SEWER AREA STUDY

Project Site:
CANYON OAKS
San Dimas, CA

Prepared for:
NJD, LTD
26152 Oroville Place
Laguna Hills, CA 92653

Project Manager:
Trevor Dodson, P.E.

Date Prepared: *May 2008*
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JN: *349.04.01*

Prepared by:

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1. EXISTING SEWER SYSTEMS FOR CANYON OAKS

The City of San Dimas has its own sewer system which connects at various points to the Los Angeles County Sanitation District (LACSD) lines. The subject of this study is the line which runs from the foothills at Cataract Avenue to the City of Glendora border in the northwesterly sector of the city. This line starts at a manhole at Cataract Avenue and W. Dalepark Drive, runs southerly in Cataract, jogs westerly and then southerly in an easement through the Glendora Country Club to a manhole on the northerly side of Foothill Blvd. The line crosses Foothill Blvd. before running in a northwesterly direction to Amelia Avenue. The line turns southerly along Amelia Ave. to a manhole on the northerly side of San Dimas Wash. At that point the line accepts flow from the 74 acre area located south of the San Dimas Wash, north of the Foothill Freeway (I-210) and between Amelia Avenue and San Dimas Avenue. The line makes a u-turn and heads northerly to the westerly portion of Baseline Road, where it turns west into the City of Glendora. The line proceeds along Baseline Road to its terminus at the LACSD Lone Hill Avenue Trunk Sewer. The San Dimas sewer system is maintained by LACSD.

See Appendix 3 for a spreadsheet of area calculations, Appendix 4 for Specific Plan and Land Use Maps and Appendix 5 for Area Study Exhibit.

2. METHODOLOGY

1. Existing sewer plans studied
2. Tributary areas mapped with current City of San Dimas Land Use Map. See Area Study Exhibit (Appendix 5).
3. Land use coefficients calculated and applied in a typical calculation (Appendix 1)
4. Kutter's formula was used for capacity checks, n=0.013 Haested Methods. Typical calculation in Appendix 2. Results in Spreadsheet (Appendix 3).
5. % of half-full per line was calculated using excel spreadsheet Kutters formula, flow coefficients assigned per City of San Dimas Land Use Maps and Los Angeles Public Works handout, and acreage of Land Use Areas. Manhole designations used are those called out in the GIS information provided by the City of San Dimas and available from the LA County GIS website.
6. All existing pipes are either 8" or 10" and were evaluated based on the half-full design criteria. Any lines found deficient on that basis were compared to the full flow capacity, being that the area is fully developed with the exception of the proposed development site, which was applied to the study at the rate approved by the City for development.

3. RESULTS

The following areas have been found to be deficient using the half-full design criteria:

Appendix 3	Segment 314 – 315	100.17% full
	Segment 315 – 316	100.17% full
	Segment 316 – 317	100.17% full
	Segment 237 – 235	107.02% full

No areas have been found to be deficient using the % full (for fully developed areas).

All reaches found to be deficient were minimally deficient using the 50% full criterion. The 50% full criterion is used for design purposes, not for evaluation of capacity. No reaches were found deficient using the 100% full criterion. Since all areas tributary to the sewer are currently fully developed and the proposed development for which this study was commissioned is limited to a certain number of estate type homes, the study finds that there is sufficient capacity in the sewer system to accommodate the proposed development. Therefore, no upgrade of the sewer system should be required for the Canyon Oaks development.

Appendix 1

Table DP-1. Profile of General Demographic Characteristics: 2000

Geographic Area: San Dimas city, California

[For information on confidentiality protection, nonsampling error, and definitions, see text]

Subject	Number	Percent
Total population	**34,980**	**100.0**
SEX AND AGE		
Male	16,783	48.0
Female	18,197	52.0
Under 5 years	2,051	5.9
5 to 9 years	2,495	7.1
10 to 14 years	2,697	7.7
15 to 19 years	2,707	7.7
20 to 24 years	2,113	6.0
25 to 34 years	4,183	12.0
35 to 44 years	5,642	16.1
45 to 54 years	5,513	15.8
55 to 59 years	1,937	5.5
60 to 64 years	1,483	4.2
65 to 74 years	2,020	5.8
75 to 84 years	1,534	4.4
85 years and over	605	1.7
Median age (years)	37.3	(X)
18 years and over	26,046	74.5
Male	12,132	34.7
Female	13,914	39.8
21 years and over	24,546	70.2
62 years and over	5,014	14.3
65 years and over	4,159	11.9
Male	1,588	4.5
Female	2,571	7.3
RACE		
One race	33,443	95.6
White	26,116	74.7
Black or African American	1,156	3.3
American Indian and Alaska Native	243	0.7
Asian	3,286	9.4
Asian Indian	464	1.3
Chinese	1,013	2.9
Filipino	810	2.3
Japanese	317	0.9
Korean	230	0.7
Vietnamese	116	0.3
Other Asian [1]	336	1.0
Native Hawaiian and Other Pacific Islander	73	0.2
Native Hawaiian	37	0.1
Guamanian or Chamorro	11	-
Samoan	20	0.1
Other Pacific Islander [2]	5	-
Some other race	2,569	7.3
Two or more races	1,537	4.4
Race alone or in combination with one or more other races: [3]		
White	27,444	78.5
Black or African American	1,341	3.8
American Indian and Alaska Native	516	1.5
Asian	3,754	10.7
Native Hawaiian and Other Pacific Islander	162	0.5
Some other race	3,383	9.7

Subject	Number	Percent
HISPANIC OR LATINO AND RACE		
Total population	**34,980**	**100.0**
Hispanic or Latino (of any race)	8,163	23.3
Mexican	6,029	17.2
Puerto Rican	190	0.5
Cuban	208	0.6
Other Hispanic or Latino	1,736	5.0
Not Hispanic or Latino	26,817	76.7
White alone	21,381	61.1
RELATIONSHIP		
Total population	**34,980**	**100.0**
In households	33,771	96.5
Householder	12,163	34.8
Spouse	7,019	20.1
Child	10,940	31.3
Own child under 18 years	7,850	22.4
Other relatives	2,093	6.0
Under 18 years	727	2.1
Nonrelatives	1,556	4.4
Unmarried partner	508	1.5
In group quarters	1,209	3.5
Institutionalized population	372	1.1
Noninstitutionalized population	837	2.4
HOUSEHOLD BY TYPE		
Total households	**12,163**	**100.0**
Family households (families)	8,985	73.9
With own children under 18 years	4,319	35.5
Married-couple family	7,019	57.7
With own children under 18 years	3,289	27.0
Female householder, no husband present	1,405	11.6
With own children under 18 years	746	6.1
Nonfamily households	3,178	26.1
Householder living alone	2,558	21.0
Householder 65 years and over	1,057	8.7
Households with individuals under 18 years	4,750	39.1
Households with individuals 65 years and over	2,765	22.7
Average household size	2.78	(X)
Average family size	3.23	(X)
HOUSING OCCUPANCY		
Total housing units	**12,503**	**100.0**
Occupied housing units	12,163	97.3
Vacant housing units	340	2.7
For seasonal, recreational, or occasional use	46	0.4
Homeowner vacancy rate (percent)	1.0	(X)
Rental vacancy rate (percent)	2.6	(X)
HOUSING TENURE		
Occupied housing units	**12,163**	**100.0**
Owner-occupied housing units	8,967	73.7
Renter-occupied housing units	3,196	26.3
Average household size of owner-occupied units	2.87	(X)
Average household size of renter-occupied units	2.51	(X)

- Represents zero or rounds to zero. (X) Not applicable.

[1] Other Asian alone, or two or more Asian categories.

[2] Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.

[3] In combination with one or more of the other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000.

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FROM 2000 CENSUS of CITY of SAN DIMAS
AVG. 2.78 PERSONS / HOUSE HOLD OR DU

PER CO. OF L.A. SECTION K: FOR CALCULATIONS FOR AREA STUDIES.

TO CALCULATE cfs/acre use

$$\frac{125 \text{ GPD} \times \#\text{ OF PERSONS/ACRE}}{24 \text{ HRS/DAY} \times 60 \text{ min/HR}} = \text{GPM}$$

GPM x 0.002228 = CFS/ACRE COEF.

SINCE THE ZONING FOR SAN DIMAS DOES NOT FOLLOW THE SAME ZONING DESIGNATIONS AS L.A. COUNTY, THE FOLLOWING CALCULATIONS WERE DONE TO DETERMINE THE CORRECT COEFFICIENT TO APPLY TO VARIOUS SAN DIMAS ZONING AREAS.

~~MF-(12): 0.006 cfs~~ 0.002228 cfs/GPM

~~$\frac{12 \text{ UNITS}}{\text{AC}} \times \frac{2.78 \text{ persons}}{\text{UNIT}} = 33.36 \text{ persons}$~~

~~$\frac{125 \times 33.36}{24 \times 60} = 2.90 \times 0.002228 = 0.006$ cfs/AC~~

~~SP-22:~~

~~$\frac{3.81 \text{ UNITS}}{\text{AC.}} \times \frac{2.78 \text{ person}}{\text{UNIT}} = 10.59 \text{ persons}$~~

~~$\frac{125 \times 10.59}{24 \times 60} = 0.92 \times 0.002228 = 0.002$ cfs/AC~~

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777 E. Tahquitz Canyon Way, Suite 117, Palm Springs, CA 92262 o tel 760.327.3375 o fax 760.327.2122

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LAND USE DESIGNATIONS

SF – VERY LOW ESTATE – 0.0001

DENSITY 0.2 UNITS/ACRE

$$\frac{0.2 \text{ UNITS}}{\text{ACRE}} \times \frac{2.78 \text{ PERSONS}}{\text{UNIT}} = 0.56 \text{ PERSONS/AC}$$

$$\frac{125 \times 0.56}{24 \times 60} = 0.049 \times 0.002228 = 0.0001$$

SF – VERY LOW – 0.0016

DENSITY = 3 UNITS/AC

$$\frac{3 \text{ UNITS}}{\text{ACRE}} \times \frac{2.78 \text{ PERSONS}}{\text{UNIT}} = 8.34 \text{ PERSONS/AC}$$

$$\frac{125 \times 8.34}{24 \times 60} = 0.724 \times 0.002228 = 0.0016$$

SF – LOW – 0.0032

DENSITY 6 UNITS/AC

$$\frac{6 \text{ UNITS}}{\text{AC}} \times \frac{2.78 \text{ PERSONS}}{\text{UNIT}} = 16.68 \text{ PERSONS/AC}$$

$$\frac{125 \times 16.68}{24 \times 60} = 1.448 \times 0.002228 = 0.0032$$

LOW/MEDIUM – 0.0043

DENSITY 8 UNITS/AC

$$\frac{8 \text{ UNITS}}{\text{AC}} \times \frac{2.78 \text{ PERSONS}}{\text{UNIT}} = 22.24 \text{ PERSONS/AC}$$

$$\frac{125 \times 22.24}{24 \times 60} = 1.931 \times 0.002228 = 0.0043$$

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Project:		Project #:	
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LAND USE DESIGNATIONS

MEDIUM - 0.0065

DENSITY 12 UNITS/AC

$$\frac{12 \text{ UNITS}}{\text{AC}} \times \frac{2.78 \text{ PERSONS}}{\text{UNIT}} = 33.36 \text{ PERSONS/AC}$$

$$\frac{125 \times 33.36}{24 \times 60} = 2.896 \times 0.002228 = 0.0065$$

full circle thinking

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SECTION K: SIZE, GRADES AND JOINTS

1. Quantities

See M-a-23 on the next page.

From the area study, compute in acres the total area, including streets and alleys, to be served by the sewer being designed. With this and the zoning information, consult the Section Head as to which of the following constants to use:

ZONING Per Ord. 1494	COEFFICIENT cfs Per Acre	Computer Code
For Residential Areas:		
R-1 Single Family	0.004	0-1
R-2 duplex	0.008	2
R-3 APT	0.012	3
R-4 Apt	0.016*	4
PER TONY K. 3-14-05 Phone → R-5	0.020	
For Commercial Areas:		
C-1 thru C-4	0.015*	5-6
For Heavy Industrial Areas:		
M	0.021*	7 to 99

FOR PEAK Q

*Individual building, commercial or industrial plant capacities shall be the determining factor when they exceed the coefficients shown.

The 0.004 cfs per acre is equivalent to an average per capita flow of 55 gallons of domestic sewage per day, a maximum of 125 gallons per day and 21 persons per acre. $\left(\frac{125 \times 21}{24 \times 60} = 1.8229 \text{ gpm} \times 0.002228 = 0.004\right)$

When computing the quantities of sewage from an entire district in which an elementary school is located, if the pupils attending the school also live within the district, it is not necessary to increase the quantity as computed for the entire district. However, if the school draws attendance from outside the district, allowance must be made for the additional quantity.

In all cases allowance must be made when computing the size of pipe for the sewer in the street on which the school is located.

For primary schools without gymnasiums, the experience of the Los Angeles City School Board has been that five gallons per pupil per day, based on the water bills, is an average and they have

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To Joan Lyle	From Tony Khalkhali	
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ESTIMATED AVERAGE DAILY SEWAGE FLOWS

FOR VARIOUS OCCUPANCIES

Occupancy	Abbr.	Average Daily Flow*
		X 2.5 To obtain Peak Flow.
Apartment Buildings:	Apt	
Bachelor or single dwelling units		100 gal/D.U.
1 bedroom dwelling units		150 gal/D.U.
2 bedroom dwelling units		200 gal/D.U.
3 or more bedroom dwelling units		250 gal/D.U.
Auditoriums, churches, etc.	Aud	5 gal/seat
Automobile parking	P	25 gal/1000 sq. ft. gross floor area
Bars, cocktail lounges, etc.	Bar	20 gal/seat
Commercial Shops & Stores	CS	100 gal/1000 sq. ft. gross floor area
Hospitals (surgical)	HS	500 gal/bed
Hospitals (convalescent	HC	85 gal/bed
Hotels	H	150 gal/room
Medical Buildings	MB	300 gal/1000 sq. ft. gross floor area
Motels	M	150 gal/unit
~~Office Buildings~~	~~Off~~	~~200 gal/1000 sq. ft. gross floor area~~
Restaurants, cafeterias, etc.	R	50 gal/seat
Schools:		
Elementary or Jr. High	S	10 gal/student
High Schools	HS	15 gal/student
Universities or Colleges	U	20 gal/student
College Dormitories	CD	85 gal/student**

*These flows in general include an average allowance for operating personnel, and hospital staff, faculty, etc., as appropriate.

**Includes food service, laundry and bathing.

TWG/DWL
Sewer Design

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Area Study

Provide copy of County Sewer Maintenance District maps
Highlight project site boundary
Highlight existing mainline sewer from project site to trunk connection
Provide copy of all existing mainline sewer plans from project site to trunk connection
Indicate PC/CI plan number, pipe size, and slope along sewer mainline (from project site to trunk line connection)
Draw tributary area on County Sewer Maintenance District maps
Extend area study to topographic ridge line
Draw tributary area on supporting topographic map
Provide copy of current map from City or County Regional Planning Department indicating land use zones within the tributary area
Color code subareas and each land use zone
Provide sewer flow rates and capacity checks at sewer confluences, tract/parcel and political boundaries, and at critical sewer pipe size/slope locations.
Wet stamp and sign area study map and calculations
See comments on area study map and calculations

Appendix 2

Typical Kutter's Formula calculation for half full pipe

Project Description

Friction Method	Kutter Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Normal Depth	0.33	ft
Diameter	0.67	ft

Results

Discharge	0.34	ft^3/s
Flow Area	0.17	ft^2
Wetted Perimeter	1.04	ft
Top Width	0.67	ft
Critical Depth	0.27	ft
Percent Full	49.3	%
Critical Slope	0.00812	ft/ft
Velocity	1.99	ft/s
Velocity Head	0.06	ft
Specific Energy	0.39	ft
Froude Number	0.69	
Maximum Discharge	0.77	ft^3/s
Discharge Full	0.71	ft^3/s
Slope Full	0.00098	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	49.25	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s

Typical Kutter's Formula calculation for half full pipe

GVF Output Data

Normal Depth	0.33	ft
Critical Depth	0.27	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00812	ft/ft

Typical Kutter's Formula full capacity calculation

Project Description

Friction Method	Kutter Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Normal Depth	0.66	ft
Diameter	0.66	ft
Discharge	0.68	ft³/s

Results

Discharge	0.68	ft³/s
Normal Depth	0.66	ft
Flow Area	0.34	ft²
Wetted Perimeter	2.07	ft
Top Width	0.00	ft
Critical Depth	0.39	ft
Percent Full	100.0	%
Critical Slope	0.00906	ft/ft
Velocity	1.98	ft/s
Velocity Head	0.06	ft
Specific Energy	0.72	ft
Froude Number	0.00	
Maximum Discharge	0.74	ft³/s
Discharge Full	0.68	ft³/s
Slope Full	0.00400	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	100.00	%

Typical Kutter's Formula full capacity calculation

GVF Output Data

Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.66	ft
Critical Depth	0.39	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00906	ft/ft

Appendix 3

SAN DIMAS AREA STUDY -
NORTHWESTERLY AREA DRAINING TO MH 304

	SEGMENT MH#	SEGMENT MH#	PIPE SIZE	PIPE SLOPE-%	*1/2 FULL CAPACITY	**FULL CAPACITY	***CALC. FLOW	AREA ADDED TO PREVIOUS SEGMENT	AREA SUM	% - 1/2 FULL LINE	% - FULL LINE
CATARACT SOUTHERLY TO MH 699	upstream	371	8	0.00	0		0.008	80 acres of single family estate	80.00		
	371	706	8	0.40	0.34		0.060	16.11	96.11	17.52	-
	706	705	8	0.40	0.34		0.081	1.41	97.52	23.74	-
	705	X1	8	0.40	0.34		0.081	0.00	-	23.82	-
	X1	X2	8	0.40	0.34		0.081	0.00	-	23.82	-
	X2	X3	8	0.40	0.34		0.081	0.00	-	23.82	-
	X3	X4	8	0.40	0.34		0.081	0.00	-	23.82	-
	X4	X5	8	0.40	0.34		0.081	0.00	-	23.82	-
	X5	699	8	0.76	0.47		0.081	0.00	-	17.23	-
	699	699	0	-	0		0.134	12.24	109.76	-	-
SEGMENTS FROM MH 699 TO CITY LINE	699	305	8	0.24	0.26		0.134	0.00	-	51.40	-
	305	305					0.188	12.75	122.51		
	305	306	8	2.08	0.78		0.253	20.05	142.56	34.64	-
	306	307	8	2.08	0.78		0.270	5.50	148.06	34.64	-
	307	308	8	2.08	0.78		0.270	0.00	148.06	41.88	-
	308	309	8	2.88	0.91		0.316	14.23	162.29	34.70	-
	309	310	8	2.00	0.76		0.316	0.00	162.29	41.55	-
	310	311	8	0.88	0.50		0.327	1.68	163.97	65.33	-
	311	312	8	0.40	0.34		0.327	0.00	163.97	96.08	-
	312	313	8	0.40	0.34		0.338	1.68	165.65	99.29	-
	313	314	8	0.40	0.34		0.338	0.00	165.65	99.29	-
	314	315	8	0.40	0.34	0.68	0.341	Elementary school - 450 students	176.85	100.17	50.09
	315	316	8	0.40	0.34	0.68	0.341	0.00	176.85	100.17	50.09
	316	317	8	0.40	0.34	0.68	0.341	0.00	176.85	100.17	50.09
	317	318	8	6.60	1.38		0.341	0.00	176.85	24.68	-
	318	319	8	0.80	0.48		0.341	0.00	176.85	70.96	-
	319	320	10	0.24	0.51		0.372	9.67	186.52	72.85	-
	320	321	10	0.24	0.51		0.372	0.00	186.52	72.85	-
	321	321	MH	0.00			0.414	26.38	212.90	-	-
	321	321	MH	0.00			0.488	23.11	236.01	-	-
	321	321	MH	0.00			0.592	24.18	260.19	-	-
	321	304	8	1.46	0.65		0.592	0.00	260.19	-	-
SEGMENTS FROM CITY LINE THROUGH GLENDORA TO LA COUNTY MAIN AT MH 229	304	239	8	2.80	0.90		0.605	4.26	264.45	-	-
	239	237	8	4.00	1.08		0.618	3.95	268.40	-	-
	237	235	8	1.20	0.59	1.18	0.631	4.21	272.61	107.02	53.51
	235	233	8	1.60	0.68		0.646	4.66	277.27	-	-
	233	299	8	1.60	0.68		0.659	3.83	281.10	-	-

SAN DIMAS AREA STUDY -
NORTHWESTERLY AREA DRAINING TO MH 304

ZONE	ZONING COEFFICIENT (cfs/Acre)
COMMERCIAL	0.0150
SF-VERY LOW ESTATE	0.0001
SF- VERY LOW	0.0016
SF - LOW	0.0032
LOW/MEDIUM	0.0043
MEDIUM	0.0065
LEMENTARY SCHOOL	-
100+	Reaches that will be overtaxed
	Areas added into manhole from the area south of San Dimas Wash and north of I-210 between Amelia Ave. and San Dimas Ave.

ELEMENTARY SCHOOL = 10 GAL/STUDENT/DAY
*PER LA COUNTY DEPARTMENT OF PUBLIC WORKS CHART S-C4 (IN CFS)- OR HAESTED METHODS - KUTTER'S FORMULA WITH n=0.013
**PER KUTTER'S FORMULA WITH N-0.013 - HAESTED METHODS USED
***BASED ON CURRENT LAND USE AND COEFFICIENTS CALCULATED IN APPENDIX 1 BASED ON LA COUNTY COEFFICIENTS (IN CFS/ACRE)

Appendix 4

CITY OF San Dimas CALIFORNIA

GENERAL PLAN

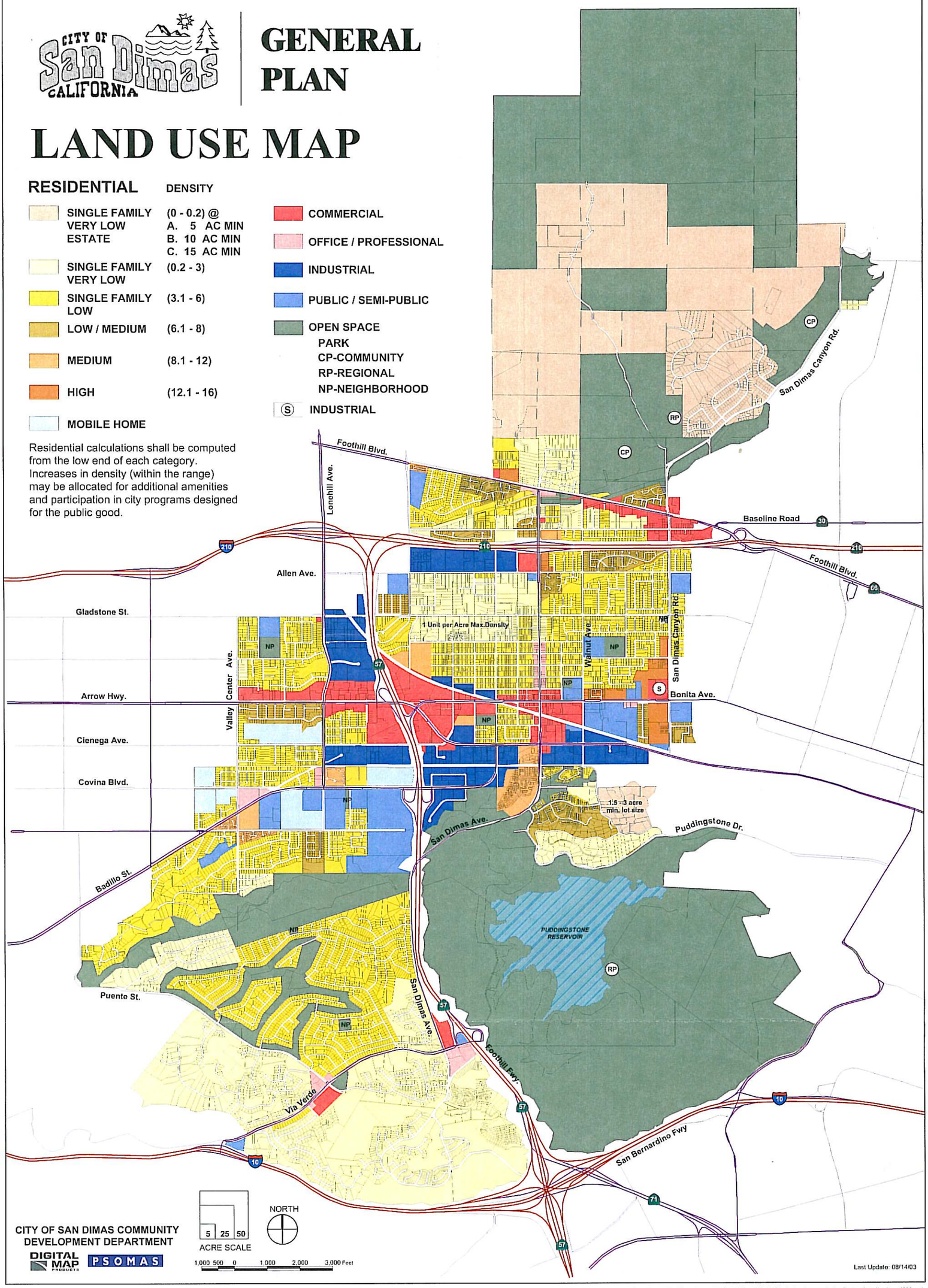
LAND USE MAP

RESIDENTIAL

	DENSITY
SINGLE FAMILY VERY LOW ESTATE	(0 - 0.2) @ A. 5 AC MIN B. 10 AC MIN C. 15 AC MIN
SINGLE FAMILY VERY LOW	(0.2 - 3)
SINGLE FAMILY LOW	(3.1 - 6)
LOW / MEDIUM	(6.1 - 8)
MEDIUM	(8.1 - 12)
HIGH	(12.1 - 16)
MOBILE HOME	

Residential calculations shall be computed from the low end of each category. Increases in density (within the range) may be allocated for additional amenities and participation in city programs designed for the public good.

- COMMERCIAL
- OFFICE / PROFESSIONAL
- INDUSTRIAL
- PUBLIC / SEMI-PUBLIC
- OPEN SPACE
  - PARK
  - CP-COMMUNITY
  - RP-REGIONAL
  - NP-NEIGHBORHOOD
- (S) INDUSTRIAL



CITY OF SAN DIMAS COMMUNITY DEVELOPMENT DEPARTMENT

DIGITAL MAP PRODUCTS PSOMAS

NORTH

5 25 50 ACRE SCALE

1,000 500 0 1,000 2,000 3,000 Feet

Last Update: 08/14/03

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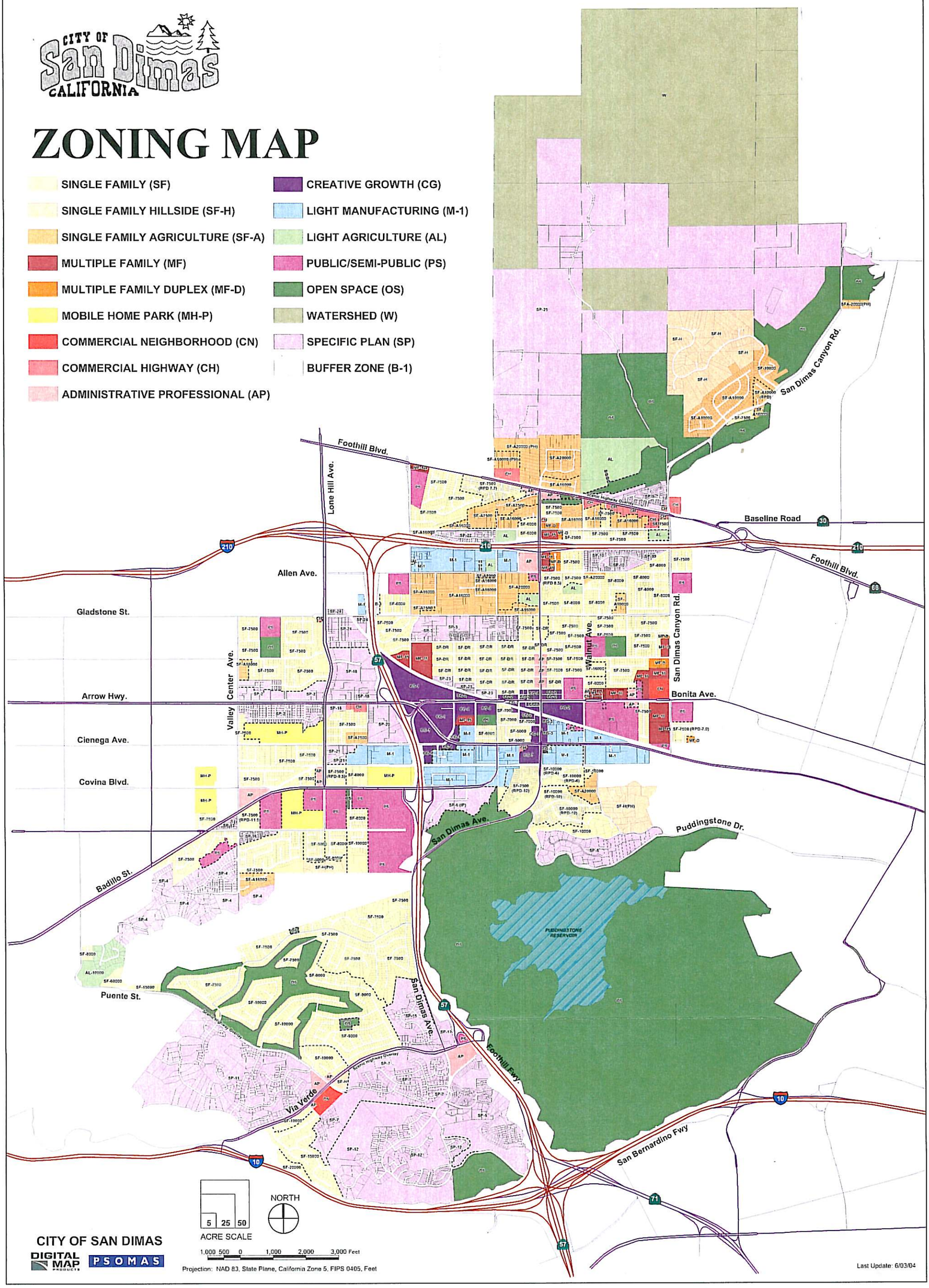
CITY OF San Dimas CALIFORNIA

ZONING MAP

- SINGLE FAMILY (SF)
- SINGLE FAMILY HILLSIDE (SF-H)
- SINGLE FAMILY AGRICULTURE (SF-A)
- MULTIPLE FAMILY (MF)
- MULTIPLE FAMILY DUPLEX (MF-D)
- MOBILE HOME PARK (MH-P)
- COMMERCIAL NEIGHBORHOOD (CN)
- COMMERCIAL HIGHWAY (CH)
- ADMINISTRATIVE PROFESSIONAL (AP)
- CREATIVE GROWTH (CG)
- LIGHT MANUFACTURING (M-1)
- LIGHT AGRICULTURE (AL)
- PUBLIC/SEMI-PUBLIC (PS)
- OPEN SPACE (OS)
- WATERSHED (W)
- SPECIFIC PLAN (SP)
- BUFFER ZONE (B-1)



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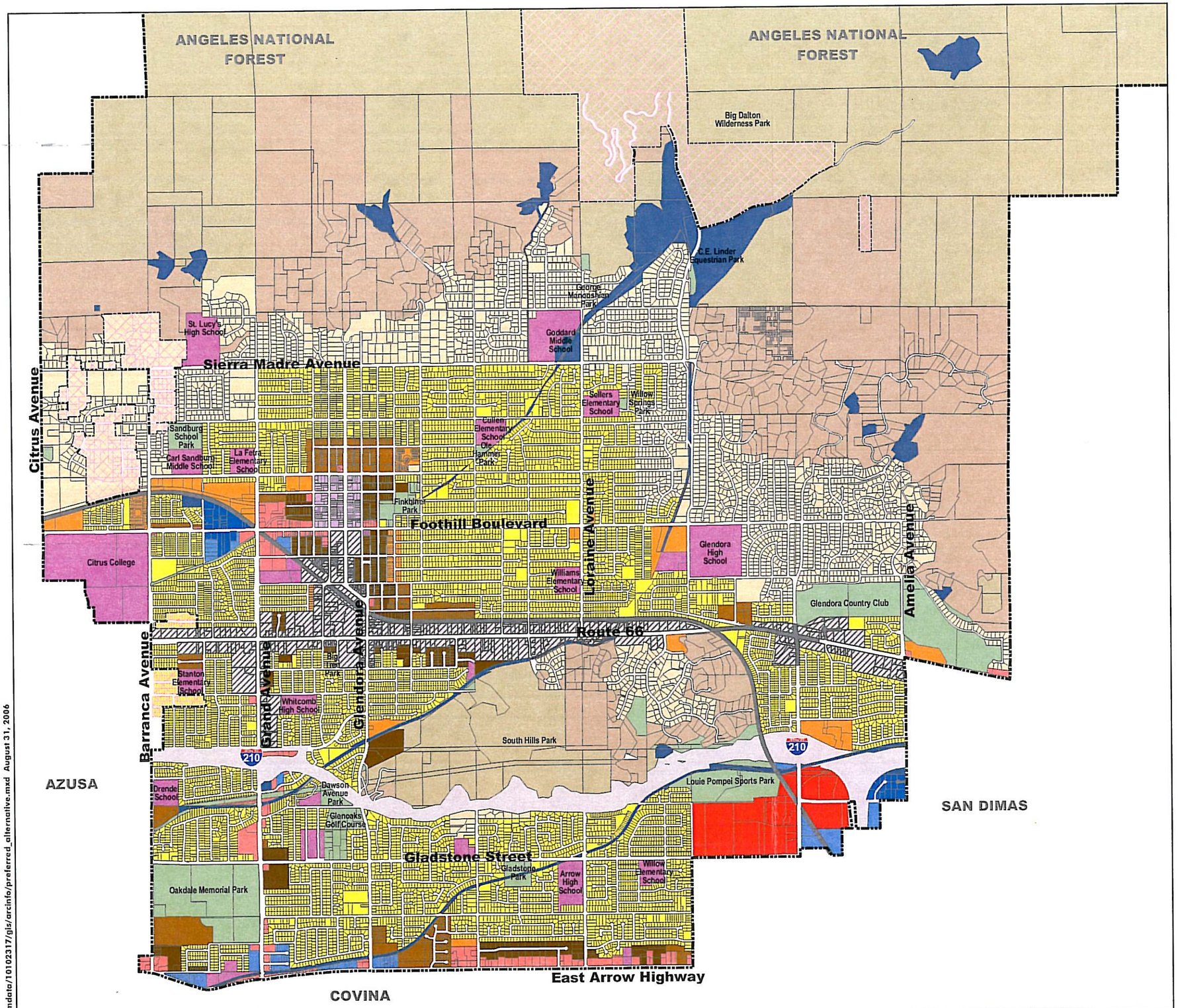

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GENERAL PLAN LAND USE MAP

EXHIBIT LU - 7

LEGEND

RESIDENTIAL (UNITS/ACRE)
- HILLSIDE VERY LOW DENSITY (0.1 - 1)
- LOW DENSITY (1.1 - 3)
- LOW/MEDIUM DENSITY (3.1 - 6)
- MEDIUM DENSITY (6.1 -11)
- MEDIUM/HIGH DENSITY (11.1 - 15)
- HIGH DENSITY (15.1 - 20)

COMMERCIAL
- GENERAL COMMERCIAL
- REGIONAL COMMERCIAL
- VILLAGE MIXED USE

INDUSTRIAL
- LIGHT INDUSTRIAL
- GENERAL INDUSTRIAL

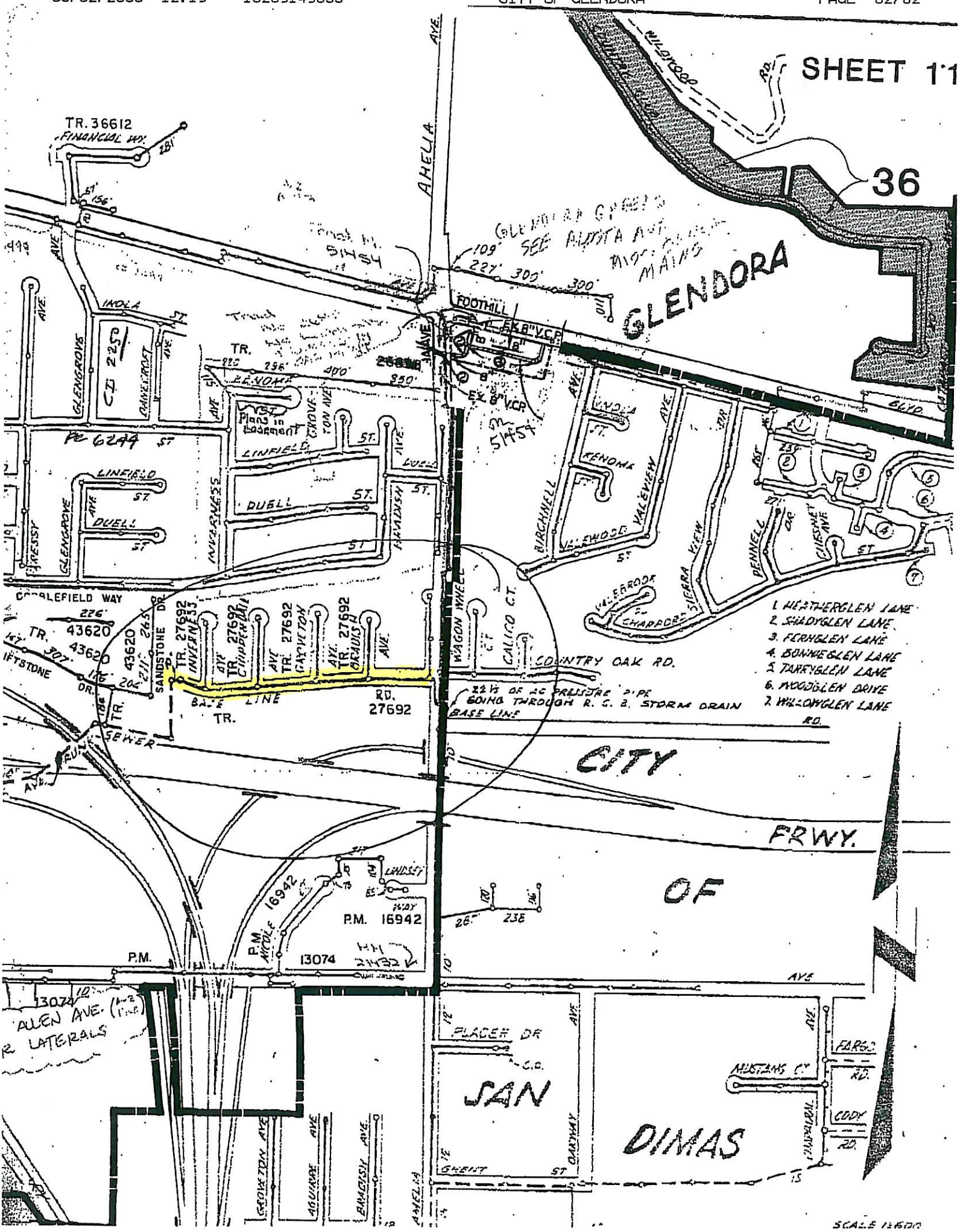
OPEN SPACE
- CONSERVATION OPEN SPACE
- OPEN SPACE

OTHER
- CIVIC/INSTITUTIONAL
- ROUTE 66 SPECIFIC PLAN
- UTILITY AND FLOOD CONTROL
- RAILROAD
- PUBLIC RIGHT-OF-WAY
- SPHERE OF INFLUENCE
- COUNTY AREA OVERLAY
- CITY LIMITS

Source: GIS Data, City of Glendora

NORTH

0 1,200 2,400 Feet


SHEET 11
36
GLENDORA
TR. 36612
FINANCIAL WY.
AMELIA AVE.
FOOTHILL
EX. 8" V.C.P.
INDIA ST.
GLENGROVE
DANECROFT
TR.
KENOMA
Plans in basement
LINFIELD ST.
DUELL ST.
INVERNESS
BRADISH
GROVETON AVE.
CORBLEFIELD WAY
43620
TR. 43620
SANDSTONE DR.
TR. 27692
INVERNESS
CHIPPENDALE
GROVETON
BRADISH
BASE LINE
RD. 27692
WAGON WHEEL
CALICO CT.
COUNTRY OAK RD.
BIRCHNELL
VALEVIEW
VALEWOOD
VALEBROOK
CHARPORT
SIERRA VIEW
PENNELL
CHESNEY AVE.
1. HEATHERGLEN LANE
2. SHADYGLEN LANE
3. FERNGLEN LANE
4. BONNIEGLEN LANE
5. TARRYGLEN LANE
6. WOODGLEN DRIVE
7. WILLOWGLEN LANE
22 1/2 OF AC PRESSURE PIPE GOING THROUGH R. C. B. STORM DRAIN
BASE LINE RD.
SEWER
CITY OF SAN DIMAS
FRWY.
LINDSEY WAY
P.M. 16942
P.M. 13074
ALLEN AVE.
LATERALS
PLACER DR
C.D.
MUSTANG CT.
FARGO RD.
CODY RD.
GHENT ST
OAKWAY
GROVETON AVE
AGUIRRE AVE
BRADISH AVE.
AMELIA
SCALE 1:600

CITY OF GLENDORA
PUBLIC WORKS DEPARTMENT

116 E. FOOTHILL BOULEVARD,
GLENDORA, CALIFORNIA 91741
(626) 914-8246 FAX (626) 914-9053

FAX MEMO

DATE: 5/2/08

TO: Joan Lyle, Tuscor Eng.

FROM: Eve Tate PHONE NO. (626) 914-8246

SUBJECT: Sewer mainline: Base Line Rd.

TOTAL PAGES (including this page) : 2

MESSAGE:

See attached index sheet. Base Line Rd. & Groveton sewer lines are under Tract No. 27692 (4 sheets).

Please call if you would like to request copies.

Eve

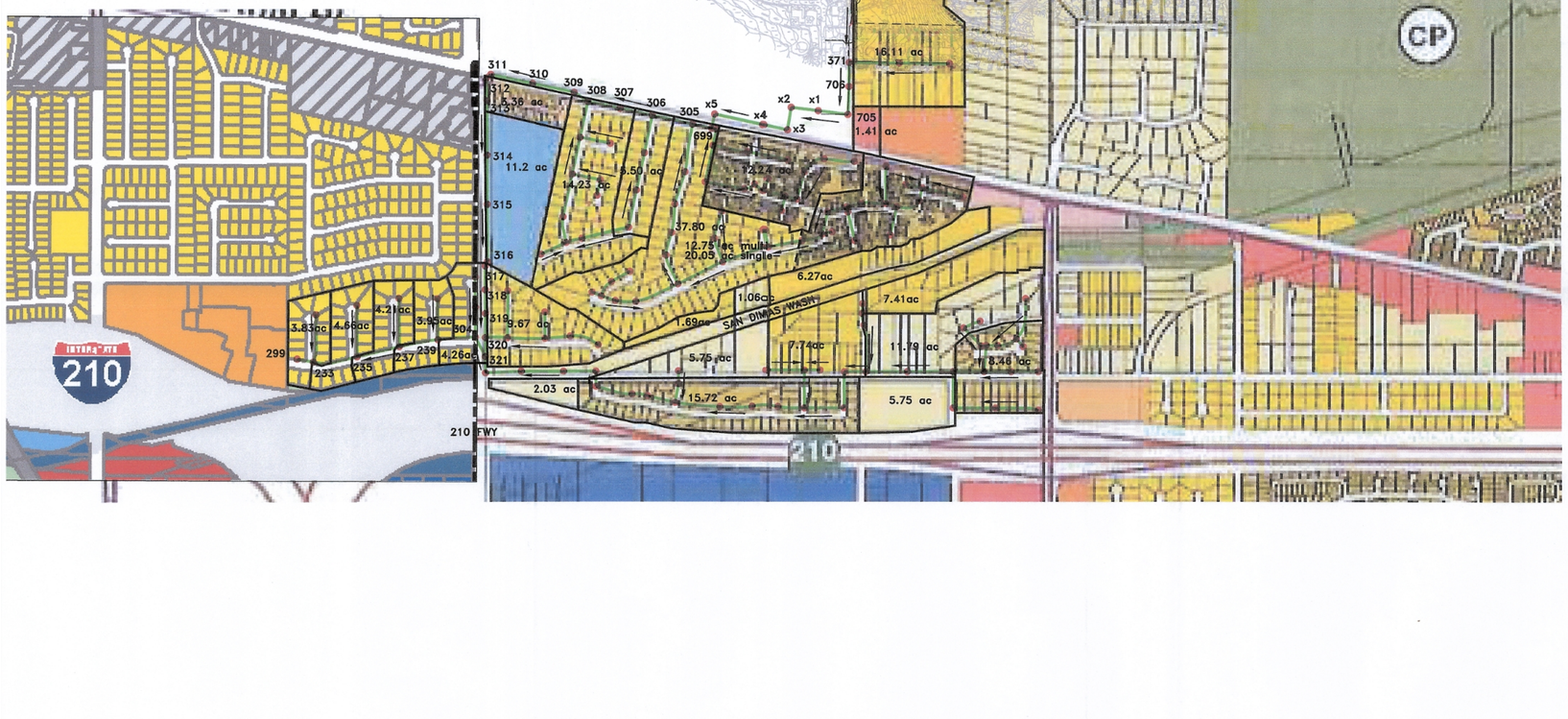
Appendix 5

LAND USE MAP

CALACULATED SEWER COEFFICIENTS	RESIDENTIAL	DENSITY
0.0001	SINGLE FAMILY VERY LOW ESTATE	(0 - 0.2) @ A. 5 AC MIN B. 10 AC MIN C. 15 AC MIN
0.0016	SINGLE FAMILY VERY LOW	(0.2 - 3)
0.0032	SINGLE FAMILY LOW	(3.1 - 6)
0.0043	LOW / MEDIUM	(6.1 - 8)
0.0065	MEDIUM	(8.1 - 12)
	HIGH	(12.1 - 16)
	MOBILE HOME	

Residential calculations shall be computed from the low end of each category. Increases in density (within the range) may be allocated for additional amenities and participation in city programs designed for the public good.

	COMMERCIAL
	OFFICE / PROFESSIONAL
	INDUSTRIAL
	PUBLIC / SEMI-PUBLIC
	OPEN SPACE
	PARK
	CP-COMMUNITY
	RP-REGIONAL
	NP-NEIGHBORHOOD
(I)	INDUSTRIAL



LEGEND

- SEWER / LAND USE BOUNDARY
- EXISTING SANITARY SEWER
- EXISTING MANHOLE
- DIRECTION OF FLOW
- 0.45ac ACRES WITHIN SEWER / LAND USE BOUNDARY

NORTH

SCALE: 1"=500'

REVISED: JUNE 12, 2009

FUSCOE ENGINEERING
16795 Von Karman, Suite 100
Irvine, California 92606
tel 949.474.1960 • fax 949.474.5315
www.fuscoe.com

CANYON OAKS
TENTATIVE TRACT 70583
SANITARY SEWER STUDY
CATARACT AVENUE TO
LA COUNTY SANITATION DISTRICT LONE HILL AVENUE TRUNK SEWER

SHEET 1 of 1

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