Regional Transportation Mitigation Fee 2016 Nexus Study Update

Final Report

Prepared for:

NEVADA • COUNTY • TRANSPORTATION NCTC COMMISSION

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Executive Summary

The Mitigation Fee Act requires that mitigation fees be periodically updated. This is to ensure that the assumptions regarding future growth, the need for projects, their costs, etc. continue to provide a reasonable nexus between the impacts of new development and the fees charged. This report describes the methodology used in updating the nexus, the resulting recommended fee structure, and the revised forecast for RTMF program revenues based on the new growth assumptions and recommended fees.

Since the previous RTMF nexus study was prepared (2007-to-2008) the Great Recession caused a prolonged slump in the economy with the real estate sector being particularly hard hit. New forecasts for future development incorporate both a lower existing base of households and employment and lower future growth rates. These factors have resulted in lower reduced forecasts for future traffic congestion and a reduced need for roadway capacity improvements. However, it also means that the cost of projects will be spread over fewer new units. A final factor in the mix is the fact that Nevada County has been fortunate to receive more state funding than was foreseen in the original nexus study. This combination of factors reduces the amount that needs to be and can be collected through the RTMF to mitigate the future regional transportation impacts of new development. Exhibit ES-1 shows the recommended revised fee structure, which takes the factors described above into account.

Typical Use	Unit	Current Fee	Proposed Fee	% Change
Residential				
Single Family House	Dwelling Unit	$4,201	$3,770	-10%
Multi Family Housing	Dwelling Unit	$2,950	$2,610	-12%
Mobile Home in Park	Dwelling Unit	$2,950	$1,976	-33%
Senior Housing	Dwelling Unit	$1,528	$1,410	-8%
Non-Residential				
Office	Thousand Sq. ft.	$1,330	$842	-37%
Industrial	Thousand Sq. ft.	$546	$372	-32%
Warehouse	Thousand Sq. ft.	$546	$249	-54%
Retail/Service - Low	Thousand Sq. ft.	$3,102	$1,670	-46%
Retail/Service - Medium	Thousand Sq. ft.	$5,191	$3,568	-31%
Retail/Service - High	Thousand Sq. ft.	$13,987	$6,327	-55%
Lodging	Room	$710	$451	-36%
Public & Quasi-Public	Thousand Sq. ft.	Exempt	Exempt	N/A
School K-8th Grade	Student	Exempt	Exempt	N/A
School 9-12th Grade	Student	Exempt	Exempt	N/A
Public College	Student	Exempt	Exempt	N/A

Exhibit ES-1: Current and Recommended RTMF Fees

The recommendation includes a small decrease in fees for most residential units, while non-residential development would have larger reductions. The reduction is greater for non-residential development due to the fact that the proposed fees take differences in trip lengths into account in contrast to previous studies, which treated all trips equally.

If this fee schedule is adopted, NCTC will continue to have residential fees in the mid-range of foothill counties while non-residential fees will be lower than peer counties. If the forecasts for future residential and non-residential development prove correct, then total revenues from the RTMF over the next twenty years will be approximately $22M which will provide approximately 12% of the total cost of the projects on the updated CIP. The remaining 88% of project costs are attributable to existing deficiencies and by law must be covered by some source other than impact fees.

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1.0 INTRODUCTION

1.1 Background to the Nexus Study

The western Nevada County Regional Transportation Mitigation Free (RTMF) program was established in 2001 through a partnership of Nevada County, Nevada City, Grass Valley, and the Nevada County Transportation Commission (NCTC). The program provides a mechanism for new development to pay its fair share towards the cost of construction of the regional system of roads, streets, and highways needed to accommodate growth in western Nevada County.

The RTMF program operates pursuant to the Mitigation Fee Act, also known as California Assembly Bill 1600 (AB 1600) or California Government Code Sections 66000 et seq., which governs impact fees in California. The Mitigation Fee Act requires that all local agencies in California, including cities, counties, and special districts follow some basic principles when instituting impact fees as a condition of new development. Agencies must:

1) Identify the purpose of the fee. (Government Code Section 66001(a)(1))
2) Identify the use to which the fee is to be put. (Government Code Section 66001(a)(2))
3) Determine that there is a reasonable relationship between the fee's use and the type of development on which the fee is to be imposed. (Government Code Section 66001(a)(3))
4) Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is to be imposed. (Government Code Section 66001(a)(4))
5) Discuss how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is to be imposed. (Government Code Section 66001(b))

These principles closely emulate two landmark U.S. Supreme Court rulings that each provide guidance on the application of impact fees. The first case, *Nollan v. California Coastal Commission* (1987) 107 S.Ct. 3141, established that local governments are not prohibited from imposing impact fees or dedications as conditions of project approval provided the local government establishes the existence of a "nexus" or link between the exaction and the state interest being advanced by that exaction. The Nollan ruling clarifies that once the adverse impacts of development have been quantified, the local government must then document the relationship between the project and the need for the conditions that mitigate those impacts. The ruling further clarifies that an exaction may be imposed on a development even if the development project itself will not benefit, provided the exaction is necessitated by the project's impacts on identifiable public resources.

The second case, *Dolan v. City of Tigard* (1994) 114 S.Ct. 2309, held that in addition to the Nollan standard of an essential nexus, there must be a "rough proportionality" between proposed exactions and the project impacts that the exactions are intended to allay. As part of the Dolan ruling, the U.S. Supreme Court advised that "*a term such as 'rough proportionality' best encapsulates what we hold to be the requirements of the Fifth Amendment. No precise mathematical calculation is required, but the city (or other local government) must make some sort of individualized determination that the required dedication is related both in nature and extent to the impact of the proposed development*."

The combined effect of both rulings is the requirement that public exactions must be carefully documented and supported. This requirement is reiterated by the provisions of the Mitigation Fee Act and subsequent rulings in the California Supreme Court (*Ehrlich v. City of Culver City* (1996) 12 C4th 854) and the California Court of Appeals (*Loyola Marymount University v. Los Angeles Unified School District 45* (1996) Cal.App.4th 1256).

This Nexus Study report is intended to satisfy the requirements of the State of California Mitigation Fee Act. Specifically, this Nexus Study report will outline the purpose and use of the RTMF, the relationship between new development and impacts on the transportation system, the estimated cost to complete necessary improvements to the regional street system within western Nevada County, and the 'rough proportionality' or 'fair-share' fee for differing development types.

1.2 Program Experience to Date

From its inception in fiscal year 2000/2001 until the end of fiscal year 2013/2014 a total of $3.6M was collected in RTMF fees. Fifty-two percent of this amount came from developments in unincorporated Nevada County, 45% from developments in Grass Valley, and 3% from developments in Nevada City (see Exhibit 1 and Exhibit 2).

Fiscal Year	Nevada County	City of Grass Valley	City of Nevada City	Total
FY 2000/01	$0	$1,897	$0	$1,897
FY 2001/02	$75,183	$64,383	$0	$139,565
FY 2002/03	$108,576	$120,764	$8,664	$238,004
FY 2003/04	$94,530	$156,887	$22,468	$273,885
FY 2004/05	$72,575	$131,114	$28,028	$231,717
FY 2005/06	$138,480	$234,399	$7,987	$380,866
FY 2006/07	$63,253	$112,896	$1,890	$178,039
FY 2007/08	$44,445	$156,834	$6,308	$207,587
FY 2008/09	$111,937	$238,031	$2,499	$352,466
FY 2009/10	$176,458	$84,370	$0	$260,828
FY 2010/11	$222,750	$8,459	$3,928	$235,138
FY 2011/12	$170,155	$15,178	$0	$185,333
FY 2012/13	$168,255	$48,771	$4,201	$221,228
FY 2013/14	$474,393	$284,987	$7,482	$766,863
Total	$1,920,990	$1,658,970	$93,456	$3,673,416
	52%	45%	3%	100%

Exhibit 1: RTMF Revenues, 2000 to 2014

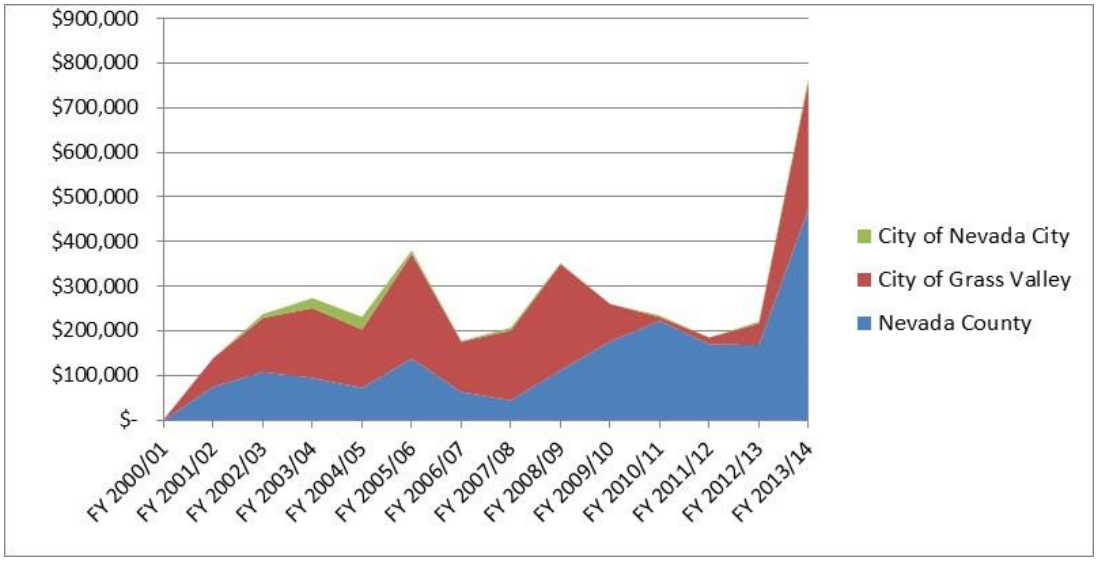


Exhibit 2: RTMF Revenues by Year and Jurisdiction

Since the previous nexus study revenues have averaged $337,000/year, which is only 19% of the amount anticipated in the study ($1.7M/year). This was due to the suppressive effect of the Great Recession on real estate development. On the other hand, NCTC had great success in securing other funds for projects on the Capital Improvement Program (CIP) including a $19M grant for the Dorsey Drive Interchange which more than made up for the less-than-expected RTMF revenues.

The RTMF has used the revenues it has collected to fund a variety of improvement projects. These are listed in Exhibit 3 below. Exhibit 3 shows that the RTMF program is important not just for the funding it provides but also because the RTMF dollars are used as local matching funds to leverage funding from other sources.

Project	RTMF Funding	Funding from Other Sources	Total Funding
East Main/Idaho-Maryland Roundabout	$1,823,000	$777,000	$2,600,000
Dorsey Drive Interchange	$214,020	$19,333,980	$19,548,000
Brunswick/Loma Rica	$488,790	$536,865	$1,025,655
NCTC Admin Annual Administration Charges	$8,950	$0	$8,950
RTMF Update Charges	$83,538	$0	$83,538
Total Paid	$2,618,298 11%	$20,647,845 89%	$23,266,143 100%

Exhibit 3: Projects that have Received RTMF Funds

2.0 UPDATES OF KEY INPUTS

2.1 Land Use Categories

The Mitigation Fee Act requires that any fee charged has a "reasonable relationship" to the impact being generated by the new development project against which the fee is assessed. An important factor in determining "reasonableness" is that projects generating different amounts of traffic are charged different fee levels. This is typically done by classifying projects into land use types and charging different fee levels for each category based on the trip generating characteristics of each type of land use and on the size of the project.

There is no standard system of land use categories for fee programs in California. Each jurisdiction has discretion to determine their own categories subject to the proviso that it results in a reasonable relationship between the development projects impact and the fee charged. An ideal system of land use categories would have the following characteristics:

- Based on Trip Generation Characteristics: A system should distinguish between development types that generate a lot of traffic (e.g. fast-food restaurants) and those that generate little traffic (furniture stores). A system that lumps them together into a single category (retail) and charges the same fee per square foot for each would be more vulnerable to legal challenge.
- Evidence-Based: A system should be based on actual evidence of impacts, which usually takes the form of survey data from a reputable source. The Institute of Transportation Engineers' (ITE's) *Trip Generation Manual* is the most widely-used reference for trip generation data in the U.S. and was used in the current study. An essential part of being data-driven is to measure the size of the development in units that are meaningfully related to trip generation and readily quantifiable as the basis for calculating the fee obligation. Residential developments are typically measured in terms of dwelling unit. For most categories of non-residential development the appropriate unit of measurement is thousands of square feet of floor space (TSF). However, there are some uses where other units are more appropriate, such as "pumps" for gas stations and "rooms" for hotels.
- Unambiguous: Each land use category should be defined with sufficient clarity that the developer, the agency staff at the counter, and if necessary a court, can easily determine whether or not a proposed development falls within the category. Overlaps between categories should be avoided.
- Exhaustive: There should be a category to cover every potential project type. Otherwise if a proposal does not fall neatly into an existing category, the developer could challenge whichever category they are put into, or even claim that if no fee has been adopted for their particular development type then no fee applies. Since it is not always possible to anticipate projects that may occur years into the future it is advisable to have a catch-all category such as "Other Non-Residential" to capture odd cases. The other way to deal with this is to offer the option to base the fee on a project-specific traffic study rather than using an existing category.
- Easy to Use: The system should be simple enough that in the vast majority of cases agency staff can readily compute the fee obligation in a few minutes. It should also be easy for policy-makers and developers to understand how the fee obligation is being calculated, estimate the fee

obligation themselves, and to know how the fees in their program compare with fees in other jurisdictions.

The current RTMF land use categories are arguably weak on several of the factors listed above, as are the systems used by Nevada County and Grass Valley. In each case, though, the system can be strengthened without deviating far from the current system.

2.1.1 Land Use Categories in the RTMF, LTMF, and TIF Programs

As part of the nexus update, the land use categories used in the RTMF program were compared to those in Grass Valley's Transportation Impact Fee (TIF) and Nevada County's Local Traffic Mitigation Fee. We found that the three fee programs use somewhat different land use categories (see Exhibit 4 below[1]).

Land Use Category		RTMF	LTMF	TIF
RESIDENTIAL				
	Single Family House	✓	✓	✓
	Multi Family	✓	✓	✓
	Mobile Home in Park		✓	✓
	Senior Residential	✓	✓	✓
NONRESIDENTIAL				
	Retail - Low	✓	✓	✓
	Retail - Medium	✓	✓	✓
	Retail - High	✓	✓	✓
	Office		✓	✓
	Office/Service	✓		
	Office - Medical		✓	
	Industrial	✓	✓	
	Light Industrial			✓

Exhibit 4: Comparison of Current Land Use Categories in Western Nevada County

The strength of all three systems is that they are simple enough to be easily administered yet complex enough to reflect meaningful differences in trip generating characteristics between, say, low-generating retail and high-generating retail or between senior housing and conventional housing. There are some weaknesses, though:

- The LTMF does not have a category for "Service" (banks, hair salons, etc.). The RTMF has one, but the category is very broad and encompasses both high-generating uses (banks with ATMs) with low-generating uses (general office). The TIF does not mention services in its land use categories, but includes as secondary uses within different retail categories (see *Grass Valley Transportation Impact Fee Program Nexus Study*, Table 9).

[1] Source: Nevada County Resolution No. 08-336 Exhibit H, RTMF Administrative Plan Figure 1A, TIF Nexus 2008 Study Table 2.

- Each program has at least one category not used by either of the other two, so a proposed development subject to two fees may find itself in two different categories. While there is no legal necessity for the systems to match up, the fact that a project might be listed in a low-fee category in the RTMF (say, Office/Service) while the same project might be put into a high-fee category for the LTMF (Office-Medical) might raise questions concerning the "reasonable relationship".
- The TIF and RTMF (and by extension the LTMF) programs use the same retail category names ("Retail – Low", "Retail – Medium", etc.) to mean different things. The RTMF explicitly categorized retail uses by means of their trip-gen rate with, for example, "Retail – Low" being all retail uses with a trip-gen rate below 35 VT/TSF/Day. The TIF nexus study did not explicitly state how retail uses were categorized, but it appears that they also used thresholds but set at a different level (apparently around 55 VT/TSF/day as the upper limit for Retail – Low). As a result, a typical strip mall (ITE Code 826, 44 VT/TSF/Day) would be "Retail – Low" for TIF but "Retail - Medium" for RTMF. Again, while there is no legal necessity for the systems to match up, the fact that a project might be listed in a low-fee category in the TIF while the same project might be put into a high-fee category for the RTMF might raise questions concerning the "reasonable relationship".
- Public sector uses (schools, government offices, etc.) and quasi-public sector uses (churches, utilities, etc.) do not seem to be mentioned in the LTMF program. The TIF program explicitly exempts public facilities from fees but does not seem to mention quasi-public facilities or private facilities serving public functions such as private schools. The RTMF program does not mention public uses but allows for exemptions in other fee programs to be carry over to the RTMF.
- The RTMF explicitly allows for project-specific trip generation studies for proposals that do not fit into the standard categories, but Grass Valley does not appear to have adopted a policy allowing this. The LTMF sets fees by trip rather than by square foot of floor space and so can easily accommodate project-specific studies.

2.1.2 Recommended Land Use Categories

Based on the ideal characteristics of a category system listed in the first section above and the issues raised in the second section, we recommend that the following changes be made to improve the defensibility of the RTMF:

- The resolution adopting RTMF's updated fee structure should explicitly specify which ITE land use codes fall into each of the fee program land use categories.
- Service uses should be combined with retail uses with similar trip generation rates. Thus high, medium, and low "Retail/Service" categories would replace the existing "Retail" and "Office/Service" categories.
- A "Mobile Home in Park" category should be added to the RTMF so that its residential categories match those of the other programs in reflecting the low trip-generation characteristics of this type of building. Mobile homes on individual lots outside of mobile home parks would continue to be treated as single-family dwellings.
- A "Lodging" category should be added to the RTMF, and the other programs as well, given the importance of tourism to the area. Hotels are not easily incorporated into other categories because their trip generate rates are typically measured in rooms instead of TSF.

- A “warehouse” category should be added to the RTMF, and the other programs as well, given that warehouses are growing as a share of the real estate market and their trip generation characteristics as significantly different from industrial developments (the category they are currently lumped into).
- The RTMF should explicitly state its policy towards public sector development. Since most public sector buildings are exempt from local fees anyway the simplest solution would be to create a “Public Sector” category for the purposes of accounting for their share of the fee program and explicitly stating these uses are “exempt” in the respective fee ordinances.
- The RTMF should have an “Other Non-Residential” category to cover land use types not found in the standard categories. This would not have a trip generation rate defined for it (the wide variety of potential projects would make an average both difficult to compute and not very meaningful). Instead the rate would read, “The trip generation for any project of a type not found in these categories shall be computed using the ITE daily trip-generation rate for their land use type or, at the discretion of agency staff, through a separate traffic study.”

Exhibit 5 compares the recommended land use categories to the ones currently in use in the fee programs.

Land Use Category	RTMF	LTMF	TIF	Recommended
RESIDENTIAL				
Single Family House	✓	✓	✓	✓
Multi Family	✓	✓	✓	✓
Mobile Home in Park		✓	✓	✓
Senior Residential	✓	✓	✓	✓
NONRESIDENTIAL				
Retail - Low	✓	✓	✓	
Retail - Medium	✓	✓	✓	
Retail - High	✓	✓	✓	
Retail/Service - Low				✓
Retail/Service - Medium				✓
Retail/Service - High				✓
Office		✓	✓	✓
Office/Service	✓			
Office - Medical		✓		
Industrial	✓	✓		✓
Light Industrial			✓	
Warehouse				✓
Public Sector				✓
Lodging				✓
Other Non-Residential				✓

Exhibit 5: Comparison of Current Land Use Categories to Recommended Categories

2.2 Trip Generation Rates

ITE's Trip Generation Manual has been updated with new survey material since the edition that was used in the previous nexus study. The trip generation rates have accordingly been updated to those of the latest (9th) edition.

Exhibit 6 shows a detailed correspondence list between the general categories show in Exhibit 5 and the ITE land use codes. It also shows the derivation of the trip generation rate used for each category from the individual rates of the sub-categories.

Land Use Category	Unit	ITE Code	Weekday Trips per Unit
RESIDENTIAL			
Single Family Detached House	Dwelling Unit	210	9.52
Multi-Family			
Apartment	Dwelling Unit	220	6.65
Low Rise Apartment	Dwelling Unit	221	6.59
Residential Condominium/Townhouse	Dwelling Unit	230	5.81
Median for Multi-Family			*6.59*
Mobile Home in Park	Dwelling Unit	240	4.99
Senior Residential			
Senior Adult Housing - Detached	Dwelling Unit	251	3.68
Senior Adult Housing - Attached	Dwelling Unit	252	3.44
Median for Senior Residential			*3.56*
NON-RESIDENTIAL			
Office			
General Office	TSF	710	11.03
Single Tenant Office	TSF	715	11.65
Office Park	TSF	750	11.42
Business Park	TSF	770	12.44
Clinic	TSF	630	31.45
Medical-Dentist Office	TSF	720	36.13
Median for Office			*12.05*
Industrial			
General Light Industry	TSF	110	6.97
General Heavy Industry	TSF	120	1.50
Industrial Park	TSF	130	6.83
Manufacturing	TSF	140	3.82
Median for Industrial			*5.33*
Warehousing	TSF	150	3.56
Retail/Service - Low			
Furniture Store	TSF	890	5.06
Discount Home Furnishing Superstore	TSF	869	20.00
Tire Superstore	TSF	849	20.36
Department Store	TSF	875	22.88
Tire Store	TSF	848	24.87
Factory Outlet Center	TSF	823	26.59
Home Improvement Superstore	TSF	862	30.74
New Car Sales	TSF	841	32.30
Median for Retail - Low			*23.88*
Retail/Service - Medium			
Discount Club	TSF	857	41.80
Shopping Center	TSF	820	42.70
Electronics Superstore	TSF	863	45.04
Building Materials and Lumber	TSF	812	45.16
Discount Superstore	TSF	813	50.75
Hardware/Paint Store	TSF	816	51.29
Arts and Crafts Store	TSF	879	56.55
Discount Store	TSF	815	57.24
Auto Parts Store	TSF	843	61.91
Specialty Retail Center	TSF	814	64.03
Median for Retail - Medium			*51.02*

Exhibit 6: Trip-Generation Rates for Different Land Use Categories

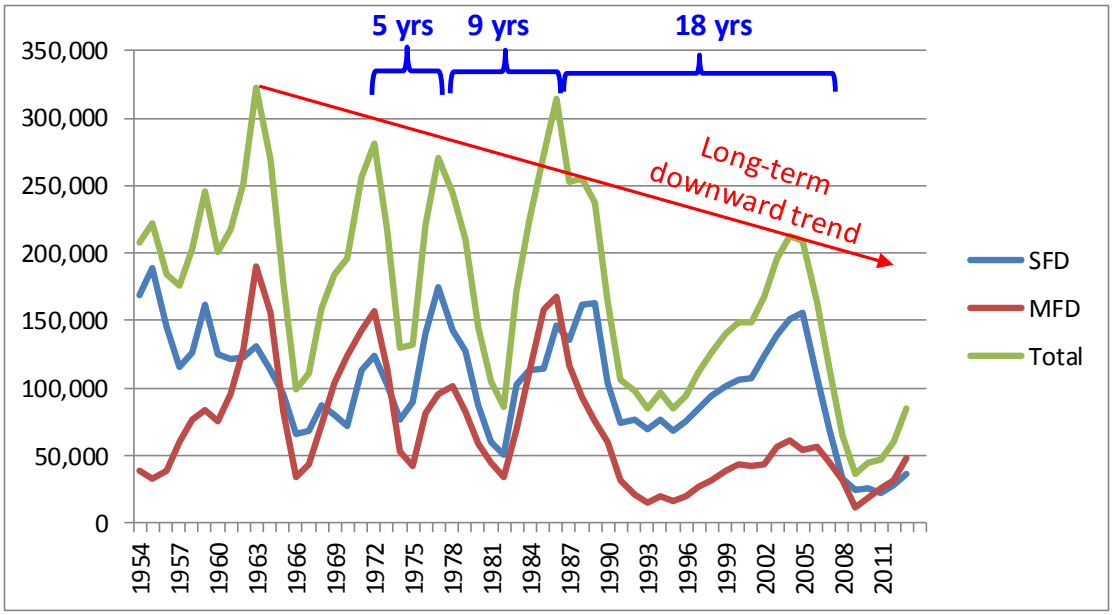
Land Use Category	Unit	ITE Code	Weekday Trips per Unit
Retail/Service - High			
Apparel Store	TSF	876	66.40
Nursery (Garden Center)	TSF	817	68.10
Day Care Center	TSF	565	74.06
Quality Restaurant	TSF	931	89.95
Pharmacy/Drugstore w/o Drive Through Window	TSF	880	90.06
Discount Supermarket	TSF	854	90.86
Pharmacy/Drugstore with Drive Through Window	TSF	881	96.91
Supermarket	TSF	850	102.24
High Turnover (Sit-Down) Restaurant	TSF	932	127.15
Drive-in Bank	TSF	912	148.15
Median for Retail - High			*90.46*
Lodging			
Hotel	Room	310	8.17
All Suites Hotel	Room	311	4.90
Business Hotel	Room	312	7.27
Motel	Room	320	5.63
Median for Lodging			*6.45*
Public & Quasi-Public			
Military Base	TSF	501	1.78
Library	TSF	590	56.24
Government Office Building	TSF	730	68.93
State Motor Vehicles Department	TSF	731	166.02
United States Post Office	TSF	732	108.19
Government Office Complex	TSF	733	27.92
Median for Public Sector			*68.93*
School K-8th Grade	Student	520 & 522	1.33
School 9th-12 Grade	Student	522 & 530	1.69
Junior/Community College	Student	540	1.23
Other Non-Residential			
All Port and Terminal Uses		000-099	The trip generation for any project in these categories shall be computed using the ITE daily trip-generation rate for their land use type or, at the discretion of agency staff, through a separate traffic study
All Recreational Uses		300-399	
All Private Institutional Uses (Public Institutions are Exempt)		500-599	
Convenience Market		851	
Convenience Market with Gasoline Pumps		853	
Fast Food Restaurant with Drive Through		934	
Coffee/Donut Shop with Drive Through		937	
Coffee/Donut Shop Drive Through No Seating		938	
Gasoline/Service Station		944	
Gasoline/Service Station with Convenience Market		945	
Gasoline/Service Station with Convenience Market and Car Wash		946	
Self-Service Car Wash		947	

Exhibit 6: Trip-Generation Rates for Different Land Use Categories (continued)

2.3 Growth Forecasts

Assumptions regarding future growth are critical inputs for a traffic mitigation fee since they help determine both whether roadway deficiencies will develop and how many new homes or square feet of new commercial development will contribute towards the costs of mitigations. Since the RTMF is a long-term program we must look at long-term trends to arrive forecast growth over the study horizon.

Exhibit 7 shows the number of housing starts for California for the period 1954 to 2013.



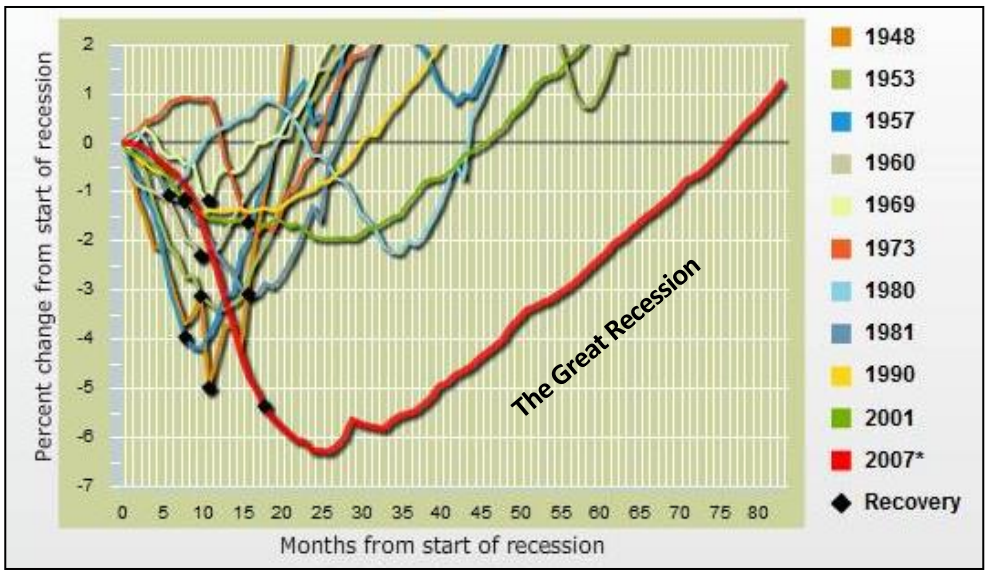
Data Source: California Building Industry Association

Exhibit 7: Housing Starts in California by Year

The exhibit shows the unstable nature of the housing market in California, with five major "housing booms" and five "housing busts" occurring during this period. Several patterns are discernible, namely:

- The housing booms are occurring further and further apart. Five years elapsed between the peaks of the 1972 and 1977 booms, 9 years between the peaks of the 1977 and 1986 booms, and 18 years between the 1986 and 2004 booms. If this pattern continues it may be decades before the next peak occurs.
- The size of the booms is trending downwards. The most recent boom was the smallest of the five, being only about 2/3^{rds} the size of the previous boom.
- From the 1960's through the 1980's single-family and multi-family housing was being built in similar quantities in California. In fact, multi-family housing production exceeded single-family housing in 3 of the 4 housing booms in this period. The period from 1990 to 2005, when single-family housing was produced at more than 2½ times the pace of multi-family, appears in retrospect to have been an aberration from the historical pattern.

More recently the real estate market has been affected by the Great Recession. The Great Recession was deeper and much longer than any previous recession since WWII (see Exhibit 8) and the collapse of the real estate market was at the heart of the recession. This was, hopefully, a one-off event unlikely to recur within the time horizon of the current study (to 2035). Nevertheless, it seems unlikely that things will "go to back to normal" (i.e. to the conditions prevailing in the 1990-to-2005 period) in terms of real estate development; structural and demographic changes have occurred resulting in a new normal. Any assumptions regarding real estate development that were made based on pre-recession data therefore need to be re-examined to determine if they remain valid post-recession.



Source: Federal Reserve Bank of Minneapolis

Exhibit 8: Change in U.S. Employment during Post WWII Recessions

Scaling down from the state-wide level to the local level, data from the U.S. Census Bureau shows that in recent years the foothills counties have been growing slowly, if at all (see Exhibit 9).

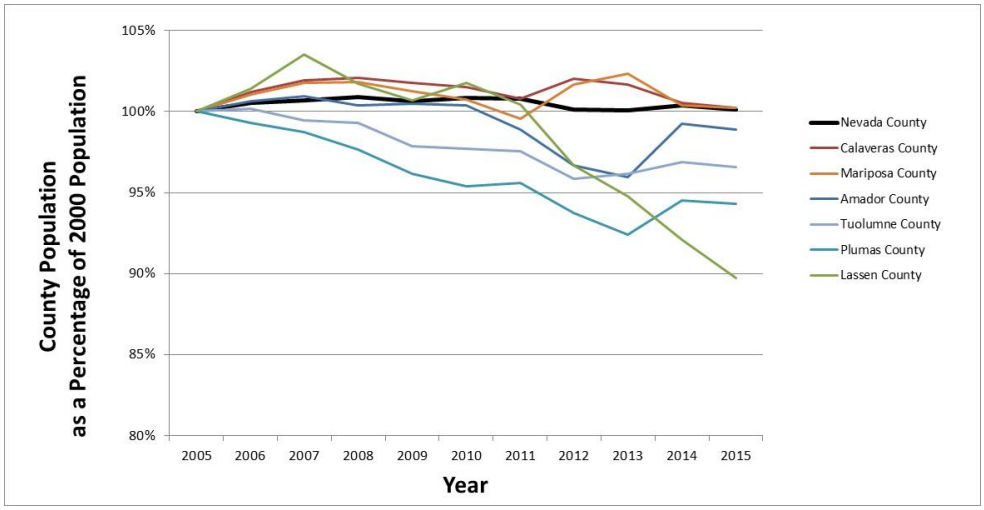


Exhibit 9: Change in Foothill Counties' Populations

Post-recession population forecasts by Caltrans[2] suggests that only modest growth can be expected for the foreseeable future (see Exhibit 10).

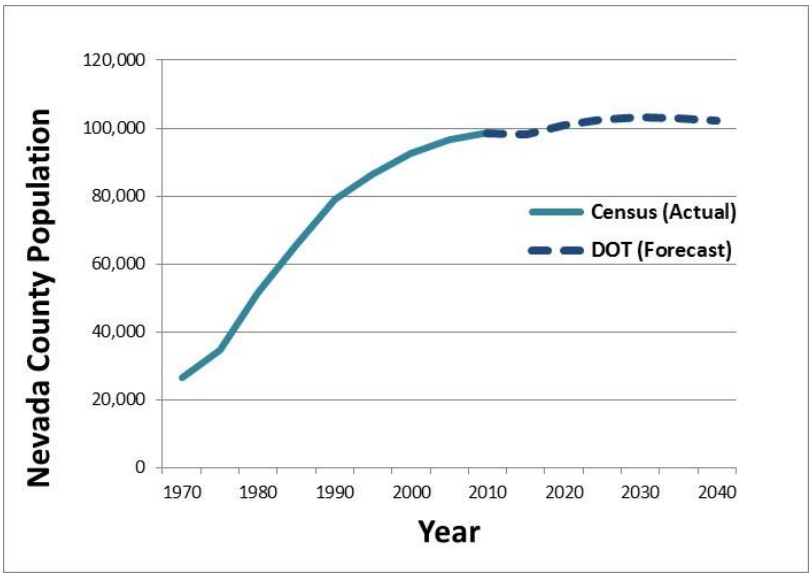


Exhibit 10: Actual and Forecast Population for Nevada County

The growth forecasts used in the previous nexus study, which began in 2006, were based on data collected in the construction boom leading up to the Great Recession. The forecasts used in the current study are based on an assumed lower growth rate and therefore the 2035 population in the current forecast is lower than the 2030 forecast used in the previous study. The current and previous forecasts are compared in Exhibit 11.

[2] *California County-Level Economic Forecast, 2014-2040*, Office of State Planning, California Department of Transportation, September 2014

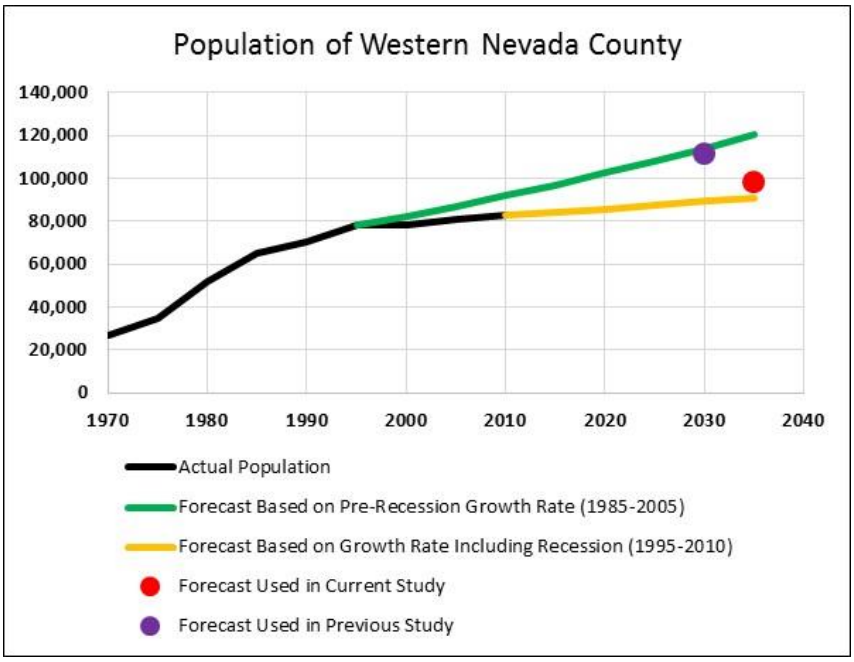


Exhibit 11: Comparison of Population Forecasts for Nevada County

The lower forecast for future population has several effects on the RTMF, most notably:

- Fewer new households means less traffic impacts and therefore less need for roadway improvements as mitigation. Some projects may no longer be needed and a smaller portion of the need will be attributable to new development.
- However, for those projects that are stilled needed, fewer new dwelling units means that each will have to pay a higher share of the cost.

These trends work in opposite directions; the first would tend to lower fees while the second would tend to raise them. The interaction of these opposing trends is discussed further in a later section of this report.

Based on the growth projections supplied by the local jurisdictions and using the land use categories described in Section 2.1.2, the growth forecast by land use type is shown in Exhibit 12.

Land Use Category		Entire RTMF Area			%
Description	Unit	Year 2012	Year 2035	Growth	Growth
Residential					
Single-Family Dwelling	DU	31,352	34,676	3,324	*11%*
Multi-Family Dwelling	DU	2,393	4,172	1,779	*74%*
Mobile Home	DU	1,515	1,615	100	*7%*
Senior Housing	DU	1,021	1,386	365	*36%*
Total		36,281	41,849	5,568	*15%*
Non-Residential					
Retail - Low	TSF	1,539	1,932	392	*25%*
Retail - Medium	TSF	1,231	1,545	314	*25%*
Retail - High	TSF	308	386	78	*25%*
Office	TSF	1,231	2,157	926	*75%*
Office-Medical	TSF	231	281	50	*22%*
Industrial	TSF	1,870	2,149	280	*15%*

Exhibit 12: Growth Forecast by Land Use Type

2.4 Funding from Other Sources

When computing the amount of an impact fee, the amount of funding available from other sources must be deducted from the project cost estimates to ensure that new development is not paying more than its fair share. State and federal funds for transportation improvements are channeled through the State Transportation Improvement Program (STIP), which is administered by the California Transportation Commission (CTC). For the purposes of this study there are two key features of the STIP; namely: 1) that the CTC allocates a share of statewide funding to Nevada County which NCTC then allocates among individual projects, subject to later review by the CTC, and 2) that STIP funding is difficult to predict and varies widely from year to year depending on the budget situation on the state level. Under these circumstances the best way to estimate future funding from the STIP is to look at the long-term average of funding from this source. This is done Exhibit 13. Based on the historical average of $7.9M/year in STIP funding we estimate that $158M will be available from this source over the next 20 years.

Year	Project	STIP Funding
2002	SR 267 Truckee Bypass	$33,500,000
2004	SR 49 Widening Bear River Bridge to Wolf/Combie Roads	$10,400,000
2012	SR 49/La Barr Meadows Road Intersection Improvements	$40,500,000
2014	Dorsey Drive Interchange	$17,000,000
2015	SR 89 Mousehole - Pedestrian/Bike Path	$6,400,000
2015	SR 49 LaBarr Project North to McKnight Widening	$3,000,000
	Total Over 14-Year Period	$110,800,000
	Annual Average of 14-Year Period	$7,914,286
	Amount Available Over 20 Years, Based on 14-Year Annual Average	$158,285,714

Exhibit 13: Funding Available from Other Sources

2.5 Updating Project Costs

The cost of road construction has varied significantly over the course of the last decade, so it is important that this be factored into the fee structure for the RTMF.

Exhibit 14 shows Caltrans' construction price index for highway projects for the period from 1900 to 2014. As can be seen in the exhibit, there was a slow and stable rise in prices throughout the 1990's and early years of the 2000's. However, in 2004 a combination of a construction boom, rising land and fuel costs, and the effect of a weakening U.S. dollar on the cost of imported construction materials, caused construction prices to rise more in a single year then they had in the previous 15 years combined; the highest single-year increase since Caltrans started the index. This was followed in 2005 by the second-highest single-year increase. The rapid increase was followed by a rapid decrease with the collapse of the housing market, which used many of the same construction inputs as Caltrans.

The Caltrans cost index is based on actual bid prices for projects done in the previous year. There is a second cost index, prepared by the Engineering News Record (ENR) that is computed based on the market prices for various major inputs to road projects (concrete, steel, aggregate, etc.). This index is less volatile than the Caltrans index because it does not include the effect of contractors' changing profit expectations in response to strong or weak market conditions. The two indices are compared in Exhibit 14.

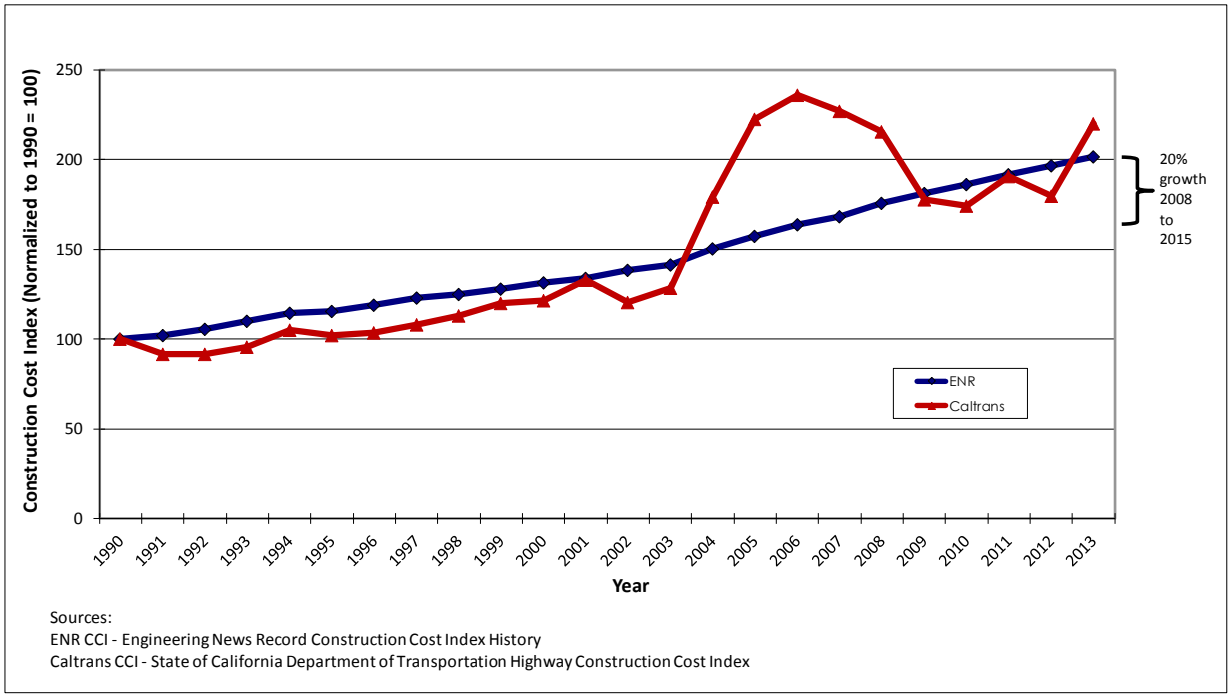


Exhibit 14: Caltrans' Construction Price Index, 1990-2014

NCTC policy specifies that the ENR index for California Cities is to be used as the basis for cost adjustments for the RTMF. This decision was based in part on the relative stability of the ENR index, which makes the fee program more predictable for developers compared to the highly volatile Caltrans index. Therefore, since the ENR index has risen 25% since the last nexus study, for projects where no recent cost estimates are available, the project cost estimates were increased 25% from the previous calculation.

3.0 UPDATED FEE CALCULATION

An overview of the methodology used to compute the RTMF is provided in the section below, followed by sections providing more in-depth discussion of the key components. These are followed by sections describing the resulting fees and the revenues that would be raised by the RTMF under the different sets of policy options.

3.1 Overview of the Fee Computation Methodology

The methodology used in the fee computation is outlined in Exhibit 15 below. The major steps include:

1) The starting point was a set of forecasts for residential and non-residential growth from NCTC, the City of Grass Valley, and Nevada County. The forecasts were described in Section 2.1.
2) The growth forecasts were used as inputs into the NCTC traffic model that was then used to forecast traffic volumes for 2035. Recent traffic counts were used to find current traffic volumes. The volumes were then used to determine the level of service (LOS) for each potential project site under 2015 and 2035 conditions.
3) Each jurisdiction sets its LOS standards through resolutions, usually as part of its General Plan.
4) The existing and future LOS were compared to the LOS standard to determine where deficiencies currently exist and where they may develop in the future. Potential projects were identified that would correct the deficiencies.
5) The outputs of Step 4 were used to determine the percentage of the need for each potential project that is attributable to new development.
6) The estimated cost for different projects come from a variety of sources, including engineering studies and planning-level estimates.
7) The project cost estimates were updated, if necessary, using the Engineering New Record construction cost index to reflect current prices. This was described in Section 2.5.
8) The outputs from steps 5 and 7 were used to determine the dollar cost for each project that is attributable to new development.
9) Next, any funding that may be available from other sources for the listed projects was identified. This was discussed in Section 2.4.
10) The amount of funding available from other sources was compared to the project costs to determine if it exceeded the amount attributable to existing deficiencies (i.e., not attributable to new development). If so, the surplus of other funds was used to reduce the amount needed from new development. The result was the maximum amount of funding allowable by law that could potentially be collected using the RTMF.
11) The NCTC traffic model was used to determine the percentage share of growth in vehicle-miles traveled (VMT) that will be associated with residential and non-residential development.

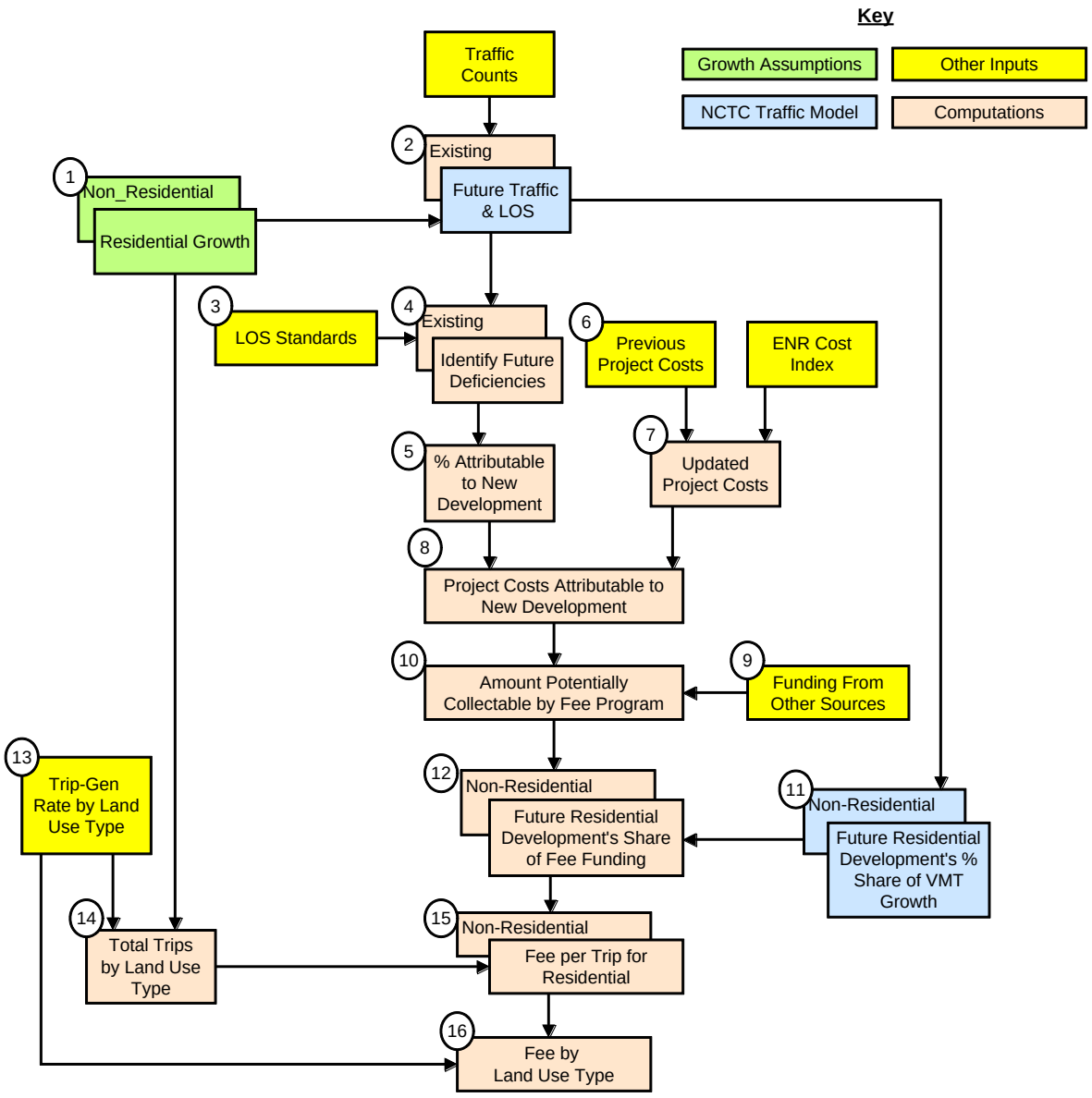


Exhibit 15: Steps in the Fee Computation

12) The results of Steps 10 and 11 were then combined to determine the portion of project costs that could be attributed to new residential and non-residential development.

13) Next, the trip generation rate was determined for each land use type. For residential land uses the unit of measurement was daily trips/dwelling unit, while for non-residential uses trip-generation was measured in terms of daily trips/thousand square feet of space, except for schools, where the unit was daily trips/student and lodging, where daily trips/room were used.

14) The number of new units for each development type was then multiplied by the trip generation rate to produce the total number of new trips associated with each type of land use development.

15) The project funding attributable to residential and non-residential developments (from Step 12) was then divided by the expected number of new residential and non-residential trips (from Step 14) to produce the potential impact fee per trip for each type of unit.

16) The fee per trip from Step 15 was then multiplied by the number of trips per unit from Step 13 to compute the fee per unit.

The next sections describe several key steps in the process in more detail.

3.2 Identification of Existing and Future Deficiencies

Existing and future deficiencies were identified by comparing the existing and future LOS to the LOS standards adopted by the local jurisdictions. For unincorporated Nevada County the LOS standard is D in all locations. For Grass Valley, the General Plan calls for LOS D at most locations. However, in some locations LOS E is allowed in order to maintain the walkable character of the historic downtown area[3].

Exhibit 16 shows the existing and future LOS at the project locations listed in the previous nexus study. Several additional sites were identified as potentially requiring improvement; these were added to the bottom of the table.

The previous nexus study (2008) identified 25 projects for the fee program. Of these:

- 3 have been completed and paid for
- 2 have been completed but not yet paid for
- 10 are now deemed unnecessary. These include:
    - 1 was identified in the previous nexus study as not being needed
    - 9 are no longer expected to be needed due to the new, lower growth expectations
- 1 has been shifted to TIF program because it is not a regional facility
- 9 are recommended to be retained going forward

In addition one new location, SR-49 at Coyote Street, was identified as having a deficiency and being eligible for inclusion in the RTMF program.

[3] See City of Grass Valley Resolution 2013-33

Project ID (from Previous Study)	Project ID (New)	Intersection	Traffic Control	LOS Standard	Previous Nexus Study (Existing)		Previous Nexus Study (2030)		Current Nexus Study (Existing)		Current Nexus Study (2035)		Notes
					Delay (sec/veh) *or ADT*	LOS	Delay (sec/veh) or ADT	LOS	Delay (sec/veh) *or ADT*	LOS	Delay (sec/veh) *or ADT*	LOS	
1	1	SR 20/49 SB Ramps/Dorsey Dr	Signal	D	N/A		N/A		10.8	B	40.4	D	Improvements identified in the previous study have already been built
		SR 20/49 NB Ramps/Dorsey Dr	Signal	D	N/A		N/A		13.2	B	13.0	B	Improvements identified in the previous study have already been built
2A		SR-49: South of McKnight Way		D			*34,700*	**F**	*26,085*	C	*27,800*	C	Deficient in previous nexus study but not deficient under revised assumptions.
2B	2	SR-49: South of La Barr Meadows Rd (SB)		D			*37,200*	**F**	*11,604*	**F**	*12,050*	**F**	Has 2 lanes NB and 1 lane SB, so LOS is different for the two directions of travel
		SR-49: South of La Barr Meadows Rd (NB)		D					*11,604*	C	*12,050*	C	
2C	3	SR-49: South of Alta Sierra Dr (SB)		D			*31,800*	**F**	*11,498*	**F**	*11,650*	**F**	Has 2 lanes NB and 1 lane SB, so LOS is different for the two directions of travel
		SR-49: South of Alta Sierra Dr (NB)		D					*11,498*	C	*11,650*	C	
2D	4	SR-49: South of Wolf Creek		D			*31,500*	**F**	*27,852*	**F**	*28,300*	**F**	
3		SR 49/Combie Rd	Signal	D			57.0	**E**	17.9	C	35.0	D	Deficient in previous nexus study but not deficient under revised assumptions.
4A	5	McKnight Way/SR 49 NB Ramps	Signal	D		**F**		**F**		**F**	14.8	B	Deficient in both previous and current nexus study. The design for improvement has been changed to a set of roundabouts.
		McKnight Way/SR 49 SB Ramps	Signal	D		**F**		**F**		**F**	41.5	D	
4B		McKnight Way/Taylorville Rd	SSSC	D	15.7	C	33.3	D	13.3	B	14.5	B	
5		None listed											
6	6	McCourtney Rd/SR 20 EB Ramps	SSSC	D	193.0	**F**	1000.0	**F**	155.8	**F**	155.4	**F**	
7-9		None listed											
10	7	SR 20/49 NB Ramps/Idaho Maryland Rd	AWSC	D			>150	**F**	20.6	C	50.8	**F**	
11		E.Main St/Idaho Maryland Rd/SR 20/49 SB Ramp	RAB	D									Roundabout has already been built and paid for
12		SR 20/49 SB Ramps/Brunswick Rd	Signal	D	52.0	D	72.0	**E**	22.6	C	22.3	C	Deficient in previous nexus study but not deficient under revised assumptions.
13A & 13B	8	SR 20/49 NB Ramps/Ridge Rd/Gold Flat Rd	AWSC	D			457.0	**F**	19.3	C	21.5	C	Lower future forecasts
		SR 20/49 SB Ramps/Ridge Rd/Gold Flat Rd	AWSC	D	51.0	**E**	93.0	**F**	39.7	**E**	55.2	**F**	
		Zion St/Ridge Rd/Nevada City Hwy	AWSC	D			N/A	**F**	11.1	B	8.4	A	Improvements identified in the previous study have already been built and paid for
14		SR-20/49 Golden Center Fwy: Bennett St to Idaho-Maryland		D			*61,795*	**F**			*54,400*	C	Deficient in previous nexus study but not deficient under revised assumptions.
15	9	SR 20/SR 49/Uren St	SSSC	D			293.0	**F**	623.2	**F**	>1000	**F**	New Counts on June 02, 2015
16-21		None listed											
22 & 23		Brunswick Rd/Loma Rica Rd	SSSC	D	18.0	C	414.0	**F**	24.0	C	11.8	B	Signalization identified in the previous study has already been done
		Brunswick Rd/E Bennett St/Greenhorn Rd	AWSC	D			74.0	**F**	21.3	C	41.4	**E**	Barely meets LOS threshold. County considers this lower priority than other projects.
24		Brunswick Rd/SR 174/Colfax Highway	SSSC	D			168.0	**F**	17.1	C	20.4	C	New Counts on June 02, 2015
25-28		None listed											
29	10	E.Main St/Bennett St/Richardson St	Signal	D					27.4	C	29.3	C	Improvements identified in the original RTMF study have already been built
30-35		None listed											
36		SR 20/Rough and Ready Highway	Signal	D			67.0	**E**	20.1	C	21.5	C	The impact occured in the AM peak period as indicated in the previous nexus study
37		SR 20/Pleasant Valley Rd	Signal	D			58.0	**E**	25.1	C	30.0	C	The impact occured in the AM peak period as indicated in the previous nexus study
38		Dorsey Drive Extension											No longer considered a regional project so is not eligible for RTMF. Perhaps TIF
		SR-49/Cement Hill Rd	SSSC	D					23.7	C	34.0	D	Not in previous study, but County requested that it be studied this time
	11	SR-49/Coyote St	SSSC	D					66.5	**F**	116.9	**F**	Not in previous study, but County requested that it be studied this time
		State Highway Projects											Now listed individually
		Admin Costs and 5-year reviews											Computed as a percentage of total project costs

Notes:
For signalized intersections average delay and LOS for all approaches are reported.
"AWSC" means "all way stop-controlled." For AWSC intersections, average intersection delay and LOS are reported.
"SSSC" means "side-street stop controlled." For SSSC intersections, delay and LOS for the worst performing approach are reported.

Exhibit 16: Existing and Future LOS at Potential Project Locations

3.3 Determining the Percent of Project Need Attributable to New Development

The procedure for determining the percentage of the need to improve a roadway facility that is attributable to new development is illustrated in Exhibit 17.

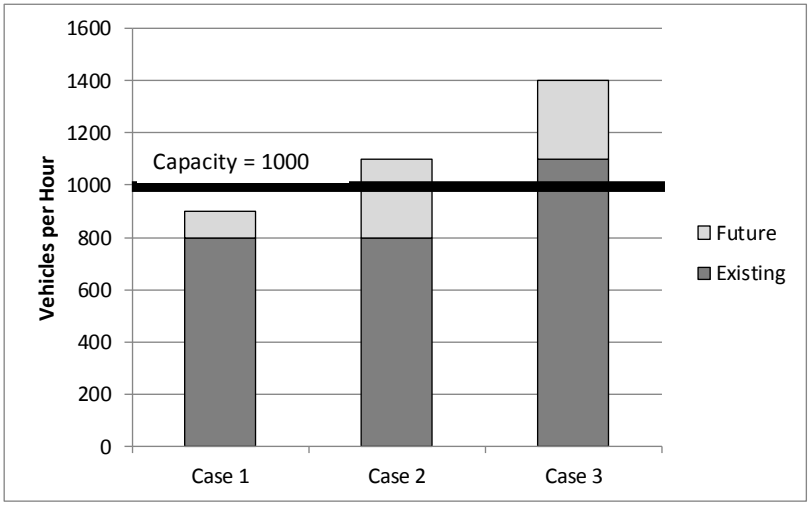


Exhibit 17: Examples of How the Percent Attributable to New Development is Determined

In Exhibit 17 the capacity is the maximum volume that can be accommodated at the adopted LOS. There are three possible cases, namely:

- In Case 1, the roadway facility is operating at below its capacity under existing conditions and is forecast to continue to do so under future (2030) conditions. In such cases there is no deficiency and so no impact fees can be collected for the project[4].
- In Case 2 the facility operates below its maximum capacity under existing conditions but the capacity is insufficient to accommodate the expected future growth in traffic. In such cases the need to provide additional capacity is entirely attributable to new development.
- In Case 3 the traffic using the facility already exceeds its rated capacity and the expected growth in traffic will exacerbate the situation. In such cases the percentage attributable to new development is the portion of the volume beyond the rated capacity that comes from new development.

Exhibit 18 shows how this methodology was applied to the projects identified in Exhibit 16 as having existing and/or future deficiencies.

[4] This is not to say that the project is not justified; only that the justification is unrelated to the need to provide additional capacity to accommodate future development. The seismic retrofit of a bridge would be an example of a project where the need is not based on insufficient capacity.

Project ID (from Previous Study)	Project ID (New)	Facility	Segment	LOS Standard	Existing				Future (2035) Without Improvements				% of Deficiency Attributable to New Development
					Peak-Hour Entering Volume *or ADT*	Capacity*	V/C Ratio	LOS	Peak-Hour Entering Volume *or ADT*	Capacity*	V/C Ratio	LOS	
					(A)	(B)	(C)=(A)/(B)	(D)	(E)	(F)	(G)=(E)/(F)	(H)	(I)=(G-D)/(D-1)
1	1	SR 20/49 Ramps	Dorsey Drive Interchange	D									33% **
2B	2	SR-49	South of La Barr Meadows Rd (SB)	D	*11,604*	8,325	**1.39**	**F**	*12,050*	8,325	**1.45**	**F**	12%
2C	3	SR-49	South of Alta Sierra Dr (SB)	D	*11,498*	8,325	**1.38**	**F**	*11,600*	8,325	**1.39**	**F**	3%
2D	4	SR-49	South of Wolf Creek	D	*27,852*	16,650	**1.67**	**F**	*28,300*	16,650	**1.70**	**F**	4%
4	5	SR-49 NB & SB Ramps	@ McKnight Way	D	2,379	2,200	**1.08**	**E**	2,692	2,200	**1.22**	**F**	64%
6	6	SR 20 EB Ramps	@ McCourtney Rd	D	1,275	969	**1.32**	**F**	1,420	969	**1.47**	**F**	32%
10	7	SR 20/49 NB Ramps	@ Idaho Maryland Rd	D	1,327	1,420	0.93	C	1,740	1,420	**1.23**	**E**	100%
13A	8	SR 20/49 SB Ramps	@ Ridge Rd/Gold Flat Rd	D	1,394	1,352	**1.03**	**E**	1,440	1,352	**1.07**	**E**	52%
15	9	SR 20/SR 49	@ Uren St	D	1,685	1,045	**1.61**	**F**	1,860	1,045	**1.78**	**F**	21%
***	10	South Auburn St	@ SR-20/49 NB Ramps	D	1,143			D	1,320			**F**	100%
***	11	SR-49	@ Coyote St	D	1,179	1,003	**1.18**	**F**	1,270	1,003	**1.27**	**F**	34%

* For roadway segments, capacity is as defined in the General Plan. For intersections, capacity is defined as the maximum sum of the approach volumes that does not exceed the LOS standard
** Calculated using model runs that showed the percentage of future traffic was attributable to existing demand and how much was attributable to new demand
*** Not in previous nexus study

Exhibit 18: Determination of Percent of Project Need Attributable to New Development

As can be seen from Exhibit 18, of the 11 sites where deficiencies were identified there were only 2 locations where the need for the project is wholly attributable to new development (i.e. Case 2 in Exhibit 17). In all 9 of the other locations a deficiencies already exists to some degree and new development is responsible for only a portion of the need for improvement (i.e. Case 3 in Exhibit 17).

3.4 Determining the Amount Potentially Collectable Through the RTMF

The amount potentially collectable through the RTMF program was calculated using the updated project costs, the percentage of project need attributable to new development show in Exhibit 18, and the funding available from other sources shown in Exhibit 13. This calculation is shown in Exhibit 19.

Column F in Exhibit 19 shows funding available that is in excess of the funding needed to correct existing deficiencies (Column D). The funds shown in Column F show how future development in Nevada County has benefitted from state and federal grant funding, since if funds had not come from those other sources then these amounts would have been collectable from new development through impact fees.

Project ID (from Previous Study)	Project ID (New)	Facility	Segment	Updated Cost Estimate	% of Need Attributable to New Development	Costs Attributable to New Development	Costs Attributable to Existing Deficiencies (not New Development)	Funding from Other Sources (STIP, SHOPP, etc.)	Funds from other sources beyond what is needed for existing deficiencies	Amount Potentially Collectable from Mitigation Fees	RTMF Funds Currently Available	RTMF Funds Spent on Project	Amount Potentially Collectable from RTMF	Funds Needed from Other Sources
				(A)	(B)	(C) = (A)*(B)	(D) = (A) - (B)	(E)	If (E)>(D), (F)=(E)-(D) Otherwise (F) = 0	(G)=(C)-(F)	(H)	(I)	(J)=(G)-(H)-(I)	(K)=(A)-(E)-(J)
1	1	SR-49 Interchange	Dorsey Drive	$24,000,000	33%	$7,991,555	$16,008,445	$19,385,609	$3,377,164	$4,614,391	$929,114	$214,020	$3,471,257	$0
2B	2	SR-49	S/o La Barr Meadows Rd (SB)	$33,417,273	12%	$4,005,587	$29,411,686	$0	$0	$4,005,587	$0	$0	$4,005,587	$29,411,686
2C	3	SR-49	South of Alta Sierra Dr (SB)	$123,414,693	3%	$3,862,597	$119,552,096	$0	$0	$3,862,597	$0	$0	$3,862,597	$119,552,096
4	4	SR-49 NB & SB Ramps	@ McKnight Way	$8,000,000	64%	$5,089,431	$2,910,569	$0	$0	$5,089,431	$0	$0	$5,089,431	$2,910,569
6	5	SR 20 EB Ramps	@ McCourtney Rd	$1,556,515	32%	$500,432	$1,056,083	$0	$0	$500,432	$0	$0	$500,432	$1,056,083
10	6	SR 20/49 NB Ramps	@ Idaho Maryland Rd	$1,380,043	100%	$1,380,043	$0	$0	$0	$1,380,043	$0	$0	$1,380,043	$0
13A	7	SR 20/49 SB Ramps	@ Ridge Rd/Gold Flat Rd	$670,000	52%	$350,227	$319,773	$0	$0	$350,227	$0	$0	$350,227	$319,773
15	8	SR 20/SR 49	@ Uren St	$1,088,655	21%	$233,760	$854,895	$0	$0	$233,760	$0	$0	$233,760	$854,895
29	9	E.Main St	@ Bennett St/Richardson St	$1,500,000	100%	$1,500,000	$0	$0	$0	$1,500,000	$268,465	$0	$1,231,535	$0
*	10	South Auburn St	@ SR-20/49 NB Ramps	$1,033,842	100%	$1,033,842	$0	$0	$0	$1,033,842	$0	$0	$1,033,842	$0
**	11	SR-49	@ Coyote St	$350,000	34%	$119,288	$230,712	$0	$0	$119,288	$0	$0	$119,288	$230,712
	12	Admin Costs and 5-year reviews (2% of program)											$425,560	
		Total		$196,411,021		$26,066,763	$170,344,258	$19,385,609	$3,377,164	$22,689,599	$1,197,579	$214,020	$21,703,560	$154,335,813
		As a percent of total costs for needed projects				13%	87%			12%	1%		11%	79%

* indicates a project that had been in the previous Grass Valley TIF project list but is now being identified as a regional project and so shifted to the RTMF program

** indicates a new project not in the previous project list but identified in the current study as a deficiency that is at least partially attributable to new development

Exhibit 19: Calculation of the Amount Potentially Collectable Through the RTMF between 2016 and 2030

3.5 Residential and Non-Residential Shares of Traffic Impacts

The previous (2008) nexus study used the number of vehicle trips generated by different types of developments as the primary indicator of their traffic impacts. Since that time, the State of California has instituted a new policy[5] by which vehicle-miles travelled (VMT) will now be used as the main indicator of traffic impacts. VMT takes into account the fact that traffic impacts are proportional both to the number of new trips associated with the development and the average length of those trips.

Outputs from the NCTC Travel Demand Model were used to forecast the growth in VMT for the five different types of trips that are represented in the model. The growth in VMT from new development was attributed to residential and non-residential developments based on trip type. Standard practice for how to do this can be found in NCHRP Report 187[6], a primary reference for travel estimation techniques used in travel demand modeling, which states that "*HBW (Home Based Work) and HBNW (Home Based Non Work) trips are generated at the households, whereas the NHB (Non-Home Based) trips are generated elsewhere*." NCTC policy follows this practice by attributing all trips beginning or ending at the traveler's home (roughly 2/3^{rds} of all trips) to the residential land use while all trips not involving a residential location (roughly 1/3rd of all trips) are attributed to non-residential land uses.

Exhibit 20 shows the average trip length by trip purpose in the NCTC traffic model. The four home-based trip purposes, shown in gray, have longer average lengths than non-home-based trips. Consequently the change from trip-based fees to VMT-based fees tends to shift the incidence of the fees away from non-residential development and more towards residential development.

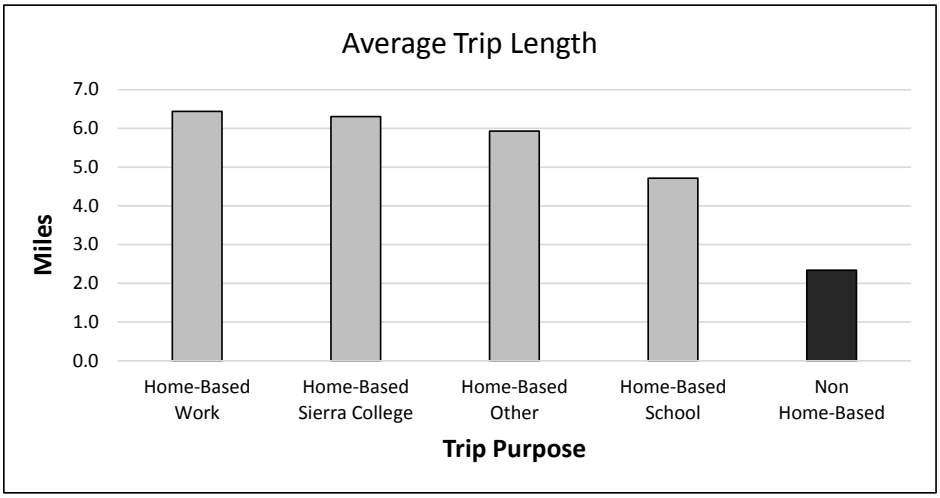


Exhibit 20: Average Trip Length by Trip Purpose

[5] SB-743, signed into law in 2013

[6] *Quick Response Urban Travel Estimation Techniques and Transferable Parameters User's Guide*, Transportation Research Board, 1978

The forecast growth in VMT from residential and non-residential land uses is shown Exhibit 21.

Trip Purpose	Growth in VMT	% of Total VMT Growth
Attributable to Residential Development		
Home-Base Other Trips	92,567	56%
Home-Base Work Trips	39,401	24%
Home-Based School Trips	2,075	1%
Home-Based Sierra College Trips	1,417	1%
Attributable to Non-Residential Development		
Non-Home-Based Trips	28,892	18%
Total	**164,352**	100%

Exhibit 21: Percentage of VMT Growth Attributable to Residential and Non-Residential Development

Based on this calculation, 85% of VMT growth was attributed to residential development and 15% was attributed to non-residential development.

3.6 Determining the Total Number of Trips and the Fee Per Trip

As described earlier, the next step in the process is to determine the total number of trips for residential and non-residential development. This was done by multiplying the trip generation rate for each land use category (see Exhibit 6) by number of new units of each land use type (see Exhibit 12). The result is shown in Exhibit 22.

Land Use	Unit	Trip-Gen Rate	# of New Units	Daily Trips
Residential				
Single-Family Dwelling	DU	9.52	3,324	31,644
Multi-Family Dwelling	DU	6.59	1,779	11,724
Mobile Home in Park	DU	4.99	100	499
Senior Housing	DU	3.56	365	1,299
Total Residential				45,166
Non-Residential				
Retail - Low	TSF	23.88	392	9,370
Retail - Medium	TSF	51.02	314	16,018
Retail - High	TSF	90.46	78	7,100
Office	TSF	12.05	976	11,760
Light Industry	TSF	5.33	240	1,276
Warehouse	TSF	3.56	40	142
Lodging	Rooms	6.45	20	129
Public & Quasi-Public*	TSF	68.93	100	6,893
School K-8th Grade*	Students	1.29	516	666
School 9-12th Grade*	Students	1.71	383	655
Community College*	Students	1.23	439	540
Total Non-Residential				54,549

* Public Sector

Exhibit 22: Computation of Total Residential and Non-Residential Trips

The portion of project costs attributable to new development (see Exhibit 19) was multiplied by the percent attributable to residential and non-residential development (see Exhibit 21) to find the fee-eligible costs for residential and non-residential development. This was then divided by the number of trips shown in Exhibit 22 to determine the fee per trip for residential and non-residential developments (see Exhibit 23).

Item	Formula	Total RTMF-Eligible Project Costs	Attributable to Residential Development	Attributable to Non-Residential Development
Total Project Costs	(A)	$21,703,560		
% Attributable by Category	(B)		82%	18%
Amount Attributable by Category	(C)=(A)*(B)		$17,888,232.99	$3,815,327.23
Trip Ends	(D)		45,166	54,549
RTMF per Trip End	(E)=(C)/(D)		$396.05	$69.94

Exhibit 23: Computation of Fee per Trip

3.7 Recommended Fee by Land Use Category

The final step is to compute the fee to be charged for each unit of new development. This is done by multiplying the trip generation rates from Exhibit 6 by the fee per trip from Exhibit 23. The result is shown in Exhibit 24. Exhibit 24 also compares the new fees with the current fees. The key points from this comparison are:

- A small decrease is recommended for the fees for per single-family home, multi-family unit, and senior homes.
- A larger reduction is recommended in the fees for mobile homes in mobile home parks. This is due to them being split off from multi-family housing into their own category in recognition of their lower trip-generation rate.
- A larger reduction in fees is recommended for every category of non-residential land use. The decrease is primarily a function of the change from basing fees on the number of vehicle trips and instead basing fees on the VMT, which is a better measure of traffic impact[7]. Since businesses have on average shorter trip lengths than homes the effect is to shift the incidence of the fee from non-residential development more towards residential development.

Policy-makers are sometimes concerned about the effects that a fee program might have in terms of making their county less competitive than peer counties in attracting development. There are two aspects to this, namely:

- People and businesses moving to foothills counties expect to find little or no traffic congestion. To the extent that the RTMF provides funding for needed capacity improvements it improves the competitiveness of Nevada County.
- Impact fees, like any other cost, inhibit development to some extent. However, this does not mean that they necessarily reduce competitiveness. As can be seen in Exhibit 25, the recommended RTMF fees would be in the middle of the pack among peer counties and so are unlikely to deter development. The recommended RTMF fees for non-residential development would be quite low compared to peer counties (see Exhibit 26).

[7] SB-743, signed into law in 2013 and currently being phased into practice, will make VMT the main measure of traffic impacts in California.

Typical Use	Unit	Current Fee per Trip	Current Trip-Gen Rate	Current Fee	Proposed Fee per Trip	Updated Trip-Gen Rate	Proposed Fee	% Change
		(A)	(B)	(C)=(A)*(B)	(D)	(E)	(F)=(D)*(E)	(G)=(F)/(C)-1
Residential								
Single Family House	Dwelling Unit	$439	9.57	$4,201	$396	9.52	$3,770	-10%
Multi Family Housing	Dwelling Unit	$439	6.72	$2,950	$396	6.59	$2,610	-12%
Mobile Home in Park	Dwelling Unit	$439	6.72	$2,950	$396	4.99	$1,976	-33%
Senior Housing	Dwelling Unit	$439	3.48	$1,528	$396	3.56	$1,410	-8%
Non-Residential								
Office	Thousand Sq. ft.	$110	12.09	$1,330	$70	12.05	$842	-37%
Industrial	Thousand Sq. ft.	$110	4.96	$546	$70	5.33	$372	-32%
Warehouse	Thousand Sq. ft.	$110	4.96	$546	$70	3.56	$249	-54%
Retail/Service - Low	Thousand Sq. ft.	$110	28.20	$3,102	$70	23.88	$1,670	-46%
Retail/Service - Medium	Thousand Sq. ft.	$110	47.19	$5,191	$70	51.02	$3,568	-31%
Retail/Service - High	Thousand Sq. ft.	$110	127.15	$13,987	$70	90.46	$6,327	-55%
Lodging	Room	$110	6.45	$710	$70	6.45	$451	-36%
Public & Quasi-Public	Thousand Sq. ft.			Exempt			Exempt	N/A
School K-8th Grade	Student			Exempt			Exempt	N/A
School 9-12th Grade	Student			Exempt			Exempt	N/A
Public College	Student			Exempt			Exempt	N/A

* Public-sector land uses are generally exempt from local fees
** The unit of analysis for this category is "rooms". Trip-gen rate shown is the average for the hotel and motel categories

Exhibit 24: Computation of Revised Fee Levels

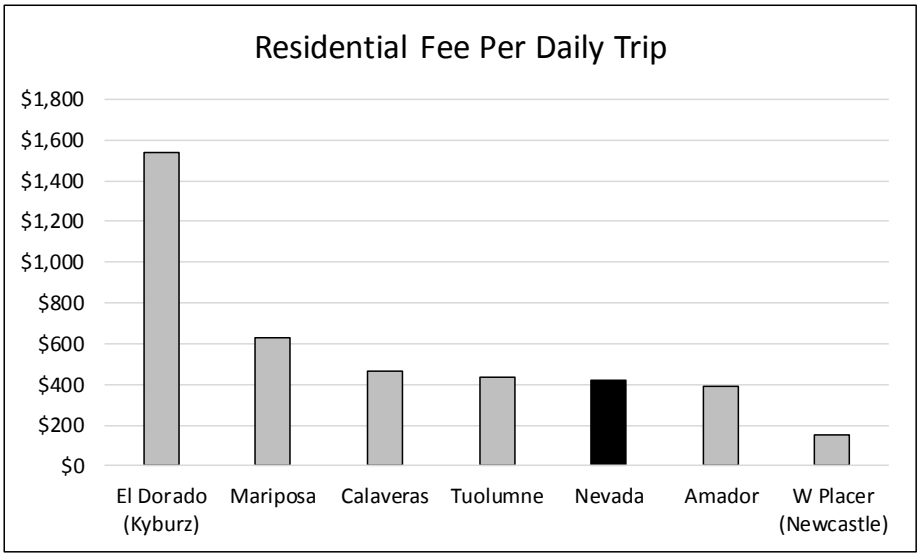


Exhibit 25: Comparison of County-Wide Residential Impact Fees Among Foothills Counties

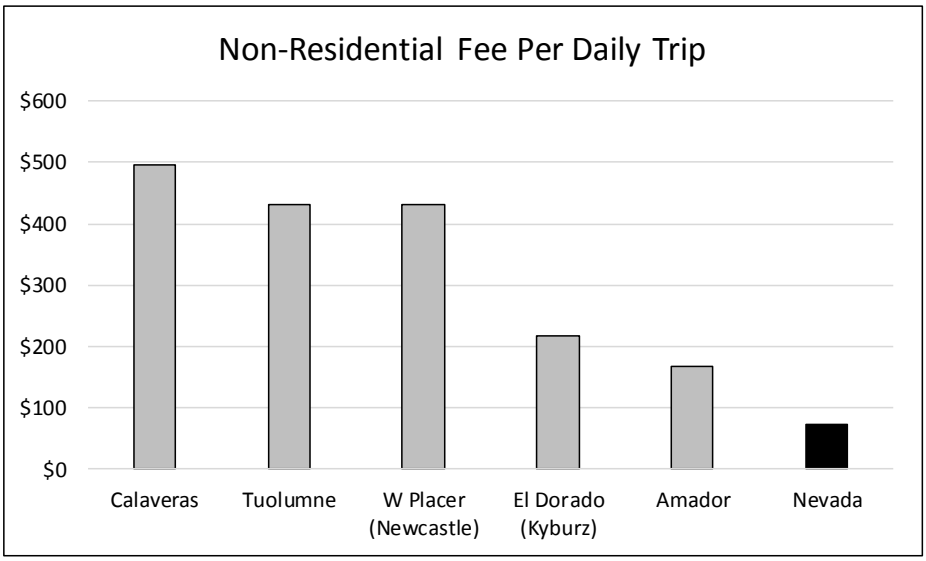


Exhibit 26: Comparison of County-Wide Non-Residential Impact Fees Among Foothills Counties

3.8 Revenues Raised by the RTMF Program

Based on the number of new units of development shown in Exhibit 12 and the recommended fee schedule shown in Exhibit 24, the total fee revenue expected to be generated by the RTMF in the next 20 years is $22.2 million, as shown in Exhibit 27. Note that this is slightly (3%) less than the $23.0M in project costs attributable to new development shown in Column J of Exhibit 19. This is because public-sector developments are exempt from the RTMF and their share of the costs cannot legally be transferred to others development, since the latter are responsible only for mitigating their own impacts.

Land Use Category	Unit	RTMF/ Trip End	Trip-Gen Rate	RTMF/ Unit	Expected # of New Units	Expected Revenues	Percent of Revenues
Residential							
Single Family House	DU	$396.05	9.52	$3,770	3,324	$12,532,828	59.4%
Multi Family	DU	$396.05	6.59	$2,610	1,779	$4,643,147	22.0%
Mobile Home	DU	$396.05	4.99	$1,976	100	$197,629	0.9%
Senior Housing	DU	$396.05	3.56	$1,410	365	$514,629	2.4%
					Residential Total >	$17,888,233	84.8%
Non-Residential							
Office	TSF	$69.94	12.05	$842	976	$822,497	3.9%
Light Industry	TSF	$69.94	5.33	$372	240	$89,275	0.4%
Warehouse	TSF	$69.94	3.56	$249	40	$9,960	0.0%
Retail/Service - Low	TSF	$69.94	23.88	$1,670	392	$655,348	3.1%
Retail/Service - Medium	TSF	$69.94	51.02	$3,568	314	$1,120,364	5.3%
Retail/Service - High	TSF	$69.94	90.46	$6,327	78	$496,610	2.4%
Lodging	Rooms	$69.94	6.45	$451	20	$9,023	0.0%
Public & Quasi-Public	TSF	Exempt	68.93	$0	100	$0	0.0%
School K-8th Grade	Students	Exempt	1.29	$0	516	$0	0.0%
School 9-12th Grade	Students	Exempt	1.71	$0	383	$0	0.0%
Public College	Students	Exempt	1.23	$0	439	$0	0.0%
					Non-Residential Total >	$3,203,078	15.2%
					Combined Total >	$21,091,311	
		As a Percentage of Project Costs Attributable to New Development >				97%	

Exhibit 27: Forecast of RTMF Revenues

Approximately 83% of the forecast revenue will come from single and multi-family housing. It is therefore crucial to the viability of the program that fees on those two categories of development not be reduced.

3.9 Results in Terms of Project Funding

The revenue forecast computed in the previous section can be compared to the project costs shown in Exhibit 19. Pro-rating the $22.2M in RTMF revenue over the $23.0M in eligible project costs results in the allocations by project shown in Exhibit 28.

Exhibit 28 shows that $155.0M in additional funding will be needed over the course of the next 20 years to fully fund the project list. Section 2.4 of this report showed that if future state funding is similar to previous funding then approximately $158.2M will become available over the 20-year period (see Exhibit 13). We therefore believe that there is a reasonable expectation that the projects identified for RTMF funding can be fully funded within the planning time horizon.

Project ID (from Previous Study)	Project ID (New)	Facility	Segment	Updated Cost Estimate	RTMF Funds		Funds from Other Sources	
					Already Collected	Fees on Future Development	Already Secured	Future Funding
1	1	SR-49 Interchange	Dorsey Drive	$24,000,000	$1,143,134	$3,471,257	$19,385,609	$0
2B	2	SR-49	S/o La Barr Meadows Rd (SB)	$33,417,273	$0	$3,871,078	$0	$29,546,195
2C	3	SR-49	South of Alta Sierra Dr (SB)	$123,414,693	$0	$3,732,890	$0	$119,681,804
4	4	SR-49 NB & SB Ramps	@ McKnight Way	$8,000,000	$0	$4,918,526	$0	$3,081,474
6	5	SR 20 EB Ramps	@ McCourtney Rd	$1,556,515	$0	$483,627	$0	$1,072,888
10	6	SR 20/49 NB Ramps	@ Idaho Maryland Rd	$1,380,043	$0	$1,333,700	$0	$46,342
13A	7	SR 20/49 SB Ramps	@ Ridge Rd/Gold Flat Rd	$670,000	$0	$338,466	$0	$331,534
15	8	SR 20/SR 49	@ Uren St	$1,088,655	$0	$225,911	$0	$862,745
29	9	E.Main St	@ Bennett St/Richardson St	$1,500,000	$268,465	$1,190,180	$0	$41,355
*	10	South Auburn St	@ SR-20/49 NB Ramps	$1,033,842	$0	$999,125	$0	$34,717
**	11	SR-49	@ Coyote St	$350,000	$0	$115,283	$0	$234,717
	12	Admin Costs and 5-year reviews		$425,560	$0	$411,270	$0	$14,290
		Total		$196,836,581	$1,411,599	$21,091,311	$19,385,609	$154,948,062
		As a percent of total costs for needed projects			0.7%	10.7%	9.8%	78.7%

* indicates a project that had been in the previous Grass Valley TIF project list but is now being identified as a regional project and so shifted to the RTMF program

** indicates a new project not in the previous project list but identified in the current study as a deficiency that is at least partially attributable to new development

Exhibit 28: Proposed Allocation of RTMF Revenues to Projects

4.0 MITIGATION FEE ACT FINDINGS

The Mitigation Fee Act, as set forth in the California Government Code Sections 66000 through 66008, establishes the framework for mitigation fees in the State of California. The Act requires agencies to make certain findings with respect to a proposed fee. These are described in the sections below.

4.1 Purpose of the Fee

Identify the purpose of the fee

The purpose of the RTMF is to establish a uniform, cooperative program to mitigate the cumulative indirect regional impacts of future developments on traffic conditions on regional roadways in Nevada County. The fees will help fund improvements needed to maintain the target level of service in the face of the higher traffic volumes brought on by new developments.

4.2 Use of Fee Revenues

Identify the use to which the fees will be put. If the use is financing facilities, the facilities shall be identified

The list of projects to receive RTMF funding is shown in Exhibit 28. Based on input from the member agencies and the public, we recommend that the regional fee should be used only for roads of regional significance. This is consistent with the fact that cumulative indirect impacts tend to be on regional facilities and so should be addressed with a regional fee program; Grass Valley and the County have complementary programs to mitigate more local impacts, and direct impacts are covered through exactions. Only projects involving state facilities were considered "regional" under this policy and can receive RTMF funding.

4.3 Use/Type-of-Development Relationship

Determine the reasonable relationship between the fees' use and the type of development project on which the fees are imposed

To determine the "use" relationship, the development being assessed an impact fee must be reasonably shown to derive some use or benefit from the facility being built using the fee. In the case of the RTMF the projects to be funded were selected based on the fact that they performed a regional (as opposed to local) function and that the need for the project was at least partially attributable to new development. The growth in regional VMT and the increases in congestion at project sites (see Exhibit 18) are evidence that new developments contributes towards the need for roadway improvements.

The fact that the projects that will be funded by the RTMF are high-priority regional roads means that all of the county's new residents and businesses will benefit in important ways from the maintenance of a reasonable level of service. Most drivers in the new developments can be expected to use these roads regularly, and those that do not will nevertheless benefit because good traffic conditions on the RTMF-funded roads will keep drivers from diverting to other roads and causing congestion in other parts of the county. Even residents or workers in the new developments who do not drive at all will benefit from access to goods and services made possible in part by the serviceability of the regional road network.

4.4 Need/Type-of-Development Relationship

Determine the reasonable relationship between the need for the public facilities and the types of development on which the fees are imposed

To determine the "need" relationship the facilities to be financed must be shown to be needed at least in part because of the new development. This was determined by analyzing the forecast traffic demand with the expected degree of new development and comparing that with the demand without new development. Projects were analyzed individually and the degree to which the need for the project was attributable to new development varied from project to project. This analysis is described in an earlier chapter of this report.

4.5 Proportionality Relationship

Determine how there is a reasonable relationship between the fee amount and the cost of the facilities or portion of the facilities attributable to the development on which the fee is imposed

The "proportionality" relationship requires that there be rough proportionality between the fee charged to each type of development and the cost of the facility being financed. In the case of the RTMF the differences in the traffic generated by different types of development were factored into the fee to be charged for each type, as is described earlier in this report. Within each land use category the size of the project, i.e. the number of dwelling units constructed or size of the building, is accounted for in assessing the fee. This ensures that projects that generate a lot of traffic and therefore have a greater traffic impact will pay more than other projects that have less impacts.