 0.58 | 2 | 2 | 4D | 311 | 249 | 100% | 650 | 650 | 751 | 751 | 180 | 144 | 571 | 607 | | | | |
| Matlock Rd. | Broad St. | Heritage Pkwy. | 2,765 | 0.52 | 2 | 2 | 4D | 46 | 15 | 100% | 650 | 650 | 681 | 681 | 24 | 8 | 657 | 673 | | | | |
| Davis Dr. | Matlock Rd. | 730 ft S. of SH 360 (NBFR) | 4,605 | 0.87 | 1 | 1 | 2U | 50 | 50 | 100% | 475 | 475 | 414 | 414 | 44 | 44 | 371 | 371 | | | | |
| Holland Rd. | SH 360 (Centerline) | Broad St. | 1,615 | 0.31 | 2 | 2 | 4D | 350 | 283 | 100% | 650 | 650 | 398 | 398 | 107 | 87 | 291 | 311 | | | | |
| Holland Rd. | Broad St. | Grand Meadows Blvd. | 1,920 | 0.36 | 2 | 2 | 4D | 319 | 299 | 100% | 650 | 650 | 473 | 473 | 116 | 109 | 357 | 364 | | | | |
| Holland Rd. | Grand Meadows Blvd. | Waterford Oaks Ln. | 910 | 0.17 | 1 | 1 | 2U | 319 | 299 | 100% | 475 | 475 | 82 | 82 | 55 | 52 | 27 | 30 | | | | |
| Holland Rd. | Waterford Glen Dr. | National Pkwy. | 5,390 | 1.02 | 1 | 1 | 2U | 319 | 299 | 100% | 475 | 475 | 485 | 485 | 326 | 305 | 159 | 180 | | | | |
| Holland Rd. | National Pkwy. | Garden Path Ln. | 420 | 0.08 | 1 | 1 | 3U | 319 | 299 | 100% | 525 | 525 | 42 | 42 | 25 | 24 | 16 | 18 | | | | |
| Holland Rd. | Garden Path Ln. | Fox Meadows Ln. | 1,185 | 0.22 | 1 | 1 | 3U | 319 | 299 | 100% | 525 | 525 | 118 | 118 | 72 | 67 | 46 | 51 | | | | |
| Holland Rd. | Fox Meadows Ln. | Britton Rd. | 1,010 | 0.19 | 1 | 1 | 2U | 319 | 299 | 100% | 475 | 475 | 91 | 91 | 61 | 57 | 30 | 34 | | | | |
| Regency Pkwy. | Broad St. | 1,300 ft South of Fountainview Dr. | 3,595 | 0.68 | 2 | 2 | 4U | 139 | 40 | 100% | 525 | 525 | 715 | 715 | 95 | 27 | 620 | 688 | | | | |
| SUBTOTAL | | | 87,502 | 16.57 | | | | | | | | | 23,596 | | 9,278 | | 14,318 | | 17 | | | |



**Appendix C – Plan for Awarding the
Roadway Impact Fee Credit**
(as prepared by City of Mansfield.)

DRAFT

Ad Valorem Tax Credit Calculation

| | Service Area: | A | B | C | D |
|----|---|--------------|--------------|--------------|--------------|
| 1 | 10-YEAR GROWTH PROJECTIONS (FROM TABLE 6) | | | | |
| 2 | Residential (dwelling units) | 2,798 | 1,217 | 2,957 | 3,375 |
| 3 | Basic (square feet) | 273,900 | 1,066,200 | 696,300 | 776,600 |
| 4 | Service (square feet) | 179,900 | 243,100 | 98,400 | 241,100 |
| 5 | Retail (square feet) | 615,200 | 291,200 | 168,000 | 2,408,800 |
| 6 | AVERAGE PROPERTY VALUE BASED ON AD VALOREM TAX DATA | | | | |
| 7 | Per Residential Dwelling Unit | \$113,494 | \$165,481 | \$87,207 | \$112,710 |
| 8 | Per Square Feet of Industrial (Basic) | \$19 | \$24 | \$24 | \$24 |
| 9 | Per Square Feet of Commercial (Service & Retail) | \$508 | \$145 | \$33 | \$66 |
| 10 | AD VALOREM TAX RATE DEDICATEED TO ROADWAY CIP PROJECTS | \$0.097012 | | | |
| 11 | Ad Valorem Tax Generated by Growth | | | | |
| 12 | By Residential (Dwelling Units) | \$308,065 | \$195,372 | \$250,164 | \$369,030 |
| 13 | By Industrial (Basic) | \$4,933 | \$24,481 | \$16,247 | \$18,081 |
| 14 | By Commercial (Service & Retail) | \$391,522 | \$75,370 | \$8,653 | \$168,948 |
| 15 | Total Tax Generated | \$704,520 | \$295,224 | \$275,064 | \$556,059 |
| 16 | COST OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH - PRE-CREDIT (FROM LINE 11 OF TABLE 7) | \$14,848,300 | \$16,623,844 | \$19,654,484 | \$53,844,929 |
| 17 | COST OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH - POST-CREDIT (LINE 16 - LINE 15) | \$14,143,780 | \$16,328,620 | \$19,379,420 | \$53,288,870 |
| 18 | TOTAL VEHI-MI OF NEW DEMAND OVER TEN YEARS (FROM LINE 8 OF TABLE 7) | 20,361 | 13,780 | 17,125 | 45,191 |
| 19 | MAX. ASSESSABLE FEE PER SERVICE UNIT (LINE 17 / LINE 18) | \$695 | \$1,185 | \$1,132 | \$1,179 |

Distribution of Ad Valorem Taxes

