



SOUTHEAST AREA

TRANSPORTATION AND LAND USE STUDY

IMPACT FEE DEMONSTRATION

Davidson/Rutherford/Williamson/Wilson Counties, Tennessee

August 2016

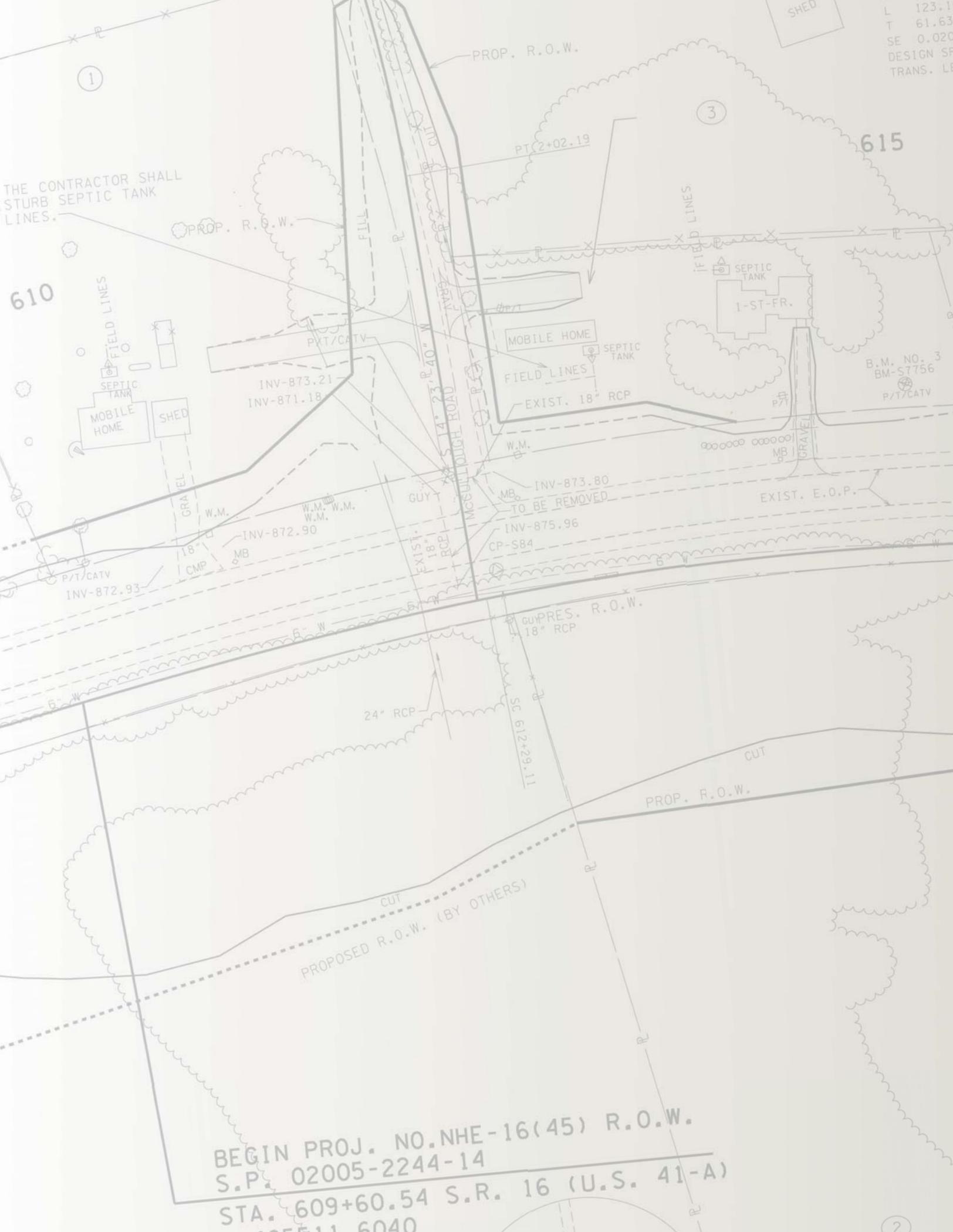


Prepared for the Nashville Area
Metropolitan Planning Organization



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BEGIN PROJ. NO. NHE-16(45) R.O.W.
S.P. 02005-2244-14
STA. 609+60.54 S.R. 16 (U.S. 41-A)

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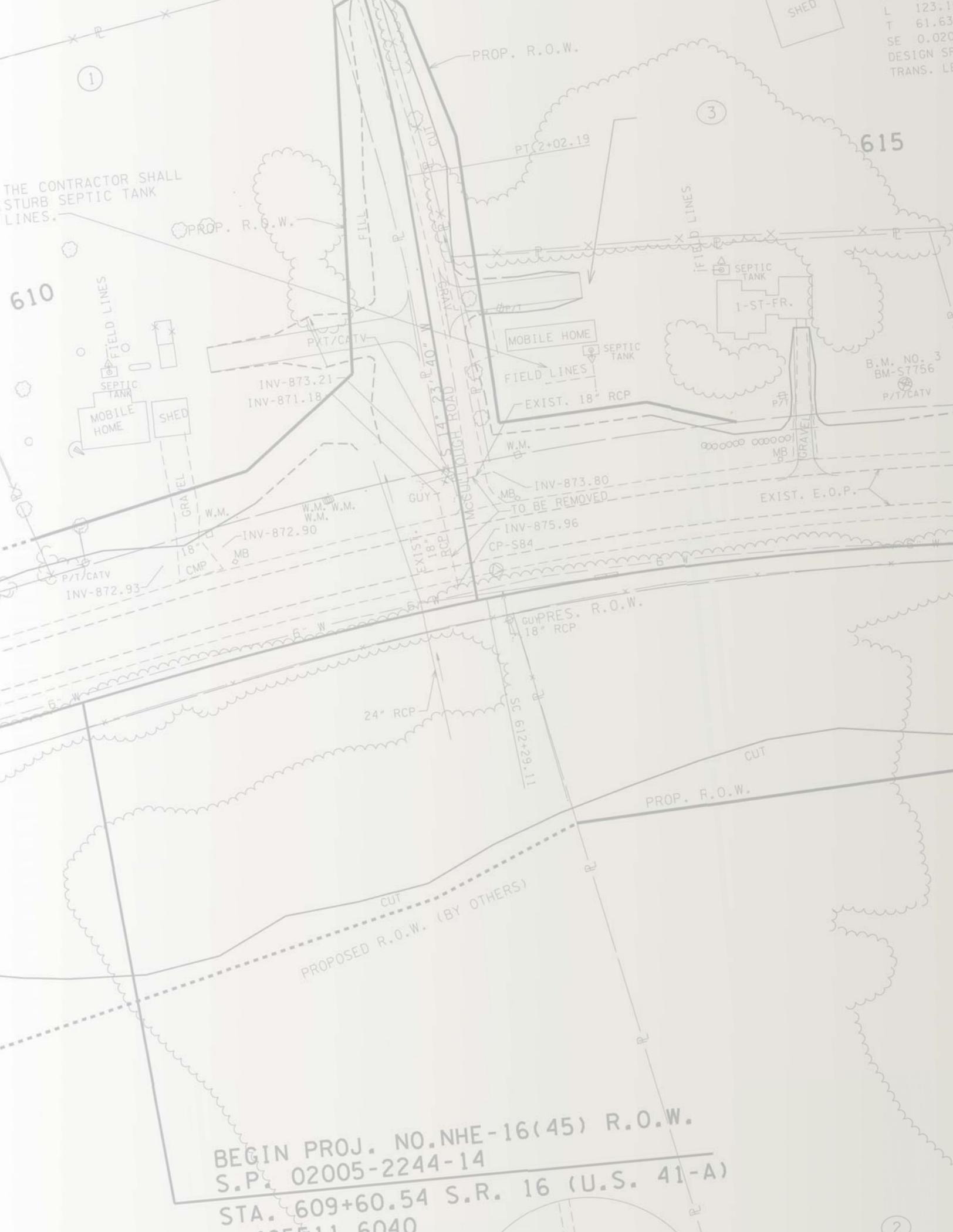
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SOUTHEAST AREA TRANSPORTATION AND LAND USE STUDY

Impact Fee Demonstration

1. OVERVIEW

Rising construction and materials costs, coupled with declining federal and other revenue sources have led many local governments scrambling to balance their budgets and to develop adequate capital improvement plans. Middle Tennessee is no exception to phenomenon, in which the Nashville MPO's RTP and local government capital improvement programs are routinely underfunded for identified transportation improvements.

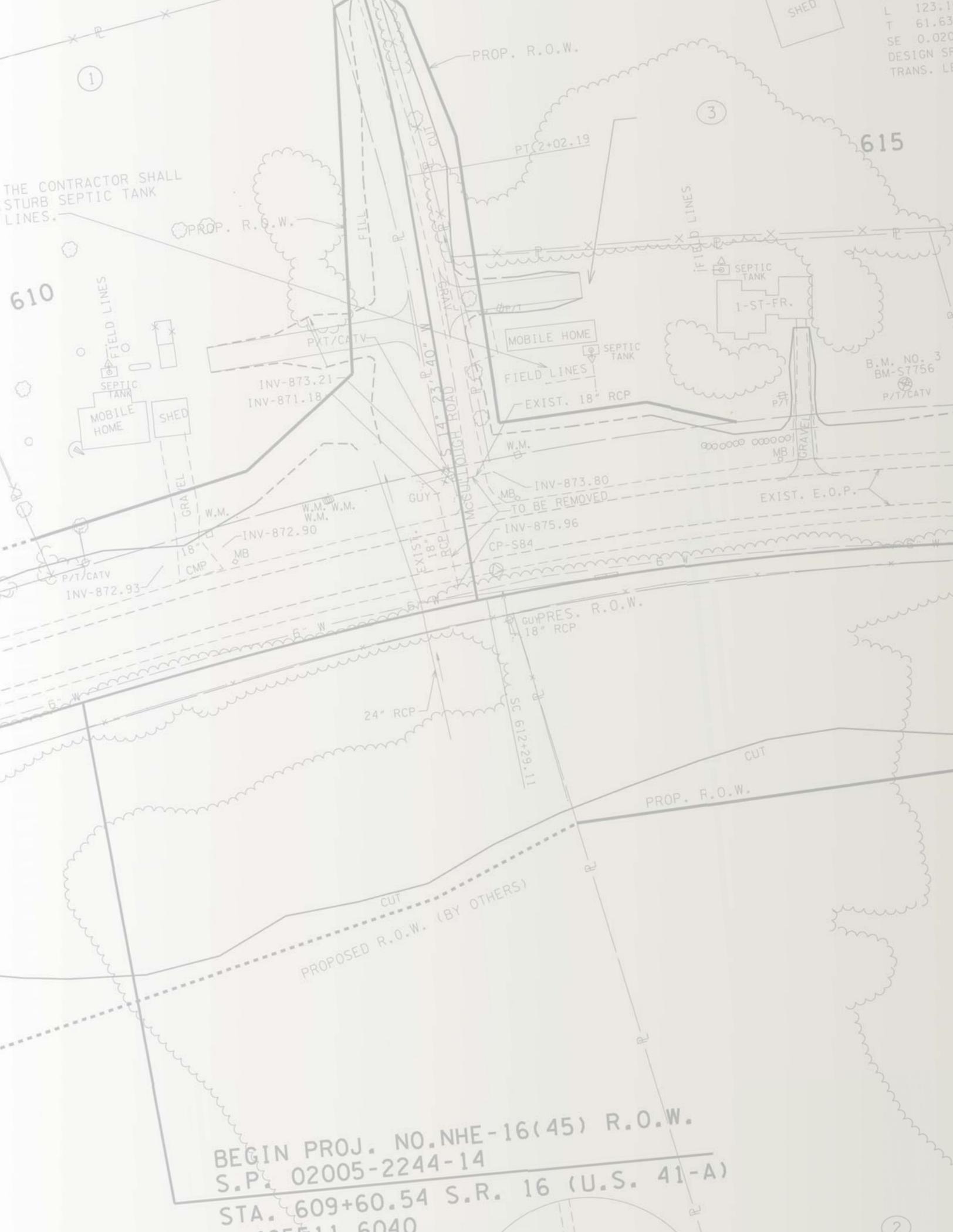
Across the spectrum of local revenue sources, impact fees are one such method of generating additional revenue for transportation improvements. Impact fees operate under the notion that "growth should pay for itself," as impact fees are assessed on new development and go toward the funding of new capital improvements, including roads, water and sewer systems and fire and police stations.

This demonstration project examines the use of transportation impact fees as a source of revenue for the Southeast Area, including an overview and history, discussion of different approaches to transportation impact fees and a sample application within the study area.

“... scrambling to balance their budgets and to develop adequate capital improvement plans ...”

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2. HISTORY IN TENNESSEE

According to the Tennessee Advisory Commission on Intergovernmental Relations (TACIR), in the late 1980s, cities and towns in Tennessee began looking for new ways of meeting the rising infrastructure costs associated with new development. In 1987, Williamson County and the cities of Brentwood, Fairview, and Franklin became the first municipalities in the state authorized to levy impact fees. In 1991, the Tennessee Code was amended to allow cities chartered under Mayor-Aldermanic Charter and Modified City Manager-Council Charter to enact impact fees. County governments were not included (see TCA § 6-2-201 and TCA § 6-33-101).

Municipalities lacking authorization to enact impact fees must seek authorization, through a local bill, directly from the General Assembly.

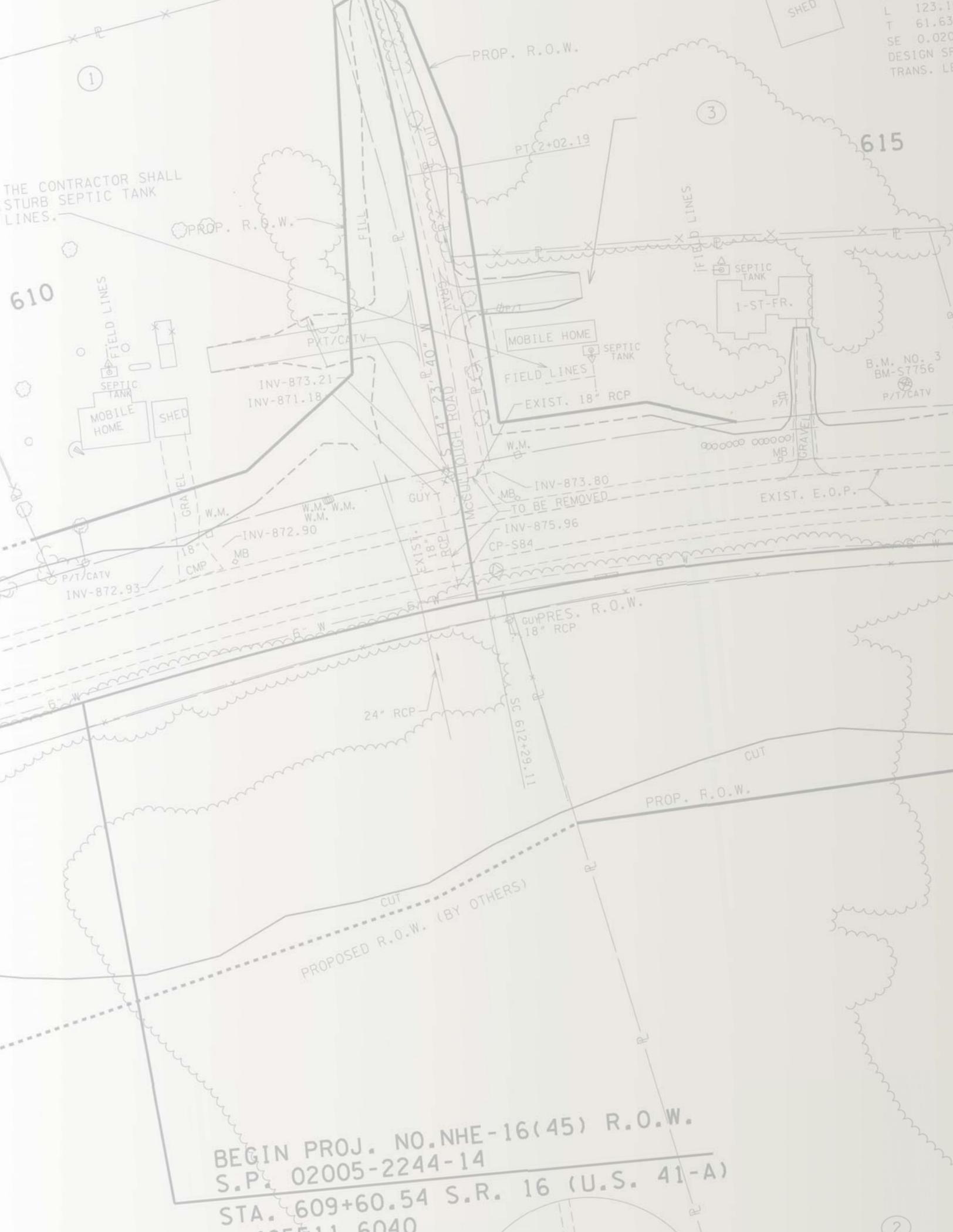
In 2006, the Tennessee General Assembly passed the County Powers Relief Act. A provision of the Act stated “no county shall be authorized to enact an impact fee on development or a local real estate transfer tax by private or public act” (see TCA § 67-4-2913). This act greatly limited the power to tax for both municipalities and counties. Municipalities cannot use adequate facilities taxes, but are still allowed to use impact fees with proper legislative authorization, while counties cannot use either tax. Counties that have prior adoption of either tax may continue to use them, but cannot increase them unless the increase is dedicated towards public schools.

An Attorney General’s opinion from February 2007 cites that counties with adequate facilities tax should adopt a Capital Improvements Program if they plan to continue usage, along with holding that counties and cities that have prior adopted adequate facilities taxes cannot increase the tax rate, locking them in on the current rate established prior to June 20, 2006, unless the authority to increase that tax was granted by private act prior to June 20, 2006. Municipalities and counties may use the fees and/or taxes for any improvements as identified in their respective private acts. Currently, Rutherford County, Davidson County, Williamson County, Franklin, Brentwood, and Smyrna have received prior authorization to levy impact fees. La Vergne, Nolensville, Spring Hill, and Thompson’s Station are all incorporated under mayor-aldermanic municipal charters. Murfreesboro and Eagleville do not have previous authorization; the municipalities would have to seek local bill approval from the General Assembly.

... no county shall be authorized to enact an impact fee on development or a local real estate transfer tax by private or public act ...

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3. IMPACT FEE APPROACHES

Impact fees operate under the premise that the cost to provide new infrastructure should be borne by the development that generates the need for it. There are two basic approaches to impact fees and several tweaks or modifications to those approaches.

3.1 Improvements Versus Standards Impact Fee

There are two basic approaches to road impact fees:

- **“Improvements-based” or “projects-based:”** This approach takes the total cost of needed road improvements within a jurisdiction over a specific time period and divides the cost evenly to growth projected to occur during that period.
- **“Standards-based” or “consumption-based:”** This approach estimates the amount of roadway demand, typically expressed in terms of vehicle miles, generated by prescribed land use types and estimates the cost to provide infrastructure to meet that demand.

In general, the improvements-based approach has the greater potential for legal challenge because it is more difficult to prove the rational nexus between the list of identified improvements and the demand generated by individual developments. Further, this approach obligates the jurisdiction to complete the list of improvements during the prescribed time frame (regardless of whether projected growth happens or not).

In contrast, the standards-based approach bases impact fees on the incremental cost to provide infrastructure. Thus, it performs well against the rational nexus test and is therefore the more popular of the two.

3.2 Impact Fee Districts

Many jurisdictions divide their territory into smaller districts for the administration of impact fees. These districts, in which impact fees are collected and spent exclusively within their boundaries, are popular among larger jurisdictions which experience significant geographic variations in growth.

3.3 Concurrency and Proportionate Fair Share

Concurrency is a growth management tool popular in Florida during the 1990s and 2000s. Transportation concurrency requires a local government to maintain a prescribed roadway level of service (LOS). If a new development generates demand which causes a facility or

“... the cost to provide new infrastructure should be borne by the development that generates the need for it. . . .”

facilities to degrade below the prescribed LOS, that development must either construct the necessary improvements to achieve adequate LOS, provide funding for the improvements or wait until adequate LOS is achieved.

Florida's concurrency requirement were subsequently modified to include a proportionate fair-share provision. This provision includes a mechanism for calculating a development's fair-share of needed transportation improvements and allowing that development to proceed once payment is made (pay-and-go).

3.4 Alternative Impact Fees

In some jurisdictions, impact fees may be used for improvements other than roadways, such as transit facilities (i.e. shelter). Transit impact fees are used in California and Florida but are typically found in locations where there is significant transit ridership, such as a dense urban area or an apartment complex adjacent to a university campus. Alternative impact fees can become a politically sensitive issue as it can create the perception that funding for roads is being diverted to other uses. Alternative impact fees should be used in places where there is a nexus to transit ridership as discussed above.



...a mechanism for calculating a development's fair-share of needed transportation improvements.

4. IMPACT FEE DEMONSTRATION

The potential for impact fees within the Southeast Area is explored through the application of a sample impact fee within the study area using the standards-based approach. What follows is a step-by-step description of the different elements of the fee calculation, culminating a sample fee schedule.

4.1 Impact Fee Formula

The impact fee calculation relies on three basic elements: demand, unit cost and credit. The transportation impact fee formula looks like this:

Vehicle miles travelled (demand) * Cost per VMT (unit cost) – credit per VMT (credit)

4.2 Demand Calculation

Demand is expressed in terms of vehicle miles travelled (VMT) on a daily basis and varies by the type of land use. VMT is a function of two main elements:

- Total number of daily trips generated.
- Average trip length.

The demand calculations for common land uses is identified in Table 4-1. The ITE Trip Generation Manual, 8th Edition is used to estimate total number of daily trips generated. The trip generation rates are adjusted to account for pass-by trips, those trips with a different ultimate destination, using the ITE Trip Generation Handbook, 2nd Edition.

Average trip length is estimated based on average trip lengths within the study area derived from the Nashville MPO's base year (2010) travel demand model. That length is adjusted to account for variations in trip length by major land use category using data from the 2009 National Household Travel Survey. The average trip length calculation is depicted in Table 4-2.

4.3 Unit Cost Calculation

The unit cost is expressed in terms of the marginal cost to provide an additional daily vehicle mile of travel (VMT). Cost per daily VMT is a function of:

- Average cost to build one lane mile of road.
- Average capacity, in terms of vehicles per day, of the road.

Road capacity projects recommended as part of the Southeast Area Transportation and Land Use Study are used as the basis for the unit

“... three basic elements: demand, unit cost and credit

Table 4-1. Demand Calculation



ITE LU Code	Land Use	Unit	Trip Rate ^[1]	% New Trips ^[2]	Trip Length ^[3]	VMT
Residential						
210	Single Family (Detached)	du	9.52	100%	3.97	37.8
220	Multi-Family (Apartment)	du	6.65	100%	3.60	23.9
230	Condo/Townhouse (Attached Housing Units)	du	5.81	100%	3.60	20.9
240	Mobile Home Park	du	4.99	100%	3.60	17.9
253	Congregate Care Facility	du	2.02	100%	3.60	7.3
Lodging						
310	Hotel	room	8.17	90%	3.60	26.4
320	Motel	room	5.63	90%	3.60	18.2
Recreation						
430	Golf Course	hole	35.74	100%	2.72	97.1
444	Movie Theater w/ Matinee	1,000 sf	27.39	95%	2.72	70.7
492	Health/Fitness Club	1,000 sf	32.93	95%	2.72	85.0
Institutions						
520	Elementary School	student	1.29	100%	3.67	4.7
522	Middle School/Junior High School	student	1.62	100%	3.67	5.9
530	High School	student	1.71	100%	3.67	6.3
540	Junior/Community College	student	1.23	100%	3.67	4.5
550	University/College	student	1.71	100%	3.67	6.3
560	Church	1,000 sf	9.11	95%	3.67	31.8
565	Day Care	1,000 sf	74.06	50%	3.67	135.9
610	Hospital	1,000 sf	13.22	100%	4.16	55.0
620	Nursing Home	1,000 sf	7.6	100%	3.67	27.9
Office						
710	General Office 100,000 sf or less	1,000 sf	13.13	90%	4.31	51.0
	General Office 100,001 - 200,000 sf	1,000 sf	11.12	90%	4.31	43.2
	General Office 200,001 - 400,000 sf	1,000 sf	9.41	90%	4.31	36.5
	General Office greater than 400,00 sf	1,000 sf	8.54	90%	4.31	33.2
720	Medical-Dental Office Building	1,000 sf	36.13	90%	4.16	135.4
Retail						
820	Retail 100,000 sf or less	1,000 sf	67.91	69%	2.72	127.3
	Retail 100,001 - 200,000 sf	1,000 sf	53.28	64%	2.72	92.6
	Retail 200,001 - 400,000 sf	1,000 sf	41.8	70%	2.72	79.5
	Retail greater than 400,00 sf	1,000 sf	36.27	78%	2.72	76.8
850	Supermarket	1,000 sf	102.24	64%	2.72	177.7
853	Convenience Store w/ Gas Pumps	1,000 sf	845.6	34%	2.72	780.9
880/881	Pharmacy/Drug Store with or w/o Drive-Thru	1,000 sf	93.49	49%	2.72	124.4

Table 4-1. Demand Calculation (continued)

ITE LU Code	Land Use 	Unit	Trip Rate ^[1]	% New Trips ^[2]	Trip Length ^[3]	VMT
991	Bank/Savings Walk-In	1,000 sf	121.3	53%	2.72	174.6
931	Quality Restaurant	1,000 sf	89.95	56%	2.72	136.8
932	High-Turnover Restaurant	1,000 sf	127.15	57%	2.72	196.9
934	Fast-Food Restaurant w/Drive-Thru	1,000 sf	496.12	50%	2.72	673.8
Industrial						
110	General Light Industrial	1,000 sf	6.97	90%	4.31	27.1
120	General Heavy Industrial	1,000 sf	1.5	90%	4.31	5.8
140	Manufacturing	1,000 sf	3.82	90%	4.31	14.8
150	Warehousing	1,000 sf	3.56	90%	4.31	13.8

Sources:

[1] ITE Trip Generation Manual, 8th Edition

[2] ITE Trip Generation Handbook, 2nd Edition or Palm Beach County Trip Generation Study

[3] Nashville MPO Travel Demand Model, 2010 Base Year, adjusted. See Table 2.

Table 4-2. Average Trip Length Calculation

Trip Type	Length ^[1]	Adjustment Factor ^[2]	Raw Trip Length ^[3]	Adjusted Trip Length ^[4]
 Single Family Residential	9.16	0.99	4.02	3.97
 Multi-family Residential	8.3	0.89	4.02	3.60
 School/Church	8.47	0.91	4.02	3.67
 Shopping/Retail	6.27	0.68	4.02	2.72
 Office/Industrial	9.96	1.07	4.02	4.31
 Medical/Dental	9.61	1.04	4.02	4.16

Sources:

[1] US DOT National Household Travel Survey, 2009.

[2] Trip length for that specific type divided by overall average trip length (9.28 miles).

[3] Nashville MPO Travel Demand Model, 2010 Base Year Network (trip length of 8.04 miles divided by two to account for origin and destination).

[4] Raw Trip Length * Adjustment Factor

“...the average capacity calculation for each road project.”

cost calculation. Table 4-3 identifies the recommended projects and cost estimates prepared for the study.

Average capacity is determined by taking the length of a project, multiplying it by the average daily capacity and dividing by the total number of lanes. Florida Department of Transportation’s (FDOT) Annual Average Daily Volume for Urbanized Areas is used as the source for daily capacity. Table 4-4 shows the average capacity calculation for each road project.

Finally, the average unit cost, in terms of cost per VMT, is calculated by dividing the sum of the total project cost (Table 4-3) by the sum of the new capacity (Table 4-4). Table 4-5 shows the cost per VMT calculation.

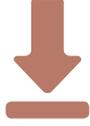
Table 4-3. Average Cost per Vehicle Mile Travelled

 Total Road Cost	 Total Road Capacity (Daily VMT)	 Cost per VMT
\$505,270,000	1,096,900	\$460.63

Table 4-4. Road Project Cost Estimates: Southeast Area Transportation and Land Use Study

 Facility	 From	 To	 Description	 Construction	 ROW	 Bridge	 Total Cost
Harding Place Extension	Ezell Pike	Couchville Pike	New four lane divided road with bicycle lanes and sidewalks.	\$58,280,000	\$43,798,200	\$0	\$102,080,000
SR 96	Broad Street (US 41)	I-24	Widen to 6 lanes with median/center turn lane parallel multi-use trail.	\$5,470,000	\$14,244,500	\$27,898,000	\$47,610,000
Thompson Lane (SR 268)	US 41/70 (NW Broad Street)	SR 10 (Memorial Boulevard)	Widen to four lanes with lanes with median/center turn lane, sidewalks and bicycle lanes.	\$16,140,000	\$5,816,400	\$11,651,250	\$33,610,000
Veterans Parkway	St. Andrews Drive/ Armstrong Valley Road	Lone Oak/ Battlefield Crescent	Construct new road and widen/ reconstruct existing substandard 2-lane road: four lanes with center turn lane/median, sidewalks and bicycle lanes.	\$13,090,000	\$6,793,100	\$0	\$19,880,000
SR 96	Arno Road	Wilson Pike (SR 252)	Widen to four lanes with median and parallel multi-use trail.	\$23,570,000	\$20,567,300	\$8,999,250	\$53,140,000

Table 4-4. Road Project Cost Estimates: Southeast Area Transportation and Land Use Study (continued)

 Facility	 From	 To	 Description	 Construction	 ROW	 Bridge	 Total Cost
SR 96	Wilson Pike (SR 252)	SR 840	Widen to four lanes with median and parallel multi-use trail.	\$22,770,000	\$19,867,800	\$16,224,000	\$58,860,000
SR 96	SR 840	Existing 4-lane section	Widen to four lanes with median and parallel multi-use trail.	\$28,900,000	\$20,446,800	\$15,366,000	\$64,710,000
Nolensville Pike/SR 11	Old Hickory Boulevard (SR 254)	Burkitt Road	Widen to four lanes with median and parallel multi-use trail.	\$17,480,000	\$16,077,700	\$7,566,000	\$41,120,000
Nolensville Pike/SR 11	Burkitt Road	York Road	Widen to four lanes with median and parallel multi-use trail.	\$670,000	\$580,900	\$4,875,000	\$6,130,000
Extension of Concord Road	Nolensville Road (US 31A - 41A)	I-24/ LaVergne	Construct a new two-lane road with median and multi-use path parallel to utility easement (new interchange at I-24 or tie into Burkett Road).	\$15,390,000	\$14,159,000	\$0	\$29,550,000
Extension of Concord Road	I-24/ LaVergne	Old Hickory Boulevard	Construct a new two-lane road with median and multi-use path parallel to utility easement.	\$7,290,000	\$6,706,900	\$15,600,000	\$29,600,000
Harding Pl. (SR 254)	I-24	CSX Railroad	Widen to 6 lanes with median/center turn lane, sidewalks and bicycle lanes.	\$1,350,000	\$974,000	\$0	\$2,320,000
US 41/ Murfreesboro Road	Donelson Pike	Smith Springs Road	Widen to 6 lanes with median/center turn lane parallel multi-use trail.	\$3,220,000	\$3,856,600	\$0	\$7,080,000
Broad Street (US 41)	Middle Tennessee Boulevard	Maney Street	Widen to four lanes with median and parallel multi-use trail.	\$3,210,000	\$6,373,700	\$0	\$9,580,000
TOTALS				\$216,830,000	\$180,262,900	\$108,179,500	\$505,270,000

Source: Southeast Area Transportation and Land Use Study

Table 4-5. Average Road Capacity Calculation

 Facility	 From	 To	Length (mi.)	Existing Lanes	Proposed Lanes	Existing Capacity	New Capacity	Added Capacity	Daily Vehicle Miles of Capacity
Harding Place Extension	Ezell Pike	Couchville Pike	7.8	0	5	0	36,800	36,800	286,000
SR 96	Broad Street (US 41)	I-24	2.0	5	7	36,800	55,400	18,600	37,700
Thompson Lane (SR 268)	US 41/70 (NW Broad St)	SR 10 (Memorial Blvd)	4.3	2	5	16,700	36,800	20,100	86,500
Veterans Parkway	St. Andrews/Armstrong Valley Road	Lone Oak/Battlefield Crescent	2.1	0	5	0	36,800	36,800	77,100
SR 96	Arno Road	Wilson Pike (SR 252)	5.8	2	5	16,700	36,800	20,100	117,000
SR 96	Wilson Pike (SR 252)	SR 840	5.6	2	5	16,700	36,800	20,100	113,000
SR 96	SR 840	Existing 4-lane section	7.1	2	5	16,700	36,800	20,100	143,400
Nolensville Pike/SR 11	Old Hickory Blvd. (SR 254)	Burkitt Rd.	4.3	2	5	16,700	36,800	20,100	86,700
Nolensville Pike/SR 11	Burkitt Rd.	York Rd.	0.2	2	5	16,700	36,800	20,100	3,300
Extension of Concord Road	Nolensville Road (US 31A/41A)	I-24/LaVergne	3.8	0	3	0	17,500	17,500	66,500
Extension of Concord Road	I-24/LaVergne	Old Hickory Blvd.	1.8	0	3	0	17,500	17,500	31,500
Harding Place (SR 254)	I-24	CSX Railroad	0.5	5	7	36,800	55,400	18,600	10,000
US 41/Murfreesboro Rd.	Donelson Pike	Smith Springs Rd	1.2	5	7	36,800	55,400	18,600	22,200
Broad Street (US 41)	Middle Tennessee Boulevard	Maney St.	0.8	2	5	16,700	36,800	20,100	16,000
TOTALS			47.4	29	72	227,300	532,400	305,100	1,096,900

Source: FDOT Annual Average Daily Volume for Urbanized Areas

2 lanes: Average of Class I and Class II State Signalized Arterials

3 lanes: Average of Class I and Class II State Signalized Arterials for a Two Lane Road with 5% Adjustment Factor for a median

5 lanes: Average of Class I and Class II State Signalized Arterials for a Four Lane Divided Road

4.4 Credit Calculation

Transportation projects in the study area, including the road projects used as the basis for the impact fee demonstration project, are funded in part by taxes already collected by the federal and state government. Thus, to not account for taxes already paid would be a form of double-taxation. An adjustment to the impact fee formula is necessary to credit for taxes paid.

The federal and state government collects fees for transportation primarily through gasoline taxes. The credit is a function of those taxes paid per vehicle mile traveled, factored over the average lifespan of a road.

Currently, \$0.214 in federal and state taxes is collected on every gallon of gasoline sold in Tennessee. However, not all of the money collected is spent on capacity projects. According to a review of the most recent TDOT Statewide Transportation Improvement Program (STIP), about 59 percent of gasoline tax revenues are spent on capacity projects (the bulk of the remainder is spend on operations and maintenance), meaning \$0.126 of in tax revenue per gallon of gasoline sold goes toward capacity.

In order to translate that amount into tax per vehicle mile of travel, it is necessary to know how many miles of travel one gallon of gasoline will yield. The US Environmental Protection Agency (EPA) estimates the average fuel economy for passenger cars and light trucks is 23.6 miles per gallon. This translates into \$0.005 tax collected for capacity projects for each daily vehicle mile of travel, or \$1.95 per VMT on an annual basis.

Assuming the average useful lifespan of a road is 40 years and a discount rate of five percent, the net present value of taxes collected is \$33.51 per VMT. The elements of the credit calculation are identified in Table 4-6.

“...to not account for taxes already paid would be a form of double-taxation.”

Table 4-6. Impact Fee Credit

 TN State and Federal Gas Tax	 % Spent on Capacity Projects ^[1]	 Share of Tax for Capacity Projects	 Average Fuel Efficiency (mpg) ^[2]	 Tax Revenue Per Vehicle Mile Traveled	 Annual Tax Collected per VMT	 Facility Lifespan (years)	 Discount Rate	 Credit Per VMT
\$0.214	59%	\$0.126	23.6	\$0.005	\$1.95	40	5.00%	\$33.51

Sources

[1] TDOT Statewide Transportation Improvement Program.

[2] US EPA estimates for model year 2012 cars and light trucks.

4.5 Impact Fee Calculation

The final step in the process is to calculate the impact fee schedule (Table 4-7), which is accomplished by multiplying the demand by the unit cost, minus the credit. Table 6 shows the impact fee calculation and resulting impact fee rate schedule for common land uses.

Table 4-7. Impact Fee Calculation

ITE LUC	Land Use	Unit	VMT	Cost Per VMT	Credit Per VMT	Impact Fee
Residential						
210	Single Family (Detached)	du	37.8	\$460.63	\$33.51	\$16,135
220	Multi-Family (Apartment)	du	23.9	\$460.63	\$33.51	\$10,213
230	Condo/Townhouse (Attached Housing Units)	du	20.9	\$460.63	\$33.51	\$8,923
240	Mobile Home Park	du	17.9	\$460.63	\$33.51	\$7,663
253	Congregate Care Facility	du	7.3	\$460.63	\$33.51	\$3,102
Lodging						
310	Hotel	room	26.4	\$460.63	\$33.51	\$11,292
320	Motel	room	18.2	\$460.63	\$33.51	\$7,782
Recreation						
430	Golf Course	hole	97.1	\$460.63	\$33.51	\$41,463
444	Movie Theater w/ Matinee	1,000 sf	70.7	\$460.63	\$33.51	\$30,187
492	Health/Fitness Club	1,000 sf	85.0	\$460.63	\$33.51	\$36,293
Institutions						
520	Elementary School	student	4.7	\$460.63	\$33.51	\$2,022
522	Middle School/Junior High School	student	5.9	\$460.63	\$33.51	\$2,539
530	High School	student	6.3	\$460.63	\$33.51	\$2,680
540	Junior/Community College	student	4.5	\$460.63	\$33.51	\$1,928
550	University/College	student	6.3	\$460.63	\$33.51	\$2,680
560	Church	1,000 sf	31.8	\$460.63	\$33.51	\$13,563
565	Day Care	1,000 sf	135.9	\$460.63	\$33.51	\$58,033
610	Hospital	1,000 sf	55.0	\$460.63	\$33.51	\$23,507
620	Nursing Home	1,000 sf	27.9	\$460.63	\$33.51	\$11,911
Office						
710	General Office 100,000 sf or less	1,000 sf	51.0	\$460.63	\$33.51	\$21,777
	General Office 100,001 - 200,000 sf	1,000 sf	43.2	\$460.63	\$33.51	\$18,443
	General Office 200,001 - 400,000 sf	1,000 sf	36.5	\$460.63	\$33.51	\$15,607
	General Office greater than 400,00 sf	1,000 sf	33.2	\$460.63	\$33.51	\$14,164
720	Medical-Dental Office Building	1,000 sf	135.4	\$460.63	\$33.51	\$57,819

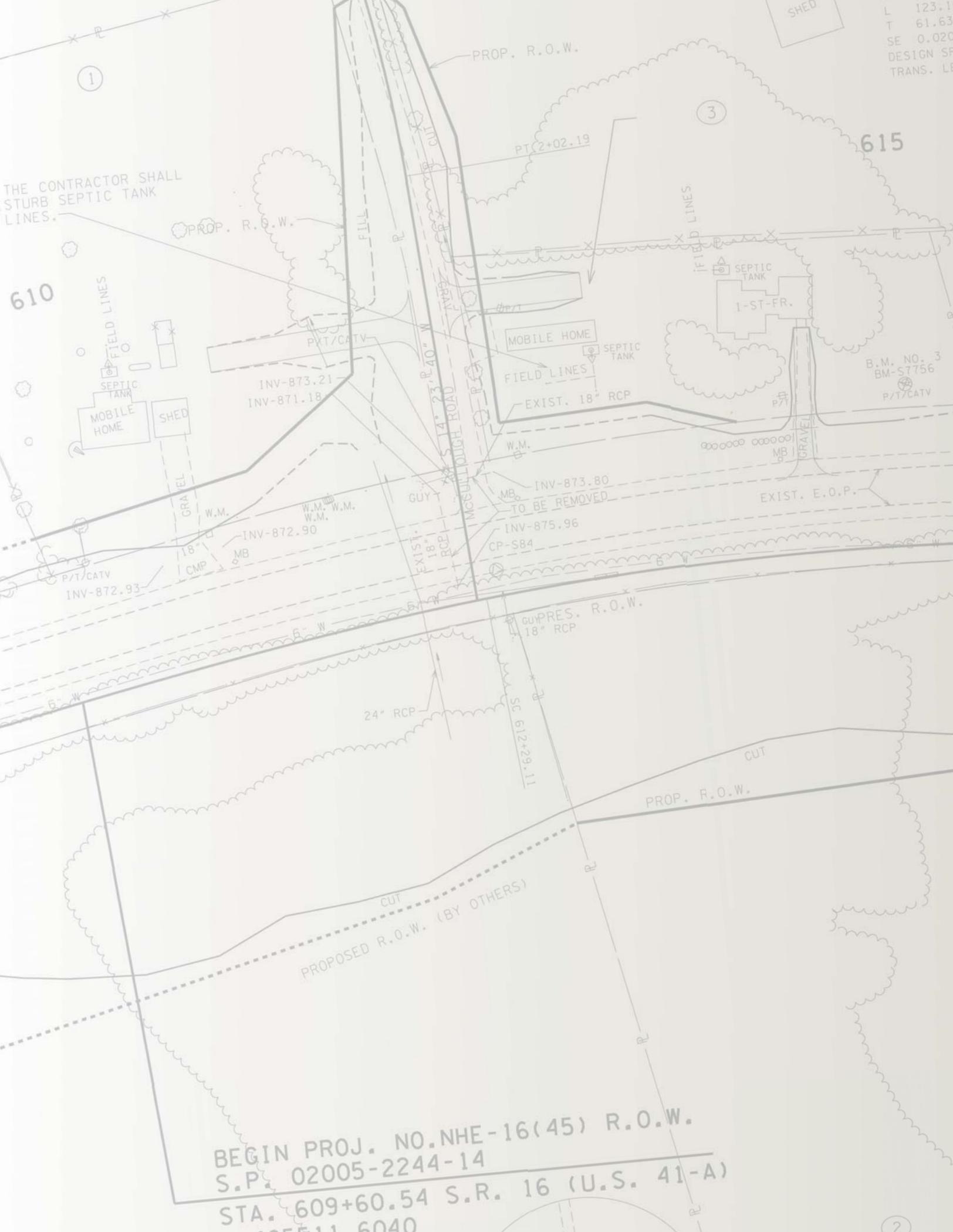
Table 4-7. Impact Fee Calculation (continued)



ITE LUC	Land Use	Unit	VMT	Cost Per VMT	Credit Per VMT	Impact Fee
Retail						
820	Retail 100,000 sf or less	1,000 sf	127.3	\$460.63	\$33.51	\$54,361
	Retail 100,001 - 200,000 sf	1,000 sf	92.6	\$460.63	\$33.51	\$39,559
	Retail 200,001 - 400,000 sf	1,000 sf	79.5	\$460.63	\$33.51	\$33,945
	Retail greater than 400,00 sf	1,000 sf	76.8	\$460.63	\$33.51	\$32,820
850	Supermarket	1,000 sf	177.7	\$460.63	\$33.51	\$75,911
853	Convenience Store w/ Gas Pumps	1,000 sf	780.9	\$460.63	\$33.51	\$333,539
880/881	Pharmacy/Drug Store with or w/o Drive-Thru	1,000 sf	124.4	\$460.63	\$33.51	\$53,145
991	Bank/Savings Walk-In	1,000 sf	174.6	\$460.63	\$33.51	\$74,583
931	Quality Restaurant	1,000 sf	136.8	\$460.63	\$33.51	\$58,438
932	High-Turnover Restaurant	1,000 sf	196.9	\$460.63	\$33.51	\$84,080
934	Fast-Food Restaurant w/Drive-Thru	1,000 sf	673.8	\$460.63	\$33.51	\$287,779
Industrial						
110	General Light Industrial	1,000 sf	27.1	\$460.63	\$33.51	\$11,560
120	General Heavy Industrial	1,000 sf	5.8	\$460.63	\$33.51	\$2,488
140	Manufacturing	1,000 sf	14.8	\$460.63	\$33.51	\$6,336
150	Warehousing	1,000 sf	13.8	\$460.63	\$33.51	\$5,905

“... collects fees for transportation primarily through gasoline taxes

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5. ADMINISTRATION

The preceding section presents the calculation of a hypothetical transportation impact fee for jurisdictions within the Southeast Area Transportation and Land Use Study Area. In order to administer such an impact fee, there are several additional considerations.

5.1 Collection and Distribution

The legal justification for impact fees lies in part with the rational nexus test: the fee charged must bear a direct relationship to the benefit received. There are several important elements to consider in order to achieve that nexus:

- **Impact fee districts:** Impact fees are collected at the municipal or county level. In jurisdictions that cover large geographic areas, such as counties (where enabled), it is common to subdivide into districts for the collection and distribution of impact fees to more accurately tie the benefit to fees collected. This would only likely apply to Murfreesboro and Rutherford County within the study area.
- **Contributions for non-local roads:** The demand component of the impact fee calculation includes travel on all roads, not just local roads. Similarly, the cost component is based on a combination of local road and state/US routes. As a result, fees collected must be spent on both local and non-local roads. Although fees are collected by local jurisdictions, the fees can be spent on state and US routes through local participation (funding) in the Nashville MPOs Transportation Improvement Program (TIP) and TDOT's Statewide Transportation Improvement Program (STIP). Jurisdictions can determine the proportion spent on local vs. non-local roads (such as percent of lane miles, estimated percent of VMT, etc.).
- **Regional sharing:** In many cases there are transportation facilities of regional significance, SR 96 and US 41 for example, that will benefit multiple jurisdictions. It is possible for these jurisdictions to "pool" their impact fee collections to ensure such projects are completed. Multi-jurisdictional contributions can be coordinated through the MPO and TDOT either informally or formally (i.e. memorandum of agreement).

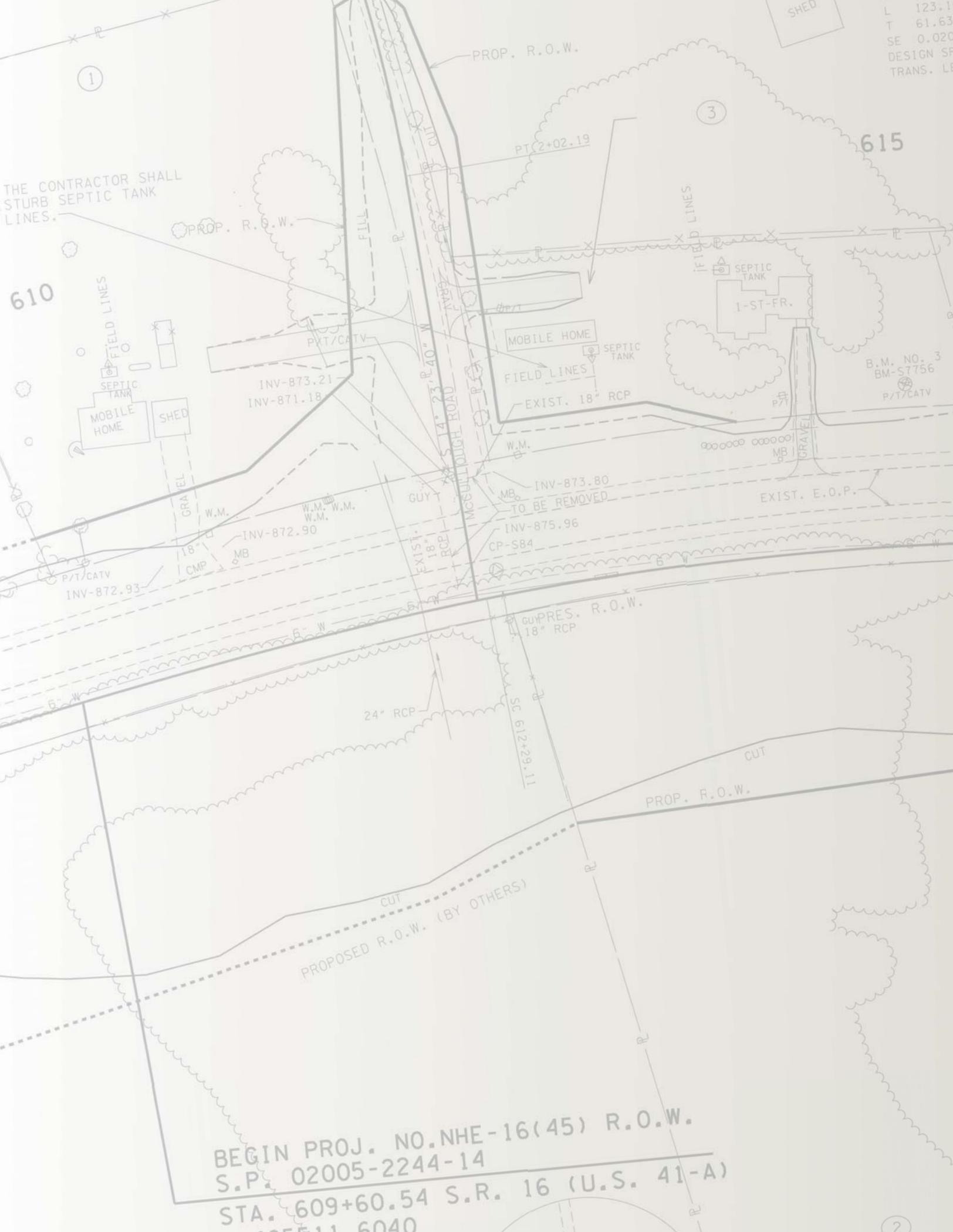
5.2 Phasing or Partial Impact Fees

Often, the full cost of an impact fee will result in substantial increase to the cost of development, creating unintended market volatility. Jurisdictions may choose to phase in the impact fee over time, beginning with a partial fee (50 percent for example) and slowly increasing over time (such as a ten or 25 percent increase per year).

“... the fee charged must bear a direct relationship to the benefit received.”

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6. SUMMARY

The Southeast Area Transportation and Land Use Study Area is poised for significant growth over the coming decades. The Preferred Growth Vision provides a transportation and land use framework for that growth to occur, including recommended transportation projects to meet growing demand.

The estimated cost to provide the necessary transportation infrastructure far outstrips the anticipated revenue from conventional sources. Impact fees are one approach to generating additional revenue for transportation. This demonstration project provides a hypothetical impact fee calculation for the Southeast Area, include estimates of demand, cost and credits.

“... poised for significant growth over the coming decades.”