



San Diego Municipal Code

Land Development Code

Trip Generation Manual

Revised May 2003



Printed on recycled paper

This information, document, or portions thereof, will be made available in alternative formats upon request.

TABLE OF CONTENTS

INTRODUCTION.....	1
TRIP GENERATION RATE SUMMARY	3
TRIP GENERATION LOOK-UP TABLE FOR SELECTED SIZES OF A REGIONAL SHOPPING CENTER	7
TRIP GENERATION LOOK-UP TABLE FOR SELECTED SIZES OF A COMMERCIAL OFFICE	8
ADDITIONAL TRIP GENERATION RATE GUIDELINES	9
CENTRE CITY CUMULATIVE TRIP GENERATION RATES.....	10
TRIP GENERATION LOOK-UP TABLE FOR CENTRE CITY REGIONAL SHOPPING CENTER AND COMMERCIAL OFFICE	11
TRIP GENERATION RATES FOR FACILITIES FINANCING PURPOSES.....	12
APPEAL PROCESS.....	15
LIST OF TABLES	ii
LIST OF APPENDICES	ii

LIST OF TABLES

1. TRIP GENERATION RATE SUMMARY	3
2. TRIP GENERATION LOOK-UP TABLE FOR SELECTED SIZES OF A REGIONAL SHOPPING CENTER	7
3. TRIP GENERATION LOOK-UP TABLE FOR SELECTED SIZES OF A COMMERCIAL OFFICE.....	8
4. ADDITIONAL TRIP GENERATION RATE GUIDELINES	9
5. CENTRE CITY CUMULATIVE TRIP GENERATION RATES.....	10
6. TRIP GENERATION LOOK-UP TABLE FOR CENTRE CITY REGIONAL SHOPPING CENTER AND COMMERCIAL OFFICE	11
7. TRIP GENERATION RATES FOR FACILITIES FINANCING PURPOSES.....	12

LIST OF APPENDICES

A. DEFINITIONS AND GENERAL TERMS	A-1
B. PHYSICAL LAND USE PARAMETERS	B-1
C. DEFINITION OF LAND USE CATEGORIES FOR TRIP GENERATION PURPOSES.....	C-1
D. CITY'S LAND USE ZONES.....	D-1

INTRODUCTION

The *Trip Generation Manual* is a collection of information about vehicular traffic that is generated by different land uses. This information is based on studies made to determine how many vehicles enter and exit a site devoted to a particular land use.

The process for a typical trip generation study includes a selection of several (usually four to seven) sites that can be categorized as having the same land use. Next, data regarding various characteristics of these sites is collected. Data collection varies according to the specifics of the subject land use. The collected data could include several different physical parameters attributed to the subject site such as location, lot size, structure size, number of employees, and other units of interest. Individual sites are isolated and traffic counters are placed at every entrance and exit point of these sites. The traffic counts are taken for a period of up to seven days. The results of these counts are compiled to determine daily and peak hour trip generation rates per the independent variable(s) for the subject use. Depending on the specific land use, the independent variable(s) may be square feet, acre, number of employees, dwelling units, rooms, etc. Additional data include the proportion of trips made in the morning and afternoon peak periods and the proportion of peak trips that entered and exited the sites.

The trip generation rates presented in this manual are the result of trip generation studies made by the City of San Diego, the San Diego Association of Governments (SANDAG), the Institute of Transportation Engineers (ITE), and other qualified sources. Where possible, local data was used. A task force made up of staff from the City of San Diego, SANDAG, and private consultants was created to provide input into the formation of this manual.

This manual includes the following information:

<u>TABLE</u>	
<u>NO.</u>	<u>DESCRIPTION</u>

- | | |
|----------|---|
| 1 | Trip Generation Rate Summary - This table includes rates or formulas for the calculation of driveway and cumulative trip generation rates (see Appendix A for definitions). It also includes percentage of trips for AM and PM peak hours. The proportion of trips entering and exiting the sites during the peak hours are also provided. |
| 2 | Regional Shopping Center - Studies show that the trip generation rate for a Regional Shopping Center depends on its size. However, since this relationship is not discrete, the trip generation rate for a Regional Shopping Center is represented as a logarithmic formula. The formula reflects that the number of trips do not increase proportionally to increases in the size of the Regional Shopping Center. Table 2 includes the calculated driveway and cumulative trip generation for selected sizes of Regional Shopping Centers. |

**TABLE
NO.**

DESCRIPTION

- 3** **Commercial Office** - Similar to Regional Shopping Centers, a logarithmic formula is used to determine the trip generation of office buildings. The formula calculates the trip generation rates that increase at a slower rate than the increase in the size of the Commercial Office. Trip generation for selected sizes of Commercial Offices is presented in this table.

- 4** **Additional Trip Generation Rates** - The trip generation rates obtained based on limited data for several specific land uses are included in Table 4. In absence of other information available, these rates may be used as a reference for a similar land use elsewhere.

- 5** **Centre City Cumulative Trip Generation Rates** - The trip generation rates in the Centre City area are generally lower than the rates elsewhere in the city. This is due to higher share of mass transit in mode split, high density of land use, high proportion of “walk” trips, parking availability, and parking costs.

- 6** **Centre City Trip Generation Look-Up Table** - The logarithmic formulas for Regional Shopping Centers and Commercial Offices in Centre City are calculated for selected sizes.

- 7** **Facilities Financing** - The trip generation rates for the purpose of fee collection toward financing the required infrastructure are in this table.

Appeal Process: The procedure to appeal a particular trip rate is included in the last section.

Appendices: General terms, physical land use parameters, definition of land use categories for trip generation purposes, and the City's land use zones are provided in the appendices.

Other Resources: Two other useful publications that assist in project traffic impact analysis are: the City's *Traffic Impact Study Manual*, prepared by the Transportation Development Section, Development Services Department; and the City's *Street Design Manual*. Both publications may be obtained from the Records Section of the Development Services Department, 1222 First Avenue, second floor.

TABLE 1

May 2003

TRIP GENERATION RATE SUMMARY
(WEEKDAY)

LAND USE	DRIVEWAY ^{(1) (2)} VEHICLE TRIP RATE	CUMULATIVE ⁽⁸⁾ VEHICLE TRIP RATE	PEAK HOUR AND IN/OUT RATIO	
			AM (IN:OUT)	PM IN:OUT)
AGRICULTURE (OPEN SPACE) ⁽³⁾	2 trips/acre	2 trips/acre	--	--
AIRPORT ⁽³⁾				
Commercial	100 trips/flight; 60 trips/acre	100 trips/flight; 60 trips/acre	6% (6:4)	7% (5:5)
General Aviation	2 trips/flight; 6 trips/acre	2 trips/flight; 6 trips/acre	--	--
CEMETERY	5 trips/acre	5 trips/acre	--	--
COMMERCIAL-RETAIL ^{(4) (5)}				
Automobile Services:				
Car Dealer	50 trips/1,000 sq. ft.; 300 trips/acre	45 trips/1,000 sq. ft.; 297 trips/acre	5% (7:3)	8% (4:6)
Carwash:				
Full service	900 trips/site; 600 trips/acre	450 trips/site; 300 trips/acre	4% (5:5)	9% (5:5)
Self service	100 trips/wash stall	50 trips/wash stall	4% (5:5)	8% (5:5)
Gasoline Stations:				
With food mart	130 trips/vehicle fueling space; 750 trips/station	26 trips/vehicle fueling space; 150 trips/station	7% (5:5)	11% (5:5)
With fully automated carwash	150 trips/vehicle fueling space	30 trips/vehicle fueling space	8% (5:5)	8% (5:5)
With food mart & fully automated carwash	135 trips/vehicle fueling space	27 trips/vehicle fueling space	--	--
With food mart & fully automated carwash	155 trips/vehicle fueling space	31 trips/vehicle fueling space	8% (5:5)	9% (5:5)
Parts Sale	62 trips/1,000 sq. ft.	56 trips/1,000 sq. ft.	4% (5:5)	10% (5:5)
Repair Shop	20 trips/1,000 sq. ft.; 20 trips/service stall; 400 trips/acre	18 trips/1,000 sq. ft.; 19 trips/service stall	8% (7:3)	11% (4:6)
Tire Store	25 trips/1,000 sq. ft.; 30 trips/service stall	23 trips/1,000 sq. ft.; 27 trips/service stall	7% (6:4)	11% (5:5)
Convenience Market Chain:				
Open Up to 16 Hours Per Day	500 trips/1,000 sq. ft.	250 trips/1,000 sq. ft.	8% (5:5)	8% (5:5)
Open 24 Hours	700 trips/1,000 sq. ft.	350 trips/1,000 sq. ft.	9% (5:5)	7% (5:5)
Discount Store/Discount Club	70 trips/1,000 sq. ft.	49 trips/1,000 sq. ft.	2% (6:4)	10% (5:5)
Drugstore	90 trips/1,000 sq. ft.	40 trips/1,000 sq. ft.	4% (6:4)	10% (5:5)
Furniture Store	6 trips/1,000 sq. ft.; 100 trips/acre	5.4 trips/1,000 sq. ft.	4% (7:3)	9% (5:5)
Lumber/Home Improvement Store	30 trips/1,000 sq. ft.; 150 trips/acre	27 trips/1,000 sq. ft.; 135 trips/acre	7% (6:4)	9% (5:5)
Nursery	40 trips/1,000 sq. ft.; 90 trips/acre	36 trips/1,000 sq. ft.; 81 trips/acre	3% (6:4)	10% (5:5)
Restaurant:				
Quality	100 trips/1,000 sq. ft.; 3 trips/seat; 500 trips/acre	90 trips/1,000 sq. ft.; 2.7 trips/seat; 450 trips/acre	1% (6:4)	8% (7:3)
High Turnover (sit-down)	130 trips/1,000 sq. ft.; 7 trips/seat; 1,200 trips/acre	104 trips/1,000 sq. ft.; 5.6 trips/seat; 460 trips/acre	8% (5:5)	8% (6:4)
Fast Food (with or without drive-through)	700 trips/1,000 sq. ft.; 22 trips/seat; 3,000 trips/acre	420 trips/1,000 sq. ft.; 13.2 trips/seat; 1,800 trips/acre	4% (6:4)	8% (5:5)
Shopping Center:				
Neighborhood (30,000 sq. ft. or more GLA on 4 or more acres)	120 trips/1,000 sq. ft. GLA; 1,200 trips/acre	72 trips/1,000 sq. ft.; 720 trips/acre	4% (6:4)	11% (5:5)
Community (100,000 sq. ft. or more GLA on 10 or more acres)	70 trips/1,000 sq. ft. GLA; 700 trips/acre	49 trips/1,000 sq. ft.; 490 trips/acre	3% (6:4)	10% (5:5)
Regional (300,000 sq. ft. or more GLA) (6)	$\text{Ln}(T) = 0.756 \text{Ln}(x) + 5.25$ *	$0.8 [\text{Ln}(T) = 0.756 \text{Ln}(x) + 5.25]$ *	2% (7:3)	9% (5:5)
Specialty Retail Center/Strip Commercial	40 trips/1,000 sq. ft.; 400 trips/acre	36 trips/1,000 sq. ft.; 360 trips/acre	3% (6:4)	9% (5:5)
Supermarket	150 trips/1,000 sq. ft.; 2,000 trips/acre	90 trips/1,000 sq. ft.; 2,000 trips/acre	4% (7:3)	10% (5:5)

* See Table 2

TABLE 1 (Continued)

May 2003

TRIP GENERATION RATE SUMMARY
(WEEKDAY)

LAND USE	DRIVEWAY ⁽¹⁾⁽²⁾ VEHICLE TRIP RATE	CUMULATIVE ⁽⁸⁾ VEHICLE TRIP RATE	PEAK HOUR AND IN/OUT RATIO	
			AM (IN:OUT)	PM (IN:OUT)
EDUCATION ⁽³⁾				
University (4 years or higher)	2.5 trips/student; 100 trips/acre	2.5 trips/student; 100 trips/acre	10% (9:1)	9% (3:7)
Community College (2 years)	1.6 trips/student; 18 trips/1,000 sq. ft.; 80 trips/acre	1.6 trips/student; 18 trips/1,000 sq. ft.; 80 trips/acre	12% (9:1)	8% (3:7)
High School	1.8 trips/student; 50 trips/acre; 11 trips/1,000 sq. ft.	1.8 trips/student; 50 trips/acre; 11 trips/1,000 sq. ft.	20% (8:2)	14% (3:7)
Junior High/Middle School	1.4 trip/student; 12 trips/1,000 sq. ft.; 40 trips/acre	1.4 trips/student; 12 trips/1,000 sq. ft.; 40 trips/acre	24% (7:3)	7% (3:7)
Elementary School	2.9 trips/student; 39 trips/1,000 sq. ft.; 136 trips/acre	2.9 trips/student; 39 trips/1,000 sq. ft.; 136 trips/acre	31% (6:4)	19% (4:6)
Day Care Center	5 trips/child; 80 trips/1,000 sq. ft.	5 trips/child; 80 trips/1,000 sq. ft.	19% (5:5)	18% (5:5)
FINANCIAL INSTITUTION (Bank or Credit Union) ⁽⁵⁾				
Excluding drive-through	150 trips/1,000 sq. ft.; 1,000 trips/acre	112.5 trips/1,000 sq. ft.; 750 trips/acre	4% (7:3)	8% (4:6)
With drive-through	200 trips/1,000 sq. ft.; 1,500 trips/acre	150 trips/1,000 sq. ft.; 1,125 trips/acre	5% (6:4)	10% (5:5)
Drive-through only	250 trips/lane	187.5 trips/lane	3% (5:5)	13% (5:5)
HOSPITAL ⁽³⁾				
Convalescent/Nursing	3 trips/bed	3 trips/bed	7% (6:4)	7% (4:6)
General	20 trips/bed; 20 trips/1,000 sq. ft.; 300 trips/acre	20 trips/bed; 20 trips/1,000 sq. ft.; 300 trips/acre	9% (7:3)	10% (3:7)
HOUSE OF WORSHIP ⁽⁴⁾				
General	15 trips/1,000 sq. ft.; quadruple rates for days of	9 trips/1,000 sq. ft.; quadruple rate for days of	4% (8:2)	8% (5:5)
Without School or Day Care	5 trips/1,000 sq. ft.; quadruple rates for days of assembly	5 trips/1,000 sq. ft.; quadruple rate for days of	4% (8:2)	8% (5:5)
INDUSTRIAL				
Industrial/Business Park (some commercial included) ⁽³⁾	16 trips/1,000 sq. ft.; 200 trips/acre	16 trips/1,000 sq. ft.; 200 trips/acre	12% (8:2)	12% (2:8)
Small Industrial Park ^{(7) *}	15 trips/1,000 sq. ft.; 120 trips/acre	15 trips/1,000 sq. ft.; 120 trips/acre	11% (9:1)	12% (2:8)
Large Industrial Park *	8 trips/1,000 sq. ft.; 100 trips/acre	8 trips/1,000 sq. ft.; 100 trips/acre	11% (9:1)	12% (2:8)
Manufacturing/Assembly	4 trips/1,000 sq. ft.; 50 trips/acre	4 trips/1,000 sq. ft.; 50 trips/acre	20% (9:1)	20% (2:8)
Rental Storage	2 trips/1,000 sq. ft.; 30 trips/acre	2 trips/1,000 sq. ft.; 30 trips/acre	6% (5:5)	9% (5:5)
Scientific Research and Development	8 trips/1,000 sq. ft.; 80 trips/acre	8 trips/1,000 sq. ft.; 80 trips/acre	16% (9:1)	14% (1:9)
Truck Terminal	10 trips/1,000 sq. ft.; 7 trips/bay; 80 trips/acre	10 trips/1,000 sq. ft.; 7 trips/bay; 80 trips/acre	9% (4:6)	8% (5:5)
Warehousing	5 trips/1,000 sq. ft.; 60 trips/acre	5 trips/1,000 sq. ft.; 60 trips/acre	15% (7:3)	16% (4:6)
LIBRARY ⁽³⁾				
Less than 100,000 sq. ft.	50 trips/1,000 sq. ft.; 400 trips/acre	20 trips/1,000 sq. ft.	2% (7:3)	10% (5:5)
100,000 sq. ft. or more		16 trips/1,000 sq. ft.	2% (7:3)	10% (5:5)

* Small amount of local serving commercial included. May have multiple shifts.

TABLE 1 (Continued)

May 2003

TRIP GENERATION RATE SUMMARY
(WEEKDAY)

LAND USE	DRIVEWAY ⁽¹⁾⁽²⁾ VEHICLE TRIP RATE	CUMULATIVE ⁽⁸⁾ VEHICLE TRIP RATE	PEAK HOUR AND IN/OUT RATIO	
			AM (IN:OUT)	PM (IN:OUT)
LODGING ⁽³⁾				
Hotel (w/convention facilities/restaurant)	10 trips/room; 300 trips/acre	10 trips/room; 300 trips/acre	6% (6:4)	8% (6:4)
Motel	9 trips/room; 200 trips/acre	9 trips/room; 200 trips/acre	8% (4:6)	9% (4:6)
Resort Hotel	8 trips/room; 100 trips/acre	8 trips/room; 100 trips/acre	5% (6:4)	7% (6:4)
MILITARY BASE ⁽³⁾				
	2.5 trips/employee (military or civilian)	2.5 trips/employee (military or civilian)	9% (9:1)	10% (6:4)
OFFICE				
Commercial Office ⁽⁶⁾	$\text{Ln}(T) = 0.756 \text{Ln}(x) + 3.95$; 450 trips/acre	$\text{Ln}(T) = 0.756 \text{Ln}(x) + 3.95$; 450 trips/acre	13% (9:1)	14% (2:8)
Corporate Headquarters/Single Tenant Office	10 trips/1,000 sq. ft.	10 trips/1,000 sq. ft.	15% (9:1)	15% (1:9)
Department of Motor Vehicles	180 trips/1,000 sq. ft.; 900 trips/acre	18 trips/1,000 sq. ft.	6% (6:4)	11% (4:6)
Government Office (Civic Center):	30 trips/1,000 sq. ft.		9% (9:1)	12% (3:7)
Less than 100,000 sq. ft.		20 trips/1,000 sq. ft.	9% (9:1)	12% (3:7)
100,000 sq. ft. or more		16 trips/1,000 sq. ft.	9% (9:1)	12% (3:7)
Medical Office:	50 trips/1,000 sq. ft.; 500 trips/acre		6% (8:2)	10% (3:7)
Less than 100,000 sq. ft.		20 trips/1,000 sq. ft.	6% (8:2)	10% (3:7)
100,000 sq. ft. or more		16 trips/1,000 sq. ft.	6% (8:2)	10% (3:7)
Post Office:				
Distribution (central/walk-in only)	90 trips/1,000 sq. ft.	76 trips/1,000 sq. ft.	5%	7%
Community (without mail drop lane)	200 trips/1,000 sq. ft.; 1,300 trips/acre	168 trips/1,000 sq. ft.; 1,092 trips/acre	6% (6:4)	9% (5:5)
Community (with mail drop lane)	300 trips/1,000 sq. ft.; 2,000 trips/acre		7% (5:5)	9% (3:7)
Less than 100,000 sq. ft.		168 trips/1,000 sq. ft.; 1,092 trips/acre	7% (5:5)	7% (6:4)
100,000 sq. ft. or more		252 trips/1,000 sq. ft.; 1,680 trips/acre	7% (5:5)	8% (7:3)
RECREATION				
Bowling Center	30 trips/lane; 300 trips/acre	30 trips/lane; 300 trips/acre	7% (7:3)	10% (4:6)
Golf Course	600 trips/course; 40 trips/hole; 8 trips/acre	600 trips/course; 40 trips/hole; 8 trips/acre	6% (8:2)	9% (3:7)
Marina	4 trips/berth; 20 trips/acre	4 trips/berth; 20 trips/acre	3% (3:7)	7% (6:4)
Movie Theater	80 trips/1,000 sq. ft.; 1.8 trips/seat	80 trips/1,000 sq. ft.; 1.8 trips/seat	0.3%	8% (7:3)
Park:				
Beach, Ocean or Bay	600 trips/1,000 ft. shoreline; 60 trips/acre	600 trips/1,000 ft. shoreline; 60 trips/acre	--	11% (4:6)
Developed	50 trips/acre	50 trips/acre	4%	8%
Undeveloped	5 trips/acre	5 trips/acre	4%	8%
Racquetball/Tennis/Health Club	40 trips/1,000 sq. ft.; 40 trips/court; 300 trips/acre	40 trips/1,000 sq. ft.; 40 trips/court; 300 trips/acre	4% (6:4)	9% (6:4)
San Diego Zoo	115 trips/acre	115 trips/acre	--	--
Sea World	80 trips/acre	80 trips/acre	--	--
Sport Facility:				
Indoor	30 trips/acre	30 trips/acre	--	--
Outdoor	50 trips/acre	50 trips/acre	--	--

TABLE 1 (Continued)

May 2003

**TRIP GENERATION RATE SUMMARY
(WEEKDAY)**

LAND USE	DRIVEWAY ⁽¹⁾⁽²⁾ VEHICLE TRIP RATE	CUMULATIVE ⁽⁸⁾ VEHICLE TRIP RATE	PEAK HOUR AND IN/OUT RATIO	
			AM (IN:OUT)	PM (IN:OUT)
RESIDENTIAL ⁽³⁾				
Congregate Care Facility	2 trips/dwelling unit	2 trips/dwelling unit	3% (6:4)	8% (5:5)
Estate Housing	12 trips/dwelling unit	12 trips/dwelling unit	--	--
Mobile Home	5 trips/dwelling unit; 40 trips/acre	5 trips/dwelling unit; 40 trips/acre	9% (3:7)	12% (6:4)
Multiple Dwelling Unit:				
Under 20 dwelling units/acre	8 trips/dwelling unit	8 trips/dwelling unit	8% (2:8)	10% (7:3)
Over 20 dwelling units/acre	6 trips/dwelling unit	6 trips/dwelling unit	8% (2:8)	9% (7:3)
Retirement/Senior Citizen Housing	4 trips/dwelling unit	4 trips/dwelling unit	--	--
Single Family Detached:				
Urbanized Area ⁽¹⁾	9 trips/dwelling unit	9 trips/dwelling unit	8% (2:8)	10% (7:3)
Urbanizing Area ⁽¹⁾	10 trips/dwelling unit	10 trips/dwelling unit	8% (2:8)	10% (7:3)
TRANSPORTATION FACILITIES ⁽³⁾				
Bus Depot	25 trips/1,000 sq. ft.	25 trips/1,000 sq. ft.		
Park & Ride Lots	400 trips/acre; 600 trips/paved acre	400 trips/acre; 600 trips/paved acre	14% (7:3)	15% (3:7)
Transit Station (rail)	300 trips/acre	300 trips/acre	14% (7:3)	15% (3:7)

Notes:

- (1) From the 1990 Trip Generation Manual. Driveway rates reflect trips that are generated by a site. These rates are used to calculate the total number of trips that impact the project and its immediate vicinity.
- (2) Does not include trip rates for Centre City area. See Table 5.
- (3) San Diego Association of Governments (SANDAG), "Traffic Generators," San Diego, California, December 1996, and July 1998.
- (4) City of San Diego memo, "Trip Generation Rate for Churches," December 9, 1992.
- (5) Refer to Cumulative Vehicle Trip Rate column for reduced trip rates.
- (6) Ln = Natural logarithm; fitted curve logarithmic equation is used for Commercial Office and Regional Shopping Center. For example, the trip generation of an Office Building with 100,000 sq. ft. of GLA is: $\text{Ln}(T) = 0.756 \text{Ln}(100) + 3.95$, or $\text{Ln}(T) = 0.756 (4.60517) + 3.95$, or $\text{Ln}(T) = 3.481509 + 3.95$, or $\text{Ln}(T) = 7.431509$, which is 1,688 trips. The trip generation of a Regional Shopping Center with 1,000,000 sq. ft. of GLA is: $\text{Ln}(T) = 0.756 \text{Ln}(1,000) + 5.25$, or $\text{Ln}(T) = 0.756 (6.907755) + 5.25$, or $\text{Ln}(T) = 5.222263 + 5.25$, or $\text{Ln}(T) = 10.47226$, which is 35,322 trips. See Table 2 for calculated trip generation for selected sizes of Regional Shopping Centers, and Table 3 for calculated trip generation for selected sizes of Commercial Offices. GLA = Gross Leasable Area; T = trips; x = GLA in 1,000 square feet.
- (7) Institute of Transportation Engineers, "Trip Generation," 5th and 6th Editions, Washington, District of Columbia, 1991 and 1998.
- (8) Trips made to a site are Pass-By and Cumulative trips. See Appendix A for definitions of these trips. Cumulative rates are used to determine the community-wide impact of a new project.

TABLE 2

May 2003

TRIP GENERATION LOOK-UP TABLE FOR SELECTED SIZES OF A REGIONAL SHOPPING CENTER

SIZE OF GROSS LEASABLE AREA IN SQUARE FEET	DRIVEWAY $\text{Ln}(T) = 0.756 \text{Ln}(x) + 5.25$	CUMULATIVE $0.8 [\text{Ln}(T) = 0.756 \text{Ln}(x) + 5.25]$
300,000	14,215	11,372
325,000	15,102	12,081
350,000	15,972	12,778
375,000	16,827	13,462
400,000	17,669	14,135
425,000	18,497	14,798
450,000	19,314	15,451
475,000	20,120	16,096
500,000	20,915	16,732
525,000	21,701	17,361
550,000	22,478	17,983
575,000	23,246	18,597
600,000	24,006	19,205
625,000	24,759	19,807
650,000	25,504	20,403
675,000	26,242	20,994
700,000	26,974	21,579
725,000	27,699	22,159
750,000	28,418	22,734
775,000	29,131	23,305
800,000	29,839	23,871
825,000	30,541	24,433
850,000	31,238	24,991
875,000	31,930	25,544
900,000	32,618	26,094
950,000	33,979	27,183
1,000,000	35,322	28,258
1,050,000	36,649	29,319
1,100,000	37,961	30,369
1,150,000	39,258	31,407
1,200,000	40,542	32,434
1,250,000	41,813	33,450
1,300,000	43,071	34,457
1,350,000	44,318	35,454
1,400,000	45,553	36,443
1,450,000	46,778	37,422
1,500,000	47,992	38,394
1,550,000	49,197	39,357
1,600,000	50,392	40,314
1,650,000	51,578	41,262
1,700,000	52,755	42,204
1,750,000	53,924	43,139
1,800,000	55,085	44,068
1,850,000	56,238	44,990
1,900,000	57,383	45,906
2,000,000	59,652	47,722
2,100,000	61,893	49,515
2,200,000	64,109	51,287
2,300,000	66,300	53,040
2,400,000	68,468	54,774
2,500,000	70,614	56,491
2,600,000	72,739	58,191

Ln = Natural Logarithm (see notes for Table 1); T = Trips; x = Gross Leasable Area in 1,000 square feet

TABLE 3

May 2003

TRIP GENERATION LOOK-UP TABLE FOR SELECTED SIZES OF A COMMERCIAL OFFICE

SIZE OF GROSS LEASABLE AREA IN SQUARE FEET	TRIP GENERATION $\text{Ln}(T) = 0.756 \text{Ln}(x) + 3.95$
25,000	592
30,000	679
35,000	763
40,000	845
45,000	923
50,000	1,000
55,000	1,074
60,000	1,147
65,000	1,219
70,000	1,289
75,000	1,358
80,000	1,426
85,000	1,493
90,000	1,559
95,000	1,624
100,000	1,688
110,000	1,814
120,000	1,938
130,000	2,059
140,000	2,177
150,000	2,294
160,000	2,409
170,000	2,522
180,000	2,633
190,000	2,743
200,000	2,851
210,000	2,958
220,000	3,064
230,000	3,169
240,000	3,273
250,000	3,375
265,000	3,527
280,000	3,677
295,000	3,825
310,000	3,971
325,000	4,116
340,000	4,259
355,000	4,400
370,000	4,540
385,000	4,678
400,000	4,815
425,000	5,041
450,000	5,264
475,000	5,483
500,000	5,700
525,000	5,914
550,000	6,126
575,000	6,335
600,000	6,543
625,000	6,748
650,000	6,951
675,000	7,152

Ln = Natural Logarithm (see notes for Table 1); T = Trips; x = Gross Leasable Area in 1,000 square feet

ADDITIONAL TRIP GENERATION RATE GUIDELINES

The following trip generation rates were determined by the Transportation Planning Section based on a limited amount of data. Although most of these rates are site specific, they may be used as a reference for a similar land use elsewhere, with prior approval.

LAND USE	TRIP GENERATION RATE
Aircraft Hangar/Storage	6 trips/aircraft
Asphalt Batch Plant	100 trips/usable acre
Automated Teller Machine (Freestanding)	260 trips/site
Automobile Dismantling Facility	50 trips/acre
Automobile Multiple Dealerships *	31 trips/1,000 sq. ft.; 217 trips/acre;
Basketball Court	28 trips/1,000 sq. ft.; 200 trips/acre cumulative 200 trips/court
Charitable Resale Store (Salvation Army)	610 trips/weekday; 380 trips/Sunday
Courier Express Distribution Center (Federal Express)	10 trips/1,000 sq. ft.
Factory Outlets	70 trips/1,000 sq. ft.; 700 trips/acre
Golf Driving Range	600 trips/site
Gravel Quarry Operation	100 trips/usable acre
Handball Court	40 trips/court
Heavy Equipment Repair/Storage (Hawthorne)	1,069 trips/site
Multi Family Residential for Physically Disabled	4.5 trips/dwelling unit
Quick Oil Change	40 trips/1,000 sq. ft.; 36 trips/1,000 sq. ft. cumulative
Recreation Building	45 trips/1,000 sq. ft.
Recreational Vehicle Dealership	200 trips/acre
Recreational Vehicle Park	$2 \times 1/(T.O.) \times \text{number of hookups} \times 0.85$
Seminar Room/Study Hall/Office (Pt. Loma Nazarene College)	4 trips/1,000 sq. ft.
Truck Parking Facility	60 trips/acre; 30 trips/acre for Otay Mesa
Truck Repair Service	140 trips/service repair site + 2.5 trips/ 1,000 sq. ft. of administrative office

* Minimum of three automobile dealerships with access from the same street. Based on Federhart and Associates, February 1987.

TABLE 5

May 2003

CENTRE CITY CUMULATIVE TRIP GENERATION RATES

LAND USE	TRIP GENERATION RATE
COMMERCIAL-RETAIL	
Convenience Market:	
Open 15-16 hours	37 trips/1,000 sq. ft.
Open 24 hours	52 trips/1,000 sq. ft.
Lumber Store	24 trips/1,000 sq. ft.
Restaurant:	
Quality	32 trips/1,000 sq. ft.
High Turnover (sit-down)	27 trips/1,000 sq. ft.
Fast Food (with or without drive-through)	35 trips/1,000 sq. ft.
Shopping Center:	
Neighborhood	48 trips/1,000 sq. ft.
Community	28 trips/1,000 sq. ft.
Regional:	
Less than 500,000 sq. ft.	0.65 [Ln(T) = 0.756 Ln(x) + 5.25]
500,000 sq. ft. or more	0.63 [Ln(T) = 0.756 Ln(x) + 5.25]
Specialty Retail Center (Strip Commercial)	18 trips/1,000 sq. ft.
Supermarket	60 trips/1,000 sq. ft.
FINANCIAL INSTITUTION	
Excluding drive-through	26 trips/1,000 sq. ft.
With drive-through	31 trips/1,000 sq. ft.
Drive-through only	34 trips/lane
INDUSTRIAL	
Industrial/Business Park	13 trips/1,000 sq. ft.
Large Industrial Park	7 trips/1,000 sq. ft.
Small Industrial Park	12 trips/1,000 sq. ft.
Warehousing	4 trips/1,000 sq. ft.
LIBRARY	
LODGING	
Hotel (w/convention facilities/restaurant)	9 trips/room
Motel	8 trips/room
Resort Hotel	7 trips/room
OFFICE	
Commercial Office:	
Less than 100,000 sq. ft.	0.85 [Ln(T) = 0.756 Ln(x) + 3.95]
100,000 sq. ft. or more	0.81 [Ln(T) = 0.756 Ln(x) + 3.95]
Corporate Headquarters/Single Tenant Office:	
Less than 100,000 sq. ft.	0.62 [Ln(T) = 0.756 Ln(x) + 3.95]
100,000 sq. ft. or more	0.5 [Ln(T) = 0.756 (Ln(x) + 3.95)]
Government Office (Civic Center)	10 trips/1,000 sq. ft.
Medical Office	17 trips/1,000 sq. ft.
Post Office:	
Distribution (walk-in only)	11 trips/1,000 sq. ft.
Community (without/mail drop lane)	18 trips/1,000 sq. ft.
Community (with mail drop lane)	27 trips/1,000 sq. ft.
Scientific Research and Development	7 trips/1,000 sq. ft.
RECREATION	
Movie Theater	7 trips/1,000 sq. ft.
RESIDENTIAL	
Multiple Dwelling Units:	
Under 20 dwelling units per acre	5 trips/dwelling unit
20 or more dwelling units per acre	4 trips/dwelling unit
Retirement/Senior Citizen Housing	2.5 trips/dwelling unit
Single Dwelling Units	6 trips/dwelling unit

Notes:

The above land uses are expected to generate less trips in Centre City than outside downtown for the following reasons:
 In Centre City mass transit has a higher percentage of mode split; due to high density; "walk" trips are a greater percentage of internal trips; parking availability and costs (people do not necessarily park where they work or visit). The trip rates shown are based on "Development of Centre City Trip Generation Rates," by S. Pazargadi, P.E., August 1990.
 Ln = Natural Logarithm (see notes for Table 1); T = Trips; x = Gross Leasable Area in 1,000 square feet

TABLE 6

May 2003

**TRIP GENERATION LOOK-UP TABLE FOR CENTRE CITY
REGIONAL SHOPPING CENTER AND COMMERCIAL OFFICE**

REGIONAL SHOPPING CENTER		COMMERCIAL OFFICE	
Size of Gross Leasable Area in Square Feet	Trip Generation K [Ln(T) = 0.756 Ln(x) + 5.25]	Size of Gross Leasable Area in Square Feet	Trip Generation K [Ln(T) = 0.756 Ln(x) + 3.95]
300,000	9,240	25,000	503
325,000	9,816	30,000	578
350,000	10,382	35,000	649
375,000	10,938	40,000	718
400,000	11,485	45,000	785
425,000	12,023	50,000	850
450,000	12,554	55,000	913
475,000	13,078	60,000	975
500,000	13,177	65,000	1,036
525,000	13,672	70,000	1,096
550,000	14,161	75,000	1,155
575,000	14,645	80,000	1,212
600,000	15,124	85,000	1,269
625,000	15,598	90,000	1,325
650,000	16,068	95,000	1,381
675,000	16,533	100,000	1,368
700,000	16,993	110,000	1,470
725,000	17,450	120,000	1,570
750,000	17,903	130,000	1,668
775,000	18,353	140,000	1,764
800,000	18,798	150,000	1,858
825,000	19,241	160,000	1,951
850,000	19,680	170,000	2,043
875,000	20,116	180,000	2,133
900,000	20,549	190,000	2,222
950,000	21,406	200,000	2,310
1,000,000	22,253	210,000	2,396
1,050,000	23,089	220,000	2,482
1,100,000	23,915	230,000	2,567
1,150,000	24,733	240,000	2,651
1,200,000	25,542	250,000	2,734
1,250,000	26,342	265,000	2,857
1,300,000	27,135	280,000	2,979
1,350,000	27,920	295,000	3,098
1,400,000	28,699	310,000	3,217
1,450,000	29,470	325,000	3,334
1,500,000	30,235	340,000	3,449
1,550,000	30,994	355,000	3,564
1,600,000	31,747	370,000	3,677
1,650,000	32,494	385,000	3,789
1,700,000	33,236	400,000	3,900
1,750,000	33,972	425,000	4,083
1,800,000	34,703	450,000	4,264
1,850,000	35,430	475,000	4,441
1,900,000	36,151	500,000	4,617
2,000,000	37,581	525,000	4,791
2,100,000	38,993	550,000	4,962
2,200,000	40,389	575,000	5,132
2,300,000	41,769	600,000	5,299
2,400,000	43,135	625,000	5,466
2,500,000	44,487	650,000	5,630
2,600,000	45,825	675,000	5,793
2,700,000	47,152	700,000	5,954

x = Gross Leasable Area (GLA) in 1,000 sq. ft.
 K is 0.65 for Regional Shopping Centers with less than 500,000 sq. ft. of GLA, and is 0.63 for 500,000 or more sq. ft. of GLA.
 K is 0.85 for Commercial Offices with less than 100,000 sq. ft. of GLA, and is 0.81 for 100,000 or more sq. ft. of GLA

TRIP GENERATION RATES FOR FACILITIES FINANCING PURPOSES

LAND USE	VEHICLE TRIP RATE
AGRICULTURE (OPEN SPACE)	2 trips/acre
AIRPORT	
Commercial	100 trips/flight; 12 trips/acre
General Aviation	2 trips/daily flight; 6 trips/acre
Hangar	6 trips/aircraft
CEMETERY	5 trips/acre
COMMERCIAL-RETAIL	
Auto Parts Sales	56 trips/1,000 sq. ft.
Auto Repair Center	20 trips/1,000 sq. ft.
Auto Service & Gas Stations:	
Gasoline service station	20 trips/pump dispenser
Gasoline station with food mart ⁽¹⁾	40 trips/1,000 sq. ft. + pump dispenser rate
Oil change and lubrication service	40 trips/1,000 sq. ft.
Tire store	23 trips/1,000 sq. ft.; 27 trips/service stall
Truck repair facility with office	140 trips/site
Automotive Sales:	
Car dealer	22 trips/1,000 sq. ft.
Car dealer storage	6.5 trips/1,000 sq. ft.
Recreational vehicle dealer	200 trips/acre
Car Wash:	
Full service	450 trips/site
Self-serve	0 trip/site (if complimentary)
Coin-operated	108 trips/stall
Catering Company	20 trips/1,000 sq. ft.
Convenience Market Chain ⁽¹⁾	40 trips/1,000 sq. ft.
Discount Store/Discount Club	40 trips/1,000 sq. ft.
Drugstore	40 trips/1,000 sq. ft.
Equipment Manufacturing and Retail	1,069 trips/site
Furniture Store	5.4 trips/1,000 sq. ft.
Grocery/Convenience Market	25 trips/1,000 sq. ft.
Lumber/Home Improvement Store	27 trips/1000 sq. ft.
Nursery	36 trips/1,000 sq. ft.
Restaurant:	
Quality	40 trips/1,000 sq. ft.
High Turnover (sit-down)	40 trips/1,000 sq. ft.
Fast Food (with or without drive-through)	40 trips/1,000 sq. ft.
Shopping Center:	
Neighborhood (30,000 sq. ft. or more GLA on 4 or more acres)	60 trips/1,000 sq. ft.
Community (100,000 sq. ft. or more GLA on 10 or more acres)	70 trips/1,000 sq. ft.
Regional (300,000 sq. ft. or more GLA) ⁽²⁾	0.8 [Ln(T) = 0.756 Ln(x) + 5.25] *
Specialty Retail Center/Strip Commercial	36 trips/1,000 sq. ft.
Supermarket	40 trips/1,000 sq. ft.
EDUCATION	
Day Care Center	80 trips/1,000 sq. ft.
Elementary School	39 trips/1,000 sq. ft.
Junior High/Middle School	12 trips/1,000 sq. ft.
High School	11 trips/1,000 sq. ft.
Community College (2 years)	18 trips/1,000 sq. ft.
University (4 years or higher)	100 trips/acre
University Seminar Facility	4.0 trips/1,000 sq. ft.

* See Table 2

**TRIP GENERATION RATES
FOR FACILITIES FINANCING PURPOSES**

LAND USE	VEHICLE TRIP RATE
FINANCIAL INSTITUTION	
Automated Teller Machine (ATM) ⁽³⁾	260 trips/ATM (stand-alone)
Bank or Credit Union:	
Excluding drive-through	112.5 trips/1,000 sq. ft.
With drive-through	150 trips/1,000 sq. ft.
Drive-through only	187.5 trips/1,000 sq. ft.
HEALTH CARE	
Convalescent/Nursing	3 trips/bed
General	20 trips/1,000 sq. ft.
Residential Care Facility	2 trips/bed
Substance Rehabilitation Center	4 trips/bed
HOUSE OF WORSHIP	
General	9 trips/1,000 sq. ft.
Without School or Day Care	5 trips/1,000 sq. ft.
INDUSTRIAL	
Asphalt Batch Plant	100 trips/usable acre
Industrial/Business Park (some commercial included)	16 trips/1,000 sq. ft.
Industrial Park, Large *	8 trips/1,000 sq. ft.
Industrial Park, Small *	15 trips/1,000 sq. ft.
Manufacturing/Assembly	4 trips/1,000 sq. ft.
Mining Operation	100 trips/gross usable acre
Rental Storage	2 trips/1,000 sq. ft.
Sand/Gravel Quarry Mine	100 trips/gross usable acre
Scientific Research and Development	8 trips/1,000 sq. ft.
Truck Terminal	10 trips/1,000 sq. ft.
Warehousing	5 trips/1,000 sq. ft.
LIBRARY	
Less than 100,000 sq. ft.	20 trips/1,000 sq. ft.
100,000 sq. ft. or more	16 trips/1,000 sq. ft.
LODGING	
Hotel (w/convention facilities/restaurant)	10 trips/room
Motel	9 trips/room
Resort Hotel	8 trips/room
MILITARY BASE	
	2.5 trips/employee (military or civilian)
OFFICE	
Commercial Office ⁽⁴⁾	$\text{Ln}(T) = 0.756 \text{Ln}(x) + 3.95$ **
Corporate Headquarters/Single Tenant Office	10 trips/1,000 sq. ft.
Court Facility	40 trips/1,000 sq. ft.
Department of Motor Vehicles	20 trips/1,000 sq. ft.
Express Shipping Distribution Center	10 trips/1,000 sq. ft.
Government Office (Civic Center):	
Less than 100,000 sq. ft.	20 trips/1,000 sq. ft.
100,000 sq. ft. or more	16 trips/1,000 sq. ft.
Medical Office:	
Less than 100,000 sq. ft.	20 trips/1,000 sq. ft.
100,000 sq. ft. or more	16 trips/1,000 sq. ft.

* Some local serving commercial included

** See Table 3

**TRIP GENERATION RATES
FOR FACILITIES FINANCING PURPOSES**

LAND USE	VEHICLE TRIP RATE
OFFICE (continued)	
Post Office:	
Less than 100,000 sq. ft.	20 trips/1,000 sq. ft.
100,000 sq. ft. or more	16 trips/1,000 sq. ft.
Research and Development (may include light manufacturing)	18 trips/1,000 sq. ft.
RECREATION	
Auditorium	0.6 trip/1,000 sq. ft.
Bowling Center	30 trips/lane
Bungee Jumping Tower	115 trips/site
Golf Course	600 trips/course
Marina	4 trips/berth
Movie Theater	80 trips/1,000 sq. ft.; 1.8 trips/seat
Park:	
Beach, Ocean or Bay	600 trips/1,000 sq. ft. of shoreline
Developed	50 trips/acre
Undeveloped	5 trips/acre
Racquetball/Tennis/Health Club	40 trips/1,000 sq. ft.
Roller Skating Rink	40 trips/1,000 sq. ft.
San Diego Zoo	115 trips/acre
Sea World	80 trips/acre
Sport Facility:	
Indoor	30 trips/acre
Outdoor	50 trips/acre
Swimming Pool	3.1 trips/parking space
RESIDENTIAL	
Convent	2 trips/room
Estate Housing	12 trips/dwelling unit
Mobile Home	5 trips/dwelling unit
Multiple Dwelling Unit:	
Under 20 dwelling units/ acre	8 trips/dwelling unit
Over 20 dwelling units/ acre	6 trips/dwelling unit
Physically Disabled Residence	4.5 trips/dwelling unit
Recreational Vehicle Park	3 trips/hook-up
Recreational Vehicle Monthly Rental	2 x 1/(T.O.) x number of hookups x 0.85
Retirement/Senior Citizen Housing	4 trips/dwelling unit
Single Dwelling Unit:	
Urbanized Area	9 trips/dwelling unit
Urbanizing Area	10 trips/dwelling unit
Single Resident Occupancy	2.5 trips/room
SOCIAL SERVICES	
Homeless Shelter	2 trips/bed
Salvation Army	610 trips/1,000 sq. ft.
Senior Citizen's Center	2 trips/parking space
Work Furlough Facility	4 trips/bed
TRANSPORTATION FACILITIES	
Bus Depot	25 trips/1,000 sq. ft.
Park & Ride Lots	400 trips/acre; 600 trips/paved acre
Transit Station (rail)	300 trips/acre

Notes:

- (1) For each 750 sq. ft. (or any portion thereof greater than 500 sq. ft.) of convenience store floor area, a discount of 50% shall be applied to one automotive fuel dispensing position. All other dispensing positions shall be charged the normal rate.
- (2) Refer to note 6 (page 6) under Table 1.
- (3) If any ATM is new to an institution, the rate is also 260 trips/ATM.
- (4) Refer to note 6 (page 6) under Table 1.

APPEAL PROCESS

The trip generation rates in this manual may be appealed if the proposed project is unique and does not conform to the land uses in the City's *Trip Generation Manual*. A trip generation study of similar sites must be conducted by a registered traffic engineer. The study method must be approved in advance by the City before the study may be conducted.

Prior to conducting a trip generation study, the consultant must meet with the City's Transportation Development Section of the Development Services Department to discuss the appeal. The purpose of the meeting is to decide if it is appropriate to have a separate trip rate for the particular land use in question, and if so, how the trip generation study is to be conducted. The methodology must be approved by the Transportation Development Section in advance of the trip generation study.

A study of several sites is typically required for the trip generation study. Typically four study sites are desired. All study sites and procedures must be approved by the Transportation Development Section in advance. The studies will require a twenty-four-hour machine count at each driveway site for a minimum of two days. Additional days, or specific days of the week, may be required depending on the land use being studied.

Once the sites and the procedures have been approved, the data collection may begin. The completed field count data would then be submitted to the Transportation Development Section with a summary of the proposed trip generation rate for the studied land use. This data should be supplemented with an explanation of why the proposed trip generation rate should be used instead of the City's trip generation rate.

The Senior Traffic Engineer of the Transportation Development Section will review and comment on the trip generation study. If approved, the consultant may use the new trip generation rate for the traffic study of the project with unique character. The Transportation Development Section will inform the Facilities Financing Section and the Transportation Planning Division when a new rate is approved for the studied land use.

APPENDICES

- A. DEFINITIONS AND GENERAL TERMS**
- B. PHYSICAL LAND USE PARAMETERS**
- C. DEFINITION OF LAND USE CATEGORIES
FOR TRIP GENERATION PURPOSES**
- D. CITY'S LAND USE ZONES**

APPENDIX A

DEFINITIONS AND GENERAL TERMS

DEFINITIONS AND GENERAL TERMS

ADT (Average Daily Traffic)

Two-direction, 24-hour total count of vehicles crossing a line on an average weekday. Unusual seasonal variations must be specified, or else the typical annual conditions are assumed.

AWDT (Average Weekday Traffic)

Same as ADT.

CBD

Central Business District.

Centre City

The area bounded by Laurel Street to the north, Interstate 5 to the east, Commercial Street to the south, and the San Diego Bay to the west.

Cumulative Trips

New vehicle trips added to a community. Cumulative trips are driveway trips minus pass-by trips.

Diverted Trip

A trip that is deviated from a roadway within the vicinity of the generator to access a site. The roadway from which the trip is diverted could include streets or freeways that are adjacent to the generator, but without direct access to the generator.

Driveway Trips

The total number of trips that are generated by a site. The sum of cumulative trips plus the pass-by trips.

Pass-By Trip

A trip that is deviated from the roadway to a site for a stop-over to sites such as retail establishments, banks, restaurants, service stations, etc. A trip made to a site from traffic already "passing by" that site on an adjacent street that contains direct access to the generator. These are existing vehicle trips in a community.

Peak Hour

The one hour of the day that has the highest number of trip ends, for a site. The one hour of the day that has the highest traffic volume counts, for a roadway segment or an intersection.

Primary (or Unlinked) Trips

Trips that go directly between the primary purposes of home, work, and school. Also, a linked trip that goes from a primary purpose to a single destination and back again to the same primary point, is considered two primary unlinked trips.

Secondary (or Linked) Trips

The remaining trips, which have one or more stops along the way to a primary destination.

Trip-end

A one-direction vehicle movement.

Trip Generation Rate

The number of vehicular movements for a land use category within a 24-hour period. This is expressed as the number of trip-ends per unit of physical land use parameter.

Urbanized Area

As applied to single dwelling units, includes the areas designated "urbanized" on the latest edition of the City's General Plan and Progress Guide map.

Urbanizing Area

As applied to single dwelling units, includes all "Future Urbanizing" areas, all "Planned Urbanizing Communities," and some of the "Urbanized Communities."

APPENDIX B

PHYSICAL LAND USE PARAMETERS

PHYSICAL LAND USE PARAMETERS

Independent variables are physical and predictable land use parameters by which the sites (traffic generators) or their functions may be measured.

Acre

A unit of land area measurement equal to 43,560 square feet or 1/640th of a square mile. In relation to site area, all developable land area, including parking lots are included, but not unusable land area (such as an open space easement or canyon). Often designated "gross acre" or "gross acre (usable)."

Attendee

A person attending a sporting or other event.

Average Daily Flight

The number of takeoffs or landings of aircrafts at an airport on an average weekday.

Bed

Used to indicate the maximum number of patients at a hospital or convalescent facility.

Berth

A physical mooring place for a boat at a marina.

Civilian Employee

A non-military worker whose place of employment is a military base.

Dwelling Unit

A living facility that may be a single dwelling unit, an apartment, or a mobile home. Sometimes abbreviated as "DU." For example, a duplex would be counted as two DUs.

Employee

A person who works at a commercial or industrial facility.

Gross Floor Area

The total floor area (including areas that are not leased) of an establishment. The typical unit of measurement is 1,000 square feet of gross floor area, sometimes abbreviated as "1,000 GFA," and excludes parking floor area.

Gross Leasable Area

The total floor area designed for tenant occupancy upon which rent is collected. The typical unit of measurement is 1,000 square feet of gross leasable area, sometimes abbreviated as "1,000 GLA," and excludes parking floor area.

Military Personnel

A member of the armed forces assigned to work or train at a military base.

Room

One living-quarter at a hotel or motel. A suite of several rooms would be classified as one room.

Seat

A chair, stool, or bench (a bench could be multiple seats) provided for the use of a patron at a restaurant, or a viewer at a movie theater.

Shore

Shoreline land immediately adjacent to a lake or ocean. The typical unit of measurement is 1,000 feet of shoreline, sometimes abbreviated as "1,000 feet Shore."

Student

A person enrolled (full or part-time) at an educational facility.

Vehicle Fueling Space

The number of spaces that can accommodate vehicles to take fuel at a given time.

APPENDIX C

DEFINITION OF LAND USE CATEGORIES FOR TRIP GENERATION PURPOSES

DEFINITION OF LAND USE CATEGORIES FOR TRIP GENERATION PURPOSES

AGRICULTURE/OPEN SPACE

A tract of land used for producing crops or raising livestock, and in varying degrees, the preparation of these products for human use. "Open Space" refers to a tract of land specifically designated as an open space zone and used to protect open space for natural resources preservation, park and recreation use, or scenic enjoyment.

AUTO-SERVING COMMERCIAL

GASOLINE SERVICE STATION

A gasoline service station is a freestanding commercial establishment designed primarily for the sale of gasoline to the motoring public. Maintenance and repair work may also be done, as well as the sale of auto-related accessories.

CAR DEALER

A car dealer is a freestanding structure normally with open or shed-like parking lot designed for the sale of new and used cars and trucks. Car dealers also provide maintenance service and the sale of automobile accessories.

CAR WASH (Full Service)

A car wash is a freestanding building, which houses equipment for washing vehicles. It also has an area for drying off vehicles after they are washed.

AIRPORT

GENERAL AVIATION

A general aviation airport is designed primarily for the use of small private and corporate aircraft, and not for regularly scheduled commercial passenger service. A general aviation airport is usually characterized by short runways, few or no terminal facilities, and many small planes.

COMMERCIAL - RETAIL

CONVENIENCE MARKET

A convenience market is usually a small, freestanding establishment selling food items, beverages and other sundry items. Sales are typically of small quantities. Convenience markets have largely supplanted the neighborhood corner store, particularly in suburban areas. Convenience markets with more than four vehicle-fueling spaces will be considered as gasoline stations with food mart.

FURNITURE STORE

A retail establishment displaying and selling residential furniture items, typically having a small staff in relation to total square feet.

HOME IMPROVEMENT STORE

A retail establishment selling home improvement and related supplies in one location.

LUMBER STORE

A retail establishment selling lumber, home improvement and related supplies in one location.

NURSERY

A nursery is a place where plants and flowers are grown for sale.

SHOPPING CENTER

A shopping center is a conglomerate of individual businesses designed for the retail sale of a large spectrum of products ranging from clothing to jewelry, art, etc. Shopping centers normally contain specialty shops, eating establishments, and department stores. Some services such as travel agencies, insurance offices, beauty salons, etc. may also be located in a shopping center. All stores normally have a common parking area.

NEIGHBORHOOD SHOPPING CENTER

A neighborhood shopping center typically has a gross leasable floor area of 30,000 square feet or more, located on at least four or more acres. The principal retail outlet may be a supermarket supported by a drugstore and/or some other smaller retail store(s). The trading radius is usually less than three miles and serves a population of roughly 5,000-10,000 people.

COMMUNITY SHOPPING CENTER

A community shopping center typically has a gross leasable floor area of 100,000 square feet or more, located on 10 or more acres. The leading retail outlets are usually a discount store (i.e., Wal-Mart, Kmart, T J Maxx, Ross, and Home Depot), and may also include a grocery store or drugstore. The trading radius can be three miles or more and serve a population area of about 25,000 people.

REGIONAL SHOPPING CENTER

A regional shopping center typically has a gross leasable floor area of 300,000 square feet or more. The center is usually under one management which has a regional service area and two or more major department stores, supported by a number of specialty retail stores.

SPECIALTY RETAIL CENTER/STRIP COMMERCIAL

A freestanding retail store is a single building with separate parking where merchandise is sold to the end user, usually in small quantities. Minor auxiliary services that are independently owned and operated from the major store can be a part of the retail facility. Freestanding retail stores may be of any size but usually are a function of the merchandise sold, and the locality. In general, as the gross floor area approaches 100,000 square feet, the stores lose their "freestanding" character and become part of a shopping center. The number of employees in freestanding retail stores is a function of the sales volume and land acreage and depends on the

store type, size, and attractiveness to the consumer. Supermarkets, convenience stores, discount stores, lumber stores and furniture stores are typically not included in this category (as they are treated individually for trip generation).

SUPERMARKET

A supermarket is a freestanding, self-service store, which sells food, beverages, and household items.

EDUCATION

UNIVERSITY

A university is a major educational facility that grants bachelor degrees with a four-year curriculum. Universities are normally located on a park-like campus consisting of many buildings. They may be state-supported or privately run.

COMMUNITY COLLEGE

A college that grants associate degrees in a two-year curriculum, and is usually state-supported.

HIGH SCHOOL

A high school is a secondary school with a three or four-year curriculum. A high school is usually located on a campus-like setting with associated sports facilities.

JUNIOR HIGH SCHOOL (MIDDLE SCHOOL)

Junior high schools are secondary schools designed to educate a group of children in grades, which are intermediate--between grade school and high school. Junior high schools are normally freestanding and include athletic fields.

ELEMENTARY SCHOOL (GRADE SCHOOL)

An elementary school is a school normally serving grades kindergarten through six. An elementary school is usually an isolated building with an associated playground.

DAY CARE CENTER

A day care center is a place where preschool children are cared for during the workday.

FINANCIAL INSTITUTIONS

BANK OR CREDIT UNION (EXCLUDING DRIVE-THROUGH LANES)

A bank or credit union is a freestanding structure for the custody, loan, exchange or issues of money or credit. Trips for drive-through facilities should be generated separately and added to the lobby totals.

BANK OR CREDIT UNION (DRIVE-THROUGH LANES ONLY)

A bank or credit union that provides its services only through drive-through lanes. Such facility should be clearly labeled a "drive-through bank" for trip generation purposes. Trips for drive-through tellers should be generated separately, even if adjoining a bank lobby.

HOSPITAL

HOSPITAL

A hospital is a freestanding institution where the sick or injured are given medical or surgical care. Emergency room medical treatment is usually provided.

CONVALESCENT HOSPITAL

Convalescent hospitals are freestanding institutions designed to provide medical care for patients with long-term illnesses. Normally such hospitals do not provide emergency room medical treatment.

HOUSE OF WORSHIP

A house of worship such as a church or synagogue may include a school, a day-care center, meeting rooms, a ministerial residence, and various other activities.

INDUSTRIAL

BUSINESS PARK

A grouping of industrial or office units, which may include local serving commercial facilities.

SMALL INDUSTRIAL FACILITY

A plant (or group of plants) of under 100,000 square feet, situated on a lot of less than eight gross acres. Small industrial facilities may be located in an industrial park or light industrial area. Small amount of local serving commercial is included.

LARGE INDUSTRIAL FACILITY

An individual plant of at least 100,000 square feet, usually situated on a lot of over eight gross acres. Large industrial facilities may be located throughout the community. Small amount of local serving commercial is included.

MANUFACTURING/ASSEMBLY SITES

Sites devoted to conversion of raw materials or semi-finished parts to large finished products, using high-tech machineries.

RENTAL SELF-STORAGE FACILITY

A warehouse establishment, which rents small storage vaults, often termed "mini storage."

SCIENTIFIC RESEARCH AND DEVELOPMENT

A scientific research and development facility is a single-tenant facility devoted to the discovery and development of new products (or the improvement of an existing product). The number of employees is usually low when compared to other industries. Typical zoning is SR with a minimum lot size of one acre.

TRUCK STOP

A large truck service establishment that sells diesel fuel, and may have repair facility, restaurant, and overnight accommodations.

WAREHOUSE

A warehouse is an industrial use designed solely for the storage and/or transfer of goods. Warehouses are normally large unpartitioned buildings. Multiple truck loading docks and rail access are common.

LIBRARY

A library is a freestanding structure in which books, manuscripts, musical scores, or other literary/artistic materials are kept for loan (but not for sale).

LODGING

HOTEL/MOTEL

This category is defined as a commercial land use establishment offering lodging to tourists, business people or highway travelers, and may also have facilities for formal meetings. Often restaurants and specialty shops are available on site to patrons and the general public.

RESORT HOTEL

Larger hotels with many amenities and recreational opportunities within the hotel site or walking distance.

MILITARY BASE

A military base is a national defense installation owned by the federal government where personnel of the United States armed forces, as well as civilians, are assigned. A military base is almost always completely isolated by fences with only a few access points that control traffic entering the facility.

OFFICE

COMMERCIAL OFFICE

A commercial office building houses one or more tenants. The affairs of commercial organizations are conducted in the building. In unusual circumstances, two buildings whose gross floor areas jointly totals well over 100,000 gross square feet may be considered large commercial office buildings, subject to meeting certain requirements. These include (but are not necessarily limited to) joint ownership and/or management of the two buildings, and the provision of needed services in one or both buildings (including a cafeteria, showers, bank or savings and loan, post office substation, or exercise facilities), which are available to tenants of both buildings.

CORPORATE HEADQUARTERS/SINGLE TENANT OFFICE

Headquarter or administrative office of a firm engaged in management and administration of the firm.

DEPARTMENT OF MOTOR VEHICLES (DMV)

A DMV office administers examinations and collects fees for driver's licenses and vehicular registration licenses.

GOVERNMENTAL OFFICE

A building that houses the offices and personnel of governmental agencies. Governmental offices may be grouped in a series of buildings within the central area, as a city or state complex, or may be in an isolated building such as a Federal building.

MEDICAL OFFICE

A building where the businesses and practices relative to the restoration or preservation of health are carried out. A medical office building is usually a centrally located complex of medical offices that serve a wide range of medical needs. Associated uses may include pharmacies and optical services.

POST OFFICE

Part of the U.S. Postal Service, a post office sells stamps, postal supplies, leases post office boxes, and serves as the central office for letter carriers who take mail and deliver it to residences and businesses.

RECREATION

BOWLING CENTER

A bowling center is a freestanding recreational facility that features bowling lanes. It may include amenities such as a bar, restaurant, and a retail bowling equipment store within the building.

GOLF COURSE

Golf courses are those areas of wilderness, fairways and greens devoted to the game of golf. Normally, golf courses provide for 18 holes; however, courses of other lengths are available.

MARINA

A marina is a commercial facility available to boating enthusiasts, which provides such services as boat storage and launching, gasoline, oil, fishing equipment, and bait.

MOVIE THEATER

A freestanding structure for showing motion pictures that can include one or more movie screens.

BEACH, OCEAN, OR BAY

These parks are recreation facilities provided for sunbathing and relaxation adjacent to an ocean or bay, and may include picnic facilities and children's play equipment.

PARK (UNDEVELOPED)

Undeveloped parks are those parcels of land dedicated to passive recreation purposes. Most have picnic tables, grass, sidewalks, and swings or slides for small children, but do not include tennis courts, ball fields, or other participant sports facilities.

PARK (DEVELOPED)

Developed parks are those parks that provide a variety of recreation facilities. Such parks provide swings, slides, etc., as well as facilities and fields for participant sports (baseball, softball, tennis, swimming, soccer, football, etc.).

RACQUETBALL/TENNIS/HEALTH CLUB

A health club is a specialized recreation facility featuring racquetball, tennis, exercising equipment or swimming, though seldom are all of those facilities offered in the same establishment.

ZOO AND SEA LIFE PARK

Zoo and sea life park are a combination of wilderness areas and freestanding facilities designed to house animals, which are alien to the environment in which the animal attraction is located. Most modern facilities also provide fenced areas to maintain animals suitable for children, between the ages of four and twelve, to physically touch and play with. Other animal attractions include aquariums, aviaries, and natural wildlife areas. Examples are Sea World and the San Diego Zoo.

SPORTS FACILITIES

A spectator sport facility is a recreational land use where people gather to watch a team sport or other attraction that takes place at that facility. Spectator sports are normally held in specially designed stadiums with large parking facilities. Traffic volumes before and after completion of events can cause severe local congestion. Examples are the San Diego Qualcomm Stadium, the Sports Arena, and the Del Mar Race Track.

RESIDENTIAL

CONGREGATE CARE FACILITY

A congregate care facility typically consists of one or more multi-unit buildings designed for elderly living.

ESTATE HOUSING

A single dwelling unit on an individual lot of 1 acre or more.

MOBILE HOME

Mobile home is usually consisting of trailers, which are installed on permanent foundations.

MULTIPLE DWELLING UNIT (UNDER 20 DWELLING UNITS/ACRE)

A multiple dwelling unit, which includes townhouse apartments, or isolated clusters of two to four apartments. All multiple dwelling units with less than 20 units per acre are included in this category.

MULTIPLE DWELLING UNIT (20 DWELLING UNITS OR MORE/ACRE)

A multiple dwelling unit/apartment is a dwelling unit located within the same physical structure, and has at least four other dwelling units on a common lot. These units, on the average, have a smaller floor area than single-family homes. They may have an individual exterior entry, as in "townhouses," or a common entry as in "flats." Residents usually have a smaller family size thereby reducing trips made per unit. This category only applies to high-density units more than 20 DUs/acre.

RETIREMENT/SENIOR CITIZEN HOUSING

A retirement community is a housing development occupied almost exclusively by retired people. Retirement communities may resemble single dwelling unit or multiple dwelling developments. Occupants are of retirement age and make very few work trips.

SINGLE DWELLING UNIT

A single dwelling unit is a detached home on an individual lot. A parcel with more than one home structurally attached is excluded from this category. Single dwelling homes are generally owned by the occupant, although they may be rented. Covered garages are frequent. Family size, age of occupants, and transit accessibility differ for urbanized and urbanizing areas, resulting in a different treatment for trip generation.

RESTAURANT

FAST FOOD

A fast-food restaurant is one where a high percentage of the meals are for the carry-out or take-home patrons. The restaurant may also have a seating area. The food is usually precooked, possibly wrapped and often sitting under heat lamps ready for quick service to the customer. Examples are Jack-in-the-Box, McDonald's, and Taco Bell.

QUALITY (LOW TURNOVER)

A quality restaurant is an eating establishment with low turnover rates of generally one hour or longer. All meals are served to customers who are seated at tables or booths. Examples are Mister A's, The Marine Room, and Black Angus.

SIT-DOWN (HIGH TURNOVER)

Sit-down restaurants usually serve meals at tables, although the customers may go through a line to pick up the meal. A turnover of less than one hour is typical. An entire meal is usually ordered, as opposed to only a beverage. Many small ethnic restaurants fit in this category. Examples are Love's Barbecue, Filippi's Pizza Grotto, and Denny's Restaurant.

APPENDIX D

**CITY'S LAND USE ZONES
FOR COMPLETE LISTINGS OF LAND USE REGULATIONS
PLEASE REFER TO LAND DEVELOPMENT CODE**

CITY’S LAND USE ZONES

The following is a brief outline of the uses and regulations within the various zones in the City of San Diego, listed in the general order of least intensive to most intensive. Overlay Zones are listed following the base zones.

Notes:

- Italicized words are defined in Chapter 11, Article 3, Division 1 of the Land Development Code.
- FAR, referenced in various sections below, is an abbreviation for “floor area ratio”. Chapter 11, Article 3, Division 2 of the Land Development Code details how to calculate FAR.
- Parking regulations are determined by use and are located within Chapter 14, Article 2, Division 5 of the Land Development Code.

OPEN SPACE ZONES

The purpose of the Open Space Zones is to protect lands for outdoor recreation, education, and scenic and visual enjoyment; to control urban form and design; and to facilitate the preservation of environmentally sensitive lands. Included within these zones are the OP (Open Space--Park); OC (Open Space--Conservation); OR (Open Space--Residential, and; the OF (Open Space--Flood plain) Zones. It is intended that these zones be applied to lands where the primary uses are parks or open space or to private land where development must be limited to implement open space policies of adopted land use plans or applicable federal and state regulations and to protect the public health, safety, and welfare. See Chapter 13, Article 1, Division 2 of the Land Development Code for specific land use and development regulations.

AGRICULTURAL ZONES

The purpose of the Agricultural Zones is to provide for areas that are rural in character or areas where agricultural uses are currently desirable. The Agricultural Zones are intended to accommodate a wide range of agriculture and agriculture-related uses as well as single dwelling units. Included within the agricultural zones are the: AG (Agricultural--General) Zones which permit all types of agricultural uses and some minor agricultural sales on a long-term basis with a minimum of 5- to 10-acre lots; and the AR (Agricultural--Residential) Zones which accommodate a wide range of agricultural uses while also permitting the development of single dwelling unit homes at a very low density on 1 to 5-acre lots. See Chapter 13, Article 1, Division 3 of the Land Development Code for specific land use and development regulations.

RESIDENTIAL ZONES

The purpose of the residential zones is to provide for areas of residential development at various specified densities throughout the city. The residential zones are intended to accommodate a variety of housing types and to encourage the provision of housing for all residents of San Diego. It is also intended that the residential zones reflect desired development patterns in existing neighborhoods while accommodating the need for future growth. See Chapter 13, Article 1, Division 4 of the Land Development Code for specific land use and development regulations.

RE (RESIDENTIAL--ESTATE) ZONES

The purpose of the RE zones is to provide for single dwelling units on large lots with some accessory agricultural uses. It is intended that this zone be applied to areas that are rural in character, where the retention of low density residential development is desired.

Zone	Minimum Lot Area	Maximum FAR
RE-1-1	10 Acres	0.10
RE-1-2	5 Acres	0.20
RE-1-3	1 Acre	0.35

RS (RESIDENTIAL--SINGLE UNIT) ZONES

The purpose of the RS zones is to provide appropriate regulations for the development of single dwelling units that accommodate a variety of lot sizes and residential dwelling types and which promote neighborhood quality, character, and livability. It is intended that these zones provide for flexibility in development regulations that allow reasonable use of property while minimizing adverse impacts to adjacent properties.

The RS zones are differentiated based on the minimum lot size and whether the premises is located in an urbanized community or a planned or future urbanizing community, as identified on the Progress Guide and General Plan Phased Development Areas Map (page 35 of the Progress Guide and General Plan).

Urbanized Communities

Zone	Minimum Lot Area	Maximum FAR
RS-1-1	40,000 square-feet	0.45
RS-1-2	20,000 square-feet	varies ⁽¹⁾
RS-1-3	15,000 square-feet	varies ⁽¹⁾
RS-1-4	10,000 square-feet	varies ⁽¹⁾
RS-1-5	8,000 square-feet	varies ⁽¹⁾
RS-1-6	6,000 square-feet	varies ⁽¹⁾
RS-1-7	5,000 square-feet	varies ⁽¹⁾

(1) See Section 131.0446(a) of the Land Development Code for more information.

Planned or Future Urbanizing Communities

Zone	Minimum Lot Area	Maximum FAR
RS-1-8	40,000 square-feet	0.45
RS-1-9	20,000 square-feet	0.60
RS-1-10	15,000 square-feet	0.60
RS-1-11	10,000 square-feet	0.60
RS-1-12	8,000 square-feet	0.60
RS-1-13	6,000 square-feet	0.60
RS-1-14	5,000 square-feet	0.60

RX (RESIDENTIAL--SMALL LOT) ZONES

The purpose of the RX zones is to provide for both attached and detached single dwelling units on smaller lots than are required in the RS zones. It is intended that these zones provide an alternative to multiple dwelling unit developments where single dwelling unit developments could be developed at similar densities. The RX zone provides for a wide variety of residential development patterns. The RX zones are differentiated based on the minimum lot size.

Zone	Minimum Lot Area	Maximum FAR
RX-1-1	4,000 square-feet	0.70
RX-1-2	3,000 square-feet	0.80

(RESIDENTIAL--TOWNHOUSE) ZONES

The purpose of the RT zones is to provide for attached, single-dwelling unit residential development on small lots with alley access. It is intended that these zones provide for more urbanized, single-unit living at densities that are historically more typical of multiple-unit zones. The RT zones provide transition opportunities between single-unit neighborhoods and higher density multiple-unit neighborhoods and in some instances may replace multiple-unit zones at similar densities. The RT zones are intended to be applied on subdivided blocks with alleys that are within or close to highly urbanized areas, transit areas, and redevelopment areas. The RT zones are differentiated based on the minimum lot size.

Zone	Minimum Lot Area	Maximum FAR
RT-1-1	3,500 square-feet	0.85 (1) / 1.20 (2)
RT-1-2	3,000 square-feet	0.95 (1) / 1.30 (2)
RT-1-3	2,500 square-feet	1.00 (1) / 1.40 (2)
RT-1-4	2,200 square-feet	1.10 (1) / 1.50 (2)

- (1) One and two story buildings.
- (2) Three story buildings.

RM (RESIDENTIAL--MULTIPLE UNIT) ZONES

The purpose of the RM zones is to provide for multiple dwelling unit development at varying densities. The RM zones individually accommodate developments with similar densities and characteristics. Each of the RM zones is intended to establish development criteria that consolidates common development regulations, accommodates specific dwelling types, and responds to locational issues regarding adjacent land uses.

The following zones permit lower density multiple dwelling units with some characteristics of single dwelling units:

Zone	Minimum Lot Area	Maximum FAR
RM-1-1	6,000 square-feet	0.75
RM-1-2	6,000 square-feet	0.90 ⁽¹⁾
RM-1-3	6,000 square-feet	1.05 ⁽¹⁾

(1) See Section 131.0446(e) of the Land Development Code for specific regulations.

The following zones permit medium density multiple dwelling units:

Zone	Minimum Lot Area	Maximum FAR
RM-2-4	6,000 square-feet	1.20 ⁽¹⁾⁽²⁾
RM-2-5	6,000 square-feet	1.35 ⁽¹⁾
RM-2-6	6,000 square-feet	1.50 ⁽¹⁾

(1) See Section 131.0446(e) of the Land Development Code for specific regulations.

(2) Within the Peninsula and Ocean Beach community plan area, the maximum floor area ration is 0.70.

The following zones permit medium density multiple dwelling units with limited commercial uses:

Zone	Minimum Lot Area	Maximum FAR
RM-3-7	7,000 square-feet	1.80 ⁽¹⁾
RM-3-8	7,000 square-feet	1.25 ⁽¹⁾
RM-3-9	7,000 square-feet	2.70 ⁽¹⁾

(1) See Section 131.0446(f) of the Land Development Code for specific regulations.

The following zones permit urbanized, high density multiple dwelling units with limited commercial uses:

Zone	Minimum Lot Area	Maximum FAR
RM-4-10	7,000 square-feet	3.60 ⁽¹⁾
RM-4-11	7,000 square-feet	7.20 ⁽¹⁾

(1) See Section 131.0446(f) of the Land Development Code for specific regulations.

The RM-5-12 permits visitor accommodations or medium density multiple dwelling units:

Zone	Minimum Lot Area	Maximum FAR
RM-5-12	10,000 square-feet	1.80 ⁽¹⁾⁽²⁾

- (1) See Section 131.0446(f) of the Land Development Code for specific regulations.
- (2) See Section 131.0446(g) of the Land Development Code for specific regulations.

COMMERCIAL ZONES

The purpose of the commercial zones is to provide for the employment, shopping, services, recreation, and lodging needs of the residents of and visitors to the City. The intent of the commercial zones is to provide distinct regulations for size, intensity, and design to reflect the variety of the desired development patterns within San Diego's communities. See Chapter 13, Article 1, Division 5 of the Land Development Code for specific land use and development regulations.

CN (COMMERCIAL--NEIGHBORHOOD) ZONES

The purpose of the CN zones is to provide residential areas with access to a limited number of convenient retail and personal service uses. The CN zones are intended to provide areas for smaller scale, lower intensity developments that are consistent with the character of the surrounding residential areas. The zones in this category may include residential development. Property within the CN zones will be primarily located along local and selected collector streets. The CN zones are differentiated based on the permitted lot size and pedestrian orientation as follows: the CN-1-1 allows development of a limited size with a pedestrian orientation; the CN-1-2 allows development with an auto orientation, and; the CN-1-3 allows development with a pedestrian orientation.

CR (COMMERCIAL--REGIONAL) ZONES

The purpose of the CR zones is to provide areas for a broad mix of business/professional office, commercial service, retail, wholesale, and limited manufacturing uses. The CR zones are intended to accommodate large-scale, high intensity developments. Property within these zones will be primarily located along major streets, primary arterials, and major public transportation lines.

The CR zones are designed for auto-oriented development and are differentiated based on the uses allowed as follows: the CR-1-1 allows a mix of regional serving commercial uses and residential uses, with an auto orientation, and; the CR-2-1 allows regional serving commercial and limited industrial uses with an auto orientation but no residential use.

CO (COMMERCIAL--OFFICE) ZONES

The purpose of the CO zones is to provide areas for employment uses with limited, complementary retail uses and medium to high density residential development. The CO zones are intended to apply in larger activity centers or in specialized areas where a full range of commercial activities is not desirable. The CO zones are differentiated based on the uses allowed as follows: the CO-1-1 allows a mix of office and residential uses with a neighborhood scale and orientation, and; the CO-1-2 allows a mix of office and residential uses that serve as an employment center.

CV (COMMERCIAL--VISITOR) ZONES

The purpose of the CV zones is to provide areas for establishments catering to the lodging, dining, and recreational needs of both tourists and the local population. The CV zones are intended for areas located near employment centers and areas with recreational resources or other visitor attractions. The CV zones are differentiated based on development size and orientation as follows: the CV-1-1 allows a mix of large-scale, visitor-serving uses and residential uses, and; the CV-1-2 allows a mix of visitor-serving uses and residential uses with a pedestrian orientation.

CP (COMMUNITY--PARKING) ZONE

The purpose of the CP zone is to provide off-street parking areas for passenger automobiles. The CP zone is intended to be applied in conjunction with established commercial areas to provide needed or required off-street parking.

CC (COMMERCIAL--COMMUNITY) ZONES

The purpose of the CC zones is to accommodate community-serving commercial services, retail uses, and limited industrial uses of moderate intensity and small to medium scale. The CC zones are intended to provide for a range of development patterns from pedestrian-friendly commercial streets to shopping centers and auto-oriented strip commercial streets. Some of the CC zones may include residential development. Property within the CC zones will be primarily located along collector streets, major streets, and public transportation lines.

INDUSTRIAL ZONES

The purpose of the industrial zones is to accommodate a range of industrial and manufacturing activities in designated areas to promote a balanced land use and economy and to encourage employment growth. The industrial zones are intended to provide flexibility in the design of new and redeveloped industrial projects while assuring high quality development and to protect land for industrial uses and limit nonindustrial uses. Included within these zones are the: IP (Industrial--Park) Zones that permit research and development uses with some limited manufacturing as well as a mix of light industrial and office uses; IL (Industrial---Light) Zones

that allow light industrial uses, a mix of light industrial and office uses with limited commercial uses; IH (Industrial–Heavy) Zones manufacturing uses, and; the IS (Industrial--Small Lot) Zone that provides for small-scale industrial activities within urbanized areas. See Chapter 13, Article 1, Division 6 of the Land Development Code for specific land use and development regulations.

PLANNED DISTRICT ORDINANCES (PDOs)

A number of communities throughout the City are regulated through Planned Districts, which contain unique regulations pertaining to uses and development. Communities that are regulated by PDOs include: Old Town San Diego, La Jolla Shores, Gas Lamp Quarter (5th Avenue south of Broadway), Mission Beach, Carmel Valley, Golden Hill, Barrio Logan, Mt. Hope, Otay Mesa, La Jolla, West Lewis, Cass Street, Mid-City Communities (East San Diego/City Heights/Normal Heights/North Park), Southeastern San Diego, Centre City, Marina, Mission Valley and San Ysidro. These regulations are in Chapter 10 of the City of San Diego’s Municipal Code.

OVERLAY ZONES

The purpose of overlay zones is to provide supplemental regulations that have been tailored to specific geographic areas of the City. Overlay zones are applied in conjunction with a base zone and modify or add to the regulations of the base zone to address specific issues such as development adjacent to airports, special height or parking requirements, or supplemental processing requirements. The regulations are included in Chapter 13, Division 2 through 14.

AIRPORT APPROACH OVERLAY ZONE

Applied as supplemental regulations in the vicinity of San Diego International Airport, Lindbergh Filed to ensure: that applicable regulations of the Federal Aviation Agency and the California Department of Transportation are implemented; that the San Diego Unified Port District is provided the opportunity to participate in the process, and; that vertical buffers are provided.

AIRPORT ENVIRONS OVERLAY ZONE

Applied as supplemental regulations for property surrounding Brown Field, Montgomery Field, and Naval Air Station Miramar to ensure that land uses are compatible with the operation of airports by implementing the Comprehensive Land Use Plans for each airport and to inform property owners of the noise impacts and safety hazards associated with their property's proximity to airport operations.

COASTAL OVERLAY ZONE

The purpose of the Coastal Overlay Zone is to protect and enhance the quality of public access and coastal resources.

COASTAL HEIGHT LIMIT OVERLAY ZONE

Applied as supplemental regulations to provide a height limit for specific coastal areas as enacted by the voters of the City of San Diego.

SENSITIVE COASTAL OVERLAY ZONE

The purpose of the Sensitive Coastal Overlay Zone is to help protect and enhance the quality of sensitive coastal bluffs, coastal beaches, and wetlands.

MOBILEHOME PARK OVERLAY ZONE

The purpose of the Mobilehome Park Overlay Zone is to preserve existing mobilehome park sites, consistent with the City's goal of accommodating alternative housing types, and to provide supplemental regulations for the discontinuance of mobilehome parks and the relocation of the mobilehome park tenants.

PARKING IMPACT OVERLAY ZONE

The purpose of the Parking Impact Overlay Zone is to provide supplemental parking regulations for specified coastal, beach, and campus areas that have parking impacts. The intent of this overlay zone is to identify areas of high parking demand and increase the off-street parking requirements accordingly.

RESIDENTIAL TANDEM PARKING OVERLAY ZONE

The purpose of the Residential Tandem Parking Overlay Zone is to identify the conditions under which tandem parking may be counted as two parking spaces in the calculation of required parking.

TRANSIT AREA OVERLAY ZONE

The purpose of the Transit Area Overlay Zone is to provide supplemental parking regulations for areas receiving a high level of transit service. The intent of this overlay zone is to identify areas with reduced parking demand and to lower off-street parking requirements accordingly.

URBAN VILLAGE OVERLAY ZONE

The purpose of the Urban Village Overlay Zone is to provide regulations that will allow for greater variety of uses, flexibility in site planning and development regulations, and intensity of land use than is generally permitted in other Citywide zones. The intent of these regulations is to create a mix of land uses in a compact pattern that will reduce dependency on the automobile, improve air quality, and promote high quality, interactive neighborhoods. Urban villages are characterized by interconnected streets, building entries along the street, and architectural features and outdoor activities that encourage pedestrian activity and transit accessibility. The regulations of this division are intended to be used in conjunction with the Transit-Oriented Development Design Guidelines of the Land Development Manual and the applicable land use plan.

MISSION TRAILS DESIGN DISTRICT OVERLAY ZONE

The purpose of the Mission Trails Design District is to provide supplemental development regulations for property surrounding Mission Trails Regional Park. The intent of these regulations is to ensure that development along the edges of Mission Trails Regional Park enhances the park's natural qualities and promotes the aesthetic and functional quality of park/urbanization relationships, while recognizing the right to reasonable development within the Design District.

CLAIREMONT MESA HEIGHT LIMIT OVERLAY ZONE

The purpose of the Clairemont Mesa Height Limit Overlay Zone is to provide supplemental height regulations for western Clairemont Mesa. The intent of these regulations is to ensure that the existing low profile development in Clairemont Mesa will be maintained and that public views from western Clairemont Mesa to Mission Bay and the Pacific Ocean are protected.

COMMUNITY PLAN IMPLEMENTATION OVERLAY ZONE

The purpose of the Community Plan Implementation Overlay Zone is to provide supplemental development regulations that are tailored to specific sites within community plan areas of the City. The intent of these regulations is to ensure that development proposals are reviewed for consistency with the use and development criteria that have been adopted for specific sites as part of the community plan update process.

ACKNOWLEDGMENTS

The following City of San Diego staff members have contributed to the preparation of this manual:

Methodology & Overall Review:	Siavash Pazargadi, P.E., Senior Traffic Engineer
Manual Preparation:	Shahriar T. Ammi, Associate Engineer - Traffic
Rate Analysis:	Shahriar T. Ammi, Associate Engineer - Traffic
Land Use Zones:	Scott Donaghe, Senior Planner, Development Services
Review & Comments:	Dave DiPierro, Associate Engineer - Traffic Gary Hess, Project Manager Allen Holden, Jr., P.E., Deputy Director Walt Huffman, P.E., Senior Engineer Linda Marabian, P.E., Senior Traffic Engineer Labib Qasem, P.E., Associate Traffic Engineer Gary Reming, Project Manager
Word Processing:	Vivian Pomodor and Anne Havin