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TRPA Trip Table

Updated April 14, 2019

The 2019 Trip Table is based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition (2017), provided pursuant to Section 65.2.3.H of the TRPA Code of Ordinances. **Please note that TRPA strongly encourages applicants to conduct their own trip rate surveys, particularly for unique uses which may not be adequately captured for the Lake Tahoe environment by the ITE manual or are not provided by the ITE Manual. In some cases TRPA may require a trip rate survey to be conducted. Trip rate surveys should use the guidance provided in the ITE Manual.**

In the 2019 Trip Table, where trip rates are not provided for a certain trip type in the ITE Manual 10th Edition, a trip rate from an earlier version of the ITE Manual may be provided, with a reference to the appropriate manual. Where weekday and weekend trip rates differ in the ITE Manual, the higher trip rate is shown, unless rates vary dramatically across the use on a weekday versus a weekend day. An example of this would be the case of a church or a cemetery, where weekday trips are very different from Sunday trips, in Tahoe as well as in other locations. In these cases the applicant should work with TRPA staff to determine the appropriate trip rate for the analysis being conducted (the trip rate may differ for turning-movement analysis versus VMT impact analysis, for instance). Finally, where available the trip table uses the trip rates for the “General Urban/Suburban” category. If a project’s specific circumstances dictate that a different category should be used (such as “Dense Multi-Use Urban”) the applicant should refer to the ITE Manual or conduct a trip rate survey.

Not all land uses from ITE are shown in the TRPA Trip Table. For additional uses applicants may reference the ITE Manual. Please reference the ITE Manual for detailed descriptions of each use.

If more than one rate is listed (for instance, rate per 1,000 sf of GFA versus rate per employee), the rate that results in the highest number of trips must be used. The rates shown are in Daily Vehicle Trip Ends (DVTE) per the unit shown.

Asterisks are shown (**) if technically competent information must be provided to determine the number of vehicle trips of a given project. Asterisks are shown when a trip rate for a given use is either not available in the ITE Manual or the rate provided in the ITE Manual is based on a small sample size which may not be representative of conditions at Lake Tahoe.

Locally-serving uses have a † symbol after the use. The uses identified are illustrative, not definitive. Other uses may be considered locally-serving with sufficient documentation.

This list is a sample of the available trip generation rates. If a land use is needed that is not shown, please contact TRPA transportation planning staff or the ITE Manual.

Definitions

Trip: A single or one-direction vehicle movement with either the origin or the destination inside a project area.

Trip Ends: One trip end is equal to one trip. Total trip ends are the total of all trips entering plus all trips exiting a project area during a given period of time.

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LAND USE

TRIP RATE

Gross Floor Area (GFA): The sum (in square feet) of the area of each floor level, including cellars, basements, mezzanines, penthouses, corridors, restrooms, lobbies, stores and offices, that are included within the principal outside faces of exterior walls.

<u>LAND USE</u>	<u>TRIP RATE</u>
<u>TERMINALS</u>	
Commercial Airport (ITE 021)	10.28 / employee
General Aviation Airport (ITE 022)	14.94 / employee
Intermodal Truck Terminal (ITE 030)	See ITE Manual Only Peak Hour Rates Provided
Park-N-Ride with Bus or Light Rail (ITE 090)	2.81 / parking space
<u>INDUSTRIAL</u>	
General Light Industrial (ITE 110)	3.05 / employee 5.00 / 1,000 sf GFA
General Heavy Industrial (ITE 120, 8 th Edition)	0.82 / employee 1.50 / 1,000 sf GFA
Industrial Park (ITE 130)	2.91 / employee 3.37 / 1,000 sf GFA
Manufacturing (ITE 140)	2.47 / employee 3.93 / 1,000 sf GFA (weekday) ¹
Warehousing (ITE 150)	5.05 / employee 1.74 / 1,000 sf GFA
Mini-Warehouse (Storage Units) (ITE 151)	1.95 / 1,000 sf GFA 1.65 / 1,000 sf net rentable area 0.18 / storage unit 0.19 / occupied storage unit

¹ Did not use Saturday although higher, because of small sample size.

<u>LAND USE</u>	<u>TRIP RATE</u>
<u>RESIDENTIAL</u>	
Single-Family Detached ²	10.0 / unit
Multi-Family (low-rise) (one or two levels) (ITE 220)	7.32 / unit ³
Multi-Family (mid-rise) (three to 10 levels) (ITE 221)	5.44 / unit
Mid-Rise Residential with First Floor Commercial (ITE 231)	3.44 / unit
Timeshare (ITE 265)	9.73 / occupied unit ⁴
Residential Condominium (ITE 230, 8 th Edition) ⁵	5.81 / unit
Mobile Home (ITE 240)	5.00 / unit
Senior Adult Housing – Attached (ITE 252)	3.23 / unit
Congregate Care Facility (Residential Care) (ITE 253)	2.02 / unit
<u>LODGING</u>	
Bed and Breakfast (2004 TRPA Trip Table, Not found in ITE 7 th Manual or later)	9.81 / unit 12.81 / employee
Timeshare (ITE 265)	9.73 / occupied unit ⁶
Hotel (ITE 310)	10.20 / occupied room ⁷ 14.34 / employee
All Suites Hotel (ITE 311)	6.24 / occupied room ⁸

² TRPA rounds the ITE rate to 10.0 per single-family unit for ease of calculation and consistency with application materials.

³ Did not use Saturday although higher, because of small sample size.

⁴ TRPA requires use of the occupied dwelling unit rate for certain land uses.

⁵ If the condominium will be used as a timeshare, the Timeshare trip rate should be used.

⁶ Did not use Saturday although higher, because of small sample size.

⁷ Occupied Room rate in the ITE is based on a very small sample size, therefore TRPA used the trip rate by room (occupied and unoccupied) (8.36 trips), and divided by an average occupancy rate of 82%, as cited in the “Additional Data” section of the Hotel Land Use in the ITE manual. Updated July 23, 2019.

⁸ Did not use Saturday although higher, because of small sample size.

<u>LAND USE</u>	<u>TRIP RATE</u>
Business Hotel (ITE 312)	5.79 / unit 32.31 / employee
Motel (ITE 320)	8.71 / unit ⁹ 25.17 / employee
Resort Hotel (ITE 330)	See ITE Manual Only Peak Hour Rates Provided
<u>RECREATION</u>	
Gaming (Non-Restricted)	**
Off Road Vehicle Course	**
Riding and Hiking Facilities	**
Snow Machine Facilities	**
Undeveloped Campgrounds	**
Visitor Information Centers	**
Public Park (ITE 411)	2.19 / acre 0.95 / daily trail user
Developed Campground/RV Park (ITE 416)	See ITE Manual Only Peak Hour Rates Provided
Marina	**
Golf Course (ITE 430)	3.74 / acre 30.38 / hole
Bowling Alley (ITE 437)	See ITE Manual Only Peak Hour Rates Provided
Movie Theater (traditional) (ITE 444)	See ITE Manual Only peak hour rates had sufficient sample size

⁹ Did not use Saturday although higher, because of small sample size.

LAND USE

TRIP RATE

Movie Theater (Multiplex) (ITE 445)

See ITE Manual
Only peak hour rates had sufficient sample size

Ice Skating Rink (ITE 465)

See ITE Manual
Only Peak Hour Rates Provided

Arena

**

Tennis Courts (ITE 490)

30.32 / court

Health and Fitness Club (ITE 492)

See ITE Manual
Only Peak Hour Rates Provided

Athletic Club (ITE 493)

See ITE Manual
Only Peak Hour Rates Provided

Recreational Community Center (ITE 495)

28.82 / 1,000 sf GFA
See ITE Manual for rates by employees
and members for peak hour generators

INSTITUTIONAL

Elementary School (ITE 520)

1.89 / student
19.52 / 1,000 sf GFA
21.00 / employee

Middle School/Junior High School (ITE 522)

2.13 / student
20.17 / 1,000 sf GFA
25.15 / employee

High School (ITE 530)

2.03 / student
14.07 / 1,000 sf
GFA
22.25 /
employee

Private School (K-8) (ITE 534)

See ITE Manual
Only peak hour rates had sufficient sample size

Private School (K-12) (ITE 536)

2.48 / student
16.43 / employee

<u>LAND USE</u>	<u>TRIP RATE</u>
Charter Elementary School (ITE 537)	See ITE Manual Only peak hour rates had sufficient sample size
School District Office (ITE 538)	.05 / student 14.37 / 1,000 sf GFA 5.08 / employee
Junior/Community College (ITE 540)	1.15 / student
University/College (ITE 550)	1.56 / student
Church (ITE 560)	6.95 / 1,000 sf GFA (weekday) 27.63 / 1,000 sf GFA (Sunday)
Synagogue (ITE 561)	**
Mosque (ITE 562)	**
Daycare Center (ITE 565)	4.09 / student 21.38 / employee 47.62 / 1,000 sf GFA
Cemetery (ITE 566)	6.02 / acre (weekday) 51.75 / employee (weekday) 13.94 / acre (Sunday) 134.85 / employee (Sunday)
Library (ITE 590)	80.09 / 1,000 sf GFA 69.31 / employee

<u>LAND USE</u>	<u>TRIP RATE</u>
<u>MEDICAL</u>	
Hospital (ITE 610)	3.79 / employee ¹⁰ 10.72 / 1,000 sf GFA
Nursing Home (ITE 620)	3.06 / bed 2.91 / employee 6.64 / 1,000 sf GFA
Clinic (ITE 630)	9.25 / employee 38.16 / 1,000 sf GFA
Animal Hospital/Veterinary Clinic (ITE 640)	12.69 / employee 21.50 / 1,000 sf GFA
<u>OFFICE</u>	
General Office Building (GFA of more than 5,000 sf) ¹¹ (ITE 710)	3.28 / employee 9.74 / 1,000 sf GFA
Small Office Building (GFA of 5,000 sf or less) ⁵ (ITE 712)	7.98 / employee 16.19 / 1,000 sf GFA
Corporate Headquarters (ITE 714)	2.31 / employee 7.95 / 1,000 sf GFA
Single Tenant Office Building ⁵ (ITE 715)	3.77 / employee 11.25 / 1,000 sf GFA
Medical –Dental Office Building (ITE 720)	8.70 / employee 34.80 / 1,000 sf GFA
Government Office Building (ITE 730)	7.45 / employee 22.59 / 1,000 sf GFA 3.99 / Municipal Population (1,000s)
State Motor Vehicle Dept. (ITE 731)	See ITE Manual Only peak hour rates had sufficient sample size
U.S. Post Office (ITE 732)	25.40 / employee 103.94 / 1,000 sf GFA

¹⁰ Did not use weekend rate because of small sample size.

¹¹ See ITE Manual for differentiation of different office uses, and guidance on how to calculate trips for mixed office and retail uses. Rates are for General Urban/Suburban. If project is located in a Town Center, consider referring to ITE Manual for rates based on city centers or dense multi-use.

<u>LAND USE</u>	<u>TRIP RATE</u>
Government Office Complex (ITE 733)	**
Research and Development Center (ITE 760)	3.29 / employee 11.26 / 1,000 sf GFA
Business Park (ITE 770)	4.04 / employee 12.44 / 1,000 sf GFA
<u>RETAIL</u>	
Construction Equipment Rental Store (ITE 811)	See ITE Manual Only peak hour rates provided
Outdoor Retail Sales	**
Laundry and Dry Cleaning [†]	**
Building Materials/Lumber (ITE 812) [†]	24.55 / employee (weekday) 36.69 / employee (Saturday) 18.05 / 1,000 sf GFA (weekday) 51.61 / 1,000 sf GFA (Saturday)
Free-Standing Discount Superstore (includes grocery) [†] (ITE 813)	63.94 / 1,000 sf GFA
Free-Standing Discount Store (ITE 815) [†]	53.12 / 1,000 sf GFA (weekday) 70.76 / 1,000 sf GFA (Saturday)
Variety Store/Dollar Store (ITE 814) [†]	95.59 / employee 63.47 / 1,000 sf GFA
Hardware/Paint Store (ITE 816) [†]	36.53 / employee 9.14 / 1,000 sf GFA
Nursery (Garden Center) (ITE 817) [†]	21.83 / employee (weekday) 37.69 / employee (Saturday) 68.10 / 1,000 sf GFA (weekday) 133.31 / 1,000 sf GFA (Saturday)

LAND USE	TRIP RATE
	108.1 / acre (weekday) 154.82 / acre (Saturday)
Nursery (Wholesale) (ITE 818) [†]	29.94 / 1,000 sf GFA
Shopping Center (ITE 820) [†]	16.11 / employee 46.12 / 1,000 sf GLA
Factory Outlet Center (ITE 823)	26.59 / 1,000 sf GFA (weekday) 40.97 / 1,000 sf GFA (Saturday)
Automobile Sales (New) (ITE 840) [†]	11.20 / employee (weekday) 27.84 / 1,000 sf GFA (weekday) 52.24 / 1,000 sf GFA (Saturday)
Automobile Sales (Used) (ITE 841) [†]	12.48 / employee 27.06 / 1,000 sf GFA
Automobile Parts Sales (no on-site service) (ITE 843) [†]	33.73 / employee 55.34 / 1,000 sf GFA
Auto Parts and Service Center (ITE 943) [†]	10.84 / employee 16.28 / 1,000 sf GFA
Tire Store (no large storage or warehouse) (ITE 848) [†]	18.43 / employee 28.52 / 1,000 sf GFA
Tire Superstore (with storage area) (ITE 849) [†]	20.37 / 1,000 sf GFA 30.55 / service bay
Supermarket (ITE 850) [†]	75.01 / employee (weekday) 106.78 / 1,000 sf GFA (weekday) 177.62 / 1,000 sf GFA (Saturday)

<u>LAND USE</u>	<u>TRIP RATE</u>
Discount Supermarket (ITE 854) [†]	48.66 / employee 90.87 / 1,000 sf GFA (weekday) 111.86 / 1,000 sf GFA (Saturday)
Convenience Market (ITE 851) [†]	762.28 / 1,000 sf GFA
Gas/Service Station (ITE 944) [†]	275.78 / employee 1202.83 / 1,000 sf GFA (weekday) 1315.54 / 1,000 sf GFA (Saturday) 182.17 / vehicle fueling position
Gas/Service Station with Convenience Market (ITE 945) [†]	1440.02 / 1,000 sf GFA 205.36 / vehicle fueling positions
Self-Serve Carwash (ITE 947) [†]	See ITE Manual Only peak hour rates have sufficient sample size
Apparel Store (ITE 876)	See ITE Manual Only peak hour rates provided
Pharmacy/Drugstore (ITE 880) [†]	90.08 / 1,000 sf GFA
Marijuana Dispensary (ITE 882)	259.31 / 1,000 sf GFA
Furniture Store (ITE 890)	13.87 / employee 7.15 / 1,000 sf GFA
Walk-In Bank (ITE 911) [†]	See ITE Manual Only peak hour rates provided
Drinking Place (ITE 925) [†]	See ITE Manual Only peak hour rates provided

LAND USE	TRIP RATE
Food Cart Pod (ITE 926) [†]	See ITE Manual Only peak hour rates provided
Fast Casual Restaurant (ITE 930) [†]	See ITE Manual Only peak hour rates have sufficient sample size
Quality Restaurant (>1 hr. turnover) (ITE 931) [†]	90.04 / 1,000 sf GFA 2.6 / seat
High Turnover Sit-Down Restaurant (<1 hr. turnover) [†] (ITE 932)	21.26 / employee 135.48 / 1,000 sf GFA
Fast Food Restaurant (ITE 933) [†]	66.88 / employee 346.23 / 1,000 sf GFA (weekday) 696.00 / 1,000 sf GFA (Saturday) 42.12 / seat
Coffee/Donut Shop (ITE 936) [†]	See ITE Manual Only peak hour rates provided

**** = Technical Analysis Required**

† = Locally-serving use if under 40,000 square feet