



TRANSPORTATION UNIFORM MITIGATION FEE

FEE CALCULATION HANDBOOK

In Cooperation with

The City of Banning
The City of Beaumont
The City of Calimesa
The City of Canyon Lake
The City of Corona
The City of Eastvale
The City of Hemet
The City of Jurupa Valley
The City of Lake Elsinore
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The City of San Jacinto
The City of Temecula
The City of Wildomar
The County of Riverside
Eastern Municipal Water District
March Joint Powers Authority
Riverside County Superintendent of Schools
Riverside Transit Agency
Western Water

Prepared by GHD

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1 INTRODUCTION AND PURPOSE

The Board of Supervisors of the County of Riverside and the Councils of the Cities of Western Riverside County enacted the Transportation Uniform Mitigation Fee to fund the mitigation of cumulative regional transportation impacts resulting from future development. The mitigation fees collected through the TUMF program will be utilized to complete transportation system capital improvements necessary to meet the increased travel demand and to sustain current traffic levels of service.

The fee calculations are based on the roughly proportional allocation of the costs of proposed transportation improvements based on the cumulative transportation system impacts of different types of new development. Fees are directly related to the forecast rate of growth and trip generation characteristics of different categories of new development. The purpose of this handbook is to detail the methodology for calculating the TUMF obligation for different categories of new development and, where necessary, to clarify the definition and calculation methodology for uses not clearly defined in the respective TUMF ordinances.

2 STANDARD FEE CALCULATIONS

A standard methodology will be applied for calculating all TUMF obligations based on the rates for various land use categories as prescribed in the respective TUMF ordinances. Fees associated with new residential development are to be calculated based on the prescribed TUMF rate and the total number of dwelling units associated with a new development using **Worksheet A.1.1**. Similarly, fees for all new non-residential developments are to be calculated based on the prescribed TUMF rate and the gross floor area of all buildings associated with the new development using **Worksheet A.2.1**.

The TUMF Ordinance sets forth exemptions to the payment of TUMF, including an exemption for existing uses. The specific language in the TUMF Ordinance and Administrative Plan is as follows:

"The rehabilitation and/or reconstruction of any habitable structure in use on or after January 1, 2000, provided that the same or fewer traffic trips are generated as a result thereof."

Credits for an existing use shall be calculated based on the fee schedule and calculation policies in effect at the time of credit application. It is important to note that the amount of credit a project can receive for an existing use is capped at the amount of credit that would be needed for the new proposed project to pay \$0 TUMF. Please contact WRCOG staff with any questions related to application of this exemption.

2.1 Standard Residential Fee Calculations

To calculate the TUMF obligation, residential dwelling units are defined as a building or portion thereof used by one (1) family and containing one (1) kitchen, that is designed primarily for residential occupancy. Residential dwelling units may include, but are not limited to, detached houses, apartment homes, condominiums and mobile homes. Residential dwelling units do not include hotel and motel rooms, dormitories, medical care facilities and correctional institutions which are considered non-residential developments.

Residential TUMF obligations are calculated by multiplying the net increase in the total number of dwelling units associated with a new development by the appropriate residential land use category fee rate using **Worksheet A.1.1**. Residential land use categories include single-family residential dwelling units and multi-family dwelling units, as defined in the respective TUMF ordinances.

Community facilities provided for the exclusive use of residents and their guests as part of a residential development, such as recreation rooms, swimming pools, and laundry facilities, are considered ancillary to the primary residential land use of a residential development. The development or expansion of these types of ancillary community facilities would not require payment of TUMF fees. However, the development of non-residential retail, service or industrial facilities (including, but not limited to, convenience markets, permanent management offices and permanent sales offices) in conjunction with a residential development would be considered as separate land uses and would require payment of the TUMF fee in accordance with Section 6.2 of the Nexus Study and the provisions of the respective local TUMF Ordinance.

2.2 Standard Non-Residential Fee Calculations

To calculate the TUMF obligation, non-residential development is defined as retail commercial, service commercial, industrial, and government or public sector development that is designed primarily for use as a business and is not intended for residential occupancy or dwelling use. The applicable non-residential land use category for a non-residential development is determined based on the predominate use of the building or structure associated with the new development and may be related to the underlying land use zoning of the new development site, as prescribed in the respective TUMF ordinances. The TUMF non-residential land use categories were defined with reference to the socioeconomic data obtained from the Southern California Association of Governments (SCAG) and used as the basis for completing this Nexus Study analysis. The SCAG employment data is provided for thirteen employment sectors consistent with the California Employment Development Department (EDD) Major Groups including: Farming, Natural Resources and Mining; Construction; Manufacturing; Wholesale Trade; Transportation, Warehousing and Utilities; Retail Trade; Information; Financial Activities; Professional and Business Service; Education and Health Service; Leisure and Hospitality; Other Service; and Government. For the purposes of the Nexus Study, the EDD Major Groups were aggregated to Industrial (Farming, Natural Resources and Mining; Construction; Manufacturing; Wholesale Trade; Transportation,

Warehousing and Utilities), Retail (Retail Trade), Service (Information; Financial Activities; Professional and Business Service; Education and Health Service; Leisure and Hospitality; Other Service) and Government/Public Sector (Government). These four aggregated sector types were used as the basis for determining the fee.

Table 2.1 provides a table detailing the EDD Major Groups and corresponding North American Industry Classification System (NAICS) Categories that are included in each non-residential sector type¹. Table 2.1 should be used as a guide to determine the applicable non-residential TUMF land use category based on the predominate use of the buildings associated with the new development. A comprehensive breakdown of the Major Groups and correspondence to the NAICS categories can be found in Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024) and on the U.S. Census Bureau website at <https://www.census.gov/naics/>.

Non-residential TUMF obligation are calculated by multiplying the net increase in the gross floor area of the buildings or structures associated with a new development by the appropriate non-residential land use category fee rate using **Worksheet A.2.1**. The gross floor area of non-residential developments is defined as the sum, measured in square feet, of the area at each floor level, including cellars, basements, mezzanines, penthouses, corridors, lobbies, stores, and offices, that are included within the principal outside faces of the exterior wall of the building or structure, not including architectural setbacks or projections. Included are all stories or areas that have floor surfaces with clear standing head room (at least 6 feet, 6 inches) regardless of their use. Where a ground level area, or part thereof, within the principal outside faces of the exterior walls of the building or structure is left un-roofed, the gross floor area of the un-roofed portion will be added to the overall square footage of the building for the non-residential fee calculation unless the unroofed area is solely provided for architectural or aesthetic purposes.

For certain non-residential land use types that have been explicitly defined in this handbook (herein referred to as 'defined use') un-enclosed un-roofed areas and un-enclosed roofed-over spaces that are integral to the performance of the principal business of the site will be added to the overall square footage of any buildings or structures associated with a new development for the purpose of fee calculation. Defined use types are listed in **Table 3.1** of this handbook. Determination of the precise floor area for each defined use will be made in accordance with the provisions of **Section 4.0** and **Section 5.0** of this handbook.

¹ Executive Office of the President, Office of Management and Budget, North American Industry Classification System, United States, 2022

Table 2.1 - TUMF Non-Residential Category Detailed NAICS Correspondence Summary

TUMF Category	SCAG RTP/SCS	NAICS Two Digit Code		NAICS Three Digit Code	
	Employment Categories	NAICS Code	NAICS Title	NAICS Code	NAICS Title
Industrial	Farming, Natural Resources and Mining				
		11	Agriculture, Forestry, Fishing and Hunting		
				111	Crop Production
				112	Animal Production and Aquaculture
				113	Forestry and Logging
				114	Fishing, Hunting and Trapping
				115	Support Activities for Agriculture and Forestry
		21	Mining, Quarrying, and Oil and Gas Extraction		
				211	Oil and Gas Extraction
				212	Mining (except Oil and Gas)
				213	Support Activities for Mining
	Construction				
		23	Construction		
				236	Construction of Buildings
				237	Heavy and Civil Engineering Construction
				238	Specialty Trade Contractors
	Manufacturing				
		31-33	Manufacturing		
				311	Food Manufacturing
				312	Beverage and Tobacco Product Manufacturing
				313	Textile Mills
				314	Textile Product Mills
				315	Apparel Manufacturing
				316	Leather and Allied Product Manufacturing
				321	Wood Product Manufacturing
				322	Paper Manufacturing
				323	Printing and Related Support Activities
				324	Petroleum and Coal Products Manufacturing
				325	Chemical Manufacturing
				326	Plastics and Rubber Products Manufacturing
				327	Nonmetallic Mineral Product Manufacturing
				331	Primary Metal Manufacturing
				332	Fabricated Metal Product Manufacturing
				333	Machinery Manufacturing
				334	Computer and Electronic Product Manufacturing
				335	Electrical Equipment, Appliance, and Component Manufacturing
				337	Furniture and Related Product Manufacturing
				339	Miscellaneous Manufacturing
	Wholesale Trade				
		42	Wholesale Trade		
				423	Merchant Wholesalers, Durable Goods
				424	Merchant Wholesalers, Nondurable Goods
				425	Wholesale Trade Agents and Brokers
	Transportation, Warehousing and Utilities				
		22	Utilities		
				221	Utilities
		48-49	Transportation and Warehousing		
				481	Air Transportation
				482	Rail Transportation
				483	Water Transportation
				484	Truck Transportation
				485	Transit and Ground Passenger Transportation
				486	Pipeline Transportation
				487	Scenic and Sightseeing Transportation
				488	Support Activities for Transportation
				491	Postal Service
				492	Couriers and Messengers
				493	Warehousing and Storage
Retail	Retail Trade				
		44-45	Retail Trade		
				441	Motor Vehicle and Parts Dealers
				444	Building Material and Garden Equipment and Supplies Dealers
				445	Food and Beverage Retailers
				449	Furniture, Home Furnishings, Electronics, and Appliance Retailers
				455	General Merchandise Retailers
				456	Health and Personal Care Retailers
				457	Gasoline Stations and Fuel Dealers
				458	Clothing, Clothing Accessories, Shoe, and Jewelry Retailers
				459	Sporting Goods, Hobby, Musical Instrument, Book, and Miscellaneous Retailers

**Table 2.1 - TUMF Non-Residential Category Detailed NAICS Correspondence Summary
(continued)**

TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code NAICS Code	NAICS Title	NAICS Three Digit Code NAICS Code	NAICS Title
Service					
	Information	51	Information		
				512	Motion Picture and Sound Recording Industries
				513	Publishing Industries
				516	Broadcasting and Content Providers
				517	Telecommunications
				518	Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services
				519	Web Search Portals, Libraries, Archives, and Other Information Services
	Financial Activities	52	Finance and Insurance		
				521	Monetary Authorities-Central Bank
				522	Credit Intermediation and Related Activities
				523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities
				524	Insurance Carriers and Related Activities
				525	Funds, Trusts, and Other Financial Vehicles
		53	Real Estate and Rental and Leasing		
				531	Real Estate
				532	Rental and Leasing Services
				533	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)
	Professional and Business Services	54	Professional, Scientific, and Technical Services		
				541	Professional, Scientific, and Technical Services
		55	Management of Companies and Enterprises		
				551	Management of Companies and Enterprises
		56	Administrative and Support and Waste Management and Remediation Services		
				561	Administrative and Support Services
				562	Waste Management and Remediation Services
	Education and Health Services	61	Educational Services		
				611	Educational Services
		62	Health Care and Social Assistance		
				621	Ambulatory Health Care Services
				622	Hospitals
				623	Nursing and Residential Care Facilities
				624	Social Assistance
	Leisure and Hospitality	71	Arts, Entertainment, and Recreation		
				711	Performing Arts, Spectator Sports, and Related Industries
				712	Museums, Historical Sites, and Similar Institutions
				713	Amusement, Gambling, and Recreation Industries
		72	Accommodation and Food Services		
				721	Accommodation
				722	Food Services and Drinking Places
	Other Service	81	Other Services (except Public Administration)		
				811	Repair and Maintenance
				812	Personal and Laundry Services
				813	Religious, Grantmaking, Civic, Professional, and Similar Organizations
				814	Private Households
Government/Public Sector					
	Government	92	Public Administration		
				921	Executive, Legislative, and Other General Government Support
				922	Justice, Public Order, and Safety Activities
				923	Administration of Human Resource Programs
				924	Administration of Environmental Quality Programs
				925	Administration of Housing Programs, Urban Planning, and Community Development
				926	Administration of Economic Programs
				927	Space Research and Technology
				928	National Security and International Affairs

Source: SCAG 2020 RTP/SCS
California Employment Development Department (EDD)
US Census Bureau, North American Industry Classification System (NAICS), 2022

3 DEFINED USE TYPE CALCULATIONS

Notwithstanding the provisions of the respective TUMF ordinances, the TUMF Administration Plan, and the standard residential and non-residential fee calculations described in this handbook, there are several “defined use” types that are not clearly defined in the respective TUMF ordinances or cannot readily capture the trip making characteristics of the land use based on the number of dwelling units or gross floor area of new development. For these defined use types, this handbook provides the administrative mechanism to clarify the definition of the particular use, and where appropriate, to determine the proportional ‘fair share’ when the trip generation of the use is not directly or wholly associated with the number of dwelling units or gross floor area.

The methodology for determining the proportional “fair share” for the mitigation of the cumulative traffic impacts associated with the “defined uses” will be unique for each land use. However, the fee obligation for each defined use will be calculated based on the standard residential or non-residential fee calculation methodology (described in Section 2.0 of this handbook) using the schedule of fees prescribed in the respective TUMF ordinances.

The defined use types are indicated in **Table 3.1**. The sections following Table 3.1 provide a detailed explanation of each specific defined use, the rationale for the defined use proportional fair share determination and the methodology for calculating the fee obligation for the specific defined use. **Section 4.0** details the calculation methodology for residential defined use types. **Section 5.0** details the calculation methodology for non-residential defined use types and **Section 6.0** outlines calculation worksheets for applicable defined use types.

Table 3.1 – Defined Use Types		
SECTION	DEFINED USE	CALCULATION METHODOLOGY
<i>Residential</i>		Standard residential fee calculation is the net increase in the total number of dwelling units multiplied by the appropriate residential land use category fee rate using Worksheet A.1.1 .
4.1	Single-Family Residential	For single-family residential dwelling units, the TUMF obligation is calculated by multiplying the standard single-family residential TUMF obligation by the single-family residential unit size adjustment factor using the methodology outlined in Worksheet A.1.2 .
4.2	Mobile Home Parks	Mobile homes to be located in mobile home parks will be calculated as multi-family dwelling units and mobile homes to be located on individual lots will be calculated as single-family dwelling units using Worksheet A.1.1 for standard residential fee calculations.
4.3	Transit Oriented Development	For eligible residential TOD land uses, the TUMF obligation is calculated by multiplying the standard residential TUMF obligation (either single family or multi-family, as appropriate) by the automobile trip reduction factor using the methodology outlined in Worksheet A.1.3 . Documentation including a site plan and location map will be submitted with the development application to demonstrate eligibility of residential land use as TOD.
4.4	Active Senior Living	For eligible senior adult housing (also referred to as Active Senior Living), the TUMF obligation is calculated by multiplying the standard multi-family residential TUMF obligation by the automobile trip reduction factor using the methodology outlined in Worksheet A.1.4 . Documentation including an active senior living qualification checklist will be submitted with the development application to demonstrate eligibility of residential land use as Active Senior Living.

Table 3.1 (continued) – Defined Use Types

SECTION	DEFINED USE	CALCULATION METHODOLOGY
<i>Non-Residential</i>		Standard non-residential fee calculation in the net increase in the gross floor area of buildings multiplied by the appropriate non-residential land use category fee rate using Worksheet A.2.1 .
5.1	Local Retail and Service Uses	For all types of retail and/or service uses, Worksheet A.2.2 (for retail uses) and Worksheet A.2.3 (for service uses) will be used to determine eligibility for the local retail and service waiver and calculating the value(s) to be entered as the <i>Total Gross Floor Area for Retail Buildings</i> and/or the <i>Total Gross Floor Area for Service Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.
5.2	Fuel Filling Stations	For all types of fuel filling stations or facilities with fuel filling positions, the gross floor area will be calculated using Worksheet A.2.4 and the resultant value will be entered as the <i>Total Gross Floor Area for Retail Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.
5.3	Vehicle Dealerships	Vehicle Dealerships will be calculated as a retail use based on the gross floor area of all buildings and structures associated with the dealership using Worksheet A.2.1 for standard non-residential fee calculations.
5.4	Group Quarters	All types of group quarters will be calculated as service uses using Worksheet A.2.1 for standard non-residential fee calculations.
	Congregate Care Facilities and Nursing Homes	For all group quarters specifically used for congregate care (including assisted living facilities) and/or nursing homes, the gross floor area will be calculated using Worksheet A.2.5 and the resultant value will be entered as the <i>Total Gross Floor Area for Service Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.
5.5	Mini-Warehouses and Rental Storage	Mini-Warehouses and Rental Storage (including outdoor rental storage areas) will be calculated using Worksheet A.2.6 and the resultant value will be entered as the <i>Total Gross Floor Area for Industrial Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.
5.6	Golf Courses	Golf Courses will be calculated using Worksheet A.2.7 and the resultant value will be entered as the <i>Total Gross Floor Area for Service Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.
5.7	Wholesale Nurseries	Wholesale Nurseries will be calculated using Worksheet A.2.8 and the resultant value will be entered as the <i>Total Gross Floor Area for Industrial Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.
5.8	Retail Nurseries (Garden Centers)	Retail Nurseries will be calculated using Worksheet A.2.9 and the resultant value will be entered as the <i>Total Gross Floor Area for Retail Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.
5.9	High-Cube Warehouse/Distribution Center	High-Cube Warehouses/Distribution Centers with a minimum gross floor area of 200,000 square feet, a minimum ceiling height of 24 feet and a minimum dock-high door loading ratio of 1 door per 10,000 square feet will be calculated using Worksheet A.2.10 and the resultant value will be entered as the <i>Total Gross Floor Area for Industrial Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.

Table 3.1 (continued) – Defined Use Types		
SECTION	DEFINED USE	CALCULATION METHODOLOGY
5.10	Wineries	Winery size is determined using Worksheet A.2.11. Small wineries will be calculated as an industrial use based on the gross floor area of all buildings associated with the winery using Worksheet A.2.1 for standard non-residential fee calculations. Medium wineries will be calculated using Worksheet A.2.12 and the resultant value will be entered as the <i>Total Gross Floor Area for Industrial Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations. Large Wineries will be calculated using Worksheet A.2.13 and the resultant value will be entered as the <i>Total Gross Floor Area for Industrial Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.
5.11	Electric Vehicle Supply Equipment Charging Stations	All types of publically accessible electric vehicle supply equipment (EVSE) charging stations will be calculated using Worksheet A.2.14 and the resultant value will be entered as the <i>Total Gross Floor Area for Retail Buildings</i> in Worksheet A.2.1 for standard non-residential fee calculations.

4 DETAILED METHODOLOGY FOR RESIDENTIAL DEFINED USE TYPES

4.1 Single-Family Residential

4.1.1 Summary

California Government Code §66016.5(a)(5)(A) states “A nexus study adopted after July 1, 2022, shall calculate a fee imposed on a housing development project proportionately to the square footage of proposed units of the development...” unless certain findings are made. To calculate the TUMF obligation for single-family residential dwelling units, the total number of single-family residential dwelling units will be adjusted in four tiers to correlate to the differing trip generation characteristics associated with various ranges of single-family housing sizes. The methodology outlined in **Worksheet A.1.2** and described as follows will be applied to determine the equivalent number of single-family residential dwelling units.

1. Multiply the total number of single-family residential dwelling units sized less than or equal to 1,800 square feet by 0.80 to determine the equivalent number of single-family dwelling units for this range of dwelling unit size.
2. Multiply the total number of single-family residential dwelling units sized between 1,801 square feet and 2,300 square feet by 0.90 to determine the equivalent number of single-family dwelling units for this range of dwelling unit size.
3. Multiply the total number of single-family residential dwelling units sized between 2,301 square feet and 2,700 square feet by 1.00 to determine the equivalent number of single-family dwelling units for this range of dwelling unit size.
4. Multiply the total number of single-family residential dwelling units sized more than 2,700 square feet by 1.25 to determine the equivalent number of single-family dwelling units for this range of dwelling unit size.
5. Sum the resultant values for steps 1 through 4. Use the resultant total value as the number of single-family dwelling units to calculate the TUMF obligation using **Worksheet A.1.1** for standard residential fee calculations.
(i.e. for an example single-family residential development with 22 single family dwelling units size less than 1,800 square feet and 14 units sized between 1,801 square feet and 2,300 square feet, it is $[22 \times 0.80 = 17.6] + [14 \times 0.90 = 12.6] = 30.2$ equivalent single-family dwelling units)

4.1.2 Detailed Narrative

On September 28, 2021, California Governor Gavin Newsome signed Assembly Bill 602 (AB 602) approving several changes to the Mitigation Fee Act, including the addition of §66016.5 to the California Government Code (CGC). CGC §66016.5(a)(5)(A) states “A nexus study adopted after July 1, 2022, shall calculate a fee imposed on a housing development project proportionately to the square footage of proposed units of the development...” unless certain findings are made. These findings include:

- “(i) An explanation as to why square footage is not appropriate metric to calculate fees imposed on housing development project.
- (ii) An explanation that an alternative basis of calculating the fee bears a reasonable relationship between the fee charged and the burden posed by the development.
- (iii) That other policies in the fee structure support smaller developments, or otherwise ensure that smaller developments are not charged disproportionate fees.”

In accordance with the CGC §66016.5(a)(5)(A) and as described in **Section 6.1** of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), the uniform fee for single-family residential dwelling units will be adjusted in four tiers to correlate to the trip generation characteristics associated with various ranges of single-family housing sizes. The tiers reflecting the adjustments to the uniform single-family residential fee per dwelling unit for differing ranges of single-family unit sizes are summarized in **Table 4.1**.

Table 4.1 – Single-Family Residential Fee Adjustments by Unit Size

Adjustment Tier	Housing Unit Size Range (in square feet)	Base Fee Adjustment
Tier 1	Less than or equal to 1,800	80%
Tier 2	1,801 to 2,300	90%
Tier 3	2,301 to 2,700	100%
Tier 4	More than 2,700	125%

For multi-family residential units, WRCOG determined that the fee can be imposed on all multi-family units uniformly consistent with the conclusions of the analysis of multi-family trip generation rates by unit size, which demonstrated little variation in trip generation rates across the range of multi-family residential unit sizes. Therefore, the multi-family residential fee, as calculated in **Table 6.2**, can be applied uniformly to all multi-family residential units under the TUMF program.

4.2 Mobile Home Parks

4.2.1 Summary

Mobile homes located in mobile home parks will be considered as multi-family dwelling units with the TUMF obligation calculated using **Worksheet A.1.1** for standard residential fee calculations. Notice of the fee obligation will be provided to the mobile home park developer at the time of issuance of the “Mobile Home Park Permit” or equivalent building permit for the installation of site infrastructure including, but not limited to, permanent foundations, and electrical, water and sewer receptacles. The TUMF will be required to be paid in full by the mobile home park developer at the time of final inspection by the appropriate local jurisdiction to authorize utilization of the site for

lease to a mobile home owner (which is considered the equivalent to the issuance of a certificate of occupancy).

Mobile homes to be located on individual lots will be considered as standard residential dwelling units consistent with the definition of residential units in the respective TUMF ordinances with the TUMF obligation calculated using **Worksheet A.1.1** for standard residential fee calculations.

4.2.2 Detailed Narrative

In accordance with Section 6.1 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), all mobile homes are residential dwelling units for the purpose of calculating the applicable TUMF obligation for newly developed units. Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) defines single-family detached housing as “any single-family detached home on individual lot”. Mobile homes located on individual lots are generally consistent with this description of single-family detached housing and tend to reflect single-family trip generation characteristics and resultant transportation system impacts. However, mobile homes grouped in higher density mobile home parks or on any other type of smaller individual lots consistent with the definition of multi-family residential described in the respective TUMF ordinances, tend to demonstrate trip generation characteristics more like those of multi-family residential unit developments. For this reason, it has been determined that mobile homes expressly located in mobile home parks or any other type of smaller individual lot meeting the description of multi-family residential in the respective TUMF ordinances will be considered as multi-family dwelling units for the purpose of calculating the applicable TUMF obligation.

Trip Generation Manual 11th Edition defines mobile home parks as generally consisting of multiple “manufactured homes that are sited and installed on permanent foundations” and “typically includes community facilities such as a recreation room, swimming pool, and laundry facilities” provided for the exclusive use of residents. Foundations (and associated utilities) in mobile home parks are generally provided on a ‘for lease’ basis to residents who own the actual mobile home with the mobile home being temporarily located on the foundation for the duration of the lease. For calculating TUMF, *mobile homes to be located in mobile home parks* meeting this description *will be considered as multi-family dwelling units* with the fee obligation for newly developed units to be determined accordingly. *Mobile homes to be located on individual lots* meeting the definition of single-family residential described in the respective TUMF ordinances *will be considered single-family dwelling units* with the fee obligation remaining unchanged from that previously prescribed in the Nexus Study and subsequently adopted local ordinances.

For the exclusive purpose of assessing the TUMF on newly developed mobile home parks or expansions of existing mobile home parks that result in an increase in the number of mobile home sites provided within the mobile home park, notice of the fee obligation will be provided to the mobile home park developer at the time of issuance of the ‘Mobile Home Park Permit’ or equivalent building permit for the installation of site

infrastructure including, but not limited to, permanent foundations, and electrical, water and sewer receptacles. The TUMF will be required to be paid in full by the mobile home park developer at the time of final inspection by the appropriate local jurisdiction to authorize utilization of the site for lease to a mobile home owner (which is considered the equivalent to the issuance of a certificate of occupancy).

Mobile home parks sites that have received final inspection prior to the enactment of the respective local jurisdictions TUMF Ordinance are considered pre-existing. There is no TUMF fee obligation for pre-existing mobile home park sites.

Community facilities such as recreation rooms, swimming pools, and laundry facilities are considered ancillary to the primary multi-family residential land use of mobile home parks. The development or expansion of these types of ancillary community facilities would not require payment of TUMF fees. However, the development of non-residential retail, service or industrial facilities (including, but not limited to, convenience markets, management offices and sales offices) in conjunction with a mobile home park would be considered as separate land uses and would require payment of the TUMF fee in accordance with Section 6.2 of the Nexus Study and the provisions of the respective local TUMF Ordinance.

4.3 Transit-Oriented Development

4.3.1 Summary

As described in the California Mitigation Fee Act, a transit-oriented development (TOD) is "a development project consisting of residential use or mixed use where not less than 50 percent of the floorspace is for residential use...if located within ½ mile of a transit station and with direct walking access to the station, within ½ mile of convenience retail uses including a store that sells food, and with a maximum number of parking spaces as required by state statute or local ordinance."

For calculating the TUMF obligation, a factor reflecting the reduction in automobile trip generation associated with residential TOD will be applied to the standard residential TUMF obligation.

The residential TOD TUMF obligation is calculated by multiplying the standard residential TUMF obligation (either single family or multi-family, as appropriate) by the automobile trip reduction factor. The methodology outlined in **Worksheet A.1.3** and described as follows will be applied to determine the TOD TUMF obligations.

1. Complete the TOD qualification checklist and prepare TOD documentation.
2. Determine the standard TUMF obligation for eligible residential TOD land uses using **Worksheet A.1.1**.
3. Multiply the result for Step 2 by 0.885.

Documentation will be submitted with the development application as the basis for determining the eligibility of the residential land use as a TOD. Documentation will include a site plan indicating that at least 50% of the floorspace of the development is

dedicated to residential use and the required number of parking spaces associated with the subject development. Documentation will also include a map showing the location of the subject development circled with a ½ mile radius, as well as the location of a transit station(s), the location of diverse uses and direct walking routes of ½ mile or less between the subject development and the listed uses to justify that the development satisfies the characteristics of TOD.

4.3.2 Detailed Narrative

The California Mitigation Fee Act requires that impact fees for residential development that satisfy certain characteristics of transit-oriented development (TOD) “be set at a rate that reflects a lower rate of automobile trip generation associated with such housing developments in comparison with housing developments without these characteristics.”

Section 66005.1 of the California Government Code (Mitigation Fee Act) states the following with regard to Transit-Oriented Development and impact fees:

“(a) When a local agency imposes a fee on a housing development pursuant to Section 66001 for the purpose of mitigating vehicular traffic impacts, if that housing development satisfies all of the following characteristics, the fee, or the portion thereof relating to vehicular traffic impacts, shall be set at a rate that reflects a lower rate of automobile trip generation associated with such housing developments in comparison with housing developments without these characteristics, unless the local agency adopts findings after a public hearing establishing that the housing development, even with these characteristics, would not generate fewer automobile trips than a housing development without those characteristics:

(1) The housing development is located within one-half mile of a transit station and there is direct access between the housing development and the transit station along a barrier-free walkable pathway not exceeding one-half mile in length.

(2) Convenience retail uses, including a store that sells food, are located within one-half mile of the housing development.

(3) The housing development provides either the minimum number of parking spaces required by the local ordinance, or no more than one onsite parking space for zero to two bedroom units, and two onsite parking spaces for three or more bedroom units, whichever is less.

(b) If a housing development does not satisfy the characteristics in subdivision (a), the local agency may charge a fee that is proportional to the estimated rate of automobile trip generation associated with the housing development.

(c) As used in this section, "housing development" means a development project with common ownership and financing consisting of residential use or mixed use where not less than 50 percent of the floorspace is for residential use.

(d) For the purposes of this section, "transit station" has the meaning set forth in paragraph (4) of subdivision (b) of Section 65460.1. "Transit station" includes planned transit stations otherwise meeting this definition whose construction is programmed to be completed prior to the scheduled completion and occupancy of the housing development.

With regard to the definition of transit station, Section 65460.1 of the California Government Code (Transit Village Development Plan Act) states that *the following definitions shall apply:*

(1)"Bus hub" means an intersection of three or more bus routes, with a minimum route headway of 10 minutes during peak hours.

(2)"Bus transfer station" means an arrival, departure, or transfer point for the area's intercity, intraregional, or interregional bus service having permanent investment in multiple bus docking facilities, ticketing services, and passenger shelters.

[...]

(5)"Transit station" means a rail or light-rail station, ferry terminal, bus hub, or bus transfer station."

Research regarding the relationship between automobile trips and TOD is summarized in **Table 4.2**. **Table 4.2** indicates the lower automobile trip generation rates that have been determined to be associated with TOD compared to conventional developments.

Table 4.2 – Examples of Automobile Trip Reduction Rates	
Situation	Automobile Trip Reduction Rate
Housing development within 2,000 ft of a light-rail or commuter rail station ¹	9%
Housing development in settings with intensive transit services ²	15%
Housing or business TOD ³	2 - 16%
TOD housing in California ³	15%
Average trip reduction rate (if the case study indicates a range the average rate was used)	11.5%

Sources

1: Santa Clara County Congestion Management Agency

2: California Air Resource Board study; Parker et al.; 2002

3: Effects of TOD on housing, parking, and travel; R. Cervero et al.; TCRP report 128; 2008

The California Air Resources Board, which estimates the air quality impacts of new developments, calls for up to a 15 percent reduction in trip rates for housing in settings with intensive transit services. The Santa Clara County California's Congestion Management Agency recommends a 9 percent trip reduction in estimated trip generation levels when setting impact fees for new housing developments within 2,000 feet of a light-rail or commuter-rail station. Studies also found that mode shifts and automobile trip reductions are more noticeable in areas where transit use is already high.

Those studies also found wide variations between automobile trip reduction rates from development to development, depending on several factors such as housing density, proximity to downtown, or intensity of transit service. For instance, a 2003 California TOD travel characteristics study found that commute shares of residents living within ½ mile of a transit station strongly differ from the shares of those living outside the station-area. The statewide weighted average difference in transit shares compared against the surrounding ½ mile to 3 miles was nearly 27 percent inside the ½ mile radius and 7 percent outside.

Based on case studies and considering the relatively low housing density in Western Riverside County, as well as the intensity of transit service, an average automobile trip reduction rate of 11.5% will be used to calculate the TUMF obligation for TODs as described in the California Mitigation Fee Act.

The U.S. Green Building Council (USGBC), the Congress for the New Urbanism (CNU), and the Natural Resources Defense Council (NRDC) have developed a national standard for assessing and rewarding environmentally superior neighborhood development practices within the framework of the Leadership in Environmental and Energy Design (LEED®) Green Building Rating System™. As stated in *LEED 2009 for Neighborhood Development Rating System* (USGBC, April 2012), LEED for Neighborhood Development “places emphasis on the site selection, design, and construction elements that bring buildings and infrastructure together into a neighborhood and relate the neighborhood to its landscape as well as its local and regional context. LEED for Neighborhood Development creates a label, as well as guidelines for both decision making and development, to provide an incentive for better location, design, and construction of new residential, commercial, and mixed-use developments.”

LEED Neighborhood Development (LEED ND) Certification utilizes three environmental categories: Smart Location and Linkage, Neighborhood Pattern and Design, and Green Infrastructure and Buildings. The Smart Location and Linkage (SLL) is consistent with the principles of TOD having the intent described as follows:

- “To encourage development within and near existing communities and public transit infrastructure.
- To encourage improvement and redevelopment of existing cities, suburbs, and towns while limiting the expansion of the development footprint in the region to appropriate circumstances.
- To reduce vehicle trips and vehicle miles traveled (VMT).
- To reduce the incidence of obesity, heart disease, and hypertension by encouraging daily physical activity associated with walking and bicycling.”

To achieve LEED ND certification, a prerequisite is meeting the requirements of SLL. A requirement of SLL directly applicable to TOD and mixed use is locating a “project near existing neighborhood shops, uses, and facilities collectively referred to as “diverse uses” such that the ... project’s geographic center is within 1/2-mile walk distance of at least seven diverse uses.” This SLL requirement and LEED ND prerequisite provides an appropriate measure for determining a development meets national standards for mixed use in the context of TOD. Although the California Mitigation Fee Act specifically

cites the requirement to be located in proximity to Convenience Retail uses, the LEED ND SLL diverse uses requirement will be utilized by WRCOG as the basis for determining that a development application meets the mixed use requirements of a TOD to adequately reduce trip generation rates.

Documentation of TOD that must be submitted with the development application as the basis for determining the TUMF fee obligation consists of the following:

1. Site Plan including a table or narrative detailing that not less than 50% of the total floorspace of the planned development is dedicated for residential use, and indicating the number of parking spaces associated with the subject development does not exceed the minimum number of parking spaces required by the local ordinance, or no more than one onsite parking space for zero to two bedroom units, and two onsite parking spaces for three or more bedroom units, whichever is less.
2. Location Map showing the location of the subject development circled with a ½ mile radius, as well as the location of a transit station(s), the location of diverse uses and direct walking routes of ½ mile or less between the subject development and the listed uses. The map must also indicate the pedestrian connectivity from the development to a transit station and the other diverse use locations along a barrier-free walkable pathway not exceeding ½ mile.

At least seven diverse uses from the list in **Table 4.3** must be identified within a ½ mile walking distance of the development to qualify a TOD. The qualifying diverse uses must include at least one Food Retail establishment and at least one use from each of two other categories. A single establishment may be counted as having more than one diverse use when separate and distinct uses within the establishment fall within different categories. For example, a supermarket (Food Retail category) may also include a pharmacy (Community-Serving Retail category) and a bank (Services category) providing a total of three diverse uses in a single establishment.

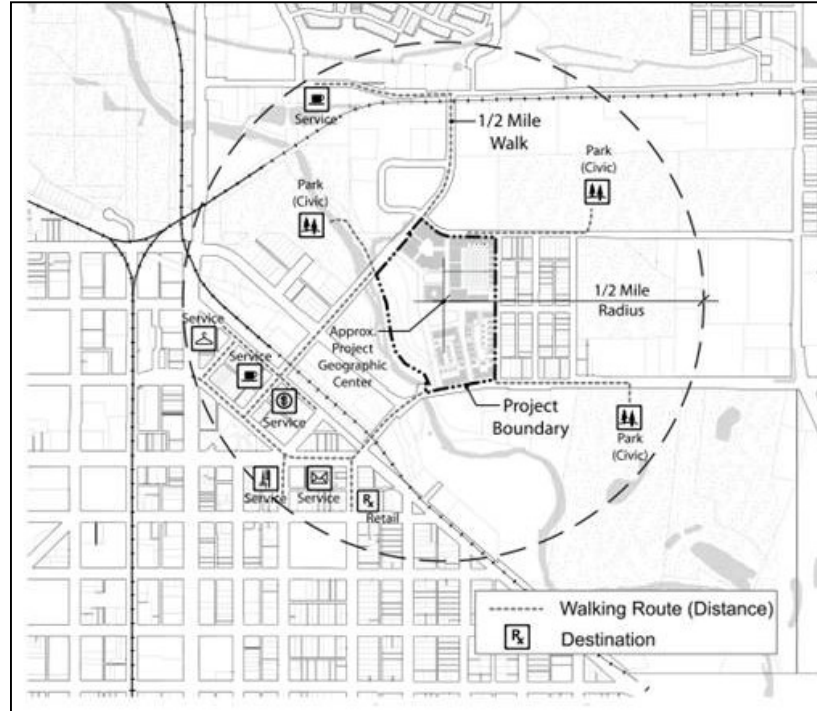
Table 4.3 – List of Diverse Uses²

Category	Use
Food Retail	Supermarket
	Other food store with produce
Community-Serving Retail	Clothing store or department store selling clothes
	Convenience store
	Farmer's market
	Hardware store
	Pharmacy
	Other retail
Services	Bank
	Gym, health club, exercise studio
	Hair care
	Laundry, dry cleaner
	Restaurant, café, diner (excluding establishments with only drive-throughs)
Civic and Community Facilities	Adult or senior care (licensed)
	Child care (licensed)
	Community or recreation center
	Cultural arts facility (museum, performing arts)
	Educational facility (including K–12 school, university, adult education center, vocational school, community college)
	Family entertainment venue (theater, sports)
	Government office that serves public on-site
	Place of worship
	Medical clinic or office that treats patients
	Police or fire station
	Post office
	Public library
	Public park
	Social services center

Figure 4.1 depicts a sample map of how the Walkability Assessment and Map of Diverse Uses may be presented to meet the requirements.

² Adapted from LEED 2009 for Neighborhood Development Rating System, updated April 2012, USGBC

Figure 4.1 – Walkability Assessment and Map of Diverse Uses within ½ mile of Development



The TUMF residential use obligation for a TOD is 88.5% of the standard residential use obligation for a similar development. This rate will be evaluated and updated in conjunction with the regular updates of the TUMF Nexus Study to respond to changes in housing density and transit service in Western Riverside County.

4.4 Active Senior Living

4.4.1 Summary

Senior adult housing (also commonly referred to as “active senior living”) is generally defined in the Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) as detached and/or attached housing units in independent living developments, including retirement communities, age-restricted housing and active adult communities, that may include amenities such as golf courses, swimming pools, 24-hour security, transportation, and common recreational facilities, but generally lack centralized dining and on-site health facilities. Residents in active senior living communities live independently and are typically active (requiring little to no medical supervision), which differs from congregate care facilities (including senior assisted living facilities) and nursing homes that are specific types of group quarters (as described in **Section 5.3**) whose primary function is to provide care for elderly persons or other persons who are unable to adequately care for themselves.

Both detached and attached senior adult housing are typically built in higher density sole purpose developments with age restrictions or limitations on residents. As such,

active senior living housing units typically demonstrate trip generation rates significantly below those of standard single-family residential units and below those of standard multi-family residential units. Furthermore, according to Trip Generation Manual 11th Edition, the trip generation rates for detached and attached dwelling units in active senior housing units are similar, and more closely reflect the trip generation rates of multi-family dwelling units. For this reason, all dwelling units in eligible active senior living developments (both detached and attached) regardless of density are considered multi-family dwelling units for the purpose of calculating the applicable TUMF obligation.

For determining the TUMF obligation, all dwelling units in eligible active senior living developments (both detached and attached) regardless of density will be considered multi-family dwelling units. The methodology outlined in **Worksheet A.1.4** and described as follows will be applied to determine the equivalent number of multi-family dwelling units for all types of active senior living dwelling units.

1. Complete the active senior living qualification checklist and provide the required supporting documentation pursuant to Cal. Civ. Code § 51.11 and Cal. Bus. & Prof. Code § 11010.05 [2016].
2. Multiply the total number of eligible active senior living dwelling units (both detached and attached) by 0.69 to determine the equivalent number of multi-family dwelling units.
(i.e. for an example Active Senior Living facility with 257 units, it is $257 \times 0.69 = 177.3$ equivalent multi-family dwelling units)
3. Use the resultant value as the number of multi-family dwelling units to calculate the TUMF obligation using **Worksheet A.1.1** for standard residential fee calculations.

4.4.2 Detailed Narrative

Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) includes descriptions for both single-family detached and multi-family attached unit types. Senior adult housing (commonly referred to as “active senior living”) is described as “independent living developments that are called various names including retirement communities, age-restricted housing and active adult communities....The development may include amenities such as a golf course, swimming pool, 24-hour security, transportation, and community recreation facilities. They generally lack centralized dining and on-site health facilities.”

In both types of active senior living dwelling unit communities, residents “are typically considered active and requiring little to no medical supervision....”, which differs from congregate care facilities (including senior assisted living facilities) and nursing homes that are specific types of group quarters (as described in **Section 5.3**) whose primary function is to provide care for elderly persons or other persons who are unable to adequately care for themselves.

Both detached and attached senior adult housing are typically built in higher density sole purpose developments with “specific age restriction for its residents, typically a

minimum of 55 years of age for at least one resident of the household". As shown in **Table 4.4**, active senior living housing units typically demonstrate trip generation rates significantly below those of standard single-family residential units and below those of standard multi-family residential units. Furthermore, according to Trip Generation Manual 11th Edition, the trip generation rates for detached and attached dwelling units in active senior housing units are similar, and more closely reflect the trip generation rates of multi-family dwelling units. For this reason, all dwelling units in eligible active senior living developments (both detached and attached) regardless of density are considered multi-family dwelling units for the purpose of calculating the applicable TUMF obligation.

Section 51.11 of the California Civil Code (Cal. Civ. Code § 51.11) defines a senior citizen housing development specifically in Riverside County as "a residential development developed with more than 20 units as a senior community by its developer and zoned as a senior community by a local governmental entity, or characterized as a senior community in its governing documents." Additionally, Section 11010.05 of the 2016 California Business and Professions Code (Cal. Bus. & Prof. Code § 11010.05 [2016]) elaborates that any "person who proposes to create a senior citizen housing development, as defined in Section 51.3 or 51.11 of the Civil Code, shall include in the application for a public report a complete statement of the restrictions on occupancy that are to be applicable in the development. Any public report issued for a senior housing development shall also include a complete statement of the restrictions on occupancy to be applicable in the development." To demonstrate a development qualifies as active senior living for the purposes of determining the TUMF obligation, applicants will be required to provide copies of local government zoning and/or governing documents, and the public report statement developed pursuant to Cal. Civ. Code § 51.11 and Cal. Bus. & Prof. Code § 11010.05 [2016], respectively.

In accordance with Section 6.1 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), and as discussed previously, both detached and attached senior adult housing, regardless of density, will be considered to be multi-family dwelling units for the purpose of calculating the applicable TUMF obligation. The TUMF obligation for multi-family (and all residential) land uses is based on the total number of dwelling units associated with the specific development and is calculated using **Worksheet A.1.1** for standard residential fee calculations. However, in the case of active senior living communities, vehicle trips generated to and from the site are typically lower than standard residential uses due to the age of the residents (who are typically retired from full time employment) and the provision of various ancillary recreational and entertainment amenities within the community. For this reason, it is necessary to determine the multi-family dwelling unit equivalency for the purpose of calculating the TUMF obligation.

A review of Trip Generation Manual 11th Edition indicates the weekday average PM peak hour vehicle trip generation rate for detached senior adult housing is 0.39 trip ends per dwelling unit, while the rate for attached senior adult housing is 0.30 trip ends per dwelling unit (a median of 0.35 PM peak hour trip ends per dwelling unit). By comparison, standard multi-family uses have a weekday PM peak hour trip generation

rate of 0.50 trip ends per dwelling unit. **Table 4.4** summarizes the various characteristics of senior active living, including trip generation rates, and establishes the equivalent multi-family dwelling units for the purpose of calculating the TUMF obligation for all senior active living dwelling units.

Table 4.4 – Characteristics of Senior Adult Housing in Active Senior Living Developments			
<i>Land Use Type (ITE Code)</i>	<i>Average Number of Dwelling Units</i>	<i>Average PM Peak Hour Vehicle Trip Ends per Dwelling Unit</i>	<i>TUMF Weighted Equivalent Multi-Family Dwelling Unit*</i>
<i>Senior Adult Housing - Detached (251)</i>	435	0.39	
<i>Senior Adult Housing - Attached (252)</i>	79	0.30	0.69
<i>Median All TUMF Multi- Family Use Types</i>		0.50	

Source: [Trip Generation Manual 11th Edition](#), Institute of Traffic Engineers, 2021

Note: * - TUMF weighted equivalent multi-family dwelling units based on relative PM peak hour trip generation per dwelling unit for adult senior living and all TUMF multi-family use types.

The multi-family dwelling unit equivalency for active senior living dwelling units is based on the comparison of the median PM peak hour trip generation characteristics for detached and attached senior adult housing as defined in the Trip Generation Manual in terms of trip ends per dwelling unit, and the median trip generation rate for all TUMF multi-family dwelling unit types. Based on this information, each active senior housing dwelling unit represents the equivalent of 0.69 multi-family dwelling units in terms of the relative trip generation rate.

For the purpose of calculating the TUMF obligation for *all types of qualifying active senior living dwelling units*, the total number of qualifying dwelling units in the development will be multiplied by 0.69 to determine the equivalent number of multi-family dwelling units. *The equivalent multi-family dwelling units will be used for the purpose of calculating the TUMF at the rate prescribed by the respective local jurisdictions TUMF Ordinance and supported by the TUMF Nexus Study.*

Application of this methodology will account for variations in the trip generation rates of senior active living dwelling units and standard multi-family dwelling units. For example, an average active senior living community with 257 detached and/or attached dwelling units would have the equivalent of 177.3 multi-family dwelling units (257 x 0.69).

Community facilities, including, but not limited to, recreation rooms, swimming pools, laundry facilities, security gatehouses, storage rooms, garages and maintenance buildings, that are provided for the sole and exclusive use of community residents (and their permitted guests) are considered to be ancillary to the primary multi-family residential land use of active senior living developments, and through their availability contribute to the lower trip generation rates observed. The development or expansion

of these types of ancillary community facilities would not require separate payment of TUMF fees. However, the development of non-residential retail, service or industrial facilities (including, but not limited to, convenience markets, club houses, management offices and sales offices) that are developed conjunction with an active senior living community but are not limited to the sole and exclusive use of community residents (and their guests) and are available for use by or accessible to the general public would be considered as separate land uses and would require payment of the TUMF fee in accordance with Section 6.2 of the Nexus Study and the provisions of the respective local TUMF Ordinance.

5 DETAILED METHODOLOGY FOR NON-RESIDENTIAL DEFINED USE TYPES

5.1 Local Retail and Service Uses

5.1.1 Summary

On August 7, 2017, the WRCOG Executive Committee implemented a policy waiving the TUMF obligation for the first 3,000 square feet of gross floor area for all retail and/or service land uses to appease concerns raised during the 2016 Nexus Study update over the impact of TUMF increases on small retail and/or service land uses that primarily serve the immediate local area. On October 1, 2018, the WRCOG Executive Committee further clarified the provisions of this policy to limit the fee waiver to only those retail and/or service land uses that have a total gross floor area of less than 20,000 square feet.

To determine eligibility and, when appropriate, to apply the waiver to the TUMF obligation for local retail and/or service uses, the methodology outlined in **Worksheet A.2.2** (for retail uses) and **Worksheet A.2.3** (for service uses), and described as follows will be applied to determine the gross floor area for calculating the TUMF obligation for all types of retail and/or service uses, respectively (*for the example calculation assume a retail building with a gross floor area of 18,000 square feet*). Determination of local retail and/or service land use eligibility and, when appropriate, calculation of the waiver should occur after any other non-residential defined use calculations have been completed.

1. Enter the total gross floor area of all retail and/or service buildings.
 - If the total gross floor area of all retail and/or service buildings is less than or equal to 3,000 square feet, enter zero as the Total Gross Floor Area of Retail Buildings and/or Service Buildings, as appropriate, in **Worksheet A.2.1**
 - If the total gross floor area of all retail and/or service buildings is more than 3,000 square feet and less than 20,000, proceed to Step 2.
 - If the total gross floor area of all retail and/or service buildings is equal to or greater than 20,000, enter the total gross floor area of all retail and/or service buildings value as the Total Gross Floor Area of Retail Buildings and/or Service Buildings, as appropriate, in **Worksheet A.2.1**
(i.e. $18,000 > 3,000$ and $18,000 < 20,000$; for the example retail building proceed to Step 2)
2. Subtract 3,000 square feet from the total gross floor area of all retail and/or service buildings and use the resultant value(s) as the Total Gross Floor Area of Retail Buildings and/or Service Buildings, as appropriate, in **Worksheet A.2.1**
(i.e. $18,000 - 3,000 = 15,000$; for the example retail building TUMF would be calculated for 15,000 square feet).

5.1.2 Background

In response to concerns raised during the 2016 Nexus Study update, WRCOG staff studied several mid-size shopping centers in the subregion to determine the nature of retail development in Western Riverside County. This study found that these shopping centers are generally anchored by a large tenant, typically occupying a space over 20,000 square feet, and that these large spaces are surrounded by one or more smaller tenant spaces. The larger spaces are commonly occupied by retailers including regional or national chain grocery stores, department stores, supermarkets, supercenters, etc.; however, smaller tenant spaces are more commonly occupied by restaurants, beauty salons, dental offices, electronics stores, etc. Whereas the larger spaces may be occupied by tenants that fulfill a broader regional demand, the smaller uses generally serve a more local demand. For example, a new 200,000 square foot national chain retail supercenter may create demand from adjacent jurisdictions, as there may be a limited number of these retailers in the subregion. However, the smaller uses, such as a restaurant, beauty salon or dental office, are generally located in every jurisdiction and would not be expected to create substantial demand from outside of the local area. Thus, even if a smaller use does generate additional traffic, this traffic will generally be more local in origin therefore generating shorter trips, less vehicle miles of travel and contributing less to the cumulative impact on the regional transportation network.

5.1.3 Implementation

The policy enacted by the WRCOG Executive Committee on August 7, 2017 and updated in October 1, 2018 provides a waiver from the TUMF obligation for the first 3,000 square feet of gross floor area for new retail and/or service development projects as well as expansions to existing retail and/or service land uses where the net increase in the total gross floor area of the building(s) will be less than 20,000 square feet. As such, no TUMF is paid on retail and/or service projects that increase the total gross floor area of the building(s) by less than 3,000 square feet, and the gross floor area used as the basis to determine the fee obligation is reduced by 3,000 square feet for retail and/or service projects that increase the total gross floor area of the building(s) by more than 3,000 square feet but less than 20,000 square feet.

The determination of eligibility for the local retail and/or service land use waiver, and, when appropriate, the subsequent calculation of the total gross floor area after application of the waiver should occur after any other non-residential defined use calculations have been completed. In accordance with the TUMF Nexus study and ordinances, Class A and Class B office developments are service uses.

For mixed-use projects or projects with multiple tenants, the 3,000 square foot reduction would apply to each individual use or each individual tenant to the extent that each tenant is operating independently of one another, and each is viewed as separate uses. This deduction is applied at the time of TUMF fee assessment and is based on the building as shown on plans at that time. Therefore, if a building is subdivided after TUMF fees are paid, TUMF would not be refunded.

5.2 Fuel Filling Stations (Gasoline/Service Stations)

5.2.1 Summary

For calculating the TUMF obligation, all types of fuel filling stations or facilities with fuel filling positions will be considered retail use types (for electric vehicle charging stations see **Section 5.11**). The methodology outlined in **Worksheet A.2.4** and described as follows will be applied to determine the gross floor area for calculating the TUMF obligation for all types of fuel filling stations or facilities with fuel filling positions (*for the example calculation assume a fuel filling station with 12 fuel filling positions and a building area of 4,000 square feet*). The total number of fuel filling positions is equal to the maximum number of vehicles that could be supplied with fuel at the same time.

1. Multiply the total number of fuel filling positions by 1,687.5 square feet (*i.e. for the example station it is $12 \times 1,687.5 = 20,250$ square feet*)
2. Determine the total floor area of buildings on the site noting that the canopy area is not included as part of the gross floor area of the buildings on the site (*i.e. for the example station it is 4,000 square feet*)
3. Compare the results for steps 1 and 2 and use the greater of the two values as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations. (*i.e. $20,250 > 4,000$ for the example station TUMF would be calculated for 20,250 square feet*)

5.2.2 Detailed Narrative

Fuel filling stations (also referred to as gasoline stations or service stations) include all retail land uses where the primary business of the site is the fueling of motor vehicles. Fuel filling stations may also incorporate convenience markets, car washes, facilities for servicing and repairing motor vehicles and “express” fast food services. By contrast, fuel pumps may be provided as an ancillary use to a convenience market where the primary business of the site is the selling of convenience items and not the fueling of motor vehicles. Electric vehicle charging stations are not considered fuel filling stations. See **Section 5.11** for the fee calculation methodology related to electric vehicle charging stations.

In accordance with Section 6.2 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), fuel filling stations are retail uses for the purpose of calculating the applicable TUMF obligation for newly developed facilities or expansions of existing facilities. The TUMF for retail (and all non-residential) land uses is based on the gross floor area of buildings associated with the specific land use. However, in the case of fuel filling stations, the canopy area is not included as part of the gross floor area of the buildings on the site as it is considered an un-enclosed roofed over area in accordance with the definition for non-residential gross floor area provided in **Section 2.2**. Vehicle trips to and from the site are generated primarily by the fuel filling positions (pumps) and in some cases only very limited building gross floor area is associated with

the fuel filling station. For this reason, it is necessary to determine the gross floor area equivalency per fueling position for the purpose of calculating the TUMF obligation.

A review of Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) indicates two (2) retail land use types that represent fuel filling stations or retail facilities with fuel filling positions where the fueling of motor vehicles represents the primary business of the site. These land use types are designated as "Gasoline/Service Station" without a convenience store, and "Convenience Store/Gas Station".

According to the Trip Generation Manual, Gasoline/Service Stations are characterized by an average of 8 to 12 fueling positions and "generally have a small building (less than 2,000 gross square feet) that houses a cashier and limited space for motor vehicle maintenance supplies and general convenience products". In the case of Convenience Store/Gas Stations, the average gross floor area of buildings typically ranges between 3,000 square feet and 5,000 square feet with an average of between 8 and 18 vehicle fueling positions, although some locations can exceed 10,000 square feet in building and/or more than 24 vehicle fueling positions. Convenience Store/Gas Stations are "co-located convenience store and gas station" where the "convenience store sells grocery and other everyday items that a person may need or want as a matter of convenience. The gas station sells automotive fuels such as gasoline and diesel."

The average PM peak hour trip generation per fueling position for Gasoline/Service Stations is 14.41 trip ends with an average of 10 vehicle fueling positions. By contrast, the average PM peak hour trip generation per fueling position for Convenience Store/Gas Stations ranges from 19.13 trips ends (for locations with buildings between 2,000 square feet and 4,000 square feet and an average of 8 vehicle fueling positions) to 28.03 trip ends (for locations with buildings between 5,500 square feet and 10,000 square feet and an average of 14 vehicle fueling positions). The respective trip generation rates indicate that Convenience Store/Gas Stations generate up to twice the number of trips per vehicle fueling position compared to Gasoline/Service Stations reflecting the influence of the convenience store to generate additional trips, especially as the size of the convenience store increases. The difference is a direct product of the additional trips generated by the primary use of the site being the selling of convenience items at the Convenience Store, and not the sale of fuel for motor vehicles which becomes ancillary.

Table 5.1 summarizes the various characteristics of fuel filling stations, including trip generation. The table also details the calculation of the gross floor area equivalency per fueling position.

The gross floor area equivalency per fueling position for Fuel Filling Stations is based on the trip generation characteristic of Convenience Store/Gas Stations which is quantified in the Trip Generation Manual in terms of both trips per fuel filling position and thousands of square feet of gross floor area for various ranges of site characteristics. Based on this information, each fuel filling position at a Fuel Filling Station represents the equivalent of 381.43 square feet of gross floor area. To account for the variation in trip generation rates between Fuel Filling Stations and all TUMF retail land use types, the gross floor area

equivalency per fueling position was weighted based on the relative trip generation between Fuel Filling Stations and the median of all TUMF Retail Uses as used in the TUMF Nexus Study. The gross floor area equivalency per fueling position was reduced by 61% to account for pass by trips to ensure consistency with the TUMF Nexus Study Trip Generation Rate Comparison. The weighted gross floor area equivalency per fueling position for Fuel Filling Stations is 1,687.5.

Table 5.1 – Characteristics of Fuel Filling Stations (Gasoline/Service Stations)

Land Use Type	Average Fueling Positions	Average Gross Floor Area (1000 sqft)	Average PM Peak Hour Vehicle Trip Ends per Fueling Position	Average PM Peak Hour Vehicle Trip Ends per 1,000 sqft	Pass By Trips (PM Peak Hour)*	Equivalent Fueling Positions per 1,000 sqft	Equivalent sqft per Fueling Position	TUMF Weighted Equivalent sqft per Fueling Position**
Gasoline/Service Station (without Convenience Store) (944)	10		14.41					
Convenience Store/Gas Station GFA 2-4K (945)	8		19.13		66%			
Convenience Store/Gas Station GFA 4.5-5.5K (945)	14		23.88					
Convenience Store/Gas Station GFA 5.5-10K (945)	14		28.03					
Convenience Store/Gas Station VFP 2-8 (945)		3		50.19	56%			
Convenience Store/Gas Station VFP 9-15 (945)		4		56.38				
Convenience Store/Gas Station VFP 16-24 (945)		5		83.57				
Median of Defined Use Types	12	4	21.51	56.38	61%	2.62	381.43	1,687.5
Median of All TUMF Retail Use Types				4.97	37%			

Sources: [Trip Generation Manual 11th Edition](#), Institute of Traffic Engineers, September 2021

[Trip Generation Handbook 3rd Edition](#), Institute of Traffic Engineers, September 2017

Note: * - Pass by trips for Convenience Store/Gas Station GFA 2-4K reflects "Pass-By and Non Pass-By Trips Weekday, PM Peak Period Land Use Code 853 - Convenience Market with Gasoline Pumps", Trip Generation Handbook 3rd Edition

** - TUMF weighted equivalent square feet per fueling position based on equivalent square feet per fueling position adjusted to reflect relative trip generation between Defined Use Types and all TUMF Retail Uses, and reduced to account for pass by trips (consistent with TUMF Nexus Study Trip Generation Rate Comparison).

For calculating the TUMF obligation for *all types of fuel filling stations*, the total number of fuel filling positions will be multiplied by 1,687.5 to determine the equivalent number of square feet of floor area, with the total number of fuel filling positions being equal to the maximum number of vehicles that could be supplied with fuel at the same time. The *equivalent floor area will be compared to the actual building gross floor area* for the site (the canopy area is not included as part of the gross floor area of the buildings on the site), and the *greater of the two floor areas will be used for the purpose of calculating the TUMF* at the rate prescribed by the respective local jurisdictions TUMF Ordinance and supported by the TUMF Nexus Study.

Application of this methodology will account for variations in the type of fuel filling station, especially the primary business of the site. For example, an average Gasoline/Service Station with Convenience Market (12 filling stations and 4,000 square feet of gross floor area) would have an equivalent floor area of 20,250 square feet ($12 \times 1,687.5 = 20,250$). A comparison of the equivalent floor area and actual building gross floor area indicates that the equivalent floor area is greater than the actual floor area ($20,250 > 4,000$) which is consistent with the primary business of the site (in this case fueling of motor vehicles) and therefore would be used as the basis for calculating the TUMF obligation.

Application of this methodology will also apply to fuel filling stations associated with supermarkets, free-standing discount superstores and discount clubs where the fuel-filling station is owned, operated and cobranded with the retail store and collocated on the same site. The Trip Generation Manual acknowledges that sites like discount clubs “may include on-site fueling pumps” thereby correlating the total trip generation of the site with the building floor area of the retail store as the primary use of the site. Where the fuel filling station is not owned, operated or cobranded with the retail store, and/or is located on a separate site from the retail store, it will be subject to a stand-alone determination of TUMF obligation following this methodology without consideration of the building floor area of the retail store that is owned, operated and branded separately from the fuel filling station and/or is located on a different site, and will be subject to a separate determination of TUMF obligation.

5.3 Vehicle Dealerships (New and Used Automobile Sales)

5.3.1 Summary

For determining the TUMF obligation, all vehicle dealerships are retail use types. TUMF obligation for Vehicle Dealerships will be calculated based on the gross floor area of all buildings associated with the dealership, including all vehicle sales, parts sales, service areas, administrative offices and waiting areas, using **Worksheet A.2.1** for standard non-residential fee calculations.

5.3.2 Detailed Narrative

Vehicle dealerships include all retail land uses where the primary business of the site is the sale of new or used vehicles including but not limited to cars, pick-ups, sport utility vehicles, motorcycles, trucks, boats and recreational vehicles. Vehicle leasing, rental, servicing and parts sales may also be associated with vehicle dealerships.

In accordance with Section 6.2 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), all vehicle dealerships are retail uses for the purpose of calculating the applicable TUMF obligation for newly developed facilities or expansions of existing facilities. The TUMF for retail (and all non-residential) land uses is based on the gross floor area of buildings associated with the specific land use.

A review of Trip Generation 11th Edition (Institute of Traffic Engineers, September 2021) indicates two relevant classifications of Automobile Sales (New (840) and Used (841)) for the purpose of determining trip generation rates. For Automobile Sales (New), trip generation rates are provided per 1000 square feet gross floor area, per Service Bay and per employee, while for Automobile Sales (Used), rates are provided per 1000 square feet gross floor area and per employee, with no specific consideration given for outdoor vehicle storage or sales areas in either case.

According to the Trip Generation Manual, Automobile Sales (New) are characterized by an average gross building floor area of typically between 28,000 square feet and 36,000 square feet, including facilities for sale or leasing of new cars and/or trucks as the primary business, along with automobile and truck servicing, parts sales and used car and truck sales. The Trip Generation Manual indicates an average weekday PM peak hour trip generation rate of 2.65 trip ends per thousand square feet for Automobile Sales (New).

Automobile Sales (Used) are characterized by an average gross building floor area of typically between 2,000 square feet and 5,000 square feet, including facilities for sale or leasing of used cars and/or trucks as the primary business, with automobile and truck servicing and parts sales sometimes available. The Trip Generation Manual indicates an average weekday PM peak hour trip generation rate of 4.92 trip ends per thousand square feet for Automobile Sales (Used).

The Automobile Sales weekday trip generation rate per thousand square feet (and per employee) for both New and Used categories were included in the range of trip generation rates used to calculate the ITE Average Trip Generation Rate for the purpose of calculating the retail component of the TUMF. The Automobile Sales weekday PM peak hour trip generation rate is comparable to other categories of retail uses, as well as the median trip generation rate of 4.97 PM peak hour trip ends for all retail uses considered for the calculation of the retail TUMF component.

The Trip Generation Manual demonstrates that the calculation of Vehicle Dealership trip generation rates on the basis of actual gross building area is consistent with the relationship of other retail land use type build floor areas to trip generation rates. Therefore, it is not considered necessary to explicitly consider outdoor storage or sales areas for Vehicle Dealerships in the calculation of trip generation. Furthermore, since the external storage and sales areas are not integral to the trip generation characteristics of a Vehicle Dealership, the calculation of the TUMF obligation for Vehicle Dealerships will be based exclusively on the gross floor area of all buildings associated with the dealership, including all vehicle sales, parts sales, service areas, administrative offices and waiting areas.

5.4 Group Quarters

5.4.1 Summary

Group quarters include, but are not limited to, correctional facilities, nursing homes, mental hospitals, college dormitories, military barracks, group homes, missions and shelters. Group quarters typically provide a group of rooms with shared living quarters for unrelated persons. Occupants of group quarters live and eat together with other persons in the building sharing at a minimum communal kitchen, dining and living facilities.

All group quarters will be considered non-residential service use types. The TUMF obligation for group quarters will be calculated using **Worksheet A.2.1** for standard non-residential fee calculations. The methodology outlined in **Worksheet A.2.5** and described as follows will be applied to determine the gross floor area for those group quarters specifically used only for congregate care (including assisted living) and/or nursing homes.

1. Multiply the total number of beds by 57.9 square feet (i.e. for 158 beds it is $158 \times 57.9 = 9,148$ square feet)
2. Use the resultant value as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations.

5.4.2 Detailed Narrative

The U.S. Census Bureau defines a housing unit as "a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements."

The U.S. Census Bureau classifies all people not living in housing unit as living in group quarters. Group quarters include both institutional and non-institutional facilities. Institutional group quarters include, but are not limited to, correctional facilities, nursing homes, and mental hospitals. Non-institutional group quarters include, but are not limited to, college dormitories, military barracks, group homes, missions and shelters. Group quarters typically provide a group of rooms with shared living quarters for unrelated persons. Occupants of group quarters live and eat together with other persons in the building sharing at a minimum communal kitchen, dining and living facilities.

The issue of classifying group quarters for calculating the TUMF obligation is obscured by the definition of 'residential dwelling units' for the purpose of the TUMF. As indicated in **Section 2.1**, for the purpose of calculating the TUMF obligation, residential dwelling units are defined as a building or portion thereof used by one (1) family and containing one (1) kitchen, which is designed primarily for residential occupancy. Although all group

quarters explicitly provide communal kitchen, dining and living facilities shared by the occupants of the building, in some instances individual units within group quarters may include kitchens for the convenience of occupants. This is increasingly common in buildings specifically intended for congregate care and senior assisted living whereby the occupants are provided the option to live and eat within their individual units equipped with a small kitchen. However, despite the inclusion of kitchen facilities in these cases, the principal purpose of the facility remains the provision of living assistance or supervision that inherently includes shared living quarters for unrelated persons and/or the sharing of communal facilities that necessitates occupants living and eating together with other persons in the facility. Accordingly, all group quarters (including those with kitchens in individual units) would not meet the U.S. Census Bureau definition of a residential housing unit and therefore, group quarters will be considered non-residential use types for the purpose of determining the TUMF obligation.

In accordance with Section 6.2 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), group quarters are considered to be service use types with the primary use of the facility generally meeting the description of either Hotels (except Casino Hotels) and Motels (NAICS Six Digit Code 721110), Rooming and Boarding Houses, Dormitories, and Workers' Camps (NAICS Six Digit Code 721310), Nursing and Residential Care Facilities (NAICS Three Digit Code 623) or Other Community Housing (NAICS Six Digit Code 624229). The TUMF obligation for service (and all non-residential) land uses is based on the gross floor area of buildings associated with the specific land use and is calculated using **Worksheet A.2.1** for standard non-residential fee calculations

5.4.2.1 Congregate Care, Nursing Homes and Assisted Living

Congregate care facilities (including senior assisted living facilities) and nursing homes are specific types of group quarters whose primary function is to provide care for elderly persons or other persons who are unable to adequately care for themselves due to advanced age or health reasons (such as chronic health care or convalescent care facilities). According to the Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) vehicle ownership by residents of these types of facilities is very low and residents do little or no driving due to their mobility limited condition. Traffic generation at these facilities is primarily limited to employees, visitors, and deliveries. By contrast, trip generation at other types of group quarters such as dormitories, barracks, and group homes is higher due to the increased mobility of residents. For this reason, it is considered appropriate to review the TUMF calculation methodology specifically for congregate care, nursing home and assisted living facilities.

A review of Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) indicates relatively consistent trip generation rates for congregate care, nursing home and assisted living facilities based on the number of units or beds, respectively. The weekday PM peak hour trip generation rate for congregate care facilities is approximately 0.23 trip ends per unit, while the corresponding rate for nursing homes is approximately 0.33 trip ends per bed and the rate for assisted living facilities is

0.33 trip ends per bed. The relatively small variation in average daily trips between congregate care units, nursing home beds and assisted living beds is indicative of congregate care units (or rooms) typically being intended for occupancy by one individual or related couple. For this reason, the number of units or rooms at a congregate care facility is considered to roughly proportional to the number of beds for the purpose of assessing trip generation characteristics in the context of determining TUMF obligation. A nursing home or assisted living facility may include multiple unrelated occupants that share a room or unit therefore making trip generation per bed an appropriate measure.

Table 5.2 summarizes the various characteristics of congregate care facilities and nursing homes, including trip generation. The table also details the calculation of the gross floor area equivalency per bed.

Table 5.2 – Characteristics of Congregate Care Facilities and Nursing Homes							
<i>Land Use Type</i>	<i>Average Number of Beds</i>	<i>Average Gross Floor Area (sqft)</i>	<i>Average PM Peak Hour Vehicle Trip Ends per Bed</i>	<i>Average PM Peak Hour Vehicle Trip Ends per 1,000 sqft</i>	<i>Equivalent Beds per 1,000 sqft</i>	<i>Equivalent sqft per Bed</i>	<i>TUMF Weighted Equivalent sqft per Bed**</i>
<i>Congregate Care Facility* (253)</i>	158		0.23				
<i>Nursing Home** (620)</i>	93	38,000	0.33	0.59			
<i>Assisted Living (254)</i>	169	60,000	0.33	0.82			
<i>Median of Defined Use Types</i>	158	49,000	0.33	0.71	2.14	468.1	57.9
<i>Median All TUMF Service Use Types</i>				5.70			

Source: Trip Generation Manual 11th Edition, Institute of Traffic Engineers, September 2021

Note: * - For Congregate Care Facilities, the number of units is considered roughly proportional to the number of beds.

** - TUMF weighted equivalent square feet based on equivalent square feet per bed adjusted to reflect relative trip generation between Congregate Care/Nursing Home and all TUMF Service Uses (consistent with TUMF Nexus Study Trip Generation Rate Comparison).

The gross floor area equivalency per bed for Congregate Care Facilities, Nursing Homes and Assisted Living Facilities is based on the median trip generation rate per bed and thousands of square feet of gross floor area for the defined use types. Each bed at a Nursing Home represents the equivalent of 468.1 square feet of gross floor area. To account for the variation in trip generation rates between Congregate Care Facilities and Nursing Homes, and all TUMF service land use types, the gross floor area equivalency per bed was weighted based on the relative trip generation between

Congregate Care Facilities, Nursing Homes and Assisted Living Facilities, and the median of all TUMF Service Uses as used in the TUMF Nexus Study. The weighted gross floor area equivalency per bed for Congregate Care Facilities (including Assisted Living Facilities) and Nursing Homes is 57.9.

For calculating the TUMF obligation for *all types of congregate care facilities and nursing homes*, the total number of beds will be multiplied by 57.9 to determine the equivalent number of square feet of floor area. The *equivalent floor area will be used for the purpose of calculating the TUMF* at the rate prescribed by the respective local jurisdictions TUMF Ordinance and supported by the TUMF Nexus Study. Application of this methodology will account for the considerably lower trip generation rates observed at congregate care facilities and nursing homes, since residents do little or no driving due to their advanced age and/or medical condition.

5.5 Mini-Warehouses and Rental Storage

5.5.1 Summary

For determining the TUMF obligation, all types of mini-warehouses or facilities providing rental storage (including outdoor rental storage areas) are industrial use types. The methodology outlined in **Worksheet A.2.6** and described as follows will be applied to determine the gross floor area for all types of mini-warehouses rental storage facilities.

1. Multiply the total number of storage units by 37.5 square feet
(i.e. for the example facility it is $500 \times 37.5 = 18,750$ square feet)
2. Use the resultant value as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations.

For the purpose of determining the TUMF obligation, a residence that is located entirely within a mini-warehouse or rental storage site and is used exclusively by an on-site caretaker and his/her immediate family is considered to be integral to the primary industrial use of the site and therefore is not subject to any additional TUMF obligation over the amount calculated in accordance with the methodology outlined above.

5.5.2 Detailed Narrative

Mini-warehouses and rental storage facilities include all land uses where the primary business of the site is the rental of units, vaults or spaces to the public for the storage of goods. While mini-warehouses are typically enclosed buildings, rental storage facilities can include outdoor unenclosed and uncovered areas for the storage of items such as recreational vehicles, boats, trailers and construction equipment. Rental units or spaces are generally delineated and/or physically separated from other units or spaces, and access is typically provided to the site through a common controlled access point. A residential dwelling is sometimes located within a mini-warehouse or rental storage site for use exclusively by an on-site caretaker.

In accordance with Section 6.2 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments,

As Adopted September 9, 2024), mini-warehouses and rental storage facilities are industrial use types with the primary use of the facility generally meeting the description of Warehousing and Storage (NAICS Three Digit Code 493). The TUMF obligation for industrial (and all non-residential) land uses is based on the gross floor area of buildings associated with the specific land use and is calculated using **Worksheet A.2.1** for standard non-residential fee calculations. However, in the case of mini-warehouses and rental storage facilities, vehicle trips to and from the site is generated primarily by the availability of storage units and/or spaces and in some cases only very limited building floor area is associated with the storage facility. For this reason, it is necessary to determine the gross floor area equivalency per storage unit (or space) for the purpose of calculating the TUMF obligation.

A review of Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) indicates the weekday PM peak hour trip generation rate for mini-warehouses is approximately 0.021 trip ends per storage unit, and is approximately 0.18 trip ends per thousand square feet of building area. **Table 5.3** summarizes the various characteristics of mini-warehouses, including trip generation, and establishes the equivalent square feet per storage unit for the purpose of calculating the TUMF obligation for all rental storage facilities including those with very limited building floor area associated with the storage facility.

Table 5.3 – Characteristics of Mini-Warehouses							
<i>Land Use Type (ITE Code)</i>	<i>Average Number of Storage Units/Spaces</i>	<i>Average Gross Floor Area (sqft)</i>	<i>Average Daily Vehicle Trips per Storage Unit/Space</i>	<i>Average Daily Vehicle Trips per 1,000 sqft</i>	<i>Equivalent Storage Units per 1,000 sqft</i>	<i>Equivalent sqft per Storage Unit/Space</i>	<i>TUMF Weighted Equivalent sqft per Storage Unit*</i>
<i>Mini-Warehouse (151)</i>	500	56,000	0.021	0.18	8.57	116.7	37.5
<i>Median of All TUMF Industrial Use Types</i>				0.56			

Source: Trip Generation Manual 11th Edition, Institute of Traffic Engineers, 2021

Note: * - TUMF weighted equivalent square feet based on equivalent square feet per storage unit/space adjusted to reflect relative trip generation per 1,000 sqft between Mini-Warehouse and all TUMF Industrial Uses (consistent with TUMF Nexus Study Trip Generation Rate Comparison).

The gross floor area equivalency per storage unit and/or space for Mini-Warehouses and Rental Storage Facilities is based on the trip generation characteristic of Mini-Warehouse, which is quantified in the Trip Generation Manual in terms of both trips per storage unit and trips per thousand square feet of gross floor area. Based on this information, each storage unit and/or space of Mini-Warehouse represents the equivalent of 116.7 square feet of gross floor area. To account for the variation in trip generation rates between Mini-Warehouses and Rental Storage Facilities, and all TUMF industrial land use types, the gross floor area equivalency per storage unit and/or space was weighted based on the relative trip generation between Mini-Warehouses and the median of all TUMF Industrial Uses as used in the TUMF Nexus Study. The weighted gross floor area equivalency per storage unit and/or space for Mini-Warehouses and Rental Storage Facilities (including outdoor rental storage areas) is 37.5.

For calculating the TUMF obligation for *all types of Mini-Warehouses and Rental Storage Facilities*, the total number of storage units and/or spaces will be multiplied by 37.5 to determine the equivalent number of square feet of floor area. The *equivalent floor area will be used for the purpose of calculating the TUMF* at the rate prescribed by the respective local jurisdictions TUMF Ordinance and supported by the TUMF Nexus Study.

In some instances, mini-warehouse and rental storage facilities include a residence exclusively for use by an on-site caretaker. For determining the TUMF obligation, a residence that is located entirely within a mini-warehouse or rental storage site and is used exclusively by an on-site caretaker and his/her immediate family is considered integral to the primary industrial use of the site. Due to the integral nature of a caretaker's residence to the mini-warehouse or rental storage use of the site, a caretaker's residence is not subject to any additional TUMF obligation over the amount calculated in accordance with the methodology outlined in this section.

5.6 Golf Courses

5.6.1 Summary

For calculating the TUMF obligation, all public and private golf courses are service use types. The methodology outlined in **Worksheet A.2.7** and described as follows will be applied to determine the gross floor area for calculating the fee obligation for all public and private golf courses (*for the example calculation assume a golf course with 18 holes and including buildings covering an area of 10,000 square feet*).

1. Multiply the total number of holes by 645.6 square feet
(i.e. *for the example golf course it is $18 \times 645.6 = 11,621$ square feet*)
2. Determine the total floor area of buildings on the site
(i.e. *for the example golf course it is 10,000 square feet*)
3. Compare the results for steps 1 and 2, and use the greater of the two values as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations. (i.e. *$11,621 > 10,000$; for the example golf course TUMF would be calculated for 11,621 square feet*)

5.6.2 Detailed Narrative

Golf courses are recreational facilities intended specifically for the playing of golf, typically over a 9-, 18-, 27- or 36-hole landscaped course. The use of golf courses can be open to the public or limited only to members of private country clubs or cooperative owner associations. Some sites may also include additional facilities such as driving ranges, and recreational club houses offering services such as locker rooms, pro shops, lounges, meeting rooms, banquet facilities and management offices.

In accordance with Section 6.2 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), golf courses are service use types with the primary use of the facility meeting the description of Golf Courses and Country Clubs (NAICS Six

Digit Code 713910). The TUMF obligation for service (and all non-residential) land uses is based on the gross floor area of buildings associated with the specific land use and is calculated using **Worksheet A.2.1** for standard non-residential fee calculations. While the trip making characteristics of golf courses may be readily captured based on the gross floor area of sites including larger club house facilities, in the case of sites with very limited building floor area, vehicle trips to and from the facility will be generated primarily by the actual playing course. For this reason, it is necessary to determine the gross floor area equivalency per hole on the playing course for the purpose of calculating the TUMF obligation where limited building floor area accompanies the golf course.

A review of Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) indicates trip generation rates for golf courses correlated to the number of holes on the course and the area of the site in acres. Trip Generation Manual 11th Edition indicates the weekday PM peak hour trip generation rate for golf courses is 3.68 trip ends per hole. Trip Generation Manual 11th Edition does not include trip generation rates for golf courses defined by gross building floor area or employees making it impossible to estimate an equivalent value based on these data. A review of Trip Generation 9th Edition (Institute of Traffic Engineers, 2012) indicates trip generation rates for golf courses correlated to the number of holes on the course, the area of the site in acres and the number of employees. Trip Generation 9th Edition indicates the weekday PM peak hour trip generation rate for golf courses is 3.56 trip ends per hole and 2.08 trips per employee. On the absence of employee data in the most recent versions of the ITE Trip Generation Manual, these data from Trip Generation 9th Edition were utilized to develop an equivalent Average Weekday PM Peak Hour Vehicle Trip Ends per Employee as the basis for determining the TUMF equivalent square feet per hole. **Table 5.4** summarizes the various characteristics of golf courses, including trip generation, and establishes the equivalent square feet per hole for the purpose of calculating the TUMF obligation for golf courses.

The gross floor area equivalency per hole for Golf Courses is based on the trip generation characteristic of Golf Courses, which is quantified in the Trip Generation 9th Edition in terms of trips per hole, trips per acre and trips per employee, and in Trip Generation Manual 11th Edition in terms of trips per hole and trips per acre. For calculating TUMF obligation, non-residential fees are determined using gross floor area in square feet. By applying the employee trip conversion factor of 2.61 employees per thousand square feet of service use area (consistent with the TUMF Nexus Study Employment Conversion Factors described in Appendix L), the average weekday PM peak hour trip ends per employee can be defined in terms of the equivalent impact in average weekday PM peak hour trip ends per thousand square feet of service use area. Based on this information, each hole on the playing course is considered to represent the equivalent of 655.8 square feet of gross floor area. To account for the variation in trip generation rates between Golf Courses, and all TUMF service land use types, the gross floor area equivalency per hole was weighted based on the relative trip generation between Golf Courses and the median of all TUMF Service Uses as used in the TUMF Nexus Study. The weighted gross floor area equivalency per hole for Golf Courses is 645.6.

Table 5.4 – Characteristics of Golf Courses

Land Use Type (ITE Code)	Average Number of Holes	Average Employees	Average Weekday PM Peak Hour Vehicle Trip Ends per Hole	Average Weekday PM Peak Hour Vehicle Trip Ends per Employee*	Average Daily Vehicle Trips per 1,000 sqft**	Equivalent Holes per 1,000 sqft	Equivalent sqft per Hole	TUMF Weighted Equivalent sqft per Hole***
Golf Courses ⁽¹⁾ (430)	20	41	3.56	2.08				
Golf Courses ⁽²⁾ (430)	20		3.68	2.15	5.61	1.52	655.8	645.6
Median of All TUMF Service Use Types					5.70			

Sources:

⁽¹⁾ Trip Generation 9th Edition, Institute of Traffic Engineers, 2012

⁽²⁾ Trip Generation Manual 11th Edition, Institute of Traffic Engineers, September 2021

Notes:

* - Average Weekday PM Peak Trip Ends per Employee⁽²⁾ based on Average Weekday PM Peak Trip Ends per Employee⁽¹⁾ multiplied by ratio of Average Weekday PM Peak Hour Trip Ends per 1,000 sqft⁽²⁾ to Average Weekday PM Peak Hour Trip Ends per 1,000 sqft⁽¹⁾ to reflect change in trip generation rates between ITE Trip Generation Manual 9th Edition and ITE Trip Generation Manual 11th Edition.

** - Average Weekday PM Peak Hour Trip Ends per 1,000 sqft based on Average Weekday PM Peak Hour Trip Ends per Employee multiplied by the TUMF Median Employee Conversion Factor per 1000 sqft for all TUMF Service Uses (per TUMF Nexus Study Exhibit L-1).

*** - TUMF weighted equivalent square feet based on equivalent square feet per hole adjusted to reflect relative trip generation per employee between Golf Course and all TUMF Service Uses (consistent with TUMF Nexus Study Trip Generation Rate Comparison).

For calculating the TUMF obligation for golf courses, the total number of holes on the playing course will be multiplied by 645.6 to determine the equivalent number of square feet of floor area. The equivalent floor area will be compared to the actual building gross floor area for the site, and the greater of the two floor areas will be used for the purpose of calculating the TUMF at the rate prescribed by the respective local jurisdictions TUMF Ordinance and supported by the TUMF Nexus Study.

Application of this methodology will account for variations in the size and scale of club house facilities that affect the nature of the primary business of the site. For example, an example golf course with 18 holes that includes 10,000 square feet of gross floor area in club house facilities would have an equivalent floor area of 11,621 square feet (18 x 645.6). A comparison of the equivalent floor area and actual building gross floor area indicates that the equivalent floor area is greater than the actual floor area (11,621 > 10,000) which is consistent with the primary business of the site being the actual playing course and therefore would be used as the basis for calculating the TUMF obligation. Conversely, an average golf course with 30,000 square feet of gross floor area in club house facilities would have an equivalent floor area of 11,621 square feet (18 x 645.6). A comparison of the equivalent floor area and actual building gross floor area indicates that the actual floor area is greater than the equivalent floor area (30,000 > 11,621) which is consistent with the increased size and scope of the clubhouse affecting the primary business of the site (the use of the recreational club house service facilities) and therefore would be used as the basis for calculating the TUMF obligation.

5.7 Wholesale Nurseries

5.7.1 Summary

For determining the TUMF obligation, all wholesale nurseries are industrial use types. The methodology outlined in **Worksheet A.2.8** and described as follows will be applied to determine the gross floor area for all wholesale nurseries (*for the example calculation assume a wholesale nursery with a total site area of 27 acres and including buildings with a gross floor area of 3,000 square feet*).

1. Multiply the total site area in acres by 821.4 square feet
(i.e. *for the example facility it is $27 \times 821.4 = 22,178$ square feet*)
2. Determine the total floor area of buildings on the site
(i.e. *for the example facility it is 3,000 square feet*)
3. Compare the results for steps 1 and 2, and use the greater of the two values as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations. (i.e. *$22,178 > 3,000$; for the example wholesale nursery TUMF would be calculated for 22,178 square feet*)

5.7.2 Detailed Narrative

Wholesale Nursery facilities include all land uses where the primary business of the site is the sale of landscape supplies, plants and other farm products to contractors and suppliers. According to the U.S. Census Bureau, the definition for a wholesale nursery is “establishments primarily engaged in the wholesale distribution of flowers, nursery stock, and florists' supplies”. Wholesale nurseries typically incorporate a combination of free-standing buildings and expansive open areas of planting and landscape stock. Most facilities include limited office, storage and shipping facilities.

In accordance with Section 6.2 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), wholesale nursery facilities are industrial use types with the primary use of the facility generally meeting the description of Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers (NAICS Six Digit Code 424930. The TUMF obligation for industrial (and all non-residential) land uses is based on the gross floor area of buildings associated with the specific land use and is calculated using **Worksheet A.2.1** for standard non-residential fee calculations. However, in the case of wholesale nursery facilities, vehicle trips to and from the site are generated primarily by the availability of open land used for production, storage and display of plants and other landscape materials. For this reason, it is necessary to determine the gross floor area equivalency per acre of the site area for the purpose of calculating the TUMF obligation.

A review of Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) indicates the weekday PM peak hour trip generation rate for wholesale nurseries is approximately 0.46 trip ends per acre of site area, and is approximately 5.01 trip ends per thousand square feet of building area. **Table 5.5** summarizes the various characteristics of wholesale nurseries, including trip generation,

and establishes the equivalent square feet per acre for the purpose of calculating the TUMF obligation for all wholesale nursery facilities, which is typically associated with having very limited building floor area.

Table 5.5 – Characteristics of Wholesale Nurseries

Land Use Type (ITE Code)	Average Site Area (acres)*	Average Gross Floor Area (sqft)	Average Weekday PM Peak Hour Vehicle Trip Ends per Acre	Average Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft	Equivalent Acres per 1,000 sqft	Equivalent sqft per Acre	TUMF Weighted Equivalent sqft per Acre*
Wholesale Nursery (818)	27	3,000	0.46	5.01	10.89	91.8	821.4
Median of All TUMF Industrial Use Types				0.56			

Source: Trip Generation Manual 11th Edition, Institute of Traffic Engineers, September 2021

Note: * - TUMF weighted equivalent square feet based on equivalent square feet per acre adjusted to reflect relative trip generation per 1000 sqft between Wholesale Nursery and all TUMF Industrial Uses (consistent with TUMF Nexus Study Trip Generation Rate Comparison).

The gross floor area equivalency per acre of site for Wholesale Nursery is based on the trip generation characteristic of Wholesale Nursery, which is quantified in the Trip Generation Manual in terms of both trips per acre and trips per thousand square feet of gross floor area. Based on this information, each acre of Wholesale Nursery represents the equivalent of 91.8 square feet of gross floor area. To account for the variation in trip generation rates between Wholesale Nursery, and all TUMF industrial land use types, the gross floor area equivalency per acre was weighted based on the relative trip generation between Wholesale Nursery and the median of all TUMF Industrial Uses as used in the TUMF Nexus Study. The weighted gross floor area equivalency per acre for Wholesale Nursery is 821.4.

For calculating the TUMF obligation for *all types of Wholesale Nurseries*, the total area of the site in acres will be multiplied by 821.4 to determine the equivalent number of square feet of floor area. *The equivalent floor area will be compared to the actual building gross floor area for the site, and the greater of the two floor areas will be used for the purpose of calculating the TUMF at the rate prescribed by the respective local jurisdictions TUMF Ordinance and supported by the TUMF Nexus Study.*

Application of this methodology will account for variations in the size and scale of buildings that affect the nature of the primary business of the site. For example, an average wholesale nursery covering 27 acres that includes 3,000 square feet of gross floor area in buildings would have an equivalent floor area of 22,178 square feet (27 x 821.4). A comparison of the equivalent floor area and actual building gross floor area indicates that the equivalent floor area is greater than the actual floor area (22,178 > 3,000) which is consistent with the primary business of the site being the outdoor production, storage and display areas, and therefore would be used as the basis for calculating the TUMF obligation. Conversely, an average wholesale nursery covering 27 acres with 30,000 square feet of gross floor area in buildings would have an

equivalent floor area of 22,178 square feet (27 x 821.4). A comparison of the equivalent floor area and actual building gross floor area indicates that the actual floor area is greater than the equivalent floor area (30,000 > 22,178) which is consistent with the increased size and scope of the buildings affecting the primary business of the site and therefore would be used as the basis for calculating the TUMF obligation.

5.8 Retail Nurseries (Garden Centers)

5.8.1 Summary

For determining the TUMF obligation, all retail nurseries (also referred to as "Garden Centers") are retail use types. The methodology outlined in **Worksheet A.2.9** and described as follows will be applied to determine the gross floor area for all retail nurseries (*for the example calculation assume a retail nursery with a total site area of 4 acres and including buildings with a gross floor area of 6,000 square feet*).

1. Multiply the total site area in acres by 2,110.7 square feet
(i.e. for the example facility it is $4 \times 2,110.7 = 8,443$ square feet)
2. Determine the total floor area of buildings on the site
(i.e. for the example facility it is 6,000 square feet)
3. Compare the results for steps 1 and 2, and use the greater of the two values as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations. (i.e. 8,443 > 6,000; for the example retail nursery TUMF would be calculated for 8,443 square feet)

This methodology applies only to retail nurseries and garden centers that are free-standing businesses. Where the selling of garden and landscaping supplies (including plants) is an integral component of a more extensive retail store, like a home improvement superstore, the TUMF obligation will be determined based exclusively on the gross building area of the primary business of the site.

5.8.2 Detailed Narrative

Retail Nursery facilities (also referred to as 'Garden Centers') include all land uses where the primary business of the site is the retail sale of garden and landscaping supplies, including plants. According to the U.S. Census Bureau, the definition for a retail nursery is an "establishment primarily engaged in selling trees, shrubs, other plants, seeds, bulbs, mulches, soil conditioners, fertilizers, pesticides, garden tools, and other garden supplies to the general public. These establishments primarily sell products purchased from others, but may sell some plants which they grow themselves". Like their wholesale counterparts they typically incorporate a combination of free-standing buildings with an open area of planting and landscape stock.

In accordance with Section 6.2 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), retail nursery facilities are retail use types with the primary use of the facility generally meeting the description of Nursery, Garden Center, and Farm Supply Retailers (NAICS Six Digit Code 444240). The TUMF obligation for retail

(and all non-residential) land uses is based on the gross floor area of buildings associated with the specific land use and is calculated using **Worksheet A.2.1** for standard non-residential fee calculations. However, in the case of retail nursery facilities, vehicle trips to and from the site may be generated primarily by the availability of open land used for storage and display of plants and other landscape materials. For this reason, it is necessary to determine the gross floor area equivalency per acre of the site area for the purpose of calculating the TUMF obligation.

A review of Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) indicates the weekday PM peak hour trip generation rate for retail nurseries and garden centers is approximately 10.49 trip ends per acre of site area and is approximately 8.37 trip ends per thousand square feet of building area. **Table 5.6** summarizes the various characteristics of retail nurseries and garden centers, including trip generation, and establishes the equivalent square feet per acre for the purpose of calculating the TUMF obligation for all retail nursery facilities, which is typically associated with having very limited building floor area.

The gross floor area equivalency per acre of site for retail nurseries and garden centers is based on the trip generation characteristic of Nursery (Garden Center), which is quantified in the Trip Generation Manual in terms of both trips per acre and trips per thousand square feet of gross floor area. Based on this information, each acre of Retail Nursery represents the equivalent of 1,253.3 square feet of gross floor area. To account for the variation in trip generation rates between retail nurseries and garden centers, and all TUMF retail land use types, the gross floor area equivalency per acre was weighted based on the relative trip generation between Nursery (Garden Center) and the median of all TUMF Retail Uses as used in the TUMF Nexus Study. The weighted gross floor area equivalency per acre for Retail Nursery is 2,110.7.

Table 5.6 – Characteristics of Retail Nurseries and Garden Centers

Land Use Type (ITE Code)	Average Site Area (acres)*	Average Gross Floor Area (sqft)	Average Weekday PM Peak Hour Vehicle Trip Ends per Acre	Average Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft	Equivalent Acres per 1,000 sqft	Equivalent sqft per Acre	TUMF Weighted Equivalent sqft per Acre*
Nursery (Garden Center) (817)	4	6,000	10.49	8.37	0.80	1,253.3	2,110.7
Median of All TUMF Retail Use Types				4.97			

Source: Trip Generation Manual 11th Edition, Institute of Traffic Engineers, September 2021

Note: * - TUMF weighted equivalent square feet based on equivalent square feet per acre adjusted to reflect relative trip generation per 1000 sqft between Retail Nursery and all TUMF Retail Uses.

For calculating the TUMF obligation for *all types of Retail Nursery*, the total area of the site in acres will be multiplied by 2,110.7 to determine the equivalent number of square feet of floor area. The *equivalent floor area will be compared to the actual building gross floor area for the site, and the greater of the two floor areas will be used for the*

purpose of calculating the TUMF at the rate prescribed by the respective local jurisdictions TUMF Ordinance and supported by the TUMF Nexus Study.

Application of this methodology will account for variations in the relative size and scale of buildings and open areas that affect the nature of the primary business of the site. For example, an average retail nursery covering 4 acres that includes 6,000 square feet of gross floor area in buildings would have an equivalent floor area of 8,443 square feet ($4 \times 2,110.7$). A comparison of the equivalent floor area and actual building gross floor area indicates that the equivalent floor area is greater than the actual floor area ($8,443 > 6,000$) which is consistent with the increased size and scope of the outdoor production, storage and display area affecting the primary business of the site and therefore would be used as the basis for calculating the TUMF obligation. Conversely, an average retail nursery covering 4 acres with 16,000 square feet of gross floor area in buildings would have an equivalent floor area of 8,443 square feet ($4 \times 2,110.7$). A comparison of the equivalent floor area and actual building gross floor area indicates that the actual floor area is greater than the equivalent floor area ($16,000 > 8,443$) which is consistent with the primary business of the site being generated by the retail buildings, and therefore would be used as the basis for calculating the TUMF obligation.

It is to be noted that application of this methodology applies only to retail nurseries and garden centers that are free-standing businesses and not integral components of a more extensive retail store, such as a discount store, discount club, hardware store, home improvement superstore or supermarket. Where the selling of garden and landscaping supplies (including plants) is an integral component of a more extensive retail store, the TUMF obligation will be determined based exclusively on the gross building area of the primary business of the site.

5.9 High-Cube Warehouses and Distribution Centers

5.9.1 Summary

For determining the TUMF obligation, all types of high-cube warehouses, including fulfillment centers, transload and short-term storage warehouses and other similar distribution facilities, will be considered industrial use types. The methodology outlined in **Worksheet A.2.10** and described as follows will be applied to determine the equivalent floor area for high-cube warehouses/fulfillment centers with a minimum gross floor area of 200,000 square feet, a minimum ceiling height of 24 feet and a minimum dock-high door loading ratio of 1 door per 10,000 square feet (*for the example calculation assume a high-cube warehouse with a gross floor area of 700,000 square feet, a ceiling height exceeding 24 feet and a dock-high door loading ratio exceeding 1:10,000*):

1. Subtract 200,000 square feet from the total gross floor area
(i.e. for the example facility it is $700,000 - 200,000 = 500,000$ square feet)
2. Multiply the resultant value from step 1 which is total gross floor area in excess of 200,000 square feet by 0.52
(i.e. for the example facility it is $500,000 \times 0.52 = 260,000$ square feet)
3. Add 200,000 square feet to the resultant value of step 2

(i.e. for the example facility it is $200,000 + 260,000 = 460,000$ square feet)

4. Use the resultant value of step 3 as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations.

The TUMF obligation for a warehouse facility with a gross floor area of less than 200,000 square feet, a ceiling height of less than 24 feet and/or a dock-high door loading ratio of less than 1 door per 10,000 square feet will be calculated based on the actual gross floor area using **Worksheet A.2.1** for standard non-residential fee calculations. Furthermore, where other uses such as wholesale showrooms, retail showrooms or office suites are co-located with qualifying high-cube warehouse facilities, only the qualifying warehouse portion of the premises will be calculated using **Worksheet A.2.10**. The fee obligation for all other co-located facilities will be calculated based on the actual gross floor area and the appropriate land use category using **Worksheet A.2.1** for standard non-residential fee calculations.

5.9.2 Detailed Narrative

High-cube warehouses are primarily for the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. These facilities typically have a high level of on-site automation and logistics management enable highly efficient processing of goods through the facility. High-cube warehouses include, but may not be limited to, the following types of facilities:

- High-cube transload and short-term storage facilities typically provide for consolidation and distribution of loads for manufacturers, wholesalers or retailers. Transload and short-term storage facilities typically provide limited storage duration, high throughput and high-efficiency distribution.
- Fulfillment centers include high-cube warehouses typically characterized by significant storage and direct distribution of ecommerce products to the end users. These facilities typically handle smaller packages and quantities than other types of high-cube warehouses.
- High-cube parcel hub warehouses typically serve as regional and local freight-forwarding facilities of time sensitive shipments via air freight and ground carriers. These sites may also include truck maintenance, wash, and/or fueling facilities ancillary to the primary use of the site.
- High-cube cold storage warehouses are facilities that provide temperature-controlled environments for the storage and distribution of frozen foods or other perishable products.

For determining the TUMF obligation, all high-cube warehouses are defined as follows:

Very large shell buildings commonly constructed using steel framed and/or concrete tilt-up techniques with a minimum gross floor area of 200,000 square feet, a minimum ceiling height of 24 feet and a minimum dock-high door loading ratio of 1 door per 10,000 square feet.

In accordance with Section 6.2 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments,

As Adopted September 9, 2024), high-cube warehouses are industrial use types with the primary use of the facility generally meeting the description of Warehousing and Storage (NAICS Three Digit Code 493). The TUMF obligation for industrial (and all non-residential) land uses is based on the gross floor area of buildings associated with the specific land use and is calculated using **Worksheet A.2.1** for standard non-residential fee calculations. However, in the case of high-cube warehouses, vehicle trips generated to and from the site are typically lower than traditional industrial uses due to the high-level of on-site automation and logistics management. For this reason, it is necessary to determine the gross floor area equivalency for the purpose of calculating the TUMF obligation.

Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) provides trip generation rates for four types of high-cube warehouse uses: High-Cube Transload and Short-Term Storage Warehouse; High-Cube Fulfillment Center Warehouse; High-Cube Parcel Hub Warehouse; and High-Cube Cold Storage Warehouse. Trip Generation Manual 11th Edition indicates the average weekday PM peak hour trip generation rate for high-cube warehouses varies from 0.17 trip ends per thousand square feet for High-Cube Transload and Short-Term Storage Warehouse to 0.71 trip ends per thousand square feet for High-Cube Parcel Hub Warehouse.

Table 5.7 summarizes the various characteristics of high-cube warehouses, including trip generation, and establishes the equivalent square feet for the purpose of calculating the TUMF obligation for all high-cube warehouse facilities.

Table 5.7 – Characteristics of High-Cube Warehouses and Fulfillment Centers				
<i>Land Use Type (ITE Code)</i>	<i>Average Gross Floor Area of Building in Square Feet</i>	<i>Average Weekday Daily Trip Ends per 1,000 sqft*</i>	<i>Average Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft</i>	<i>TUMF Weighted Equivalent sqft **</i>
<i>High-Cube Transload and Short-Term Storage Warehouse (154)</i>	1,023,000	1.40	0.17	
<i>High-Cube Fulfillment Center Warehouse - Non Sort (155)</i>	818,000	1.81	0.27	
<i>High-Cube Parcel Hub Warehouse (156)</i>	324,000	4.63	0.71	
<i>High-Cube Cold Storage Warehouse (157)</i>	569,000	2.12	0.32	
<i>Median of Defined Use Types</i>	693,500	1.97	0.29	0.52
<i>Median of All TUMF Industrial Use Types (i)</i>			0.56	

Source: (i) Trip Generation Manual 11th Edition, Institute of Traffic Engineers, September 2021

Note: * - Average Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft for High-Cube Cold Storage Warehouse based on ratio of median of Average Weekday Daily Trip Ends per 1,000 sqft for other use types compared to Average Weekday Daily Trip Ends per 1,000 sqft for High-Cube Cold Storage Warehouse multiplied by median Average Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft for other defined use types.
** - TUMF weighted equivalent square feet based on relative Weekday PM Peak Hour Trip Ends per 1000 sqft for the median of the defined use types and the median of all TUMF Industrial Uses (consistent with TUMF Nexus Study Trip Generation Rate Comparison).

The gross floor area equivalency for High-Cube Warehouses is based on the median of the trip generation characteristics for the various categories of High-Cube Warehouse, quantified in the Trip Generation Manual 11th Edition in terms of both daily and PM peak trip ends per thousand square feet gross floor area³. Based on this information, the median weekday PM peak hour trip generation rate for the various high-cube warehouses, including fulfillment centers, is approximately 0.29 trips per thousand square feet of gross floor area. To account for the variation in trip generation rates between the various high-cube warehouses, including fulfillment centers, and all TUMF industrial land use types, the gross floor area equivalency was weighted based on the relative trip generation between high-cube warehouses, including fulfillment centers, and the median of all TUMF Industrial Uses as used in the TUMF Nexus Study. The weighted gross floor area equivalency for high-cube warehouses is 0.52.

For the purpose of calculating the TUMF obligation for *High-Cube Warehouses* with a minimum gross floor area of 700,000 square feet, a minimum ceiling height of 24 feet and a minimum dock-high door loading ratio of 1 door per 10,000 square feet, the gross floor area *in excess of 200,000 square feet* will be multiplied by 0.52 and the resultant value *increased by 200,000 square feet* to determine the equivalent number of square feet of floor area. *The equivalent floor area will be used for the purpose of calculating the TUMF* at the rate prescribed by the respective local jurisdictions TUMF Ordinance and supported by the TUMF Nexus Study. For example, a high-cube warehouse with a gross floor area of 700,000 square feet, a ceiling height exceeding 24 feet and a dock-high door loading ratio exceeding 1:10,000 (for the example facility it is at least 70 dock-high door loading bays i.e. $700,000/10,000 = 70$) the equivalent floor area would be 460,000 square feet ($\{[700,000 - 200,000] \times 0.52\} + 200,000 = 460,000$)

The TUMF obligation for a warehouse facility with a gross floor area of less than 200,000 square feet, a ceiling height of less than 24 feet and/or a dock-high door loading ratio of less than 1 door per 10,000 square feet will be calculated based on the actual gross floor area using **Worksheet A.2.1** for standard non-residential fee calculations. Furthermore, where other uses such as wholesale showrooms, retail showrooms or office suites are co-located with qualifying high-cube warehouse facilities, only the qualifying warehouse portion of the premises will be calculated using **Worksheet A.2.10**. The fee obligation for all other co-located facilities will be calculated based on the actual gross floor area and the appropriate land use category using **Worksheet A.2.1** for standard non-residential fee calculations.

³ High-Cube Cold Storage Warehouse (ITE Code 157) is quantified in terms of Weekday Vehicle Trip Ends per TSF and Weekday Peak Hour of Adjacent Street Traffic only.

5.10 Winery

5.10.1 Summary

For determining the TUMF obligation, small, medium and large wineries, as defined below, are categorized using **Worksheet A.2.11** and fees calculated differently for each category using the methodology described.

Small Winery – A winery characterized by predominantly agricultural and industrial uses involving the cultivation of grapes and/or production of wine. Ancillary uses associated with a small winery can include a small tasting room not exceeding 700 square feet, and associated uses such as office and administration space, minor retail and/or small deli-type (packaged food) service that does not require a kitchen. The total building area for all buildings associated with a small winery cannot exceed 15,000 square feet.

Small winery is considered an industrial use type. TUMF obligation for small winery will be calculated based on the gross floor area of all buildings associated with the winery including all wine production and storage areas, and ancillary associated tasting room, office and administration space, minor retail and/or deli-type (packaged food) service that does not require a kitchen, using **Worksheet A.2.1** for standard non-residential fee calculations.

Medium Winery – A winery with integrated supporting operations, such as tasting room with floor area greater than 700 square feet including outdoor tasting areas, retail, event space, and/or small sit-down restaurant with primary operating hours at lunch. The patrons of the retail shops and restaurant facilities are primarily visitors to the wine-tasting room, therefore the additional facilities are not viewed as generating additional traffic to the primary use, which is wine tasting and purchase. The total building area for all buildings associated with a medium winery cannot exceed 15,000 square feet.

Medium winery is considered an industrial use type. The methodology outlined in **Worksheet A.2.12** and described as follows will be applied to determine the gross floor area for medium wineries.

1. Multiply the total gross floor area of all buildings associated with the winery including all wine production and storage areas, and ancillary associated tasting room, office and administration space, retail, event space, and/or restaurant by 3.77.

(i.e. For an example facility with 12,500 square feet gross floor area it is $3.77 \times 12,500 = 47,125$ square feet)

2. Use the resultant value as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations.

Large Winery – Winery with total building area exceeding 15,000 square feet and typically including several other significant trip generating operations occurring on-site in addition to the winery operations, such as a retail shop, sit-down restaurant, hotel, and concert/event venue that operate separately from the winery.

Due to the unique variations of uses associated with each specific large winery, the TUMF obligation is calculated independently for each definable major on-site trip generating use associated with the winery (such as hotel, restaurant, office) using **Worksheet A.2.1** for standard non-residential fee calculations. For the portion of a large winery that is used primarily for wine production and storage, wine tasting and the sale of associated merchandise, the TUMF obligation can be calculated using the methodology outlined in **Worksheet A.2.13** and described as follows will be applied to determine the gross floor area for large wineries.

1. Multiply the total gross floor area of all buildings associated with winery uses only (wine production and storage, wine tasting and the sale of associated merchandise) by 3.77.

(i.e. For an example facility with 20,000 square feet of winery uses it is $3.77 \times 20,000 = 75,400$ square feet)

2. Use the resultant value as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations.

5.10.2 Detailed Narrative

For determining the TUMF obligation, wineries are categorized into small, medium and large wineries, as defined below.

Small Winery – Characterized by predominantly agricultural and industrial uses involving the cultivation of grapes and/or production of wine. Ancillary uses associated with a small winery can include a small tasting room not exceeding 700 square feet, and associated uses such as office and administration space, minor retail and/or small deli-type (packaged food) service not requiring a kitchen. The total building area for all buildings associated with a small winery cannot exceed 15,000 square feet.

Medium Winery – Winery with integrated supporting operations, such as tasting room with floor area greater than 700 square feet including outdoor tasting areas, retail, event space, and/or small sit-down restaurant with primary operating hours at lunch. The patrons of the retail shops and restaurant facilities are primarily visitors to the wine-tasting room, therefore the additional facilities are not viewed as generating additional traffic to the primary use, which is wine tasting and purchase. The total building area for all buildings associated with a medium winery cannot exceed 15,000 square feet.

Large Winery – Winery with total building area exceeding 15,000 square feet and typically including several other significant trip generating operations occurring on-site in addition to the winery operations, such as a retail, sit-down restaurant, hotel, and concert/event venue operating separately from the winery.

The Traffic Impact Analysis (TIA) conducted for the Europa Village development (Urban Crossroads, June 2008) included daily traffic counts at a select number of wineries in the Temecula Valley region and developed a customized daily trip generation rate specifically for wine-tasting facilities in this area. The facilities included in this TIA were small, medium and large wineries with various amenities. The primary trip generating variable was the size of the wine tasting room, with additional trips at the large wineries generated by other amenities such as resort, spa and overnight hotel accommodations. The number of employees was deemed insignificant to the trip generation based on this study.

The Trip Generation Manual 11th Edition (Institute of Traffic Engineers, September 2021) presents trip generation characteristics for Wine Tasting Rooms in terms of daily trip generation rates and peak hour trip generation rates. Trip Generation Manual 11th Edition encompassed a range of tasting room sizes but does not distinguish the size of the winery overall.

Small wineries, as defined above, predominately focus on agriculture (grape cultivation) and industrial (wine production) uses but may include a small ancillary tasting room and/or office facility, are estimated to generate traffic consistent with other light industrial and agricultural facilities. The TUMF obligation for small wineries will to be calculated using the standard non-residential methodology and the adopted industrial fee rate.

Medium sized wineries, as defined previously, are unique trip generators encompassing more than industrial/agricultural activities, such that the use of the site is predominately wine tasting and the sale of wine and associated merchandise. Based on the Europa Village Trip Generation Report and Trip Generation Manual 11th Edition, **Table 5.8** details the determination of the weighted equivalent floor space for calculating the TUMF obligation of medium wineries.

Large sized wineries, as defined previously, include various types of trip generators (such as wine tasting and associated retail, restaurant and banquet facilities, hotel accommodations and resort spa) that differ based on the uses associated with a particular large winery development. Due to the unique variations of uses associated with each specific large winery, the TUMF obligation is calculated independently for each definable major on-site trip generating use associated with the winery (such as hotel, restaurant, office). For the portion of a large winery that is used primarily for wine tasting and the sale of associated merchandise, the TUMF obligation will be calculated using the methodology described previously for medium wineries.

Table 5.8 – Medium Winery TUMF Calculation				
Land Use Type (ITE Code)	Average Gross Floor Area (sqft)	Average Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft	Equivalent Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft*	TUMF Weighted Equivalent sqft **
Wine Tasting Room (970) ⁽ⁱ⁾	4,000	6.60		
Winery (all associated buildings) ⁽ⁱⁱ⁾	12,500		2.11	3.77
Median of All TUMF Industrial Use Types ⁽ⁱ⁾		0.56		

Sources: (i) Trip Generation Manual 11th Edition, Institute of Traffic Engineers, September 2021

(ii) Europa Village TIA, Urban Crossroads, prepared June 2, 2008 and revised March 17, 2009 for County of Riverside

Note: * Equivalent Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft for Winery (all associated buildings) applies Average Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft for Wine Tasting Room across expanded Average Gross Floor Area for Winery (all associated buildings)

** TUMF weighted equivalent square feet based on the Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft adjusted to reflect relative trip generation per 1000 sqft between Equivalent Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft for medium wineries and all TUMF Industrial Uses (consistent with TUMF Nexus Study Trip Generation Rate Comparison).

The gross floor area equivalency for a Medium Winery is based on the trip generation characteristic of a Wine Tasting Room, which is quantified in Trip Generation Manual 11th Edition as 6.60 weekday PM peak hour vehicle trip ends per 1,000 sqft. This trip generation rate for Wine Tasting Room was used to calculate the equivalent rate for Winery (all associated buildings) using the average gross building floor area for medium wineries contained in the Traffic Impact Analysis (TIA) conducted for the Europa Village development, yielding an equivalent weekday PM peak hour trip generation rate per 1,000 sqft of 2.11 trip ends. To account for the variation in trip generation rates between a Medium Winery and all TUMF industrial land use types, the gross floor area equivalency was weighted based on the relative trip generation between a Medium Winery and the median of all TUMF Industrial Uses as used in the TUMF Nexus Study. The weighted gross floor area equivalency for a Medium Winery is 3.77.

For calculating the TUMF obligation for a Winery, the following methodology is used, respectively, for the three defined winery category types:

Small Winery, with a tasting room and/or other associated ancillary uses with a floor area of **less than or equal to** 700 square feet and a total gross floor area of all buildings **less than or equal to** 15,000 square feet, is an industrial use type. TUMF obligation for *small winery* is calculated based on the gross floor area of all buildings associated with the winery including all wine production and storage areas, and ancillary associated tasting room, office and administration space, minor retail

and/or deli-type (packaged food) service not requiring a kitchen, using the standard non-residential fee calculation methodology.

Medium Winery, with a tasting room and/or other associated ancillary uses with a floor area of **greater than** 700 square feet including outdoor tasting areas and a total gross floor area of all buildings **less than or equal to** 15,000 square feet, is an industrial use type. For calculating the TUMF obligation for *medium winery*, the total gross floor area of all buildings associated with the winery including all wine production and storage areas, and ancillary associated tasting room, office and administration space, retail, event space, and/or restaurant will be multiplied by 3.77 to determine the equivalent number of square feet of floor area. The equivalent floor area will be used to calculate the TUMF obligation at the rate prescribed by the respective local jurisdictions TUMF Ordinance and supported by the TUMF Nexus Study. Application of this methodology will account for the higher trip generation rates observed at medium wineries, since medium wineries have associated retail and service uses that generate more trips than those associated with facilities primarily involved in wine production.

Large Winery, with a total gross floor area of all buildings **greater than** 15,000 square feet, is considered a mixed-use type due to the various types of trip generators associated with the winery development. Due to the unique variations of uses associated with each specific large winery, the TUMF obligation is calculated independently for each definable major on-site trip generating use associated with the winery (such as hotel, restaurant, office). For the portion of a large winery that is used primarily for wine production and storage, wine tasting and the sale of associated merchandise, the TUMF obligation will be calculated using the methodology described previously for *medium wineries*.

5.11 Electric Vehicle Supply Equipment Charging Stations

5.11.1 Summary

For calculating the TUMF obligation, stand-alone businesses with the primary purpose of providing publicly accessible electric vehicle supply equipment (EVSE) are designated as EVSE charging stations and will be considered retail use types. The methodology outlined in **Worksheet A.2.14** and described as follows will be applied to determine the gross floor area for calculating the TUMF obligation for all types of EVSE charging stations.

1. Multiply the total number of EVSE charging ports by 20.1. The total number of EVSE charging ports is equal to the maximum number of vehicles that could be connected for charging at the same time.

(i.e. for an example EVSE charging station with 3 charging ports it is $20.1 \times 3 = 60.3$ square feet)

2. Use the resultant value as the gross floor area to calculate the TUMF obligation using **Worksheet A.2.1** for standard non-residential fee calculations.

EVSE located within a residential or non-residential use type, where the residential or non-residential use is the primary use of the site, and the EVSE is for the sole and exclusive use of residents, employees and/or customers of the same premises, are considered ancillary to the primary residential or non-residential use of the site. There is no additional TUMF obligation for EVSE located within a residential or non-residential use type for the sole and exclusive use of residents, employees and/or customers of the same premises.

5.11.2 Detailed Narrative

Electric vehicle supply equipment (EVSE) charging stations include all stand-alone publically accessible retail land uses where the primary business of the site is providing electrical supply equipment for connecting and charging batteries that power electric or plug-in electric/gasoline hybrid motor vehicles. In accordance with Section 6.2 and Appendix B of the Transportation Uniform Mitigation Fee Nexus Study 2024 Update Final Report (Western Riverside Council of Governments, As Adopted September 9, 2024), fuel filling stations and other fuel dealers are retail uses for the purpose of calculating the applicable TUMF obligation for newly developed facilities or expansions of existing facilities. Although EVSE charging stations are a relatively new land use that is not specifically mentioned in the North American Industrial Classification System (NAICS) codes due to the recent introduction of electric or plug-in electric/gasoline hybrid motor vehicles for sale to the general public, EVSE charging stations serve a similar purpose to fuel filling stations and for this reason are similarly treated as a retail use for the purposes of determining the TUMF obligation.

EVSE charging stations may also be located within residential and non-residential land uses as an amenity for those utilizing the primary land use of the site (for example, EVSE charging stations located in the parking lot of a retail shopping mall, service office building, or residential apartment complex). Where EVSE is located within a residential or non-residential use for the sole and exclusive use of residents, employees and/or customers of the same premises (i.e. not stand-alone businesses and/or publicly accessible), they are considered ancillary to the primary residential or non-residential use of the site and unlikely to generate additional vehicle trips specifically for the purposes of accessing the charging station. There is no additional TUMF obligation for EVSE located within a residential or non-residential use for the sole and exclusive use of residents, employees and/or customers of the same premises.

The TUMF for retail (and all non-residential) land uses is based on the gross floor area of buildings associated with the specific land use. However, in many cases the EVSE is a pedestal or wall mount unit with very limited to no building gross floor area. Vehicle trips to and from the site can be generated by the EVSE charging positions making it necessary to determine the gross floor area equivalency per EVSE charging position for the purpose of calculating the TUMF obligation.

As stated previously, EVSE charging stations are a relatively new land use and is not currently a defined use in the ITE Trip Generation Manual. Similarly, there is very limited research into the trip generation characteristics of EVSE charging stations. An article

titled Public Electric Vehicle Charging Station Utilization in the United States⁴ published in Transportation Research Part D: Transport and Environment, Volume 114 (January 2023) detailed recent research into the availability and utilization of EVSE charging stations. The findings of this study were also subsequently referenced in a report titled The 2030 National Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure⁵ (NREL, June 2023). A third report titled Electric Vehicle User Behavior: An Analysis of Charging Station Utilization in Canada⁶ (Energies, February 2023) similarly analyzed EVSE utilization at stations in Canada. These references have been utilized to inform the determination of the square foot equivalency of EVSE for calculating TUMF obligations.

As of 2023, there were approximately 132,000 publicly accessible EVSE stations in the United States, including 103,000 Level 2 (L2) stations and 29,000 DC fast charging (DCFC). The average L2 station had 2.2 ports per station, while the average DCFC station had 3.1 ports per station. The U.S. study specifically analyzed almost 1.5 million sessions at 8,732 publicly accessible ports at 3,705 EVSE stations to provide observations on the utilization of publicly available EVSE charging stations. The Canadian study similarly analyzed over 1.3 million sessions at 4,037 public accessible charging ports. EVSE station locations included office, retail, municipal, institutional, leisure, transit, hotel and other public parking venues generally representing the non-home-based end of a trip which is consistent with the trip end that would be most likely served by the EVSE charging stations that would be subject to a TUMF obligation. Private or limited access ports at homes or commercial fleet venues were also presented in analysis results, although these locations demonstrate substantially different utilization as might be expected from the home-based trip end where vehicles were typically charged overnight. As described previously, private or limited access charging stations for the sole and exclusive use of residents, employees and/or customers that are ancillary to the primary use of a site would not be subject to TUMF and therefore private or limited access sites were not considered in the following analysis.

The U.S. analysis findings indicate that during the peak hour of use, Level 2 charging port utilization was 12.3% at office locations, and 10.8% at other public sites. DCFC port utilization was 4.5% at public sites during the peak hour. The Canadian study findings indicated a similar pattern of utilization with a L2 peak hour utilization of 10.1% and DCFC peak hour utilization of 8.3% at public EVSE charging stations. The Canadian study also indicated the average charge time at each L2 port is over 2 hours, while the average charge time at DCFC ports is approximately 30 minutes. The study also indicated that vehicles typically remain parked at the ports for considerably longer than the active charging periods. The peak hour utilization values presented in the respective studies are used as the basis for estimating the square foot equivalency for

⁴ Borlaug, et. al. (2023) Public Electric Vehicle Charging Station Utilization in the United States, Transportation Research Part D: Transport and Environment, Volume 114, Article 103564, January 2023

⁵ Wood, et.al. (2023) The 2030 National Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure, National Renewable Energy Laboratory, June 2023

⁶ Jonas, et. al. (2023) Electric Vehicle User Behavior: An Analysis of Charging Station Utilization in Canada, Energies, Volume 16, Article 1592, February 2023

EVSE charging ports as they are considered indicative and roughly proportional to the number of trip ends that would be expected at the charging port during the peak hour to achieve the observed level of occupancy at the port (i.e. if a charging port is occupied 10% of the time during the peak hour, the trip generation rate for the charging port in the peak hour would be roughly 0.1 trip ends per hour, consistent with the extended duration of a charging event).

Table 5.9 summarizes the various characteristics of EVSE units, including trip generation. The table also details the calculation of the gross floor area equivalency per EVSE unit.

Table 5.9 – Characteristics of Electric Vehicle Supply Equipment Charging Stations				
<i>Land Use Type</i>	<i>Average Peak Hour Utilization per EVSE Port</i>	<i>Average Weekday PM Peak Hour Vehicle Trip Ends per 1,000 sqft</i>	<i>Equivalent EVSE Port per 1,000 sqft</i>	<i>TUMF Weighted Equivalent sqft per EVSE Port*</i>
<i>Level 2 Public Charging Port - Office Sites ⁽ⁱ⁾</i>	0.12			
<i>Level 2 Public Charging Port - Other Public Sites ⁽ⁱ⁾</i>	0.11			
<i>DC Fast Charging Port ⁽ⁱ⁾</i>	0.04			
<i>Level 2 Public Charging Port ⁽ⁱⁱ⁾</i>	0.10			
<i>DC Fast Charging Port ⁽ⁱⁱ⁾</i>	0.08			
<i>Median of Defined Use Types</i>	0.10		49.70	20.1
<i>Median of All TUMF Retail Use Types ⁽ⁱⁱⁱ⁾</i>		4.97		

Sources: ⁽ⁱ⁾ [The 2030 National Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure](#), NREL, June 2023

⁽ⁱⁱ⁾ [Electric Vehicle User Behavior: An Analysis of Charging Station Utilization in Canada](#), Energies, February 2023

⁽ⁱⁱⁱ⁾ [Trip Generation Manual 11th Edition](#), Institute of Traffic Engineers, September 2021

Note: * - TUMF weighted equivalent per square feet based on equivalent square feet per EVSE port.

The gross floor area equivalency per EVSE Port for Electric Vehicle Supply Equipment Charging Stations is based on the peak hour charging port utilization characteristics at EVSE stations quantified in the cited research. Based on this information, each EVSE port is expected to generate roughly 0.10 vehicle trip ends during the weekday peak hour. To establish a gross floor area equivalency per EVSE port, the trip generation rates between EVSE Charging Ports and all TUMF retail land use types were compared, and a gross floor area equivalency per EVSE port was interpolated. The weighted gross floor area equivalency per EVSE port for Electric Vehicle Supply Equipment Charging Stations is 20.1.

For calculating the TUMF obligation, stand-alone businesses with the primary purpose of providing publicly accessible electric vehicle supply equipment (EVSE) are designated as *Electric Vehicle Supply Equipment Charging Stations*. For EVSE Charging Stations, the total number of EVSE ports will be multiplied by 20.1 to determine the equivalent number of square feet of floor area, with the total number of EVSE ports being equal to the maximum number of vehicles that could be connected for charging at the same time.

Appendix A

Fee Calculation Worksheets

APPENDIX A: FEE CALCULATION WORKSHEETS

This section contains individual fee calculation worksheets for standard use fee calculations, and defined uses following the specific defined use fee calculation methodology developed in **Section 4.0** and **Section 5.0**. **Section A.1** outlines worksheets for residential use types and **Section A.2** outlines worksheets for non-residential use types.

A.1 Fee Calculation Worksheets for Residential Use Types

Worksheet A.1.1 Standard Residential TUMF Calculation Worksheet

1.	 Enter Total Number of Single-Family Dwelling Units	X	 Enter TUMF Single- Family Rate Per Dwelling Unit	=		← Total A
2.	 Enter Total Number of Multi-Family Dwelling Units	X	 Enter TUMF Multi- Family Rate Per Dwelling Unit	=		← Total B
3.	 Enter Total A	+	 Enter Total B	=	\$ TUMF Obligation	

Worksheet A.1.2 Single-Family Residential TUMF Calculation Worksheet

1.		X	0.80	=		Total A	
	Enter Total Number of Single-Family Dwelling Units sized less than or equal to 1,800 square feet						
2.		X	0.90	=		Total B	
	Enter Total Number of Single-Family Dwelling Units sized between 1,801 square feet and 2,300 square feet						
3.		X	1.00	=		Total C	
	Enter Total Number of Single-Family Dwelling Units sized between 2,301 square feet and 2,700 square feet						
4.		X	1.25	=		Total D	
	Enter Total Number of Single-Family Dwelling Units sized more than 2,700 square feet						
5.		+		+		+	
	Enter Total A		Enter Total B		Enter Total C		Enter Total D
	=						
	Enter this value as (part of) the <u>Total Number of Single-Family Dwelling Units</u> in Worksheet A.1.1						

1. Residential TOD Characteristics Checklist

- ☐ **Residential use of not less than 50% of total floorspace**
Submit Site Plan with table or narrative explanation
- ☐ **Meets maximum number of parking spaces requirement**
Submit Site Plan indicating number of associated parking spaces
- ☐ **Transit station along a barrier-free walkable pathway not exceeding ½ mile**
Submit Location Map showing transit station and barrier-free walkable path from development
- ☐ **One (1) convenience retail store selling food within ½ mile**
Submit Location Map showing at least one (1) Food Retail establishment within ½ mile of development
- ☐ **Seven (7) diverse uses within ½ mile**
Submit Location Map showing at least seven (7) eligible diverse uses within ½ mile of development including at least one (1) Food Retail described previously

2. Residential TOD Fee Calculation

\$	X	0.885	=	\$
Enter Standard Residential TUMF Obligation for eligible TOD as calculated using Worksheet A.1.1				TUMF Residential TOD Obligation

1. Active Senior Living Characteristics Checklist

- ☐ **Minimum number of 20 dwelling units in community**
Submit Site Plan indicating the total number of associated dwelling units
- ☐ **Local zoning and/or governing documents**
Submit local zoning and/or governing documents characterizing development as senior citizen housing (active senior living) pursuant to Cal. Civ. Code § 51.11
- ☐ **Occupancy restriction statement**
Submit Public Report with statement of occupancy restrictions pursuant to Cal. Bus. & Prof. Code § 11010.05 [2016]

2. Active Senior Living TUMF Calculation

	X	0.69	=	
Enter Total Number of Active Senior Living Dwelling Units (both detached and attached)				Enter this value as (part of) the <u>Total Number of Multi-Family Dwelling Units</u> in Worksheet A.1.1

A.2 Fee Calculation Worksheets for Non-Residential Use Types

Worksheet A.2.1 Standard Non-Residential TUMF Calculation Worksheet

1.		X		=		← Total A
	Enter Total Gross Floor Area of Industrial Buildings (in square feet)		Enter TUMF Industrial Rate Per Square Foot			
2.		X		=		← Total B
	Enter Total Gross Floor Area of Retail Buildings (in square feet)*		Enter TUMF Retail Rate Per Square Foot			
3		X		=		← Total C
	Enter Total Gross Floor Area of Service Buildings (in square feet)*		Enter TUMF Service Rate Per Square Foot			
		+		+		=
	Enter Total A		Enter Total B		Enter Total C	
						\$
						TUMF Obligation

Worksheet A.2.2 Local Retail Waiver TUMF Calculation Worksheet

1.	Enter Gross Floor Area of Retail Buildings (in square feet)	← Total A	• If <u>Total A</u> is less than or equal to 3,000, enter <u>zero</u> as the <u>Total Gross Floor Area of Retail Buildings</u> in Worksheet A.2.1 • If <u>Total A</u> is more than 3,000 and less than 20,000, proceed to Step 2. • If <u>Total A</u> is equal to or greater than 20,000, enter <u>Total A</u> value as the <u>Total Gross Floor Area of Retail Buildings</u> in Worksheet A.2.1
2.	Enter Total A	- 3,000 =	← Total B Enter Total B as the <u>Total Gross Floor Area of Retail Buildings</u> in Worksheet A.2.1

Worksheet A.2.3 Local Service Waiver TUMF Calculation Worksheet

1.	Enter Gross Floor Area of Service Buildings (in square feet)	← Total A	• If <u>Total A</u> is less than or equal to 3,000, enter <u>zero</u> as the <u>Total Gross Floor Area of Service Buildings</u> in Worksheet A.2.1 • If <u>Total A</u> is more than 3,000 and less than 20,000, proceed to Step 2. • If <u>Total A</u> is equal to or greater than 20,000, enter <u>Total A</u> value as the <u>Total Gross Floor Area of Service Buildings</u> in Worksheet A.2.1
2.	Enter Total A	- 3,000 =	← Total B Enter Total B as the <u>Total Gross Floor Area of Service Buildings</u> in Worksheet A.2.1

Worksheet A.2.4 Fuel Filling Station TUMF Calculation Worksheet

1.		x	1,687.5	=		← Total A
	Enter Total Number of Fuel Filling Positions					
2.						← Total B
					Enter Total Gross Floor Area of Buildings (in square feet)	
3.					Enter this value as (part of) the <u>Total Gross Floor Area of Retail Buildings</u> in Worksheet A.2.1	
	Enter the greater of Total A and Total B					

Worksheet A.2.5 Congregate Care/Nursing Home TUMF Calculation Worksheet

	x	57.9	=	
Enter Total Number of Beds				Enter this value as (part of) the <u>Total Gross Floor Area of Service Buildings</u> in Worksheet A.2.1

Worksheet A.2.6 Mini-Warehouse/Rental Storage TUMF Calculation Worksheet

	x	37.5	=	
Enter Total Number of Storage Units, Vaults and/or Spaces				Enter this value as (part of) the <u>Total Gross Floor Area of Industrial Buildings</u> in Worksheet A.2.1

Worksheet A.2.7 Golf Course TUMF Calculation Worksheet

1.	Enter Total Number of Holes	X 645.6 =	← Total A
2.			← Total B Enter Total Gross Floor Area of Buildings (in square feet)
3.	Enter the greater of Total A and Total B		← Enter this value as (part of) the <u>Total Gross Floor Area of Service Buildings</u> in Worksheet A.2.1

Worksheet A.2.8 Wholesale Nursery TUMF Calculation Worksheet

1.	Enter Total Site Area in Acres	X 821.4 =	← Total A
2.			← Total B Enter Total Gross Floor Area of Buildings (in square feet)
3.	Enter the greater of Total A and Total B		← Enter this value as (part of) the <u>Total Gross Floor Area of Industrial Buildings</u> in Worksheet A.2.1

Worksheet A.2.9 Retail Nursery TUMF Calculation Worksheet

1.	Enter Total Site Area in Acres	x 2,110.7 =		← Total A
2.				← Total B
			Enter Total Gross Floor Area of Buildings (in square feet)	
3.	Enter the greater of Total A and Total B	← Enter this value as (part of) the <u>Total Gross Floor Area of Retail Buildings in Worksheet A.2.1</u>		

Worksheet A.2.10 High-Cube Warehouse/Distribution Center TUMF Calculation Worksheet

Enter Gross Floor Area of Qualifying Building(s) (in square feet)	- 200,000 =		← Total A
Enter <u>Total A</u>	x 0.52 =		← Total B
Enter <u>Total B</u>	+ 200,000 =	Enter this value as (part of) the <u>Total Gross Floor Area of Industrial Buildings in Worksheet A.2.1</u>	

Worksheet A.2.11 Winery Size TUMF Calculation Worksheet

← Total A Enter Gross Floor Area of Tasting Room and/or associated ancillary uses (in square feet)	← Total B Enter Total Gross Floor Area of All Buildings (in square feet)
• If <u>Total A</u> is less than or equal to 700 and <u>Total B</u> is less than or equal to 15,000, enter <u>Total B</u> value as (part of) the <u>Total Gross Floor Area of Industrial Buildings</u> in Worksheet A.2.1 • If <u>Total A</u> is greater than 700 and <u>Total B</u> is less than or equal to 15,000, enter <u>Total B</u> value in Worksheet A.2.12 • If <u>Total A</u> is greater than 700 and <u>Total B</u> is greater than 15,000, enter total square feet of <u>winery uses only</u> in Worksheet A.2.13. (Additional building square footage should be entered into A.2.1 as appropriate, i.e. hotel, restaurant, retail store, etc.)	

Worksheet A.2.12 Medium Winery TUMF Calculation Worksheet

Enter <u>Total B</u> from Worksheet A.2.9	x 3.77 =	← Total C	Enter this value as (part of) the <u>Total Gross Floor Area of Industrial Buildings</u> in Worksheet A.2.1
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Worksheet A.2.13 Large Winery TUMF Calculation Worksheet

Enter <u>total square feet of winery uses only</u>	x 3.77 =	← Total C	Enter this value as (part of) the <u>Total Gross Floor Area of Industrial Buildings</u> in Worksheet A.2.1
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**Worksheet A.2.14 Electric Vehicle Supply Equipment Charging Stations TUMF
Calculation Worksheet**

	X	14.9	=		← Total C
Enter <u>total number of</u> <u>publicly accessible</u> <u>ESVE ports</u>				Enter this value as (part of) the <u>Total Gross Floor Area</u> <u>of Retail Buildings in</u> Worksheet A.2.1	