BOCC

RESOLUTION NO. 12-382

BOARD OF COUNTY COMMISSIONERS
COUNTY OF EL PASO, STATE OF COLORADO

RESOLUTION ADOPTING THE EL PASO COUNTY ROAD IMPACT FEE PROGRAM

WHEREAS, the Board of County Commissioners of El Paso County, Colorado ("Board") has the authority to assess road impact fees to fund expenditures on capital facilities needed to serve new development pursuant to Title 29, Article 20, Section 104.5 of the Colorado Revised Statutes; and

WHEREAS, the protection of the health, safety and general welfare of the citizens of El Paso County requires that the major transportation system in the unincorporated areas of the County ("Major Transportation System") be expanded and improved to meet the demands of new development; and

WHEREAS, it is the desire and intent of the Board to have all new development, including both large and small projects, pay its equitable portion, but not more than its equitable portion, of required improvements to the Major Transportation System; and

WHEREAS, a Road Impact Fee program enables El Paso County to impose a proportionate share of the costs of required improvements to the Major Transportation System on those developments that create the need for such improvements; and

WHEREAS, on February 11, 2010 the Board adopted an Interim Unincorporated Countywide Transportation Improvement Fee ("Interim Fee") pursuant to Resolution No. 10-66 and began collecting such Interim Fee in anticipation of the future adoption of a final impact fee program; and

WHEREAS, on September 11, 2012, the Board established the Road Impact Fee Advisory Committee pursuant to Resolution No. 12-318 for the purposes set forth in the Implementation Document discussed below; and

WHEREAS, on September 27, 2012, the Board adopted a Revised and Updated Interim Unincorporated Countywide Transportation Improvement Fee ("Updated Interim Fee") pursuant to Resolution No. 12-330 Amended, which Updated Interim Fee was scheduled to become effective on December 1, 2012; and

WHEREAS, on October 18, 2012, the Board adopted Resolution No. 12-356, which addressed disposition of the Interim Fees collected; and

WHEREAS, the Fee Program Steering Committee ("Steering Committee"), comprised of numerous stakeholders from the development and finance communities, legal experts, builders and County staff, has met regularly since February 2010 to develop a final impact fee program

that will meet the needs of the citizens of El Paso County without unreasonably deterring new growth and development; and

WHEREAS, the Steering Committee has produced an Implementation Document, attached hereto as Exhibit A and incorporated herein by reference, which provides detailed regulations and procedures for implementing and administering a Road Impact Fee; and

WHEREAS, El Paso County has adopted the Major Transportation Corridors Plan, 2010 – 2040 ("MTCP"), which projects the need for major transportation improvements in the unincorporated portions of El Paso County utilizing available land use and socioeconomic information, including socioeconomic forecasts prepared by the Pike Peak Area Council of Governments; and

WHEREAS, a Road Impact Fee Study based upon the MTCP ("Fee Study"), attached hereto as Exhibit B and incorporated herein by reference, has been completed that recommends a Road Impact Fee based on standardized unit costs that is to be assessed per trip generated by new development; and

WHEREAS, the Fee Study sets forth reasonable methodologies and analyses for determining the impacts of various types of development on the Major Transportation System; and

WHEREAS, the Road Impact Fee is based on the Fee Study and the MTCP and does not exceed the costs of capital improvements required to serve the development that will pay the fees; and

WHEREAS, there is both a rational nexus and a rough proportionality between the development impacts created by each type of new development covered by this program and the Road Impact Fee that such development will be required to pay; and

WHEREAS, the Road Impact Fee will not apply to existing homes and businesses and is not intended to remedy any deficiency in capital facilities that exists without regard to proposed development; and

WHEREAS, the Fee Study and the Implementation Document together comprise the El Paso County Road Impact Fee Program; and

WHEREAS, in conjunction with the adoption of the Road Impact Fee Program, the Board has recently approved the organization of three Public Improvement Districts to more equitably spread the costs of required transportation improvements over new development causing the need and demand for said improvements; and

WHEREAS, pursuant to Title 30, Article 28, Section 133(12) of the Colorado Revised Statutes and related authorities, the Road Impact Fee Program shall include a credit and reimbursement process for the standardized unit costs of off-site improvements to eligible roads,

thereby assuring that developers constructing more than their "fair share" of certain major roads are credited and/or reimbursed for same; and

WHEREAS, approval and adoption of the Road Impact Fee Program furthers Goal 1, Strategy D, Objective 4 of the El Paso County Strategic Plan 2012-2016 and Policies 9.2.2, 9.2.4, 9.2.5, 9.4.5 and 9.4.6 of the El Paso County Policy Plan; and

WHEREAS, approval and adoption of the Road Impact Fee Program is in the best interest of the health, safety and general welfare of the current and future citizens of and visitors to El Paso County.

NOW, THEREFORE, BE IT RESOLVED that the El Paso County Board of County Commissioners hereby adopts the El Paso County Road Impact Fee Program effective December 1, 2012. The Program shall consist of the Implementation Document and Fee Study and shall be implemented and administered according to the provisions therein.

BE IT FURTHER RESOLVED that the Program amends and supersedes Resolution No. 10-66 and 12-330 Amended in their entirety. All Interim Fees and Updated Interim Fees collected before December 1, 2012 shall be credited to the Road Impact Fee Program.

BE IT FURTHER RESOLVED that the County Administrator is hereby designated the Impact Fee Administrator for the Road Impact Fee Program.

BE IT FURTHER RESOLVED that County staff is hereby directed to review relevant provisions of the El Paso County Land Development Code and the El Paso County Engineering Criteria Manual and recommend whether changes need to be made to those documents to achieve consistency with the provisions of the Road Impact Fee Program.

BE IT FURTHER RESOLVED that County staff is also directed to review, one year from now, the Impact Fees charged to commercial development and the impact thereof, and to make any recommendations for changes to the Advisory Committee, who will then make recommendations, if any, to the Board for action.

DONE THIS 15th day of November, 2012 at Colorado Springs, Colorado.

ATTEST:

County Clerk & Recorder

BOARD OF COUNTY COMMISSIONERS
OF EL PASO COUNTY, COLORADO

By: _____
Amy Lathen, Chair

El Paso County Colorado
Road Impact Fee Implementation Document

INTRODUCTION

New development in unincorporated El Paso County has been subject to an Interim Unincorporated Countywide Transportation Improvement Fee since March 1, 2010. This Interim Fee replaced a similar fee program for the Falcon area that had been in place since 2001 and was adopted instead of a second small-area fee program. The Housing and Building Association of Colorado Springs (HBA) and other stakeholders supported the establishment of a countywide fee system in 2010 and have worked with the County to create such a program.

The basis for the fee system is not new. This Road Impact Fee is simply a method of more fairly and equitably allocating the impact of new development and recovering the cost than individually negotiated developer agreements. The purpose of the program is to develop a process to identify transportation improvements needed to accommodate growth, to allocate fairly the costs of transportation improvements among new developments, and to ensure the proper and timely accounting of improvements and funds. The program does not include all roads in the unincorporated County, only higher traffic roads that provide for regional travel.

Goal Statements:

- To accurately identify transportation improvements to county and state roads needed to accommodate growth.
- To accurately assess appropriate fees for the transportation improvements and ensure that costs and fees are updated regularly.
- To ensure that either the identified transportation projects are built or that fees are paid.
- To ensure accurate and reliable accounting of fees, credits and reimbursements for eligible improvements.
- To ensure that identified transportation project costs are fairly and equitably distributed.

Program Principles:

- Ensure that needed roads are built and that the costs of road projects are fairly and equitably distributed by spreading the cost of major collectors and arterials to <u>all</u> new development on a cost per trip basis.
- The fee program is based on the premise that <u>all</u> new development (large and small) should pay a fair share either by building improvements or by paying a fee.
- The fee program is a credit and reimbursement program that would credit (pay back) developers that build more than their impacts.
- The fee program is a program for future development to fund a portion of necessary transportation improvements to accommodate future growth.
- The funds are all held in accounts that are completely separate from county funds.
- The program does not change the current entitlement process. Developers will still be responsible for improvements necessary to make their subdivisions work pursuant to the engineering criteria manual and applicable laws.
- Buyer Beware: Developments requiring expensive transportation improvements will not be able to recover the full costs of those improvements. Credits and reimbursements will be on a unit cost basis, not actual costs, to keep fees lower and fairer.

- More predictable, saves time and levels the playing field for all landowners who subdivide.

A. DEFINITIONS

For the purpose of this implementation document, the Fee Study and the Road Impact Fee Program, the following definitions shall apply unless the context clearly indicates or requires a different meaning. To the extent that any of the following definitions conflict with definitions of the same term in Land Development Code, then for the purposes of this program, these definitions apply.

Advisory Committee: A committee appointed by the BoCC to provide recommendations on the operation of the Road Impact Fee Program and associated Public Improvement Districts.

Capacity Improvement: An improvement that expands traffic volume capacity by increasing the number of trips that can safely travel on the Major Transportation System, including but not limited to the construction of new roads, intersection improvements or highway interchanges, the widening of existing roads, the installation of traffic signals, and the acquisition or dedication of right-of-way needed for any of the above.

Convenience Commercial: A Fast Food Restaurant or Gas Station/Convenience Store, as defined herein.

Developer: The owner of a parcel of real property for which an application has been submitted for approval of a final plat, a vacation and replat, a rezoning action, a special use, or a variance of use, or the person or entity submitting such application on the owner's behalf.

Dwelling Unit: One or more connected rooms and a single kitchen designed for and occupied by no more than one household unit for living and sleeping purposes.

Eligible Improvement: A Capacity Improvement to the Major Transportation System identified in the Road Impact Fee Study and the current update of the Major Transportation Corridors Plan (MTCP), which identify improvements needed to accommodate anticipated growth in the unincorporated area over a period of 20 years or more. Eligible Improvements include any warranted signalization or intersection improvements at the intersection of two major roads that are part of the Major Transportation System, or at the intersection of a major road that is part of the Major Transportation System and a state highway that is not part of the Major Transportation System.

Fast Food Restaurant: An establishment providing quick meals for in-store dining or take-out that also has a drive-through window or offers service to patrons in their vehicles.

Gas Station/Convenience Store: An establishment where motor fuel is offered for sale, at retail, to the motoring public, and which may also include a retail store carrying primarily convenience items such as prepackaged foods and beverages, household items, notions and personal products.

General Commercial: A shopping center, excluding outparcels for Convenience Commercial uses, or a free-standing establishment engaged in the selling or rental of goods, services or entertainment

to the general public, excluding Convenience Commercial uses. Such uses include, but are not limited to, shopping centers, restaurants other than Fast Food Restaurants, discount stores, supermarkets, home improvement stores, pharmacies, automobile sales and service, banks, movie theaters, amusement arcades, bowling alleys, barber shops, laundromats, funeral homes, vocational or technical schools, dance studios, health clubs and golf courses.

Governing Body: The El Paso County Board of County Commissioners (BoCC).

Gross Floor Area: The total floor area, including basements, mezzanines, and upper floors, if any, expressed in square feet measured from the outside surface of outside walls, but excluding enclosed vehicle parking areas.

Hotel/Motel: An establishment that provides paid lodging in rooms or suites that do not meet the definition of single or multifamily dwelling units.

Impact Fee or Road Impact Fee: The fee charged to development and/or builders based on growth-driven generated trips.

Impact Fee Administrator: The El Paso County employee primarily responsible for administering the provisions of the Impact Fee Resolution, or his or her designee.

Impact Fee Resolution: The resolution approved by the BoCC creating a permanent county-wide road impact fee.

Industrial: An establishment primarily engaged in the fabrication, assembly or processing of goods. Typical uses include manufacturing plants, welding shops, wholesale bakeries, dry cleaning plants, and bottling works.

Institutional: A governmental, quasi-public or institutional use, or a non-profit recreational use, not located in a shopping center. Typical uses include elementary, secondary or higher educational establishments, day care centers, hospitals, mental institutions, nursing homes, assisted living facilities, fire stations, city halls, courthouses, post offices, jails, libraries, museums, places of religious worship, military bases, airports, bus stations, fraternal lodges, parks and playgrounds.

Major Transportation System: County arterials and major collectors, including intersections with state highways, within unincorporated El Paso County, as well as selected state highways within unincorporated El Paso County, as identified in the most current version of the Major Transportation Corridors Plan and the Road Impact Fee Study.

Mini Warehouse: An enclosed storage facility containing independent, fully enclosed bays that are leased to persons for storage of their household goods or personal property.

Multi-Family: A dwelling unit that is connected to two or more other dwelling units.

Office: A building not located in a shopping center and exclusively containing establishments providing executive, management, administrative or professional services, and which may include ancillary services for office workers, such as a restaurant, coffee shop, newspaper or candy stand, or child care facilities. Typical uses include real estate, insurance, property management, investment,

employment, travel, advertising, secretarial, data processing, telephone answering, telephone marketing, music, radio and television recording and broadcasting studios; professional or consulting services in the fields of law, architecture, design, engineering, accounting and similar professions; interior decorating consulting services; medical and dental offices and clinics, including veterinarian clinics and kennels; and business offices of private companies, utility companies, trade associations, unions and nonprofit organizations.

PID District Manager/Administrator: The professional hired to manage the PID funds and to coordinate with the Impact Fee Administrator, if the County chooses. These duties may or may not be performed by the Impact Fee Administrator.

Plat: A map and supporting materials and documentation of certain described land prepared in accordance with the Land Development Code and C.R.S. §38-51-106 as an instrument for recording of real estate interests with the Clerk and Recorder and providing a permanent and accurate record of the legal description, dedications, exact size, shape, and location of lots, blocks, roads, easements, and parcels of land. The plat, when recorded by the Clerk and Recorder, becomes the legal instrument whereby the location and boundaries of separate parcels of land within a subdivision or subdivision exemption are identified.

Potentially eligible improvement: A road on the MTCP that is a major collector classification or above and is owned by or will be dedicated to or maintained by El Paso County.

Public Improvement District (PID): A public improvement district or districts created for the purposes of collecting Impact Fees, funding Eligible Improvements, or reimbursing those who make Eligible Improvements for the cost of construction or dedication of Eligible Improvements.

Road Impact Fee Study: The *Major Transportation Corridors Plan: Road Impact Fee Study*, prepared in September 2012 or a subsequent similar report.

Single-Family Detached: A dwelling unit not connected to any other dwelling unit.

Warehouse: An establishment primarily engaged in the display, storage and sale of goods to other firms for resale, as well as activities involving significant movement and storage of products or equipment. Typical uses include wholesale distributors, storage warehouses, moving and storage firms, trucking and shipping operations and major mail processing centers.

Zoning action: a rezone, special use, or variance of use that results in an increase of at least 100 more daily vehicle trips than the property would be expected to generate under the previous zoning in the opinion of the County Engineer, whether or not subdivision, platting or a building permit is required.

B. IMPOSITION OF FEES

1. Applicability. Development in the unincorporated area of the county meeting any of the following criteria is subject to the payment of Road Impact Fees:

a. Development occurring on property that receives final plat approval on or after February 11, 2010, either in a public hearing or administratively; or

b. Development occurring on property that received final plat approval prior to February 11, 2010 with a condition of approval or resolution of approval, or any extended or expired plats subject to Resolution 11-146, that require participation in a transportation improvement or impact fee program; or

c. Development occurring on property that received final plat approval prior to February 11, 2010 but that is no longer eligible for recording due to the expiration of time and for which the only extension of time arises by approval of the BoCC in an open and public meeting (hereinafter referred to as an "Expired Final Plat"), regardless whether such Expired Final Plat contains a condition of approval or resolution of approval that requires participation in a transportation improvement or impact fee program;

d. Development occurring on legal lot or approved final plat which was rezoned on or after February 11, 2010 and included a condition of approval to participate in a fee program, or that receives administrative or BoCC approval for a Zoning Action on or after December 1, 2012. In this case, the fee would be based on the additional trips generated; or

e. In the event the final plat action is a vacation and replat or an amended plat, the impact fee would only apply to any additional lot(s) created, and then only if additional traffic would be generated from the additional lot(s).

2. Timing of Obligation. The obligation to pay Road Impact Fees shall be imposed at the time of final plat approval, or at the time of zoning action approval in the case of development subject to the fees in accordance with Sec. B.1.d. The developer may elect to pay the Road Impact Fees prior to recording the final plat or within 90 days of approval of the zoning action, or to defer payment until the time of building permit application.

3. Option to Join the PID. Property owners who choose to defer payment of the Road Impact Fees to the time of building permit application may elect to include their plat or the property subject to zoning action in a Public Improvement District. The property owner must make such election prior to or contemporaneous with plat or zoning action approval. In the event that there are multiple PIDs with different millage rates, all of the lots within a final plat must be placed in the same PID. Plats or property to be included in the PID shall be submitted to the El Paso County Assessor for review and approval before plat or zoning action approval. In the case of an expired or extended final plat, the property owner shall declare whether he or she wishes to join the PID prior to an action to record the expired or extended final plat. No final plat for property to be included in the PID shall be recorded until the property has been so included.

4. Amount of Fees. A developer's Road Impact Fee obligation shall be in accordance with the following schedule or any amended schedule in effect at the time of fee payment. Impact fee obligations shall be paid with cash or offset with credits. The County may allow alternative methods of fee payment subject to a development agreement, approval of appropriate guarantees by the County Attorney and approval by the BoCC. Under no circumstances shall impact fee payment obligations be satisfied by posting of letters of credit or other collateral to guarantee payment at a

future date. The cash portion of fees applicable to development in the PID may be adjusted through legislative action of the BoCC without an update of the Road Impact Fee Study, based on an analysis of PID property tax rates, average property values, present value discount rates and other factors. Fee obligations for tax-exempt entities shall be due in full at the time of building permit application regardless of whether they are located in the PID.

Road Impact Fee Schedule

Land Use	Unit	Fee Per Unit not in PID	Fee per Unit in 5-mill PID	Fee per Unit in 10-mill PID
Single-Family Detached	Dwelling	$3132	$1829	$523
Multi-Family	Dwelling	$1956	$1483	$1007
Hotel/Motel	Room	$2283	$1630	$975
General Commercial	1,000 sf	$4054	$2947	$1841
Convenience Commercial	1,000 sf	$7158	$3629	$107
Office	1,000 sf	$2586	$926	$0
Institutional	1,000 sf	$2742	$1015	$0
Industrial	1,000 sf	$2968	$1689	$410
Warehouse	1,000 sf	$1517	$774	$30
Mini Warehouse	1,000 sf	$588	$106	$0

PID fees based on analysis by George K. Baum & Company, 10/11/12 and 10/15/12

a. With the exception of hotel/motel, nonresidential fees shown in the above fee schedule are per 1,000 square feet of Gross Floor Area, as herein defined.

b. If the type of development for which a building permit is requested is not clearly specified in the above fee schedule, the Impact Fee Administrator shall determine the fee on the basis of the fee applicable to the most nearly comparable type of land use on the fee schedule. The Impact Fee Administrator shall first use the definitions set forth in Section A to make this determination. If the appropriate category is still not clear, the Impact Fee Administrator shall use the most current edition of the *Trip Generation Manual*, prepared by the Institute of Transportation Engineers (ITE), or articles or reports appearing in the ITE Journal, as a guide to select a comparable type of land use based on trip generation rates. The developer or the Impact Fee Administrator may request an independent fee study if the use is not contained in the *Trip Generation Manual*. The fee for submission and review of an independent study will be a minimum of $2,000 per study. See Appendix 1 for the standards for preparing an independent study.

c. In many instances, a particular structure may include accessory uses associated with the primary land use. For example, in addition to the actual production of goods, manufacturing facilities often also have office, warehouse, research, and other associated functions. The Impact Fees should generally be assessed based on the primary land use. If the applicant can document that an accessory land use accounts for over 25% of the gross floor area of the structure, and that the accessory use is not assumed in the trip generation or

other impact data for the primary use, then the Impact Fees may be assessed based on the individual square footage of the primary and accessory land uses.

d. If the type of development for which a building permit is requested is for a change of land use type, the fee shall be based on the net increase in the fee for the new land use type as compared to the previous land use type. In the event that the proposed change of land use type results in a net decrease in the fee for the new use or development as compared to the previous use or development, there shall be no refund of Impact Fees previously paid.

e. If any credits are to be applied in lieu of Impact Fee payment pursuant to Section E, the amount of such credit shall be deducted from the amount of the fee to be paid.

5. Waivers. The BoCC may waive fees on the development of low- or moderate- income housing or affordable employee housing as it may define such development, provided that the County appropriates non-impact fee funds to be deposited into the Impact Fee Account to replace the foregone impact fee revenue.

C. USE OF ROAD IMPACT FEES AND PID TAX REVENUES

1. Accounting. All Impact Fees received and tax revenues collected from associated Public Improvement Districts will be deposited into one or more interest-bearing accounts to be known collectively as the Impact Fee Account. Any interest that may accrue on such amounts shall be retained in the Impact Fee Account.

2. Use of Funds. Disbursement of monies from the Impact Fee Account shall be only for the following, and shall be prioritized in the following order:

a. Debt Service. To pay debt service, including principal, interest, and any fees associated with obtaining financing and servicing such debt, on any bond issued by the associated Public Improvement Districts and used to finance Eligible Improvements.

b. Reimbursements. To provide reimbursements to persons or entities that have constructed Eligible Improvements, as described in Section E, Credits and Reimbursements.

c. Construction. To construct Eligible Improvements. Notwithstanding the position of this category in the priority order, no more than twenty percent (20%) of the monies from the Impact Fee Account may be obligated and utilized for this purpose.

d. Refunds. To pay refunds, as described in Section F, Refunds.

3. Appropriations. At least once each year, as determined by the Advisory Committee, the Advisory Committee shall propose disbursements from the Impact Fee Account for approval by the Board of County Commissioners. After review of the Advisory Committee's recommendation, the Board of County Commissioners shall either approve or modify the recommended disbursement of the monies, subject to the restrictions of Section C.2. Any amounts not appropriated from the Impact Fee Account together with any interest earnings shall be carried over to the following fiscal period.

4. Prohibited Uses. Impact fees shall not be used to pay for that portion of the cost of any improvement identified in the Road Impact Fee Study as attributable to an existing deficiency.

D. USE OF PID BOND PROCEEDS

1. Expenditures. The expenditure of Public Improvement District bond proceeds shall be only for the following, and shall be prioritized in the following order:

a. To provide reimbursements to developers who have constructed Eligible Improvements.

b. To construct Eligible Improvements, including acquisition of right-of-way, needed to improve gaps in the Major Transportation Corridor Plan System. Notwithstanding the position of this category in the priority order, up to twenty percent (20%) of the proceeds of any bond issue may be obligated and utilized for this purpose.

2. Appropriations. Prior to the expenditure of Public Improvement District bond proceeds, the Advisory Committee shall propose improvements to be funded from the portion of bond proceeds earmarked for constructing Eligible Improvements. After review of the Advisory Committee's recommendation, the Board of County Commissioners shall either approve or modify the recommended expenditures of the monies, subject to the restrictions of Section D.1. Any bond proceeds not utilized for this purpose shall be used for developer reimbursements.

E. CREDITS AND REIMBURSEMENTS

1. Credits Generally. Any person or entity may apply for a credit for any contribution, payment, construction, or dedication of land accepted and received by El Paso County for any Eligible Improvement based on unit costs. After subtracting any impact fees currently due, credits shall be eligible for reimbursement from funds in the Impact Fee Account or from bond proceeds. Credits may also be utilized, at the credit holder's discretion, to offset future impact fees that would otherwise be due. Developers shall not be eligible for impact fee credits for improvements for which they are being reimbursed by some other entity or funding source.

2. Credit Agreement. Prior to initiation of construction or dedication of ROW, the developer will enter into a credit agreement with the County. The agreement will provide an estimate of credits based on construction plans or ROW plans and is a prerequisite for any future creation of credits. Construction shall be in accordance with the standards found in the El Paso County Engineering Criteria Manual and Land Development Code for the functional classification of the particular street or road. In the event staff and the developer cannot reach an agreement on the credit amount, the matter may be forwarded to the Advisory Committee for a recommendation and a subsequent final decision by the Board of County Commissioners. Estimated credits will be finalized after construction and acceptance of the road or ROW by the County, based on as-built drawings or actual square feet dedicated.

3. Creation of Credits. Credits will be created when the Eligible Improvement is approved by the BoCC for preliminary acceptance by the County for maintenance. The final determination of credits will also be made by the BoCC at that time. Following preliminary acceptance, the County

will create a credit account in the name of the developer or entity that constructed or dedicated the Eligible Improvement.

4. Use of Credits. Credits may be utilized in the following manner.

a. Fee Offsets. Credits may be utilized, at the credit holder's discretion, to offset future impact fees that would otherwise be due. An applicant for a building permit seeking to use credits to offset impact fee payment otherwise due shall present authorization from the credit holder for such use. The credit holder's account shall be reduced by the amount of any fee offset provided.

b. Reimbursement. Reimbursement of credits shall be made as funds become available from the Impact Fee Account or from PID bond proceeds. Reimbursements from the Impact Fee Account will be made at least annually following the approval of each year's annual budget by the Board of County Commissioners. Reimbursements from PID bond proceeds will be made following the issuance of each bond. Reimbursements will be made to credit holders in the chronological order in which the credits were created, provided that credits for improvements or dedications made prior to the effective date of the Impact Fee Resolution will be considered created on the date of preliminary acceptance by the County for maintenance for the purpose of determining reimbursement order. Credit holders will be notified of the availability of funds to reimburse them. A credit holder may waive or defer all or a portion of any available reimbursement by filing a letter with the Impact Fee Administrator to that effect.

c. Transfer or Assignment. All or a portion of the credits in a credit holder's account may be transferred or assigned to another person or entity upon filing written notice of such transfer, signed by the transferor and transferee, with the Impact Fee Administrator. Credits may be transferred per plat or per zoning action. The Impact Fee Administrator shall approve the transfer provided there are adequate funds in the credit holder's account and sufficient information has been provided to create a new account for the transferee.

5. Determining Credit Amounts. The amount of the credit shall be calculated based on standardized unit costs. The unit costs are intended to be conservative and are not intended to fully cover all actual costs. The same costs used to calculate the fees will be used to determine the amount of credit due to a developer. A detailed description of standardized unit costs can be found in the Road Impact Fee Study.

a. Interim Improvements. Eligible improvements may be constructed in phases with the prior approval of the County Engineer. Phasing will occur based on the needs of the transportation system, the impacts from the development, or for project efficiencies. Interim improvements will be allowed and eligible as long as they will be utilized as part of the overall facility in the future (not throwaway sections) as certified by El Paso County, are built to the ultimate standards, and are not constructed only to serve an individual development for a short time. One example of an ineligible improvement would be an auxiliary lane constructed in the interim only to provide access to a single development, but that would be required to be removed when the roadway is expanded. An example of an eligible interim improvement would be building two lanes of four-lane arterial that are built to arterial standards.

6. Credit Application Process.

a. Credits generally. The applicant shall submit a cover letter summarizing the following information to the Impact Fee Administrator to establish credit for eligible roads constructed. In order to establish the credit amount, the developer or entity must submit all required information to the Fee Administrator. Information provided must include:

1. Applicant name and subdivision name and filing or DSD file number for zoning action.
2. Name, location and functional class of the road.
3. Copy of BoCC resolution accepting the eligible road for maintenance.
4. Certification by a Professional Engineer of construction according to approved plans and followed Engineering Criteria Manual (ECM) Standards.
5. Certification by signed affidavit that all conditions of approval were met, including following of County's Land Development Code (LDC), and that all materials and subcontractors were paid in full.
6. Formal request summarizing the type of improvement or ROW dedication, the linear feet constructed minus any bridges or drainage structures, the number of signalized intersections by type installed and a calculation of the amount of credit that is being requested using the unit costs.

b. Pre-Program Credits. Owners of property for which capital improvements or land dedications had been made prior to February 11, 2010, shall be entitled to offsets against the impact fees due for the development project pursuant to the provisions of this section. Pre-program credits shall only be available for capital improvements that had been included in the County's adopted MTCP at the time they were made. The application for credit for projects built before February 11, 2010 consists of an independent credit request to include the following information. If roads built prior to the Countywide fee are credited, then the fee obligation for the prior developed lands will be subtracted from the credit amount.

1. Applicants for pre-program offsets must file a request with the impact fee administrator by December 1, 2013. The value of the contribution shall be determined by multiplying the unit cost of the road constructed by the linear feet of road. Once the value of the contribution has been determined, the amount of the offset shall be calculated as follows: The value of the contribution, less the total amount of impact fees that would have been owed for the development that has occurred in the development project prior to the effective date of the applicable ordinance had the impact fees calculated in the impact fee study been in effect and adopted at 100% of the net cost.

2. The offset amount calculated above shall be applied against the impact fees due for building permits issued on the property until the amount of the offset is exhausted or the development project for which the capital contribution was made is completed. In no case shall any offset be transferred from the development project for which the capital contribution was made nor will any reimbursement be allowed.

3. Applicants must submit all supporting documentation to the Impact Fee Administrator along with a cover letter to apply for pre-program credit. Review of the information submitted will be by the Impact Fee Administrator, who may request additional needed information. When the information provided is determined to be complete by the Impact Fee Administrator, the request will be submitted to the Advisory Committee for recommendation to the Board of County Commissioners. Information to be submitted includes:

    a. Subdivision name and Filing or DSD file number for zoning action
    b. Provide total amount of fees paid and which basis; interim fee system or a small area
    c. Developed number of lots and /or total area developed per land use to date or number of traffic/trips generated
    d. Total number of lots and/or total area per land use to be developed at expected build out.
    e. Public road improvements constructed including date of preliminary acceptance. (These should be roads identified in the MTCP.) Include linear feet constructed. Identify roadway type/classification.
    f. The value of the contribution, less the total amount of impact fees that would have been owed for the development that has occurred in the development project prior to the effective date of the applicable ordinance had the impact fees calculated in the impact fee study been in effect and adopted at 100% of the net cost.
    g. Preliminary acceptance date
    h. Certification that all conditions of approval were met
    i. Cover letter summarizing the type of improvement or ROW dedication, the linear feet constructed, number of signalized intersections, and a calculation of the amount of reimbursement that is being requested.

c. Credits will not be issued unless all of the following conditions are met:

1. Prior to construction, the developer must submit construction plans to the County Engineer for approval.
2. Construction of the eligible improvements will follow all the requirements of the El Paso County Engineering Criteria Manual (ECM). Design criteria, submittal requirements, and the process for plan review and approval are included in the ECM. Following plan approval, a pre-construction conference is held with the County inspections staff. All required permits such as Army Corps of Engineers, Floodplain Development, Stormwater Management, etc. are to be secured prior to scheduling the pre-construction conference. All review, inspection, partial release, and acceptance procedures including applicable review fees will be the same as for any other public improvements project in El Paso County.
3. The developer proceeds with construction according to the approved plans. Any changes during construction shall be approved by the County Engineer.
4. Upon completion of the construction, the developer shall obtain a certification from a Colorado registered Professional Engineer that the facilities inspected are constructed in accordance with the approved plans and all county requirements.

A written request for the County inspection of the facilities must be submitted to the County Engineer.

5. Inspections of constructed improvements are the same as for any public improvements and are as described in the ECM. Upon successful completion of any punch list items, the BoCC schedules the projects for preliminary acceptance approval. This approval initiates the two-year warranty period, and construction surety is released and replaced by warranty collateral.

7. Reimbursements. Construction of eligible improvements must be in accordance with the County's Engineering Criteria Manual (ECM) and Land Development Code (LDC) in order to be reimbursed. All review, permit, inspection, collateral and acceptance procedures including applicable review fees are the same as for any other public improvements project in the County. In order for a developer to obtain reimbursement for road improvement costs, the applicant must submit a letter to the Impact Fee Administrator noting the request for reimbursement of credit, including the amount of reimbursement and the subdivision and filing (or properties) for which the credit was established.

a. Review of the information submitted will be by the Impact Fee Administrator, who may request additional needed information. When the information provided is determined to be complete by the Fee Administrator, the reimbursement request will be submitted to the Advisory Committee for recommendation to the Board of County Commissioners.

8. Unit Cost Schedules. The schedules of unit costs and related diagrams for the Road Impact Fee Program can be found in the Road Impact Fee Study.

F. REFUNDS

The current owner of record of property for which a Road Impact Fee has been paid shall be entitled to a refund of such fee if all or a portion of the impact fees paid are not spent within ten (10) years after the date of payment. The determination of whether the impact fees paid have been spent shall be determined using a first-in, first-out accounting standard. The Impact Fee Administrator, on determining the need for a refund, shall notify the current owner of the property.

Within 30 days after receipt of a written request for a refund, the Impact Fee Administrator must provide a written decision on the refund request including the reasons for the decision. If a refund is due the applicant, the County shall issue a refund payment to the applicant within 30 days of the Impact Fee Administrator's written decision on the refund request.

G. ADVISORY COMMITTEE

1. The functions of the Advisory Committee shall include the following.

a. Monitor and evaluate implementation of the Road Impact Fee and associated Public Improvement Districts, file annual written reports regarding same, and report to the BoCC any perceived inequities regarding same.

b. Advise the BoCC of the need to update or revise the Major Transportation Corridor Plan, the Road Impact Fee Study, or the unit costs.

c. Make recommendations to the BoCC regarding the establishment of credits, the disbursement of impact fee funds or PID bond proceeds, and the appeal of decision regarding independent fee studies.

d. Any other tasks the BoCC may direct the Advisory Committee to perform.

2. The Advisory Committee will consider the following Capital Spending Criteria Policy when making recommendations on the use of funds to the Board of County Commissioners.

a. Capital Spending Criteria Policy Statement: The following factors shall be considered when prioritizing projects:

- Projects should be constructed near in time and distance to where the fee moneys were collected.
- Safety
- Roadway classification / number of people benefited
- Traffic demand
- Gaps in system (addressing areas where no development is available to construct the frontage, bottlenecks, etc.)
- Funding or project efficiencies (joint project, available match or grant funding, project savings due to economies of scale, etc.)
- Planned schedule of the MTCP.

H. UPDATES

1. The Major Transportation Corridor Plan, including projects identified as eligible for the fee program, will be updated at least every six (6) years or as funds are available.

2. The unit costs specified in the Fee Study may be updated periodically, as determined necessary by the Advisory Committee. The update of the unit costs will be prepared by the Impact Fee Administrator based on inflation, recent construction bids and updated land costs for the County's park dedication in-lieu fees, and will be reviewed by the Advisory Committee. The updated unit costs will be effective for determining the amount of future credits following the update of the Road Impact Fee study to incorporate the updated unit costs into the fee calculation and the adoption of the updated Road Impact Fees by the BoCC. Updates may also be performed to incorporate decisions by the BoCC on potentially eligible projects, pre-program credits, credit agreements, or other necessary updates or program changes.

I. APPEALS

Any person or entity that believes that the provisions of the Road Impact Fee Program have been erroneously interpreted or applied must first raise in writing and attempt to resolve the issue with

the Impact Fee Administrator. The applicant shall timely provide any information requested by the Impact Fee Administrator related to the alleged error or the request will be deemed abandoned. The Impact Fee Administrator shall issue a written decision within twenty (20) days of receiving written notice of the alleged error. If the issue cannot be resolved, the alleged erroneous interpretation or application may be appealed to the BoCC within twenty (20) days of the Impact Fee Administrator's written decision. All appeals shall first be heard by the Advisory Committee, who shall make recommendations to the BoCC regarding the appeal. The applicant shall timely provide any information requested by the Advisory Committee and shall attend any hearing on the issue scheduled by the Advisory Committee or the appeal shall be deemed abandoned. The BoCC is the ultimate interpreter of the meaning and application of the Road Impact Fee Program. Neither the Impact Fee Administrator nor the BoCC has the authority to grant individual variances from the provisions of the Road Impact Fee Program except through consideration of an independent fee study.

Appendix 1 Independent Study Standard

An independent fee study may be performed by the applicant if the proposed development does not clearly fit within one of the established fee categories. See Section B.4(b) for more information. Generally, an independent study will not be considered if based on trips not using county roads, as all development occurring in unincorporated El Paso County will, at some point, utilize county roads. Independent studies shall consider the long-term impacts of the building or structure based on its structural characteristics, rather than the short-term impacts of the proposed initial occupant of the building or structure.

1. The preparation of the independent fee study shall be responsibility of the applicant.
2. Any person who requests to perform an independent fee study shall pay an application fee for administrative costs associated with the review and decision on such independent fee calculation study.
3. Formula: The independent fee study shall be by the use of the following formula:

FEE	= VMT x Cost Per Trip
WHERE:	
VMT	= ADT x %NEW x ATL /2
ADT	= Number of average daily trips generated
%NEW	= Percent new trips
ATL	= Average trip length in miles on the regional road system
2	= For the portion of the trip allocated to the new development (one trip end)
Cost Per Trip	= The cost per trip as adopted by the Board of County Commissioners.

i. *Standards*: The fee calculation shall be based on data, information or assumptions contained in the fee program or in independent sources. Independent sources may be used if all relevant information and data is provided to and accepted by the County and only if:

a. The independent source is an accepted standard source of transportation engineering or planning data or information;

b. The independent source is a local study on trip characteristics carried out by a qualified traffic planner or engineer pursuant to an accepted methodology of transportation planning or engineering; or

c. The percent new trips factor used in the independent fee calculation study is based on actual surveys prepared in El Paso County.

d. Meets the requirements of the EL Paso County Engineering Criteria Manual.

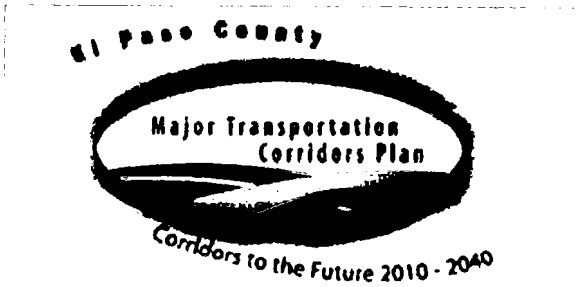
ii. Procedure. Within ten (10) working days of receipt of an independent fee study, the Impact Fee Administrator shall determine if the study is complete. If the Impact Fee Administrator determines that the study is not complete, a written statement specifying the deficiencies shall be sent by mail to the person submitting the study. The application shall be deemed complete if no deficiencies are specified. The Impact Fee Administrator shall take no further action on the application until it is deemed complete. When the Impact Fee Administrator determines the application is complete, the application shall be reviewed, and the Impact Fee Administrator shall render a written decision in twenty (20) working days on whether the fee should be modified, and if so, what the amount should be, based on the standards in the following section.

iii. Appeal of Independent Fee Study Decision. A fee payer affected by the administrative decision of the Impact Fee Administrator on an independent fee study may appeal such decision to the Board pursuant to the appeals procedure set forth in Section I of the Implementation Document. If the Board reverses the decision of the Impact Fee Administrator, the Board shall direct that the fee be recalculated in accordance with its findings.

Resolution No. 12-382
Exhibit B

Major Transportation Corridors Plan:

Road Impact Fee Study



El Paso County, Colorado

LSA

LSA ASSOCIATES, INC.

duncan associates

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Prepared by Duncan Associates
360 Nueces St., Suite 2701, Austin, Texas 78701
(512) 423-0480, clancy@duncanassociates.com

INTRODUCTION AND SUMMARY

The unincorporated portion of El Paso County has been subject to an interim road impact fee since March 1, 2010. The interim fee replaced a similar fee program for the Falcon area that had been in place since 2001, and was adopted instead of another small-area fee program for the Lorson Ranch/Rolling Hills Ranch area. At the time of the adoption of the interim fee, the Housing and Building Association of Colorado Springs (HBA) and other stakeholders expressed support for the establishment of a county-wide fee system, as opposed to small-area fee programs, and agreed to work with El Paso County to develop a county-wide system for fees, credits and reimbursements. In addition, the HBA and County will use one or more Public Improvement Districts to help fund needed transportation improvements.

Fee Program Summary

The proposed fee system does not represent a completely new obligation for developers or builders. This fee program is only a more equitable method of establishing a fair-share contribution than individually-negotiated developer exaction or a small-area fee system. The purpose of the program is to develop a process to identify transportation improvements needed to accommodate growth, to fairly allocate the costs of transportation improvements among affected developments, and to ensure the proper and timely accounting of improvements and funds.

Types of Improvements. This program covers major corridors that accommodate regional travel. The program does not include all roads, only higher traffic and longer-distance roads (arterials and major rural collectors) within unincorporated El Paso County. Improvements currently included in the fee program have been identified in the current update of the Major Transportation Corridors Plan (MTCP). This transportation plan identifies improvements needed to accommodate anticipated growth in the unincorporated area over the 2010-2040 period based on small-area growth forecasts. Only capacity-expanding improvements to County arterials, County rural collectors and selected State roads ("major roads") within the unincorporated area are included. The improvements that are eligible for funding with road impact fees are those identified in the Appendix. The list of eligible projects, costs and fee amounts will be updated over time with input from the advisory committee and approval by the Board of County Commissioners.

Standardized Unit Costs. The costs of improvements included in the fee program have been estimated based on standardized unit costs, developed in consultation with a stakeholders committee. The unit costs developed by the stakeholders are intended to be conservative and are not intended to fully cover all actual costs. The amount of developer credits or reimbursements for improvements identified in the MTCP will be based on the same unit costs. A 5% contingency has been added to address unexpected situations and cases in which the County will need to make improvements and pay higher actual costs.

Non-Growth-Related Costs. The costs included in the fee calculations exclude any portions of project costs that are attributable to remedying existing deficiencies or accommodating future pass-through traffic.

Developer Credits/Reimbursements. Colorado law requires that developers who construct improvements for which impact fees are charged receive a credit against their impact fees or be reimbursed. The resolution establishing the current interim road impact fee refers to credits against the impact fee in lieu of fee payment. Other forms of credit application, including developer reimbursement, will be provided for the updated fees.

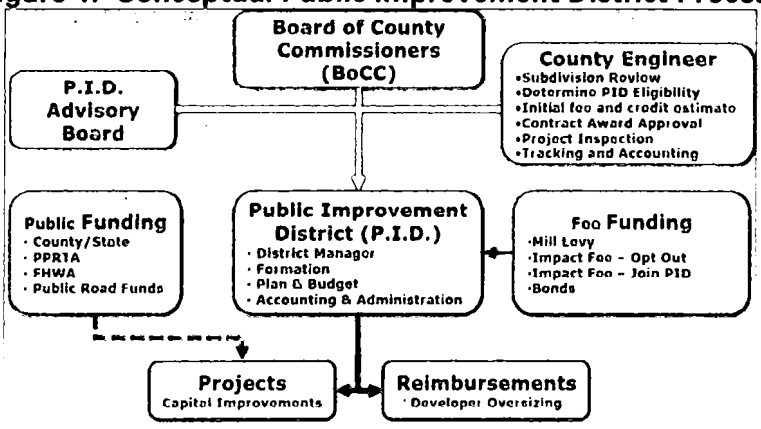
Public Improvement District

In conjunction with the fee program, the County formed three Public Improvement Districts (PIDs) as an option to supplement the fee program. The PID will issue bonds that will be used to reimburse developers for a portion of their eligible improvement costs. Developers will have the option of joining the PID at time of final plat. Developments within the PID will be subject to a lower fee at building permit than developments that do not belong to the PID. If a development chooses to join the PID, then the property would be subject to a mill levy of either 5 or 10 mills. The basic approach includes the following:

Percentage of Costs. For properties that join the PID, PID taxes will cover a percentage of the impact fee costs. For example, if the PID tax rate is set at 10 mills, the present value of future PID taxes might equal 80% of the fee obligation for a single-family home, so that the fee paid at time of building permit would only be 20% of the full fee amount paid by a single-family home not in the PID.

Multiple Districts. The courts have generally held that PID bond authorizations only last for so long, perhaps 20 or 30 years. After that, the original authorization is held to be "stale," and a new election must be held. If there were only a single PID (with perhaps a residential and nonresidential sub-PID) that new developments are continually joining, it would likely be difficult after 20-30 years to persuade voters within the PID to approve new bond authorizations. For this reason, the concept would be to create multiple PIDs that sunset after the initial bond issues have been retired. It is estimated that a new PID would be created approximately every eight years.

Figure 1. Conceptual Public Improvement District Process



Updated Fee Schedule

The proposed fee schedule has fewer, broader land use categories than the current interim fee schedule. The current interim fee schedule lists 34 nonresidential land use categories, and the fees vary enormously. The interim fees for retail/commercial uses, for example, range from $266 per 1,000 sq. ft. for a furniture store to $17,141 per 1,000 sq. ft. for a fast food restaurant. The proposed approach drastically simplifies the fee schedule, reducing the listings in the fee schedule to a few, broadly-defined categories. This approach will eliminate the very high fees for some specific uses, simplify fee administration and avoid most fees for change of use. The rationale for this change is explained in the section on Travel Demand. The proposed fees are compared to the current interim fees in Table 1, as illustrated in Figure 2. The actual fee schedule will be far simpler (see Table 15 later in this report). The reasons the Steering Committee recommended the simplified fee schedule include the following:

- It will lower the rate for many commercial uses;
- It will allow redevelopment of property to occur without incurring additional fees (unless a rezoning is required and the new use generates more than 100 new trips).

Figure 2. Comparison of Interim and Proposed Fees

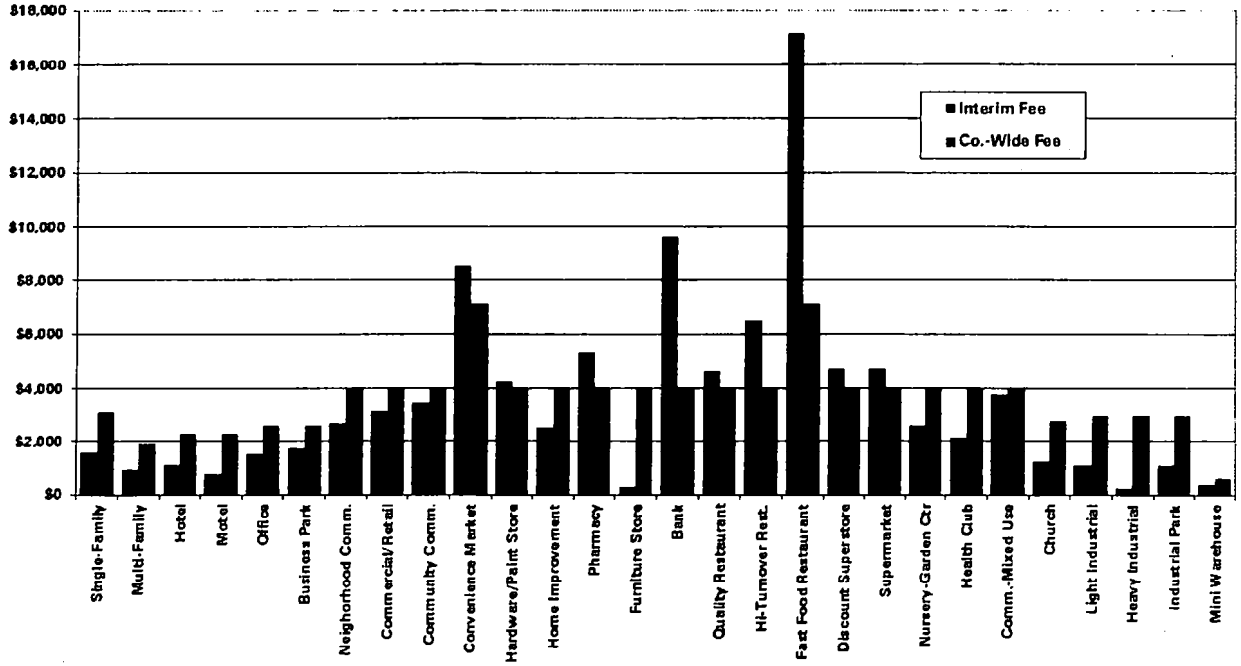


Table 1. Comparison of Interim and County-Wide Road Fees

Land Use	Unit	Interim Fee	Co.-Wide Fee	Percent Change
Single-Family	Dwelling	$1,500	$3,132	109%
Multi-Family	Dwelling	$906	$1,956	116%
Lodging				
Hotel	Room	$1,094	$2,283	109%
Motel	Room	$750	$2,283	204%
Office				
Office	1,000 sf	$1,484	$2,586	74%
Business Park	1,000 sf	$1,719	$2,586	50%
General Commercial				
Neighorhood Commercial (50,000 sf)	1,000 sf	$2,625	$4,054	54%
Commercial/Retail (100,000 sf)	1,000 sf	$3,141	$4,054	29%
Community Commercial (200,000 sf)	1,000 sf	$3,438	$4,054	18%
Hardware/Paint Store	1,000 sf	$4,234	$4,054	-4%
Home Improvement Superstore	1,000 sf	$2,453	$4,054	65%
Pharmacy	1,000 sf	$5,313	$4,054	-24%
Furniture Store	1,000 sf	$266	$4,054	1424%
Bank	1,000 sf	$9,609	$4,054	-58%
Quality Restaurant	1,000 sf	$4,609	$4,054	-12%
High-Turnover Restaurant	1,000 sf	$6,516	$4,054	-38%
Discount Superstore	1,000 sf	$4,703	$4,054	-14%
Supermarket	1,000 sf	$4,703	$4,054	-14%
Nursery - Garden Center	1,000 sf	$2,547	$4,054	59%
Nursery - Wholesale	Acre	$1,375	na	na
Health Club	1,000 sf	$2,125	$4,054	91%
Commercial - Mixed Use	1,000 sf	$3,750	$4,054	8%
Golf Course	Hole	$4,609	na	na
Convenience Commercial				
Convenience Market	1,000 sf	$8,500	$7,158	-16%
Fast Food Restaurant	1,000 sf	$17,141	$7,158	-58%
Gasoline Service Station	Pump	$7,766	na	na
Gasoline Service Station	1,000 sf	na	$7,158	na
Convenience Market w/Gas	Pump	$5,625	na	na
Public/Institutional				
Elementary School	Student	$31	na	na
Middle School	Student	$94	na	na
High School	Student	$141	na	na
Church	1,000 sf	$1,219	$2,742	125%
Park/Open Space	Acre	$203	na	na
Public/Institutional	1,000 sf	na	$2,742	na
Industrial/Warehouse				
Light Industrial	1,000 sf	$1,094	$2,968	171%
Heavy Industrial	1,000 sf	$234	$2,968	1168%
Industrial Park	1,000 sf	$1,094	$2,968	171%
Warehouse	1,000 sf	na	$1,517	na
Mini Warehouse	1,000 sf	$328	$588	79%

Source: Current interim fees from El Paso County interim fee resolution effective March 1, 2010; proposed county-wide fees from Table 15.

LEGAL FRAMEWORK

Impact fees are a way for local governments to require new developments to pay a proportionate share of the infrastructure costs they impose on the community. In contrast to "negotiated" developer exactions, impact fees are charges assessed on new development using a standard formula based on objective characteristics, such as the number and type of dwelling units constructed. The fees are a one-time, up-front charge, with the payment made at the time of building permit issuance. Impact fees require that each new development project pay a pro-rata share of the cost of new capital facilities required to serve that development.

Since impact fees were pioneered in states that lacked specific enabling legislation, such fees have generally been legally defended as an exercise of local government's broad "police power" to regulate land development in order to protect the health, safety and welfare of the community. The courts have developed guidelines for constitutionally-valid impact fees, based on the "dual rational nexus" standard. The standard essentially requires that fees must be proportional to the need for additional infrastructure created by the new development, and the fees must be spent to provide that same type of infrastructure to benefit the new development.

State Statutes

Prior to 2001, the authority of counties in Colorado to impose impact fees was not entirely clear. Several counties had adopted impact fees, which they felt were authorized under counties' implied powers. This uncertainty was removed with the passage of SB 15 by the Legislature and its signature by the governor on November 16, 2001. Among other things, this bill created a new Section 104.5: Impact Fees, in Article 20 of Title 29, Colorado Revised Statutes, which specifically provides that:

> *Pursuant to the authority granted in section 29-20-104 (1) (g) and as a condition of issuance of a development permit, a local government may impose an impact fee or other similar development charge to fund expenditures by such local government on capital facilities needed to serve new development.*

Section 29-20-104.5(1) requires that impact fees be based on a schedule of fees that is legislatively adopted, applies to development generally, as opposed to an individual development project, and only covers the cost of capital improvements needed to serve new development:

> *No impact fee or other similar development charge shall be imposed except pursuant to a schedule that is:*
>
> *(a) legislatively adopted;*
> *(b) generally applicable to a broad class of property; and*
> *(c) intended to defray the project impacts on capital facilities caused by proposed development.*

Section 29-20-104.5(2) requires the preparation of a report that quantifies the cost attributable to new development and ensures that new development is not charged for the cost to remedy existing deficiencies:

> *A local government shall quantify the reasonable impacts of proposed development on existing capital facilities and establish the impact fee or development charge at a level no greater than necessary to defray such impacts directly related to proposed development. No impact fee or other similar development charge shall be imposed to remedy any deficiency in capital facilities that exists without regard to the proposed development.*

Section 29-20-104.5(3) provides that credit against impact fees must be given for required developer contributions of land or improvements for the same facilities for which the impact fees are charged:

> *Any schedule of impact fees or other similar development charges adopted by a local government pursuant to this section shall include provisions to ensure that no individual landowner is required to provide any site specific dedication or improvement to meet the same need for capital facilities for which the impact fee or other similar development charge is imposed.*

Impact fees may be imposed for a broad range of facilities. Section 29-20-104.5(4) provides that impact fees can be imposed to "defray the projected impacts on capital facilities caused by proposed development." It defines "capital facility" to mean any improvement or facility that:

> *(a) is directly related to any service that a local government is authorized to provide;*
> *(b) has an estimated useful life of five years or longer; and*
> *(c) is required by the charter or general policy of a local government pursuant to a resolution or ordinance.*

Section 29-20-104.5(5) requires that impact fees collected must be earmarked and spent for the same types of improvements for which they were collected, and also authorizes waivers for affordable housing:

> *Any impact fee or other similar development charge shall be collected and accounted for in accordance with part 8 of Article 1 of this title. Notwithstanding the provisions of this section, a local government may waive an impact fee or other similar development charge on the development of low- or moderate- income housing or affordable employee housing as defined by the local government.*

The statutory provision referenced above (Section 29-1-803) requires separate accounting for each type of fee, and requires that interest earned on each account be retained in that account:

> *Except as otherwise provided in this section, all moneys from land development charges collected, including any such moneys collected but not expended prior to January 1, 1991, shall be deposited or, if collected for another local government, transmitted for deposit, in an interest-bearing account which clearly identifies the category, account, or fund of capital expenditure for which such charge was imposed. Each such category, account, or fund shall be accounted for separately. The determination as to whether the accounting requirement shall be by category, account, or fund and by aggregate or individual land development shall be within the discretion of the local government. Any interest or other income earned on moneys deposited in said interest-bearing account shall be credited to the account.*

Constitutional Requirements

While State law provides a broad grant of authority, impact fees must also comply with constitutional standards that have been developed by the courts to ensure that local governments do not abuse their power to regulate the development of land. The courts have gradually developed guidelines for constitutionally-valid impact fees, based on a "rational nexus" that must exist between the regulatory fee or exaction and the activity that is being regulated. The standards set by court cases generally require that an impact fee meet a two-part test:

1) The fees must be proportional to the need for new facilities created by new development (the "needs test"); and

2) The expenditure of impact fee revenues must provide benefit to the fee-paying development (the "benefit test").

The "needs test" requires that impact fees for various types of developments should be proportional to the impact of each development on the need to construct additional or expanded facilities. The fees do not have to recover the full cost, but if the fees are reduced by a percentage from the full cost, the percentage reduction should apply evenly to all types of developments. This requirement is echoed in the requirements in the Colorado act that impact fees be "intended to defray the projected impacts on capital facilities caused by proposed development" and "be generally applicable to a broad class of property."

The "benefit test" requires that impact fees be spent to provide benefit to new development. Benefit is ensured by providing that the funds be earmarked for capacity-expanding improvements of the type for which the fees are collected. The Colorado act requires this type of earmarking. Additional methods of ensuring benefit are to require that the fees be refunded if they have not been used within a reasonable period of time, or to earmark the funds collected within a geographic subarea be spent within the same geographic subarea.

A fundamental principle of impact fees, rooted in both case law and norms of equity, is that impact fees should not charge new development for a higher level of service than is provided to existing development. This principle, which is a critical part of the "needs test," is reflected in the Colorado impact fee statute's prohibition against using impact fee funds to remedy existing deficiencies (Section 29-20-104.5(2)). In addition, impact fees must generally be reduced to ensure that new development does not pay twice for the same level of service, once through impact fees and again through general taxes that are used to remedy the capacity deficiency for existing development.

A corollary principle is that new development should not have to pay twice for the same level of service. As noted above, the fees should be reduced by a credit that accounts for the contribution of new development toward remedying the existing deficiencies. A similar situation arises when the existing level of service has not been fully paid for. Outstanding debt on existing facilities that are counted in the existing level of service will be retired, in part, by revenues generated from new development. To avoid requiring new development to pay more than its proportional share, impact fees should be reduced to account for future tax payments that will retire outstanding debt on existing facilities.

In general, credit against impact fees is not required for other types of funding that may be used to help pay for growth-related, capacity-expanding improvements. While new development may contribute toward such funding, so does existing development, and both existing and new development benefit from the higher level of service that the additional funding makes possible.

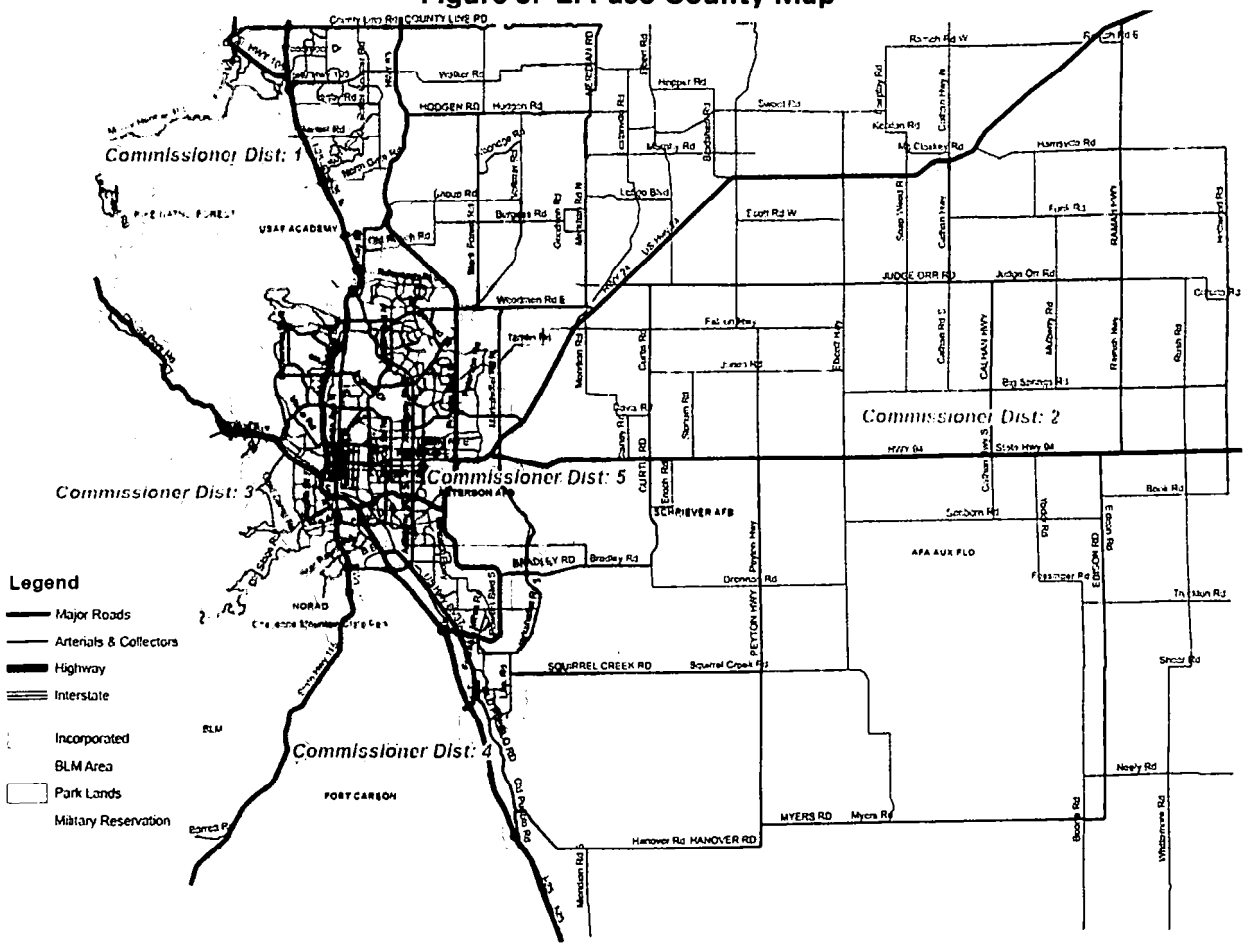
ASSESSMENT AND BENEFIT DISTRICTS

In an impact fee system, it is important to clearly define the geographic areas within which impact fees will be collected and spent. There are two types of geographic areas that serve different functions in an impact fee system: assessment districts and benefit districts. An assessment district is a geographic area that is subject to a uniform fee schedule. In the case of the County's interim road impact fee, the current assessment district is the entire unincorporated area. Benefit districts, on the other hand, represent areas within which the collected fees must be spent. Benefit districts ensure that improvements funded by impact fees are constructed within reasonable proximity of the fee-paying developments.

Assessment Districts

The County's interim road impact fee is charged to new development in the unincorporated areas of the county. The County currently uses a single fee schedule that applies uniformly throughout the unincorporated area.

Figure 3. El Paso County Map



Benefit Districts

The current interim fee revenues can be spent anywhere in the unincorporated area. While the County had initially considered dividing the unincorporated area into several benefit districts, the County has opted for a single benefit district encompassing the entire unincorporated area. There were several reasons for this decision. First, the fee program is limited primarily to arterial roadways, whose function is to move traffic long distances. The arterial road system forms an integrated network, and any attempt to draw lines to divide it into subareas would inevitably be somewhat artificial. Larimer County, for example, which is somewhat larger than El Paso County, has a single county-wide benefit district for regional roads, which are comparable to the types of roads covered by El Paso County's fee program. Second, the creation of multiple benefit districts would increase the complexity of the system. For example, it would likely necessitate establishing a separate Public Improvement District (PID) for each benefit district. It would also increase the administrative burden of tracking and accounting fee collections and expenditures. Third, a county-wide benefit district would essentially be self-regulating in terms of matching the geographic location of need and benefit. Since the fee program will primarily function to reimburse those who make needed improvements, the expenditures will tend to go to the areas were development is occurring. Fourth, multiple benefit districts would unnecessarily restrict the use of impact fee funds and credits, making it more difficult to accumulate sufficient funds to make improvements and making it more difficult to use credits to offset fees.

METHODOLOGY

This section describes the methodology used to develop the proposed county-wide road impact fees.

Plan-Based Approach

The proposed road impact fees are calculated using a "plan-based" methodology. The plan-based approach uses a travel demand model to forecast future traffic volumes, which are then compared to existing roadway capacities to identify needed improvements. The portion of the total cost of those improvements that is attributable to growth (after deductions for adjacent developer responsibility, through trips and existing deficiencies) is divided by the number of new trips over the planning period to determine a cost per trip.

Improvements included in the fee program have been identified in the most recently adopted Major Transportation Corridors Plan (MTCP). This transportation plan identifies improvements needed to accommodate anticipated growth in the unincorporated area over the 2010-2040 period based on small-area growth forecasts.

Types of Improvements

This program covers major corridors that provide regional travel. The program does not include all roads, only County arterials and major rural collectors, as wells as a few selected State roads ("major roads") within unincorporated El Paso County. Only capacity-expanding improvements to major roads identified in the MTCP are included. Types of eligible improvements include construction of new roads, widening existing roads, paving gravel roads, intersection improvements and signalization, as well as acquisition of additional rights-of-way (ROW) required for such improvements. Intersection improvements and signalization improvements included in the program are limited to the intersection of two major roads. The specific improvements that can be funded by the fee program, or for which credits or reimbursements may be provided, are identified in Table 18, Table 19 and Table 20 in the Appendix. The list of eligible projects, costs and fee amounts will be updated over time with input from the advisory committee and approval by the Board of County Commissioners.

Standardized Unit Costs

The fee program uses a standardized unit cost approach. The same costs used to calculate the fees will also be used to determine the amount of credit or reimbursement due for eligible improvements. In order for an eligible road to qualify for a credit or a reimbursement, all aspects of the road must be constructed to County standards and be accepted by the County. The standardized unit costs are summarized in Table 2.

The construction cost of segment and intersection improvements have been estimated using a standard cost per linear foot based on unit costs for a limited number of components, including asphalt, curb & gutter/shoulders, earthwork and construction management. The component unit costs developed by the stakeholders are intended to be conservative and are not intended to fully cover all actual costs. Certain cost components, such as utility relocation, were purposely omitted because they are extremely variable.

Intersection costs are calculated as the additional cost beyond the cost of the standard road segment needed to accommodate the intersection. Intersection costs include both additional construction and additional right-of-way. Diagrams of intersection improvements are in the Appendix (Figure 8).

Right-of-way (ROW) costs are estimated based on the acres and a standard, county-wide cost per acre. While construction and ROW costs are lumped together in the segment and intersection unit costs shown below, developers will receive credit separately for linear feet constructed and ROW dedicated. Signal costs are estimated based on the number of needed signals and a standard cost per signal.

Table 2. Summary of Standardized Unit Costs

Improvement Type	Unit	Unit Cost
Segment Improvements:		
Urban Residential Collector (base)	Linear Foot	$176.12
Rural Road Paving	Linear Foot	$56.82
Rural Road Upgrade	Linear Foot	$189.39
Rural Minor Arterial	Linear Foot	$210.69
Urban Nonresidential Collector	Linear Foot	$226.29
Urban Minor Arterial	Linear Foot	$312.45
Urban Principal Arterial (4 lanes)	Linear Foot	$453.23
Urban Principal Arterial (6 lanes)	Linear Foot	$616.40
Urban Expressway (4 lanes)	Linear Foot	$492.55
Urban Expressway (6 lanes)	Linear Foot	$616.40
Rural Principal Arterial (4 lane)	Linear Foot	$442.43
Rural Principal Arterial (6 lane)	Linear Foot	$682.50
Rural Expressway (4 lane)	Linear Foot	$461.12
Rural Expressway (6 lane)	Linear Foot	$629.74
State Road, Type A (4 lane divided)	Linear Foot	$400.06
State Road, Type AA (6 lane divided)	Linear Foot	$640.06
Intersection Improvements:		
Urban Minor Arterial (4 lanes)	Intersection Leg	$13,741
Urban Principal Arterial (4 lanes), 1 Turn Lane	Intersection Leg	$69,798
Urban Principal Arterial (4 lanes), 2 Turn Lanes	Intersection Leg	$108,767
Urban Principal Arterial (6 lanes)	Intersection Leg	$110,630
Traffic Signal	Each	$250,000

Note: Costs shown include ROW costs, based on $0.50 per square foot or $21,780 per acre
Source: Segment improvement cost per linear foot from Table 16 in Appendix; intersection costs per leg from Table 17 in Appendix; signal costs from LSA.

Excluded Costs

The costs included in the fee calculations are less than the total costs of the needed improvements. As noted above, only certain cost components will be included in the fee calculations, and those costs will be based be based on standardized costs that will likely understate the actual costs of improvements. In addition, any portions of project costs that are attributable to remedying existing deficiencies or accommodating future pass-through traffic that is unrelated to development in the unincorporated area are excluded from the fee calculations.

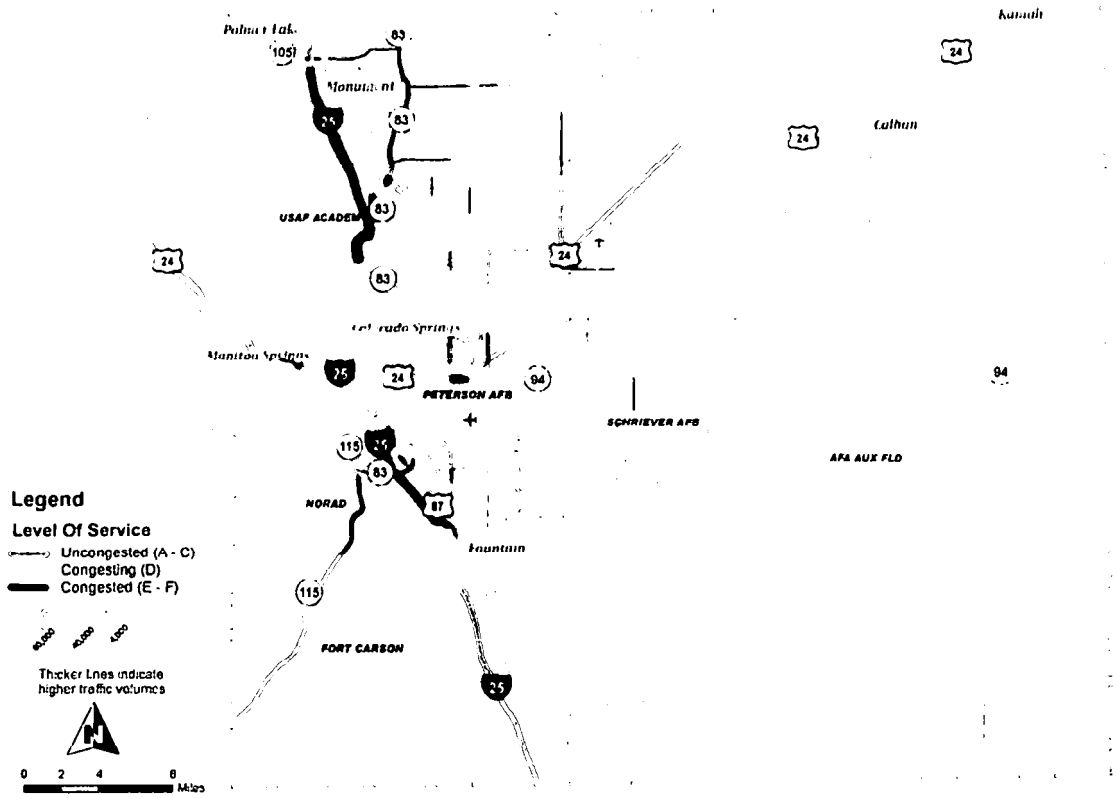
Travel Demand Model

One of the key technical tools in preparing the 2040 MTCP is the travel demand forecasting model. The model predicts future travel patterns and volumes based on travel demand (i.e., trip-making) generated by socioeconomic data (e.g., households and employment). The resulting travel is assigned to the roadway network to produce future traffic volumes on each roadway segment.

The 2005/2035 regional travel model of the Pikes Peak Area Council of Governments (PPACG) was refined for this purpose. PPACG has prepared 2035 socioeconomic forecasts as input to the regional model. Modification to the 2035 socioeconomic data and corresponding traffic analysis zone adjustments in the unincorporated areas of El Paso County were proposed, based on input from developers and land owners, comments from El Paso County's Development Services Department, the County's land use maps, information from available development sketch plans, results from the recent small area studies and comments from the public. These proposed modifications were coordinated with PPACG, which requires that the adjusted 2035 data match the original county-wide controls.

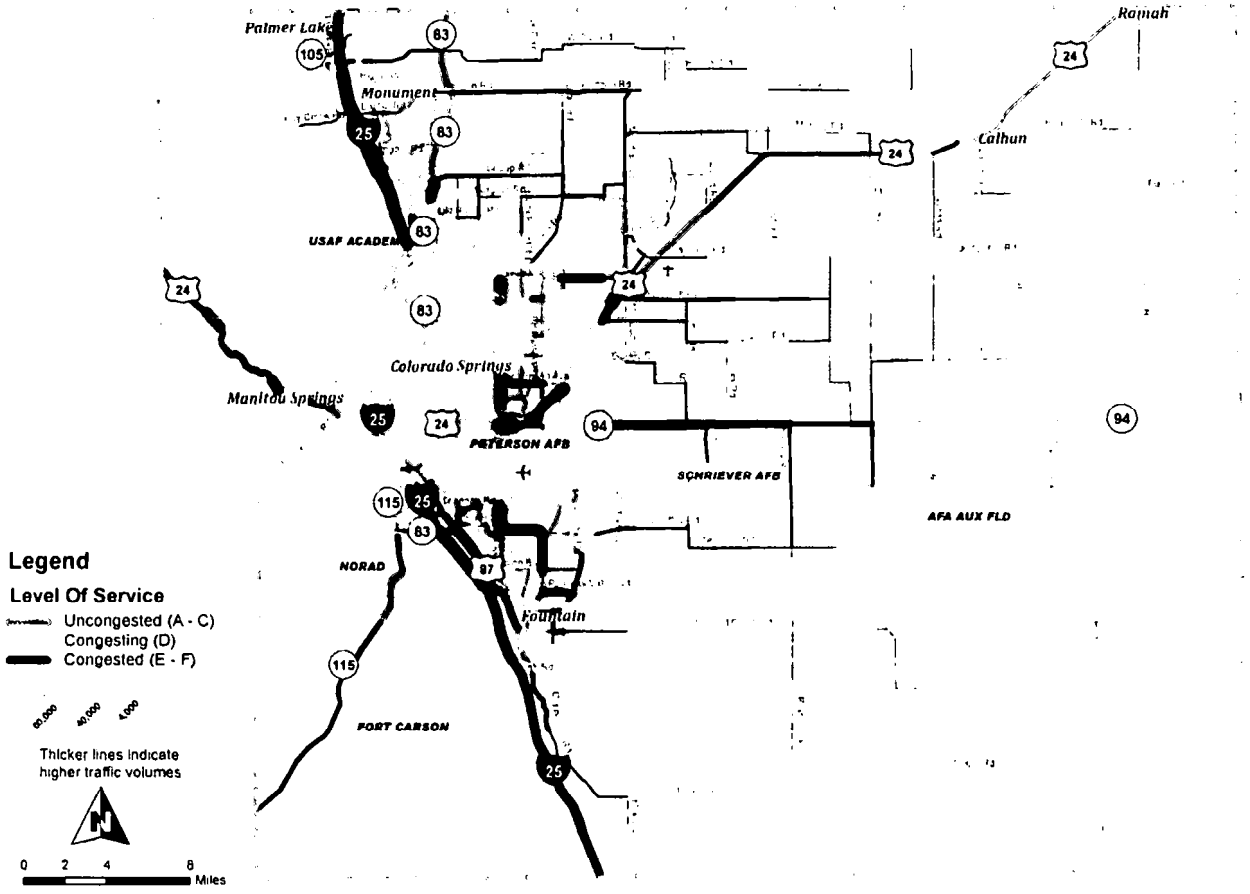
Using the model, analysis was performed to determine where future traffic volumes will exceed available roadway capacity, and several alternative transportation improvements were tested to evaluate the benefits of adding roadway capacity. Modeling of the existing major road network, including improvements that have committed funding but are not yet completed, reveals the existence of some existing capacity deficiencies. These are illustrated in Figure 4.

Figure 4. Existing Deficiencies, 2010



Modeling of future 2040 volumes based on the socioeconomic forecasts reveals a substantial increase in congestion in the absence of additional road improvements. The future levels of service are illustrated in Figure 5.

Figure 5. Future Deficiencies without Improvements, 2040



COST PER TRIP

Using a planned-based methodology as described in the previous section, the portion of the total cost of planned improvements needed over the planning horizon (2010-2040) that is attributable to growth within the unincorporated county is divided by the total trip ends that will be generated by new development in the unincorporated county in order to determine the cost per trip.

The costs that are attributable to new development in the unincorporated area exclude (1) costs attributed to existing deficiencies, and (2) costs attributable to pass-through traffic. The methodologies used to exclude these non-growth-related costs are described below.

Existing deficiency costs were identified for projects where existing traffic volumes exceed existing roadway capacities. The deficiency is determined to be a percentage of the project cost, based on the following formula: (2010 volume – 2010 capacity) / (2040 volume – 2010 capacity).

Finally, some costs are attributable to growth in trips that is unrelated to new development in the unincorporated area. Modeling was performed to determine the number of existing and future trips that are "pass-through" – that is, they do not have an origin or destination in the unincorporated area. The percentage of project costs attributable to pass-through traffic was based on the following formula: (2040 pass-through trips – 2010 pass-through trips) / (2040 total trips – 2010 total trips).

Planned Improvement Costs

Based on the modeling described in the previous section, as well as public and stakeholder input, a set of roadway improvement projects was identified as necessary to accommodate anticipated growth over the 2010-2040 planning horizon. The location of the improvements is illustrated in Figure 6.

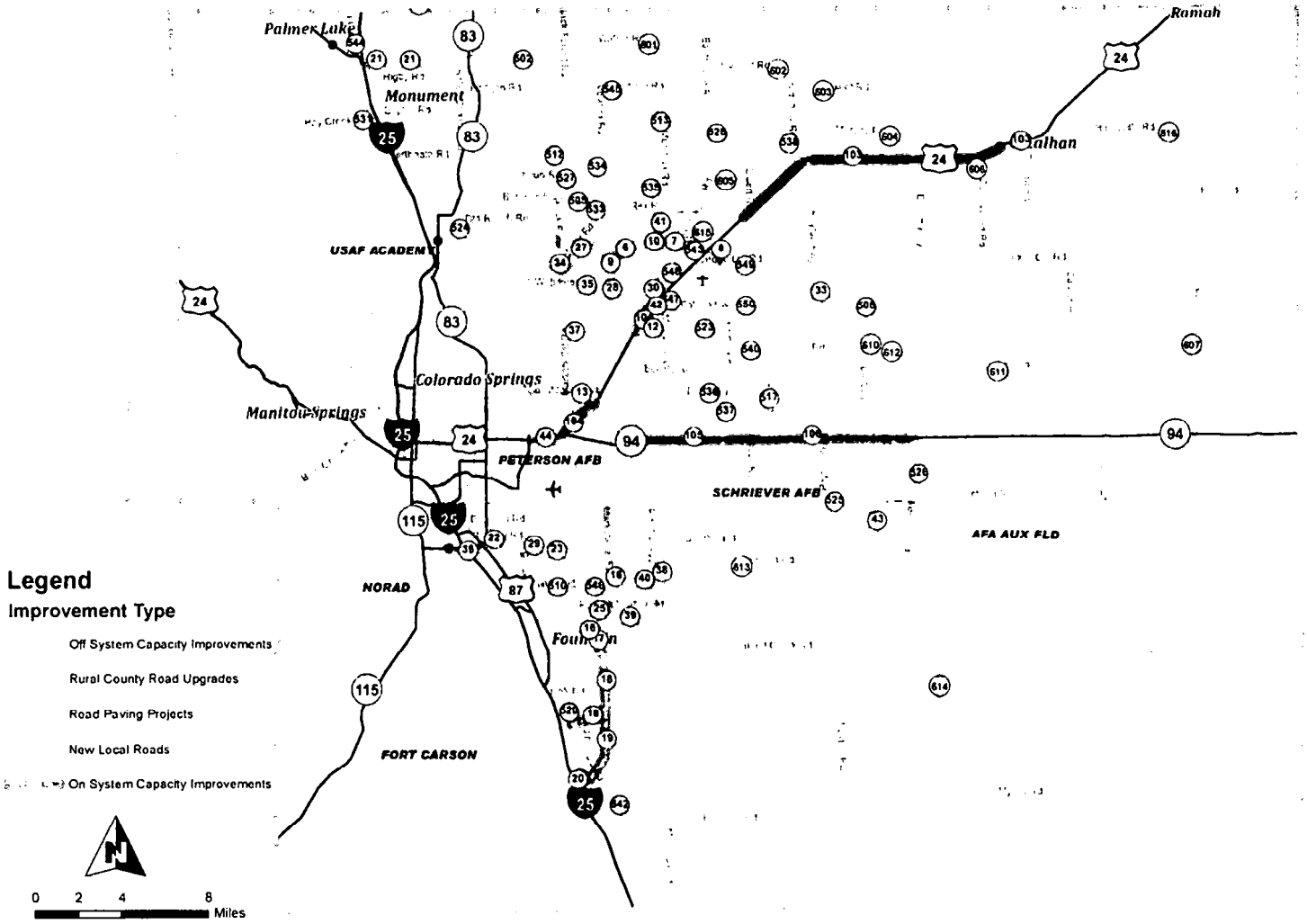
The costs of the planned improvements are summarized in Table 3, based on detailed information for each improvement included in the Appendix. Intersection and signal costs are included, and non-growth-related costs (deficiencies and pass-through traffic) are excluded.

Table 3. Summary of Planned Improvement Costs

Improvement Type	Miles	Segment Cost	Intersect./ Signals	Less Deficiencies	Less Through Trips	Net Program Costs
County Arterials	48.93	$114,355,577	$10,703,762	-$1,193,583	-$11,091,944	$112,773,812
County Rural Road Upgrades	123.56	$123,562,144	$0	$0	-$3,064,205	$120,497,939
County Rural Road Paving	87.97	$26,391,224	$0	-$580,663	-$640,004	$25,170,557
Subtotal, County Road Projects	260.46	$264,308,945	$10,703,762	-$1,774,246	-$14,796,153	$258,442,308
State Road Projects	41.28	$98,924,265	$6,377,331	$0	-$14,680,044	$90,621,552
Total Planned Improvements	301.74	$363,233,210	$17,081,093	-$1,774,246	-$29,476,197	$349,063,860
Old Reimbursements (Falcon Fee)						$661,000
Total Improvement Costs						$349,724,860

Source: Appendix (miles from Table 18 and costs from Table 20); outstanding reimbursement credits for Falcon area from El Paso County.

Figure 6. Planned Improvements



New Trips

With a plan-based methodology, the total cost of planned improvements attributed to growth over the planning horizon is divided by new trips anticipated to occur over the same time period. Since costs attributed to pass-through traffic have been excluded from the program costs, only new trips generated by development in the unincorporated area are considered. Each trip has two trip ends – an origin and a destination. While this report sometimes uses the term "trips," generally what is meant by that is trip ends. The trip generation data provided by the Institute for Transportation Engineers *Trip Generation* manual are trip ends. Trips with both an origin and destination in the unincorporated area have two trip ends in the unincorporated area, while other types of trips related to development in the unincorporated area only have one trip in the unincorporated area. The new trip ends that will be generated by development in the unincorporated area over the 2010-2040 period total 1,150,682, as shown in Table 4. However, some of those trips will be generated by development in the Woodmen Road, Central Marksheffel, Constitution and Baptist Road improvement districts, which will be partially exempted from the fee program they are already

contributing a share of road improvement costs through district assessments or taxes for major road improvements constructed by the districts. Deducting future trips from these districts results in 1,053,878 net new trips.

Table 4. Growth in Trips, 2010-2040

		Trip Ends/	2010		2040		Growth	
From	To	Trip	Trips	Trip Ends	Trips	Trip Ends	Trips	Trip Ends
Unincorp	Unincorp	2	290,118	580,236	645,553	1,291,106	355,435	710,870
Unincorp	Incorp	1	216,450	216,450	423,031	423,031	206,581	206,581
Unincorp	Teller	1	3,268	3,268	7,045	7,045	3,777	3,777
Unincorp	External	1	8,857	8,857	17,037	17,037	8,180	8,180
Incorp	Unincorp	1	217,450	217,450	426,798	426,798	209,348	209,348
Teller	Unincorp	1	3,252	3,252	6,998	6,998	3,746	3,746
External	Unincorp	1	8,857	8,857	17,037	17,037	8,180	8,180
Total Unincorporated Area			748,252	1,038,370	1,543,499	2,189,052	795,247	1,150,682
– New Trip Ends from Exempted Existing Public Improvement Districts								-96,804
Net New Trip Ends, 2010-2040								1,053,878

Source: LSA Associates, data from Major Transportation Corridors Plan analysis, March 15, 2011; new trip ends from partially-exempted Woodmen, Central Marksheffel, Constitution and Baptist Public Improvement Districts provided by LSA on September 4, 2012.

Cost per Trip

Dividing total growth-related costs by the growth in trip ends from new development in the unincorporated area yields a cost of $331.85 per trip end, as shown in Table 5. In addition, the steering committee agreed that a 5% contingency should be added to program costs to address unexpected situations as well as the difference between fee program unit costs and actual costs that will be incurred by the County in constructing improvements where no developer is available to make a needed improvement. With the addition of those contingency costs, the total cost per trip is $348.44.

Table 5. Cost per Trip

Total Growth-Related Costs, 2010-2040	$349,724,860
÷ Total New Trip Ends, 2010-2040	1,053,878
Cost per Trip End	$331.85
Plus 5% Contingency for Actual County Costs	$16.59
Total Cost per Trip End	$348.44

Source: Total costs from Table 3; new trip ends from Table 4; contingencies added based on recommendations of steering committee.

REVENUE CREDITS

As discussed in the legal framework section, credit against the road impact fees should be provided for future revenue that will be generated by new development and used to help pay for outstanding debt on existing facilities or to remedy existing capacity deficiencies. In addition, credit can be provided for future dedicated funding or anticipated outside funding that can be used to fund roadway capacity improvements. These are referred to as "revenue credits," and are the focus of this section.

Credits or reimbursements should also be provided to those who construct eligible improvements that are included in the list of planned improvements on which the fees are based. These are referred to as "developer credits," and are calculated on a case-by-case basis.

El Paso County has not historically used bonding to pay for roadway improvements, and does not have any outstanding debt from past roadway improvements. No outside funding is anticipated to be available to help fund the improvements identified in this report. The sales tax revenue from the county-wide Pikes Peak Rural Transportation Authority is used by the County to fund some major road capacity improvements, but those funded projects have been removed from the fee program.

It should be noted that costs attributable to remedying existing capacity deficiencies have been excluded from the fee calculations. However, a credit for deficiencies is still required, because new development will help fund the deficiency correction. A relatively simple approach to calculating an appropriate credit is to divide the total cost of existing deficiencies by the number of existing trips to determine a credit per trip. This puts new development on equal footing with existing development. Since virtually all of the County's funding sources that could be used to remedy existing deficiencies are county-wide, the deficiency cost will be divided by existing county-wide trip ends. These are summarized in Table 6.

Table 6. County-Wide Trips, 2010

		Trip Ends/	2010	
From	To	Trip	Trips	Trip Ends
Unincorp	Unincorp	2	290,118	580,236
Unincorp	Incorp	2	216,450	432,900
Unincorp	Teller	2	3,268	6,536
Unincorp	External	1	8,857	8,857
Incorp	Unincorp	2	217,450	434,900
Teller	Unincorp	2	3,252	6,504
External	Unincorp	1	8,857	8,857
Incorp	Incorp	2	1,671,738	3,343,476
Incorp	Teller	2	6,864	13,728
Teller	Incorp	2	6,772	13,544
Incorp	External	1	28,304	28,304
External	Incorp	1	28,304	28,304
Total County-Wide Trip Ends, 2010				4,906,146

Source: LSA Associates, data from Major Transportation Corridors Plan analysis, March 15, 2011.

Dividing the total cost to remedy existing deficiencies by total existing trip ends in El Paso County yields a deficiency credit of $0.36 per trip end.

Table 7. Deficiency Credit per Trip

Corridor	From	To	Program Cost	% Defic.	Deficiency Cost
Grinnell Blvd	Bradley Rd	Powers Blvd	$1,573,753	75.8%	$1,193,583
Walker Rd	Black Forest Rd	Elbert Rd	$2,585,028	13.6%	$352,163
Drennan Rd	Curtis Rd	Ellicott Hwy	$3,034,141	0.8%	$24,925
Harrisville Rd	Blasingame Rd	Ramah Hwy	$602,027	33.8%	$203,575
Total Deficiency Cost					$1,774,246
÷ Total County Trip Ends, 2010					4,906,146
Deficiency Credit per Trip					$0.36

Source: Program costs and deficiency percentages from Table 19 and Table 20 in the Appendix; total county trip ends from Table 6.

Subtracting the deficiency credit from the cost per trip end results in a net cost of $348 per trip end, as shown in Table 8.

Table 8. Net Cost per Trip

Cost per Trip End	$348.44
– Deficiency Credit per Trip End	-$0.36
Net Cost per Trip End	$348.08

Source: Cost per trip end from Table 5; deficiency credit from Table 7.

TRAVEL DEMAND

In order to determine road impact fees for particular land use categories, the travel demand associated with a unit of development (dwelling unit, 1,000 square feet of nonresidential development, etc.) must be determined. For the purpose of this study, travel demand is expressed in terms of daily trip ends, adjusted to account for pass-by and diverted-linked trips, as well as average trip length by trip purpose. Trip characteristics are drawn from national data, and calibrated to ensure that they reflect local travel demand.

Land Use Categories

The current interim fee schedule lists 34 nonresidential land use categories, and the fees vary enormously. The interim fees for retail/commercial uses, for example, range from $266 per 1,000 sq. ft. for a furniture store to $17,141 per 1,000 sq. ft. for a fast food restaurant.

An alternative approach would be to drastically simplify the fee schedule, reducing the listings in the fee schedule to a few, broadly-defined categories. This approach would eliminate the very high fees for uses like banks, restaurants, gas stations and convenience stores, vastly simplify fee administration (it would be very simple to identify the appropriate category in most cases), and avoid issues when uses of existing commercial buildings change, as they often do. This approach is reasonable, since impact fees are designed to mitigate long-term average impacts, not to predict short-term impacts on nearby facilities (the appropriate focus of traffic studies). Most uses occur in shopping centers, and the trip rates for shopping centers include a broad mix of uses (ITE notes that some of the studies include trips generated by out-parcels, which are often occupied by high-traffic uses such as gas stations and fast food restaurants).

The proposed approach utilizes the following land use categories: single-family detached, multi-family, hotel/motel, general commercial, convenience commercial, office, public/institutional, industrial, warehouse and mini-warehouse. The convenience commercial category consists of fast food restaurants, gas stations and convenience markets. The public/institutional category includes uses such as schools, churches, nursing homes and hospitals.

The current land use categories from the interim fees are compared to the recommended categories in Table 9 below. The total number of categories would shrink from 36 to 10.

Table 9. Current and Proposed Land Use Categories

Proposed Categories	Existing Land Use Categories
Single-Family Detached	Single-Family Detached
Multi-Family	Multi-Family
Hotel/Motel	Hotel
	Motel
General Commercial	Neighorhood Commercial (50,000 sf)
	Commercial/Retail (100,000 sf)
	Community Commercial (200,000 sf)
	Convenience Market
	Hardware/Paint Store
	Home Improvement Superstore
	Pharmacy
	Furniture Store
	Bank
	Quality Restaurant
	High-Turnover Restaurant
	Discount Superstore
	Supermarket
	Nursery - Garden Center
	Nursery - Wholesale
	Health Club
	Commercial - Mixed Use
	Golf Course
Convenience Commercial	Fast Food Restaurant
	Gasoline Service Station
	Convenience Market w/Gas
Office	Office
	Business Park
Public/Institutional	Elementary School
	Middle School
	High School
	Church
	Park/Open Space
Industrial/Manufacturing	Light Industrial
	Heavy Industrial
	Industrial Park
Warehouse	(no existing category)
Mini Warehouse	Mini Warehouse

Trip Characteristics

The travel demand generated by specific land use types in El Paso County is a product of four factors: 1) trip generation, 2) percent new trips, 3) average trip length and 4) a local adjustment factor to calibrate national travel characteristics to reflect local travel demand.

Trip Generation

Trip generation rates are based on information published in the most recent edition of the Institute of Transportation Engineers' (ITE) *Trip Generation* manual. Trip generation rates represent trip ends, or driveway crossings at the site of a land use. Thus, a single one-way trip from home to work counts as one trip end for the residence and one trip end for the work place, for a total of two trip ends.

New Trip Factor

Trip rates must be adjusted by a "new trip factor" to exclude pass-by and diverted-linked trips. This adjustment is intended to reduce the possibility of over-counting by only including primary trips generated by the development. Pass-by trips are those trips that are already on a particular route for a different purpose and simply stop at a development on that route. For example, a stop at a convenience store on the way home from the office is a pass-by trip for the convenience store. A pass by trip does not create an additional burden on the street system and therefore should not be counted in the assessment of impact fees. A diverted-linked trip is similar to a pass-by trip, but a diversion is made from the regular route to make an interim stop. The reduction for pass-by and diverted-linked trips was drawn from ITE and other published information.

The interim fees reduce the trip generation rates to account for pass-by trips, but make no such reduction for diverted-linked trips, because the data is less available than it is for pass-by trips for many land uses. Under the proposed consolidated schedule, however, data on diverted-linked trips are only needed for general and convenience commercial uses. Convenience commercial uses are discussed below. General commercial trip rates are based on shopping centers, and that data is quite robust. Of the 100 studies listed in the Institute of Transportation Engineers (ITE) *Trip Generation Handbook*, 2004, for shopping centers, 60 have information on both pass-by and diverted trips. The average new trip percentage is 42%, excluding all pass-by and diverted trips.

Average Trip Length

Average trip lengths are not used directly, but instead are used to develop trip length adjustment factors. The factors are multiplied by the trip rates to take into account the fact that trips for some land uses are shorter or longer than average. The trip length factors are derived from the U.S. Department of Transportation's 2009 National Household Travel Survey, using the following trip purposes (see Table 10).

Table 10. Land Use/Trip Purpose Matrix

Land Use Category	Trip Purpose
Single-Family	Single-Family
Multi-Family	Multi-Family
Hotel/Motel	Average
Commercial/Retail	Shopping
Office	Family/Personal
Public/Institutional	School/Church
Industrial	To or From Work
Warehouse	To or From Work
Mini Warehouse	Family/Personal

Convenience Commercial Category

The convenience commercial category requires some additional analysis. Average daily trip generation data per 1,000 square feet are available for the following three land use categories: Fast Food with Drive-Through (ITE 934), Convenience Market (Open 24 Hours) (ITE 851) and Convenience Market with Gasoline Pumps (ITE 853). Average daily trip generation data are also available per fueling position for Convenience Market with Gasoline Pumps (ITE 853), Gasoline/Service Station (ITE 944), and Gasoline/Service Station with Convenience Market (ITE 945). However, since convenience stores with and without gas pumps tend to have very similar trip generation, it would seem to make more sense to base the fees on building square footage.

Data on pass-by and diverted-linked trips are also available for the same three land use categories. Using the same procedure recommended for general commercial, the new trip percentage excludes both pass-by and diverted trips. The number of new trips that would be generated by each of these three land uses is shown in Table 11. Note that all three land uses have reasonably similar new trip generation. To be conservative, the fee will be based on the lowest of the three.

Table 11. Convenience Commercial Trip Generation Characteristics

ITE		Daily		New	No. of Studies	
Code	Land Use Description	Trip Rate	% New	Trips	Trips	% New
934	Fast Food w/Drive Thru (1,000 sf)	496.12	29.9%	148.34	21	7
853	Convenience Market w/Gasoline Pumps (1,000 sf)	845.60	16.2%	136.99	10	15
851	Convenience Market (Open 24 Hours) (1,000 sf)	737.99	23.9%	176.38	8	11

Source: Trips are average daily trips on a weekday from ITE, *Trip Generation*, 2008; percent new trips from ITE, *Trip Generation Handbook*, 2004 (excludes pass-by and ½ of diverted-linked trips)

While there are reasonably good national data on trip generation for these uses, there are limited data on average trip length. However, extensive studies have been done in Florida, and these are summarized in Table 12. Again, to be conservative, the shortest of these average trip lengths will be used.

Table 12. Convenience Commercial Trip Length Characteristics

ITE Code	Land Use Description	Avg. Trip Length (mi.)	No. of Studies
934	Fast Food w/Drive Thru	2.42	16
945	Service Station with Convenience Market	1.57	9
851	Convenience Market (Open 24 Hours)	1.52	9

Source: Tindale-Oliver & Associates, *Collier County Transportation Impact Fee Update*, February 2009.

Based on the foregoing, a "convenience commercial" use, defined as consisting of fast food restaurants with drive-through windows, convenience stores and gasoline service station (with or without convenience retail sales), could be added to the recommended travel demand schedule.

Travel Demand Schedule

The recommended travel demand schedule for the consolidated land use categories is based on national travel data, calibrated to local conditions. Average daily trip rates and the reduction for commercial retail uses to account for pass-by and diverted-linked trips are from the most recent Institute of Transportation Engineers (ITE) publications. Average trip lengths are from the National Household Travel Survey. The resulting "adjusted" trip rates are then calibrated against existing and modeled trips on the major roadway network (the calibration factor is described below). The recommended travel demand schedule is presented in Table 13.

Table 13. Recommended Travel Demand Schedule

Land Use	Unit	Trips	% New	Trip Length	Length Factor	Adj. Trips	Calibration Factor	Calibrated Trips
Single-Family	Dwelling	9.57	100%	9.16	0.99	9.47	0.95	9.00
Multi-Family	Dwelling	6.65	100%	8.30	0.89	5.92	0.95	5.62
Hotel/Motel	Room	6.90	100%	9.28	1.00	6.90	0.95	6.56
General Commercial	1,000 sf	42.94	42%	6.27	0.68	12.26	0.95	11.65
Convenience Comm.	1,000 sf	845.60	16%	1.52	0.16	21.65	0.95	20.57
Office	1,000 sf	11.01	100%	6.61	0.71	7.82	0.95	7.43
Public/Institutional	1,000 sf	9.11	100%	8.47	0.91	8.29	0.95	7.88
Industrial	1,000 sf	6.96	100%	11.98	1.29	8.98	0.95	8.53
Warehouse	1,000 sf	3.56	100%	11.98	1.29	4.59	0.95	4.36
Mini Warehouse	1,000 sf	2.50	100%	6.61	0.71	1.78	0.95	1.69

Source: Trips are average daily trips on a weekday from ITE, *Trip Generation*, 2008; percent new trips for shopping centers from ITE, *Trip Generation Handbook*, 2004 (excludes pass-by and diverted-linked trips); average trip lengths in miles from U.S. Department of Transportation, 2009 National Household Travel Survey; convenience commercial factors from Table 11 and Table 12; trip length factor is ratio of trip length to average trip length for all trip purposes (9.28 miles); adjusted trips is product of trips, percent new trips and trip length factor; calibration factor from Table 14; calibrated trips is product of adjusted trips and calibration factor.

Calibration Factor

To calibrate the travel demand schedule, the "expected" number of trips that would be generated using the adjusted trip rates and the 2010 and 2040 socioeconomic forecasts for the unincorporated area are compared to 2010 and 2040 modeled trips that are attributable to the unincorporated area (i.e., excluding trips that do not have an origin or destination in the unincorporated area). The results are summarized in Table 14. The first step is to convert retail, service and basic employees

to 1,000 sq. ft., using employee density factors. A weighted average of single-family detached and multi-family trip rates, based on 85% single-family and 15% multi-family, is used for the residential trip rate.[1] The retail/commercial rate is used for retail, office for service and the average of industrial and warehouse for basic.

The calibration factor is the ratio of modeled to expected trips. Calibration factors were developed for 2010, 2040 and new trips expected over the 2010-2040 period. For 2010 and 2040, expected trips derived from "adjusted" trip rates in the travel demand schedule under-predict modeled trips attributed to the unincorporated area. For new trips expected over the 2010-2040 period, the travel demand schedule over-predicts. Consequently, the 2010-2040 calibration factor is applied to the adjusted trips in the travel demand schedule, resulting in a 5% across-the-board reduction from the adjusted trip rates in Table 13.

Table 14. Calibration Factor

	Residential	Retail	Service	Basic	Total
2010 Units/Employees	61,938	9,383	31,113	12,060	na
2040 Units/Employees	146,119	20,603	75,508	29,303	na
New Units/Employees	84,181	11,220	44,395	17,243	na
Employees/1,000 sq. ft.	na	0.90	2.31	0.74	na
2010 Units/1,000 sq. ft.	61,938	10,426	13,469	16,297	na
2040 Units/1,000 sq. ft.	146,119	22,892	32,687	39,599	na
New Units/1,000 sq. ft.	84,181	12,466	19,218	23,302	na
Adjusted Trip Rates	8.94	12.26	7.82	6.79	na
Expected 2010 Trip Ends	553,726	127,823	105,328	110,657	897,534
Expected 2040 Trip Ends	1,306,304	280,656	255,612	268,877	2,111,449
Expected New Trip Ends	752,578	152,833	150,285	158,221	1,213,917
Modeled 2010 Trip Ends	na	na	na	na	1,038,369
Modeled 2040 Trip Ends	na	na	na	na	2,189,051
Modeled New Trip Ends	na	na	na	na	1,150,682
2010 Calibration Factor	na	na	na	na	1.16
2040 Calibration Factor	na	na	na	na	1.04
2010-2040 Calibration Factor	na	na	na	na	0.95

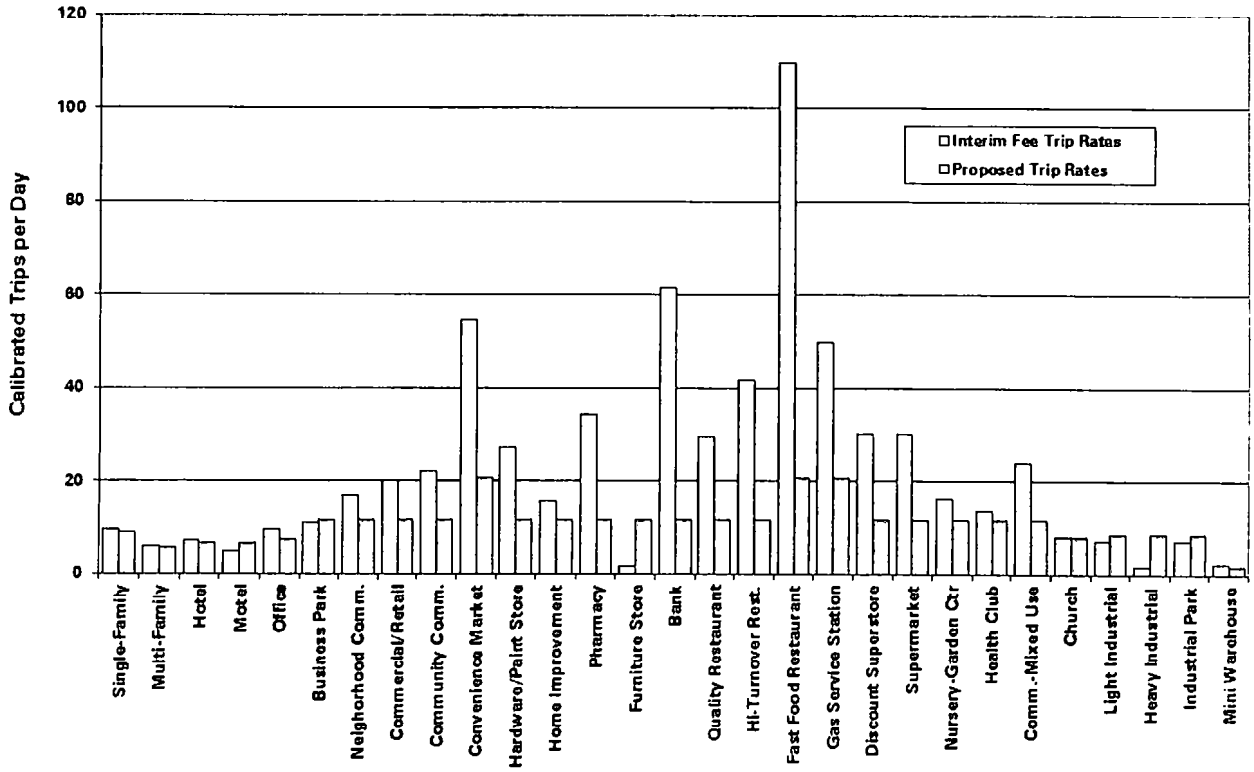
Source: 2010 and 2040 residential units and employees from LSA Associates, "Control Totals for 2040 and 2060 Socioeconomic Forecasts," March 14, 2011; employees per 1,000 sq. ft. from U.S. Department of Energy, *Commercial Buildings Energy Consumption Survey*, 2003 (retail includes mall and non-mall, basic is average of industrial and warehouse); adjusted trip rates from Table 13 (residential is weighted 85% single-family detached and 15% multi-family, basic is average of industrial and warehouse); expected trips is product of units/1,000 sq. ft. and adjusted trip rates; modeled trips from LSA Associates, "2040 Major Transportation Corridors Plan Modeled Trips and Trip Ends," March 14, 2011; calibration factor is ratio of modeled to expected trips.

[1] The *El Paso County Policy Plan* indicates that, 11.4% of housing in the unincorporated area was multi-family in 1995. The 2000 Census reveals that 14.2% of housing in the unincorporated area was multi-family. Fifteen percent was chosen as a reasonable estimate of multi-family housing in 2010, and the same estimate was used for 2040.

Comparative Travel Demand

When the land use categories are consolidated and the commercial trips are reduced by the recommended factor to account for both pass-by and diverted trips, and then calibrated for future conditions, the trip rates used in the interim fee change as shown in Figure 7 (residential trip rates are per dwelling, hotel/motel per room, others per 1,000 sq. ft.).

Figure 7. Comparison of Interim and Proposed Trip Rates



FEE SCHEDULE

The road impact fees for the recommended land use categories calculated in this study are presented in Table 15. The impact fee calculation for each land use category is the product of daily trip ends per development unit and the net cost per trip end.

Table 15. Road Impact Fee Schedule

Land Use	Unit	Trips	Net Cost per Trip	Fee per Unit
Single-Family	Dwelling	9.00	$348	$3,132
Multi-Family	Dwelling	5.62	$348	$1,956
Hotel/Motel	Room	6.56	$348	$2,283
General Commercial	1,000 sf	11.65	$348	$4,054
Convenience Comm.	1,000 sf	20.57	$348	$7,158
Office	1,000 sf	7.43	$348	$2,586
Public/Institutional	1,000 sf	7.88	$348	$2,742
Industrial	1,000 sf	8.53	$348	$2,968
Warehouse	1,000 sf	4.36	$348	$1,517
Mini Warehouse	1,000 sf	1.69	$348	$588

Source: Trips per unit are calibrated trips from Table 13; net cost per trip (rounded to nearest dollar) from Table 8.

APPENDIX

Table 16. Standardized Unit Costs – Segments

Component	Unit	Quantity	Unit Cost	Cost	Source and Notes
BASE ROAD, Urban Residential Collector					**EPC Engineering Criteria Manual Figure 2-15**
Asphalt	ft.	36	$3.11	$112.00	Assumed 7" depth and $4/sq. yd.-in.
Curb	ea.	2	$12.00	$24.00	Machine pour, Type 1, prep. and backfill @ $1
Earthwork	cy.	0.926	$2.00	$1.85	Used $2/cu. yd. and .5 ft. of cut/fill times 50 ft.
Subtotal				$137.85	
Const. Mgmt.		6%		$8.27	Includes engineering, surveying, soils work
R.O.W.	ft.	60	$0.50	$30.00	Used $21,780/acre based on EPC school/park f
Total				**$176.12**	
Rural Minor Collector					**EPC Engineering Criteria Manual Figure 2-7**
Asphalt	ft.	32	$2.67	$85.33	Assumed 6" depth and $4/sq. yd.-in.
Shoulder	ea.	2	$12.00	$24.00	Gravel, 6' each side equivalent, $12/ft
Earthwork	cy.	1.204	$2.00	$2.41	Used $2/cu. yd. and .5 ft. of cut/fill times 65 ft.
Subtotal				$111.74	
Const. Mgmt.		6%		$6.70	Includes engineering, surveying, soils work
R.O.W.	ft.	80	$0.50	$40.00	Used $21,780/acre based on EPC school/park f
Total				**$158.45**	
Rural Minor Arterial					**EPC Engineering Criteria Manual Figure 2-5**
Asphalt	ft.	40	$3.11	$124.44	Assumed 7" depth and $4/sq. yd.-in.
Shoulder	ea.	2	$12.00	$24.00	Gravel, 6' each side equivalent
Earthwork	cy.	1.574	$2.00	$3.15	$2/cu. yd. and .5 ft. of cut/fill times 85 ft.
Subtotal				$151.59	
Const. Mgmt.		6%		$9.10	Includes engineering, surveying, soils work
R.O.W.	ft.	100	$0.50	$50.00	$21,780/acre based on EPC school/park fee
Total				**$210.69**	
Urban Non-residential Collector					**EPC Engineering Criteria Manual Figure 2-14**
Asphalt	ft.	48	$3.11	$149.33	Assumed 7" depth and $4/sq. yd.-in.
Shoulder	ea.	2	$12.00	$24.00	Machine pour, Type 1, prep. and backfill
Earthwork	cy.	1.204	$2.00	$2.41	$2/cu. yd. and .5 ft. of cut/fill times 65 ft.
Subtotal				$175.74	
Const. Mgmt.		6%		$10.54	Includes engineering, surveying, soils work
R.O.W.	ft.	80	$0.50	$40.00	$21,780/acre based on EPC school/park fee
Total				**$226.29**	
Urban Minor Arterial					**EPC Engineering Criteria Manual Figure 2-13**
Asphalt	ft.	62	$3.56	$220.44	Assumed 8" depth and $4/sq. yd.-in.
Shoulder	ea.	2	$12.00	$24.00	Machine pour, Type 1, prep. and backfill
Earthwork	cy.	1.574	$2.00	$3.15	$2/cu. yd. and .5 ft. of cut/fill times 85 ft.
Subtotal				$247.59	
Const. Mgmt.		6%		$14.86	Includes engineering, surveying, soils work
R.O.W.	ft.	100	$0.50	$50.00	$21,780/acre based on EPC school/park fee
Total				**$312.45**	

Table 16. Continued

Component	Unit	Quantity	Unit Cost	Cost	Source and Notes
Urban Principal Arterial (4 lanes)					**EPC Engineering Criteria Manual Figure 2-12**
Asphalt	ft.	72	$4.00	$288.00	Assumed 9" depth and $4/sq. yd.-in.
Shoulder	ea.	4	$18.50	$74.00	Type 1 curb with 2 4' aprons @ $3.25/s.f.
Earthwork	cy.	2.130	$2.00	$4.26	$2/cu. yd. and .5 ft. of cut/fill times 115 ft.
Subtotal				$366.26	
Const. Mgmt.		6%		$21.98	Includes engineering, surveying, soils work
R.O.W.	ft.	130	$0.50	$65.00	$21,780/acre based on EPC school/park fee
Total				**$453.23**	
Urban Principal Arterial (6 lanes)					**EPC Engineering Criteria Manual Figure 2-11**
Asphalt	ft.	96	$4.44	$426.67	Assumed 10" depth and $4/sq. yd.-in.
Shoulder	ea.	4	$18.50	$74.00	Type 1 curb with 2 4' aprons @ $3.25/s.f.
Earthwork	cy.	2.685	$2.00	$5.37	$2/cu. yd. and .5 ft. of cut/fill times 145 ft.
Subtotal				$506.04	
Const. Mgmt.		6%		$30.36	Includes engineering, surveying, soils work
R.O.W.	ft.	160	$0.50	$80.00	$21,780/acre based on EPC school/park fee
Total				**$616.40**	
Urban Expressway (4 lanes)					**EPC Engineering Criteria Manual Figure 2-10**
Asphalt	ft.	72	$4.44	$320.00	Assumed 10" depth and $4/sq. yd.-in.
Shoulder	ea.	4	$18.50	$74.00	Type 1 curb with 2 4' aprons @ $3.25/s.f.
Earthwork	cy.	2.315	$2.00	$4.63	$2/cu. yd. and .5 ft. of cut/fill times 125 ft.
Subtotal				$398.63	
Const. Mgmt.		6%		$23.92	Includes engineering, surveying, soils work
R.O.W.	ft.	140	$0.50	$70.00	$21,780/acre based on EPC school/park fee
Total				**$492.55**	
Urban Expressway (6 lanes)					**EPC Engineering Criteria Manual Figure 2-9**
Asphalt	ft.	96	$4.44	$426.67	Assumed 10" depth and $4/sq. yd.-in.
Shoulder	ea.	4	$18.50	$74.00	Type 1 curb with 2 4' aprons @ $3.25/s.f.
Earthwork	cy.	2.7	$2.00	$5.37	$2/cu. yd. and .5 ft. of cut/fill times 145 ft.
Subtotal				$506.04	
Const. Mgmt.		6%		$30.36	Includes engineering, surveying, soils work
R.O.W.	ft.	160	$0.50	$80.00	$21,780/acre based on EPC school/park fee
Total				**$616.40**	
Rural Principal Arterial (4 lane)					**EPC Engineering Criteria Manual Figure 2-4**
Asphalt	ft.	76	$3.78	$287.11	Assumed 8.5" depth and $4/sq. yd.-in.
Shoulder	ea.	4	$10.00	$40.00	4' X 10" shoulder tapered to nothing @ 4'
Earthwork	cy.	2.685	$2.00	$5.37	$2/cu. yd. and .5 ft. of cut/fill times 145 ft.
Subtotal				$332.48	
Const. Mgmt.		6%		$19.95	Includes engineering, surveying, soils work
R.O.W.	ft.	180	$0.50	$90.00	$21,780/acre based on EPC school/park fee
Total				**$442.43**	

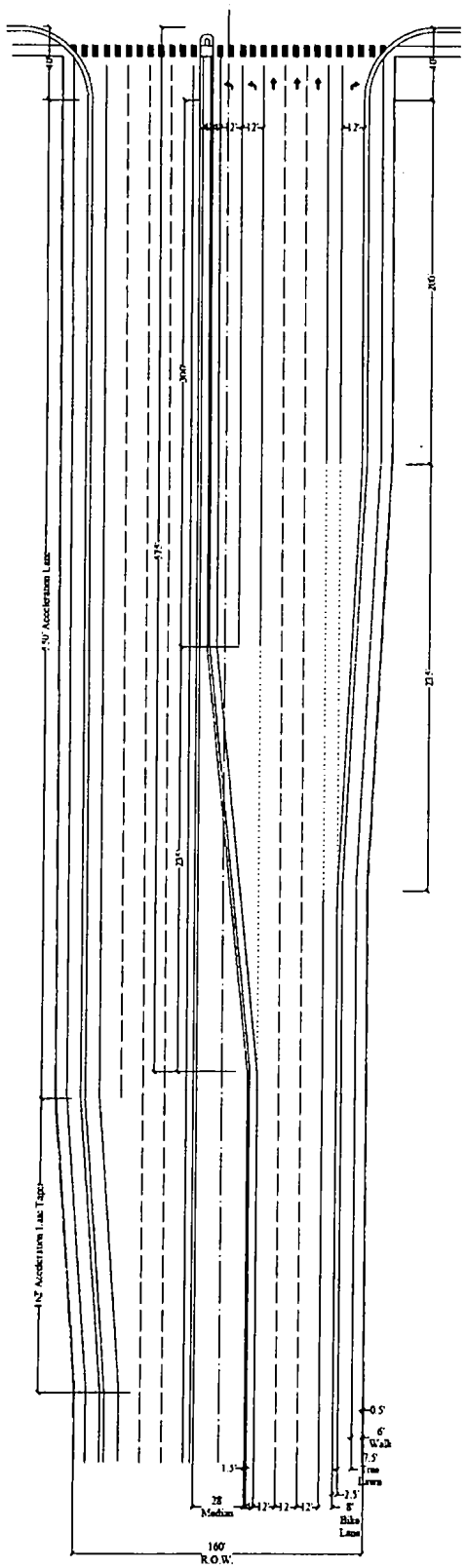
Table 16. Continued

Component	Unit	Quantity	Unit Cost	Cost	Source and Notes
Rural Principal Arterial (6 lane)					**EPC Engineering Criteria Manual Figure 2-3**
Asphalt	ft.	112	$4.44	$497.78	Assumed 10" depth and $4/sq. yd.-in.
Shoulder	ea.	4	$10.00	$40.00	4' X 10" shoulder tapered to nothing @ 4'
Earthwork	cy.	3.519	$2.00	$7.04	$2/cu. yd. and .5 ft. of cut/fill times 190 ft.
Subtotal				$544.81	
Const. Mgmt.		6%		$32.69	Includes engineering, surveying, soils work
R.O.W.	ft.	210	$0.50	$105.00	$21,780/acre based on EPC school/park fee
Total				**$682.50**	
Rural Expressway (4 lane)					**EPC Engineering Criteria Manual Figure 2-2**
Asphalt	ft.	76	$4.00	$304.00	Assumed 9" depth and $4/sq. yd.-in.
Shoulder	ea.	4	$10.00	$40.00	4' X 10" shoulder tapered to nothing @ 4'
Earthwork	cy.	3.1	$2.00	$6.11	$2/cu. yd. and .5 ft. of cut/fill times 165 ft.
Subtotal				$350.11	
Const. Mgmt.		6%		$21.01	Includes engineering, surveying, soils work
R.O.W.	ft.	180	$0.50	$90.00	$21,780/acre based on EPC school/park fee
Total				**$461.12**	
Rural Expressway (6 lane)					**EPC Engineering Criteria Manual Figure 2-1**
Asphalt	ft.	112	$4.00	$448.00	Assumed 9" depth and $4/sq. yd.-in.
Shoulder	ea.	4	$10.00	$40.00	4' X 10" shoulder tapered to nothing @ 4'
Earthwork	cy.	3.519	$2.00	$7.04	$2/cu. yd. and .5 ft. of cut/fill times 190 ft.
Subtotal				$495.04	
Const. Mgmt.		6%		$29.70	Includes engineering, surveying, soils work
R.O.W.	ft.	210	$0.50	$105.00	$21,780/acre based on EPC school/park fee
Total				**$629.74**	
State Road, Type A (4 lane divided)					**CDOT Standard Plans Figure 4-1**
Asphalt	ft.	76	$3.78	$287.11	Assumed 8.5" depth and $4/sq. yd.-in.
Shoulder	ea.	0		$0.00	Not used by CDOT
Earthwork	cy.	2.7	$2.00	$5.40	$2/cu. yd. and .5 ft. of cut/fill times 145 ft.
Subtotal				$292.51	
Const. Mgmt.		6%		$17.55	Includes engineering, surveying, soils work
R.O.W.	ft.	180	$0.50	$90.00	$21,780/acre based on EPC school/park fee
Total				**$400.06**	
State Road, Type AA (6 lane divided)					**CDOT Standard Plans Figure 4-1**
Asphalt	ft.	112	$4.44	$497.78	Assumed 10" depth and $4/sq. yd.-in.
Shoulder	ea.	0		$0.00	Not used by CDOT
Earthwork	cy.	3.500	$2.00	$7.00	$2/cu. yd. and .5 ft. of cut/fill times 190ft.
Subtotal				$504.78	
Const. Mgmt.		6%		$30.29	Includes engineering, surveying, soils work
R.O.W.	ft.	210	$0.50	$105.00	$21,780/acre based on EPC school/park fee
Total				**$640.06**	

Source: LSA Associates, data from Major Transportation Corridors Plan analysis, February 28, 2011.

Figure 8. Intersection Diagrams

Urban Principal Arterial (6 lanes) with Acceleration Lane



Urban Principal Arterial (4 lanes) with Acceleration Lane and 2 Left Turn Lanes

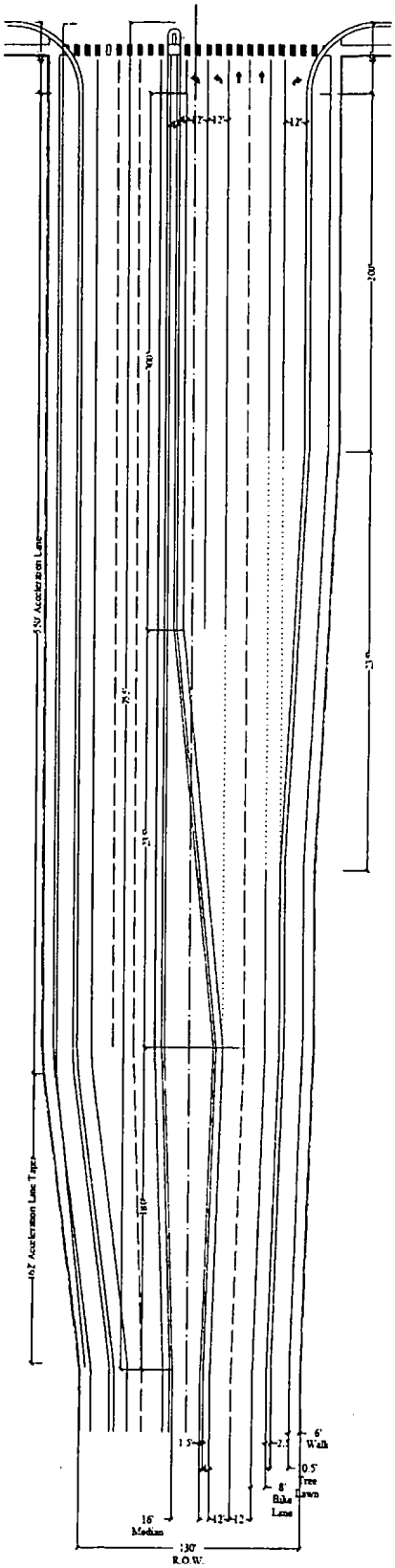
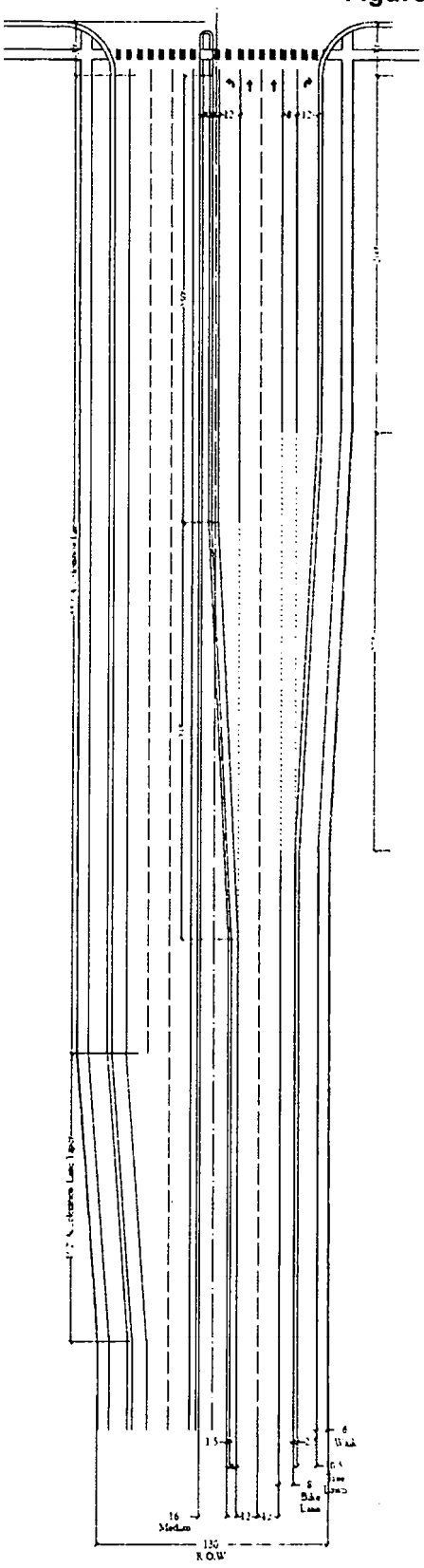
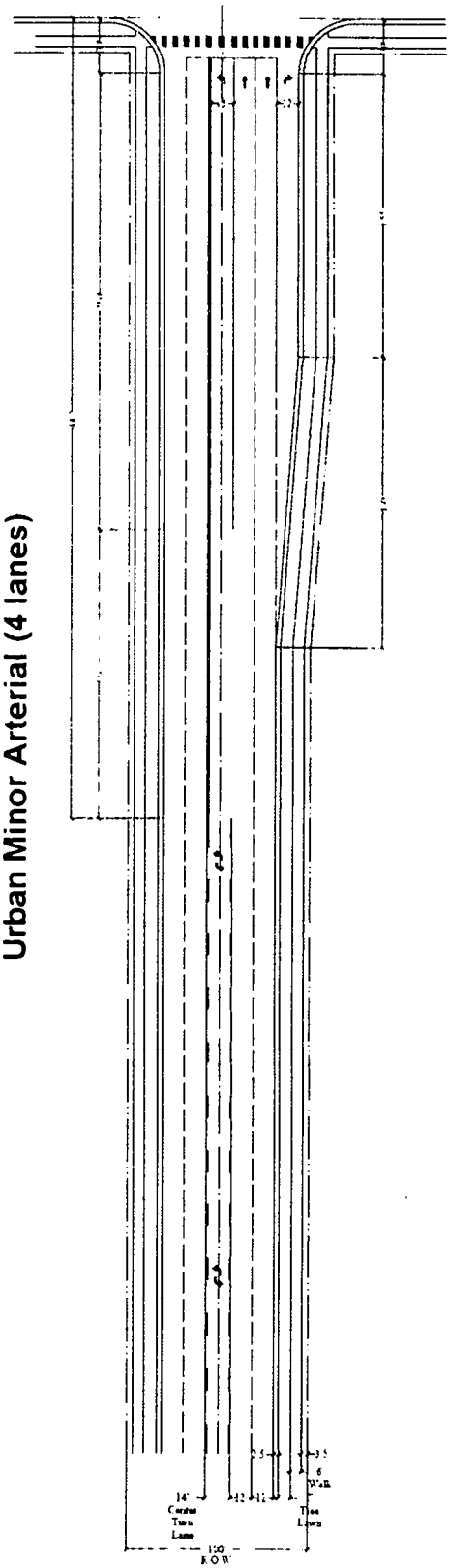


Figure 8. Continued

Urban Principal Arterial (4 lanes) with Acceleration Lane and 1 Left Turn Lane



Urban Minor Arterial (4 lanes)



The standardized unit cost for intersections used in the fee calculations are shown in Table 17. These costs are per intersection leg. A standard four-way intersection will have four intersection legs.

Table 17. Standardized Unit Costs – Intersection Legs

Component	Unit	Quantity	Unit Cost	Cost	Source and Notes
Urban Minor Arterial					
Asphalt	cu. yards	752	$144.00	$108,302	Assumed 8" depth
Curb	linear feet	880	$12.00	$10,560	Machine pour, Type 1, prep. and backfill
Earthwork	cu. yards	771	$2.00	$1,542	Used 0.5 ft. of cut/fill times 85 ft.
Subtotal				$120,404	
Const. Mgmt.		6%		$7,224	Includes engineering, surveying, soils work
R.O.W.	sq. feet	47,180	$0.50	$23,590	Used $21,780/acre based on EPC school/park fe
Total Cost of Intersection Leg				$151,219	
– Base Cost	feet	440	$312.45	-$137,478	From Appendix A: Standardized Unit Costs
Additional Cost of Intersection Leg				**$13,741**	
Urban Principal Arterial (4 Lanes), 1 Left Turn Lane					
Asphalt	cu. yards	1,451	$144.00	$208,900	Assumed 8" depth
Curb	linear feet	2,060	$18.50	$38,110	Machine pour, Type 1, prep. and backfill
Earthwork	cu. yards	1,288	$2.00	$2,576	Used $2/cu. yd. and .5 ft. of cut/fill times 50 ft.
Subtotal				$249,586	
Const. Mgmt.		6%		$14,975	Includes engineering, surveying, soils work
R.O.W.	sq. feet	77,300	$0.50	$38,650	Used $21,780/acre based on EPC school/park fe
Total Cost of Intersection Leg				$303,211	
– Base Cost	feet	515	$453.23	-$233,413	From Appendix A: Standardized Unit Costs
Additional Cost of Intersection Leg				**$69,798**	
Urban Principal Arterial (4 Lanes), 2 Left Turn Lanes					
Asphalt	cu. yards	2,152	$144.00	$309,860	Assumed 8" depth
Curb	linear feet	3,020	$18.50	$55,870	Machine pour, Type 1, prep. and backfill
Earthwork	cu. yards	1,984	$2.00	$3,968	Used $2/cu. yd. and .5 ft. of cut/fill times 50 ft.
Subtotal				$369,698	
Const. Mgmt.		6%		$22,182	Includes engineering, surveying, soils work
R.O.W.	sq. feet	118,150	$0.50	$59,075	Used $21,780/acre based on EPC school/park fe
Total Cost of Intersection Leg				$450,955	
– Base Cost	feet	755	$453.23	-$342,189	From Appendix A: Standardized Unit Costs
Additional Cost of Intersection Leg				**$108,767**	
Urban Principal Arterial (6 Lanes)					
Asphalt	cu. yards	2,389	$144.00	$344,009	Assumed 8" depth
Curb	linear feet	2,300	$18.50	$42,550	Machine pour, Type 1, prep. and backfill
Earthwork	cu. yards	1,751	$2.00	$3,502	Used $2/cu. yd. and .5 ft. of cut/fill times 50 ft.
Subtotal				$390,061	
Const. Mgmt.		6%		$23,404	Includes engineering, surveying, soils work
R.O.W.	sq. feet	103,190	$0.50	$51,595	Used $21,780/acre based on EPC school/park fe
Total Cost of Intersection Leg				$465,060	
– Base Cost	feet	575	$616.40	-$354,430	From Appendix A: Standardized Unit Costs
Additional Cost of Intersection Leg				**$110,630**	

Source: LSA Associates, data from Major Transportation Corridors Plan analysis, February 28, 2011.

Table 18. Planned Improvement Descriptions and Traffic Volumes

Corridor	From	To	Mi.	Lanes Ex	Lanes Fut	Class Ex	Class Fut	2010 Trips Total	2010 Trips Thru	LOS D Cap.	2040 Trips Total	2040 Trips Thru
Stapleton Rd	Black Forest Rd	Towner Ave	4.855	0	4	-	PA	0	0	0	25,035	178
Stapleton Rd	Meridian Ranch	Eastonville Rd	1.156	0	4	-	PA	0	0	0	9,289	149
Stapleton Rd	US-24	Judge Orr Rd	1.096	0	2	-	PA	0	0	0	6,902	0
Stapleton Rd	Towner Ave	Meridian Ranch	0.787	2	4	C	PA	4,577	92	9,500	18,759	174
Banning Lewis Py	Stapleton	Woodmen Rd	1.504	0	4	-	PA	0	0	0	21,011	0
Meridian Rd	Bradley Rd	Mesa Ridge Py	3.491	2	4	MA	MA	0	0	0	7,045	0
Gerrett Rd	US-24	Meridian Rd	1.083	2	4	MA	PA	4,590	0	12,600	17,975	0
Constitution Ave	Powers	US-24	2.467	4	6	PA	PA	15,813	3,531	28,400	40,738	13,389
Marksheffel Rd	N of Fontaine	Link Rd	2.738	2	4	MA	EX	7,893	2,567	12,600	23,123	6,251
Walker Rd	Woodmoor Rd	SH 83	2.990	2	4	MA	PA	8,844	132	12,600	16,756	308
Bradley Rd	Academy Rd	Hancock Expy	1.027	2	4	MA	PA	7,441	30	12,600	19,826	2,111
Bradley Rd	Grinnell Blvd	Powers Blvd	2.104	2	4	MA	PA	2,549	759	12,600	13,725	2,120
Woodmen	Marksheffel Rd	Mohawk Dr	0.880	4	6	EX	EX	33,575	602	36,920	47,903	9,337
Mesa Ridge Pkwy	Powers Blvd	Marksheffel Rd	0.742	0	4	-	PA	0	0	0	27,328	96
Vollmer Rd	Black Forest Rd	Stapleton Rd	1.600	2	4	MA	MA	6,374	0	12,600	17,319	7
Banning Lewis Py	Dublin Rd	Woodmen Rd	0.967	0	4	-	EX	0	0	0	22,555	0
Grinnell Blvd	Bradley Rd	Powers Blvd	0.594	2	4	MA	MA	17,504	4,980	12,600	19,066	6,760
Meridian Rd	US-24 Intersection Impvmt		0.396	2	4	MA	MA	15,579	38	12,600	15,400	0
Peaceful Valley	Marksheffel Rd	Meridian	2.565	0	2	-	MA	0	0	0	57	0
S-curve at Falcon	Falcon Hwy	Peyton Hwy	2.087	0	2	-	MA	0	0	0	2,011	33
Marksheffel Rd N	Woodmen Rd	Research Pky	1.699	0	4	-	PA	0	0	0	22,051	6,834
Fontaine Blvd	Marksheffel Rd	Terminus	1.100	0	4	-	PA	0	0	0	17,051	0
Fontaine Blvd	Terminus	Meridian Rd	1.172	0	4	-	PA	0	0	0	17,051	0
Academy Blvd	B-Street	US-85	1.500	0	4	-	PA	26,151	13,409	36,920	33,505	13,151
Meridian Rd	Stapleton Rd	Rex Rd	0.966	0	4	-	PA	11,992	0	12,600	18,532	0
Meridian Rd	US-24	Ex Meridian Rd	0.181	0	4	-	PA	0	0	0	5,279	0
Log Rd	State Hwy 94	Drennan Rd	6.021	0	4	-	PA	0	0	0	3,261	0
Marksheffel Rd	N of Carefree Cir	Stetson Hills	1.157	0	4	-	PA	14,540	5,822	15,800	8,017	2,354
Subtotal, County Arterials			48.925									
County Line Rd	I-25	SH 83	5.193	2	2	U	MA	3,451	688	6,000	13,104	1,583
Walker Rd	Steppler Rd	Black Forest Rd	4.368	2	2	U	C	1,251	13	6,000	6,204	71
Burgess Rd	Vollmer Rd	Rex Rd	6.031	2	2	U	C	2,742	0	6,000	8,136	71
Judge Orr Rd	US-24	Peyton Hwy	5.372	2	2	U	C	1,580	0	6,000	9,680	0
Falcon Hwy	Peyton Hwy	Ellicott Hwy	8.457	2	2	U	C	4,995	0	6,000	11,360	0
Fontaine Blvd	Powers Blvd	Marksheffel	0.684	2	2	U	C	1,541	0	6,000	13,210	0
Fontaine Blvd	Grinnell Blvd	Powers Blvd	1.959	2	2	U	C	5,457	773	6,000	12,933	2,362
Black Forest Rd	Shoup Rd	Wildridge Rd	7.586	2	2	U	C	3,997	57	6,000	6,417	360
Meridian Rd	Rex Rd	Hodgen Rd	5.613	2	2	MA	MA	5,999	168	6,000	10,942	185
Slocum Rd	Jones Rd	SH 94	3.983	2	2	U	C	1,326	0	6,000	5,175	0
Old Pubelo Rd	Link Rd	I-25	5.811	2	2	U	C	1,282	29	6,000	7,365	36
Garrett Rd	Meridian Rd	Curtis Rd	2.944	2	2	U	MA	1,652	0	6,000	11,291	0
Old Ranch Rd	SH 83	Otero Ave	0.593	2	2	U	MA	2,540	1,221	6,000	10,840	4,189
Peyton Hwy	State Hwy 94	Drennan Rd	5.992	2	2	U	MA	1,041	27	6,000	8,315	581
Ellicott Hwy	State Hwy 94	Sanborn Rd	2.972	2	2	U	MA	1,867	0	6,000	11,496	0
Shoup Rd	State Hwy 83	Vollmer Rd	6.126	2	2	U	MA	3,750	0	6,000	12,838	240
Murphy Rd	Meridian Rd	Peyton Hwy	7.898	2	2	U	MA	1,942	217	6,000	7,173	331
Hay Creek Rd	Tapadero Rd	Old Denver Rd	2.486	2	2	U	C	3,301	0	6,000	8,076	0
Vollmer Rd	Stapleton Rd	Burgess Rd	1.958	2	2	U	MA	4,836	0	6,000	14,683	22

Table 18. Continued

Corridor	From	To	Mi.	Lanes Ex	Lanes Fut	Class Ex	Class Fut	2010 Trips Total	2010 Trips Thru	LOS D Cap.	2040 Trips Total	2040 Trips Thru
Vollmer Rd	Burgess Rd	Hodgen Rd	5.020	2	2	U	MA	2,068	0	6,000	9,770	8
Ayer Rd	Burgess Rd	Meridian Rd	1.487	2	2	U	C	2,033	0	6,000	10,805	26
S Blaney/Davis	Curtis Rd	Meridian Rd	3.873	2	2	U	C	927	0	6,000	7,647	0
Curtis Rd	Judge Orr Rd	SH 94	8.024	2	2	U	PA	2,102	0	6,000	6,645	0
Bradshaw Rd	Murphy Rd	US-24	1.838	2	2	U	C	4,326	322	6,000	8,117	304
Jones Rd	Curtis Rd	Slocum Rd	1.995	2	2	U	MA	823	0	6,000	7,153	0
Meridian Rd	New connection	Falcon Hwy	0.270	2	2	U	PA	8,292	0	6,000	5,279	0
Hanover Rd	Meridian Rd	Old Pubelo Rd	4.185	2	2	U	C	895	32	6,000	6,254	49
Eastonville Rd	Snaffle Bit Rd	Stapleton Rd	0.675	2	2	U	MA	82	0	6,000	594	0
Beacon Lite Rd	SH 105	County Line Rd	2.076	2	2	U	C	2,822	0	6,000	7,191	0
Eastonville Rd	S of Stapleton	Woodmen Rd	1.379	2	2	U	C	4,089	0	6,000	6,304	0
Hodgen Rd	Black Forest Rd	Eastonville Rd	6.716	2	2	U	MA	4,117	241	6,000	13,702	285
Subtotal, Rural Road Upgrades			123.565									
Walker Rd	Black Forest Rd	Elbert Rd	8.616	2	2	D	C	965	19	500	3,915	195
Hopper Rd	Elbert Rd	Bradshaw Rd	2.896	2	2	D	C	388	0	500	2,606	170
Sweet Rd	Peyton Hwy	Ellicott Hwy	4.971	2	2	D	C	362	0	500	1,872	0
Murphy Rd	Wagon Trail	Ellicott Hwy	4.046	2	2	D	C	245	0	500	1,077	0
Latigo Blvd	Eastonville Rd	Elbert Rd	1.600	2	2	D	C	112	0	500	1,094	0
Soad Weed Rd	US-24	2 mi n JudgeOr	0.989	2	2	D	C	320	0	500	940	31
Ramah Hwy	US-24	SH 94	19.883	2	2	D	C	201	16	500	643	46
Log Rd	Judge Orr Rd	SH 94	8.946	2	2	D	C	282	0	500	4,246	12
Big Springs Rd	Ellicott Hwy	Calhan Hwy	6.894	2	2	D	C	169	0	500	2,081	15
Jones Rd	Peyton Hwy	Ellicott Hwy	3.997	2	2	D	C	18	0	500	3,744	0
Drennan Rd	Curtis Rd	Ellicott Hwy	10.113	2	2	D	MA	524	0	500	3,407	0
Ellicott Hwy	Squirrel Crk Rd	Myers Rd	8.678	2	2	D	C	316	0	500	870	0
Eastonville Rd	Stapleton Rd	N of Latigo Blvc	4.331	2	2	D	MA	208	0	500	2,152	0
Harrisville Rd	Blasingame Rd	Ramah Hwy	2.007	2	2	D	C	973	0	500	1,898	0
Subtotal, Rural Road Paving			87.968									
Subtotal, County Road Improvements			260.458									
US-24	Elbert Rd	Calhan Hwy	13.503	2	4	PA	PA	10,155	2,128	15,800	20,428	2,744
US-24	SH 94	Woodmen Rd	4.435	4	6	EX	EX	22,120	2,166	36,920	47,349	8,473
State Hwy 94	Marksheffel Rd	Slocum Rd	6.111	4	6	EX	EX	15,909	634	36,920	39,563	3,587
State Hwy 94	Slocum Rd	Ellicott Hwy	6.996	2	4	PA	PA	9,091	402	15,800	28,611	1,229
US-24	SH 94	Powers Blvd	1.400	2	4	PA	PA	28,597	6,188	36,920	49,297	16,483
Powers Blvd Ext S	Mesa Ridge Py	Squirrel Crk Rd	1.466	0	4	-	PA	6,260	1,979	0	38,464	4,762
Powers Blvd Ext S	Squirrel Crk Rd	New Powers Ex	3.253	0	2	-	PA	1,472	308	0	11,761	2,172
Powers Blvd Ext S	New Powers Ext	I-25	4.116	0	2	-	PA	3,260	673	0	16,013	3,041
Subtotal, State Roads			41.279									
Total, All Improvements			301.737									

Notes: Classifications are Expressway (EX), Principal Arterial (PA), Minor Arterial (MA), Collector (C), Unimproved (U) and Dirt (D).
Source: LSA Associates, data from Major Transportation Corridors Plan analysis, October 25, 2011.

Table 19. Planned Improvement Project Data

Corridor	From	To	Cost/ Lin. Foot	Intersections Cost/Leg	Legs	No. of Signals	% Defic.	% Thru
Stapleton Rd	Black Forest Rd	Towner Ave	$453.23	$108,767	4	1.00		0.7%
Stapleton Rd	Meridian Ranch	Eastonville Rd	$453.23	$108,767	2	0.25		1.6%
Stapleton Rd	US-24	Judge Orr Rd	$312.45	$0	2	1.25		0.0%
Stapleton Rd	Towner Ave	Meridian Ranch	$453.23	$108,767	2	0.50		0.6%
Banning Lewis Py	Stapleton	Woodmen Rd	$453.23	$108,767	2	0.50		0.0%
Meridian Rd	Bradley Rd	Mesa Ridge Py	$312.45	$13,741	6	2.00		0.0%
Gerrett Rd	US-24	Meridian Rd	$453.23	$108,767	2	0.25		0.0%
Constitution Ave	Powers	US-24	$616.40	$110,630	11	2.00		39.6%
Marksheffel Rd	N of Fontaine	Link Rd	$492.55	$108,767	5	0.75		24.2%
Walker Rd	Woodmoor Rd	SH 83	$453.23	$108,767	8	1.75		2.2%
Bradley Rd	Academy Rd	Hancock Expy	$453.23	$108,767	2	0.50		16.8%
Bradley Rd	Grinnell Blvd	Powers Blvd	$453.23	$108,767	2	0.50		12.2%
Woodmen	Marksheffel Rd	Mohawk Dr	$616.40	$110,630	2	0.50		61.0%
Mesa Ridge Pkwy	Powers Blvd	Marksheffel Rd	$453.23	$108,767	1	0.25		0.4%
Vollmer Rd	Black Forest Rd	Stapleton Rd	$453.23	$13,741	4	1.00		0.1%
Banning Lewis Py	Dublin Rd	Woodmen Rd	$492.55	$108,767	2	0.50		0.0%
Grinnell Blvd	Bradley Rd	Powers Blvd	$453.23	$13,741	2	0.50	75.8%	100.0%
Meridian Rd	US-24 Intersection Impvmt		$453.23	$108,767	0	0.00		0.0%
Peaceful Valley	Marksheffel Rd	Meridian	$312.45	$0	2	0.25		0.0%
S-curve at Falcon	Falcon Hwy	Peyton Hwy	$312.45	$0	1	0.00		1.6%
Marksheffel Rd N	Woodmen Rd	Research Pky	$453.23	$108,767	4	1.00		31.0%
Fontaine Blvd	Marksheffel Rd	Terminus	$453.23	$0	0	0.00		0.0%
Fontaine Blvd	Terminus	Meridian Rd	$453.23	$0	1	0.50		0.0%
Academy Blvd	B-Street	US-85	$616.40	$0	4	2.00		0.0%
Meridian Rd	Stapleton Rd	Rex Rd	$453.23	$0	3	0.00		0.0%
Meridian Rd	US-24	Ex Meridian Rd	$312.45	$0	0	0.00		0.0%
Log Rd	State Hwy 94	Drennan Rd	$312.45	$0	3	1.00		0.0%
Marksheffel Rd	N of Carefree Cir	Stetson Hills	$453.23	$108,767	4	0.25		0.0%
Subtotal, County Arterials					81	19.00		
County Line Rd	I-25	SH 83	$189.39	na	0	0.00		9.3%
Walker Rd	Steppler Rd	Black Forest Rd	$189.39	na	0	0.00		1.2%
Burgess Rd	Vollmer Rd	Rex Rd	$189.39	na	0	0.00		1.3%
Judge Orr Rd	US-24	Peyton Hwy	$189.39	na	0	0.00		0.0%
Falcon Hwy	Peyton Hwy	Ellicott Hwy	$189.39	na	0	0.00		0.0%
Fontaine Blvd	Powers Blvd	Marksheffel	$189.39	na	0	0.00		0.0%
Fontaine Blvd	Grinnell Blvd	Powers Blvd	$189.39	na	0	0.00		21.2%
Black Forest Rd	Shoup Rd	Wildridge Rd	$189.39	na	0	0.00		12.5%
Meridian Rd	Rex Rd	Hodgen Rd	$189.39	na	0	0.00		0.3%
Slocum Rd	Jones Rd	SH 94	$189.39	na	0	0.00		0.0%
Old Pubelo Rd	Link Rd	I-25	$189.39	na	0	0.00		0.1%
Garrett Rd	Meridian Rd	Curtis Rd	$189.39	na	0	0.00		0.0%
Old Ranch Rd	SH 83	Otero Ave	$189.39	na	0	0.00		35.8%
Peyton Hwy	State Hwy 94	Drennan Rd	$189.39	na	0	0.00		7.6%
Ellicott Hwy	State Hwy 94	Sanborn Rd	$189.39	na	0	0.00		0.0%
Shoup Rd	State Hwy 83	Vollmer Rd	$189.39	na	0	0.00		2.6%
Murphy Rd	Meridian Rd	Peyton Hwy	$189.39	na	0	0.00		2.2%
Hay Creek Rd	Tapadero Rd	Old Denver Rd	$189.39	na	0	0.00		0.0%
Vollmer Rd	Stapleton Rd	Burgess Rd	$189.39	na	0	0.00		0.2%

Table 19. Continued.

Corridor	From	To	Cost/ Lin. Foot	Intersections Cost/Leg	Legs	No. of Signals	% Defic.	% Thru
Vollmer Rd	Burgess Rd	Hodgen Rd	$189.39	na	0	0.00		0.1%
Ayer Rd	Burgess Rd	Meridian Rd	$189.39	na	0	0.00		0.3%
S Blaney/Davis	Curtis Rd	Meridian Rd	$189.39	na	0	0.00		0.0%
Curtis Rd	Judge Orr Rd	SH 94	$189.39	na	0	0.00		0.0%
Bradshaw Rd	Murphy Rd	US-24	$189.39	na	0	0.00		0.0%
Jones Rd	Curtis Rd	Slocum Rd	$189.39	na	0	0.00		0.0%
Meridian Rd	New connection	Falcon Hwy	$189.39	na	0	0.00		0.0%
Hanover Rd	Meridian Rd	Old Pubelo Rd	$189.39	na	0	0.00		0.3%
Eastonville Rd	Snaffle Bit Rd	Stapleton Rd	$189.39	na	0	0.00		0.0%
Beacon Lite Rd	SH 105	County Line Rd	$189.39	na	0	0.00		0.0%
Eastonville Rd	S of Stapleton	Woodmen Rd	$189.39	na	0	0.00		0.0%
Hodgen Rd	Black Forest Rd	Eastonville Rd	$189.39	na	0	0.00		0.5%
Subtotal, Rural Road Upgrades					0	0.00		
Walker Rd	Black Forest Rd	Elbert Rd	$56.82	na	0	0.00	13.6%	6.0%
Hopper Rd	Elbert Rd	Bradshaw Rd	$56.82	na	0	0.00		7.7%
Sweet Rd	Peyton Hwy	Ellicott Hwy	$56.82	na	0	0.00		0.0%
Murphy Rd	Wagon Trail	Ellicott Hwy	$56.82	na	0	0.00		0.0%
Latigo Blvd	Eastonville Rd	Elbert Rd	$56.82	na	0	0.00		0.0%
Soad Weed Rd	US-24	2 mi n JudgeOr	$56.82	na	0	0.00		5.1%
Ramah Hwy	US-24	SH 94	$56.82	na	0	0.00		6.7%
Log Rd	Judge Orr Rd	SH 94	$56.82	na	0	0.00		0.3%
Big Springs Rd	Ellicott Hwy	Calhan Hwy	$56.82	na	0	0.00		0.8%
Jones Rd	Peyton Hwy	Ellicott Hwy	$56.82	na	0	0.00		0.0%
Drennan Rd	Curtis Rd	Ellicott Hwy	$56.82	na	0	0.00	0.8%	0.0%
Ellicott Hwy	Squirrel Crk Rd	Myers Rd	$56.82	na	0	0.00		0.0%
Eastonville Rd	Stapleton Rd	N of Latigo Blvd	$56.82	na	0	0.00		0.0%
Harrisville Rd	Blasingame Rd	Ramah Hwy	$56.82	na	0	0.00	33.8%	0.0%
Subtotal, Rural Road Paving					0	0.00		
Subtotal, County Road Improvements					81	19.00		
US-24	Elbert Rd	Calhan Hwy	$400.06	$108,767	8	3.00		6.0%
US-24	SH 94	Woodmen Rd	$640.06	$110,630	8	1.50		25.0%
State Hwy 94	Marksheffel Rd	Slocum Rd	$640.06	$110,630	5	1.25		12.5%
State Hwy 94	Slocum Rd	Ellicott Hwy	$400.06	$108,767	5	0.50		4.2%
US-24	SH 94	Powers Blvd	$640.06	$108,767	6	1.50		49.7%
Powers Blvd Ext S	Mesa Ridge Py	Squirrel Crk Rd	$400.06	$108,767	4	1.00		8.6%
Powers Blvd Ext S	Squirrel Crk Rd	New Powers Ext	$312.45	$0	2	0.50		18.1%
Powers Blvd Ext S	New Powers Ext	I-25	$312.45	$0	3	0.50		18.6%
Subtotal, State Roads					41	9.75		
Total, All Improvements					122	28.75		

Source: Costs per linear foot from Table 16; costs per intersection leg from Table 17; number of needed legs and signals from LSA Associates, data from Major Transportation Corridors Plan analysis, October 25, 2011; percent deficiency and percent pass-through traffic based volume and capacity data from Table 18.

Table 20. Planned Improvement Costs

Corridor	From	To	Segment Cost	Intersecs/ Signals	Less Deficiencies	Less Thru Trips	Total Net Cost
Stapleton Rd	Black Forest Rd	Towner Ave	$11,617,111	$685,068	$0	-$87,499	$12,214,680
Stapleton Rd	Meridian Ranch	Eastonville Rd	$2,767,532	$280,034	$0	-$49,023	$2,998,543
Stapleton Rd	US-24	Judge Orr Rd	$1,808,479	$312,500	$0	$0	$2,120,979
Stapleton Rd	Towner Ave	Meridian Ranch	$1,883,875	$342,534	$0	-$12,877	$2,213,532
Banning Lewis Py	Stapleton	Woodmen Rd	$3,599,096	$342,534	$0	$0	$3,941,630
Meridian Rd	Bradley Rd	Mesa Ridge Py	$5,758,696	$582,446	$0	$0	$6,341,142
Gerrett Rd	US-24	Meridian Rd	$2,591,666	$280,034	$0	$0	$2,871,700
Constitution Ave	Powers	US-24	$8,029,290	$1,716,930	$0	-$3,854,765	$5,891,455
Marksheffel Rd	N of Fontaine	Link Rd	$7,119,934	$731,335	$0	-$1,898,886	$5,952,383
Walker Rd	Woodmoor Rd	SH 83	$7,155,585	$1,307,636	$0	-$187,908	$8,275,313
Bradley Rd	Academy Rd	Hancock Expy	$2,457,873	$342,534	$0	-$470,618	$2,329,789
Bradley Rd	Grinnell Blvd	Powers Blvd	$5,036,159	$342,534	$0	-$654,792	$4,723,901
Woodmen	Marksheffel Rd	Mohawk Dr	$2,863,149	$346,260	$0	-$1,956,810	$1,252,599
Mesa Ridge Pkwy	Powers Blvd	Marksheffel Rd	$1,775,780	$171,267	$0	-$6,832	$1,940,215
Vollmer Rd	Black Forest Rd	Stapleton Rd	$3,828,923	$304,964	$0	-$2,794	$4,131,093
Banning Lewis Py	Dublin Rd	Woodmen Rd	$2,513,906	$342,534	$0	$0	$2,856,440
Grinnell Blvd	Bradley Rd	Powers Blvd	$1,421,271	$152,482	-$1,193,583	-$380,170	$0
Meridian Rd	US-24 Intersection Impvmt		$1,722,998	$0	$0	$0	$1,722,998
Peaceful Valley	Marksheffel Rd	Meridian	$4,231,744	$62,500	$0	$0	$4,294,244
S-curve at Falcon	Falcon Hwy	Peyton Hwy	$3,442,831	$0	$0	-$56,209	$3,386,622
Marksheffel Rd N	Woodmen Rd	Research Pky	$4,066,883	$685,068	$0	-$1,472,761	$3,279,190
Fontaine Blvd	Marksheffel Rd	Terminus	$4,145,339	$0	$0	$0	$4,145,339
Fontaine Blvd	Terminus	Meridian Rd	$2,804,834	$125,000	$0	$0	$2,929,834
Academy Blvd	B-Street	US-85	$6,406,053	$500,000	$0	$0	$6,906,053
Meridian Rd	Stapleton Rd	Rex Rd	$2,311,585	$0	$0	$0	$2,311,585
Meridian Rd	US-24	Ex Meridian Rd	$293,284	$0	$0	$0	$293,284
Log Rd	State Hwy 94	Drennan Rd	$9,932,947	$250,000	$0	$0	$10,182,947
Marksheffel Rd	N of Carefree Cir	Stetson Hills	$2,768,754	$497,568	$0	$0	$3,266,322
Subtotal, County Arterials			$114,355,577	$10,703,762	-$1,193,583	-$11,091,944	$112,773,812
County Line Rd	I-25	SH 83	$5,192,955	$0	$0	-$481,029	$4,711,926
Walker Rd	Steppler Rd	Black Forest Rd	$4,367,586	$0	$0	-$51,033	$4,316,553
Burgess Rd	Vollmer Rd	Rex Rd	$6,031,163	$0	$0	-$79,842	$5,951,321
Judge Orr Rd	US-24	Peyton Hwy	$5,371,537	$0	$0	$0	$5,371,537
Falcon Hwy	Peyton Hwy	Ellicott Hwy	$8,457,156	$0	$0	$0	$8,457,156
Fontaine Blvd	Powers Blvd	Marksheffel	$683,862	$0	$0	$0	$683,862
Fontaine Blvd	Grinnell Blvd	Powers Blvd	$1,958,650	$0	$0	-$416,183	$1,542,467
Black Forest Rd	Shoup Rd	Wildridge Rd	$7,585,896	$0	$0	-$948,670	$6,637,226
Meridian Rd	Rex Rd	Hodgen Rd	$5,613,093	$0	$0	-$18,959	$5,594,134
Slocum Rd	Jones Rd	SH 94	$3,983,281	$0	$0	$0	$3,983,281
Old Pubelo Rd	Link Rd	I-25	$5,810,715	$0	$0	-$6,916	$5,803,799
Garrett Rd	Meridian Rd	Curtis Rd	$2,943,454	$0	$0	$0	$2,943,454
Old Ranch Rd	SH 83	Otero Ave	$593,339	$0	$0	-$212,161	$381,178
Peyton Hwy	State Hwy 94	Drennan Rd	$5,992,223	$0	$0	-$456,265	$5,535,958
Ellicott Hwy	State Hwy 94	Sanborn Rd	$2,972,311	$0	$0	$0	$2,972,311
Shoup Rd	State Hwy 83	Vollmer Rd	$6,125,659	$0	$0	-$161,932	$5,963,727
Murphy Rd	Meridian Rd	Peyton Hwy	$7,897,800	$0	$0	-$172,188	$7,725,612
Hay Creek Rd	Tapadero Rd	Old Denver Rd	$2,485,661	$0	$0	$0	$2,485,661
Vollmer Rd	Stapleton Rd	Burgess Rd	$1,958,159	$0	$0	-$4,320	$1,953,839

Table 20. Continued

Corridor	From	To	Segment Cost	Intersecs/ Signals	Less Deficiencies	Less Thru Trips	Total Net Cost
Vollmer Rd	Burgess Rd	Hodgen Rd	$5,020,154	$0	$0	-$4,923	$5,015,231
Ayer Rd	Burgess Rd	Meridian Rd	$1,486,953	$0	$0	-$4,435	$1,482,518
S Blaney/Davis	Curtis Rd	Meridian Rd	$3,872,579	$0	$0	$0	$3,872,579
Curtis Rd	Judge Orr Rd	SH 94	$8,023,554	$0	$0	$0	$8,023,554
Bradshaw Rd	Murphy Rd	US-24	$1,838,301	$0	$0	$0	$1,838,301
Jones Rd	Curtis Rd	Slocum Rd	$1,994,464	$0	$0	$0	$1,994,464
Meridian Rd	New connection	Falcon Hwy	$270,387	$0	$0	$0	$270,387
Hanover Rd	Meridian Rd	Old Pubelo Rd	$4,185,263	$0	$0	-$13,964	$4,171,299
Eastonville Rd	Snaffle Bit Rd	Stapleton Rd	$675,198	$0	$0	$0	$675,198
Beacon Lite Rd	SH 105	County Line Rd	$2,075,652	$0	$0	$0	$2,075,652
Eastonville Rd	S of Stapleton	Woodmen Rd	$1,379,311	$0	$0	$0	$1,379,311
Hodgen Rd	Black Forest Rd	Eastonville Rd	$6,715,827	$0	$0	-$31,385	$6,684,442
Subtotal, Rural Road Upgrades			$123,562,144	$0	$0	-$3,064,205	$120,497,939
Walker Rd	Black Forest Rd	Elbert Rd	$2,585,028	$0	-$352,163	-$133,175	$2,099,690
Hopper Rd	Elbert Rd	Bradshaw Rd	$868,945	$0	$0	-$66,621	$802,324
Sweet Rd	Peyton Hwy	Ellicott Hwy	$1,491,212	$0	$0	$0	$1,491,212
Murphy Rd	Wagon Trail	Ellicott Hwy	$1,213,896	$0	$0	$0	$1,213,896
Latigo Blvd	Eastonville Rd	Elbert Rd	$480,153	$0	$0	$0	$480,153
Soad Weed Rd	US-24	2 mi n JudgeOr	$296,625	$0	$0	-$14,991	$281,634
Ramah Hwy	US-24	SH 94	$5,965,007	$0	$0	-$400,761	$5,564,246
Log Rd	Judge Orr Rd	SH 94	$2,684,000	$0	$0	-$8,044	$2,675,956
Big Springs Rd	Ellicott Hwy	Calhan Hwy	$2,068,390	$0	$0	-$16,412	$2,051,978
Jones Rd	Peyton Hwy	Ellicott Hwy	$1,198,990	$0	$0	$0	$1,198,990
Drennan Rd	Curtis Rd	Ellicott Hwy	$3,034,141	$0	-$24,925	$0	$3,009,216
Ellicott Hwy	Squirrel Crk Rd	Myers Rd	$2,603,599	$0	$0	$0	$2,603,599
Eastonville Rd	Stapleton Rd	N of Latigo Blvd	$1,299,211	$0	$0	$0	$1,299,211
Harrisville Rd	Blasingame Rd	Ramah Hwy	$602,027	$0	-$203,575	$0	$398,452
Subtotal, Rural Road Paving			$26,391,224	$0	-$580,663	-$640,004	$25,170,557
Subtotal, County Road Improvements			$264,308,945	$10,703,762	-$1,774,246	-$14,796,153	$258,442,308
US-24	Elbert Rd	Calhan Hwy	$28,522,339	$1,620,136	$0	-$1,808,012	$28,334,463
US-24	SH 94	Woodmen Rd	$14,986,883	$1,260,040	$0	-$4,061,516	$12,185,407
State Hwy 94	Marksheffel Rd	Slocum Rd	$20,653,038	$865,650	$0	-$2,685,918	$18,832,770
State Hwy 94	Slocum Rd	Ellicott Hwy	$14,777,732	$668,835	$0	-$654,388	$14,792,179
US-24	SH 94	Powers Blvd	$4,731,324	$1,027,602	$0	-$2,864,092	$2,894,834
Powers Blvd Ext S	Mesa Ridge Py	Squirrel Crk Rd	$3,096,558	$685,068	$0	-$326,877	$3,454,749
Powers Blvd Ext S	Squirrel Crk Rd	New Powers Ex	$5,366,191	$125,000	$0	-$995,160	$4,496,031
Powers Blvd Ext S	New Powers Ext	I-25	$6,790,200	$125,000	$0	-$1,284,081	$5,631,119
Subtotal, State Roads			$98,924,265	$6,377,331	$0	-$14,680,044	$90,621,552
Total, All Improvements			$363,233,210	$17,081,093	-$1,774,246	-$29,476,197	$349,063,860

Source: Segment cost based on segment length from Table 18 and cost per foot from Table 19 (Meridian Road/US 24 intersection improvement based on actual cost; Fontaine, Marksheffel-Terminus based on credit actually provided); intersection and signal cost is number of needed intersection legs times cost per leg from Table 19 plus number of signals from Table 19 times cost per signal from Table 2; pass-through and deficiency costs are based on total project cost (sum of segment and intersection/signal costs) and deficiency and pass-through percentages from Table 20.