

# DKS MEMORANDUM

DATE: September 24, 2019  
TO: Rafael Martinez, Director of Transportation  
FROM: John P. Long, P.E., T.E.  
Cameron Shew, P.E., T.E.  
SUBJECT: TIM Fee Major Update  
Technical Memorandum 1B: Fee Rates by Size of Single-Family Unit

---

## Executive Summary

The County's Traffic Impact Mitigation (TIM) Fee Program currently has one fee rate for new "non-age restricted" single-family dwelling units, regardless of their size. For several other local jurisdictions, DKS Associates (DKS) has established a nexus to justify fee rates that differ by the size of housing units, using data from the U.S. Census and the Sacramento Area Council of Governments (SACOG) household travel surveys.

The data indicates that for housing sizes between about 1,200 and 2,500 square feet, the trip rate for a single family unit is generally within five percent of the average trip rate for single-family units. Thus, in this range, use of the average trip rate from the Institute of Transportation Engineers (ITE) Trip Generation report is appropriate. For single-family units less than 1,200 square feet (approximately 17 percent of units), a trip rate that is 88 percent of the average rate is warranted. For single-family units more than 2,500 square feet (approximately 17 percent of units), a trip rate that is 117 percent of the average rate is appropriate.

County staff and their consultant (DKS) request direction on whether varying fee rates by size of a single family unit should be incorporated into the TIM Fee Program Major Update.

## Background

The County's Traffic Impact Mitigation (TIM) Fee Program focuses on impacts of new development. Like most fee programs, the current TIM Fee Program has one fee rate for new "non-age restricted" single-family dwelling units, regardless of their size. For example, a new 1,500 square foot residential unit is charged the same fee rate as a 3,200 square foot unit. County staff has asked DKS if data exists to support a nexus between transportation impacts and housing size.

DKS has established a nexus to justify fee rates that differ by the size of housing units in several local jurisdictions using data from the U.S. Census and household travel surveys for the Sacramento region. Fee rates that vary by unit size have been used in this region for a number of years. The nexus for their use has been vetted, and the development community has supported them. Currently the following local jurisdictions have fee rates that vary by housing unit size:

<b>Jurisdiction</b>	<b>Year When Fee Rates by Unit Size were First Implemented</b>
City of West Sacramento	2004
Sacramento County	2008
City of Rancho Cordova	2013

The following section describes the analysis used to establish the nexus between traffic impacts and unit size for those jurisdictions.

## **Analysis**

“Impact Fees & Housing Affordability – A Guidebook for Practitioners,”<sup>1</sup> prepared for the US Department of Housing and Urban Development (HUD), looks at the relationship between various characteristics of a dwelling unit (e.g. square footage, bedrooms, etc.) and its impact on public facilities, including roadways. This research suggests that trip generation can be estimated by categories of the dwelling unit size (i.e. ranges of square footage) using the following relationships:

- The average number of persons per household for square footage categories that were estimated from the American Housing Survey
- The average vehicle trips by household size categories (i.e. persons in the household) from national or regional household travel surveys

The American Housing Survey (AHS), which is conducted by the Bureau of the Census for HUD, collects data on the nation's housing, including apartments, single-family homes, mobile homes, vacant housing units, household characteristics, income, housing and neighborhood quality, housing costs, equipment and fuels, size of housing unit, and recent movers. National data are collected in odd numbered years, and data for each of 47 selected Metropolitan Areas are collected about every six years. The national sample covers an average 55,000 housing units. Each metropolitan area sample covers 4,100 or more housing units.

For the local jurisdictions that currently have fee rates that vary by unit size, DKS used AHS data from the Sacramento metropolitan area to determine the average number of residents in single-family dwelling units by square-footage categories. The AHS does not provide data on square footage for multi-family dwelling units.

SACOG has conducted household travel surveys in its six-county region to collect detailed data on household characteristics and travel behavior. DKS used data from SACOG's 2000 Household Travel Survey, which involved nearly 4,000 households, to estimate the number of vehicle trips by categories of persons in the household. This information was then combined with the estimated average number of residents in single-family dwelling units by square-footage categories (from AHS) to estimate vehicle trips for square footage categories.

The data indicates that for housing sizes between about 1,200 and 2,500 square feet, the trip rate for a single family unit is generally within five percent of the average trip rate for single-family units. In this range, use of the average trip rate from ITE Trip Generation report is appropriate. For single-family units less than 1,200 square feet, the data indicates that a trip rate that is 88 percent of the average rate is warranted. For single-family units more than 2,500 square feet, a trip rate that is 117 percent of the average rate is appropriate.

Based on AHS data from the Sacramento region, about 17 percent of single-family units are smaller than 1,200 square feet, and about 17 percent are larger than 2,500 square feet.

**Recommended Action:** DKS Associates and County staff recommend the Board consider fee rates for single-family units that vary by the size of the unit, if the Board wishes to encourage a full range of housing units in the County.

---

<sup>1</sup> <https://www.huduser.gov/portal/publications/impactfees.pdf>