INTRODUCTION

This planning report describes and quantifies the physical character of the built environment in the City of Goleta. It examines the character of residential areas by measuring the dwelling densities that are present in the city. The general physical character of the city is described in terms of the intensity of buildings.

Density is examined in terms of both population and housing in the City of Goleta.† The report supplements several other General Plan background reports that address various aspects of housing supply and conditions and characteristics of population in the City of Goleta.

After describing the methodology used, the report analyzes the population densities of the city as reported in the 2000 Census of Population. This section of the report compares the population density of the City of Goleta with other cities on the central coast of California located in the Counties of Santa Barbara, San Luis Obispo, and Ventura. Population density is also described within the city by census block.

The section of the report following population density describes housing densities. Housing densities are analyzed on a gross basis, a net basis and in terms of average lot size. Gross density is calculated by dividing the number of housing units in an area by all land in a geographic area, in this case census blocks. This includes undeveloped lots, lots used for other purposes and right of ways. Net density is calculated on the basis of dividing housing units only by the area actually used by those units—the number of residential units in an area divided by the acreage of all residentially developed lots in that area.

A third section of the report describes building intensities for all types of buildings, using the most common method of measuring such intensity, Floor Area Ratio. Since floor area ratios are only estimated on the basis of aerial photography, this section of the report is more generalized than the other sections.

† While it may seem duplicative to describe density in terms of both housing and population, there have been court decisions that have interpreted state law to require both.
The data summarized in this report will not only support the general plan process, but will also provide a wealth of information for current planning activities. This data will be particularly useful in addressing both long range and current planning issues related to neighborhood quality.

**PLANNING IMPLICATIONS**

Building intensities and densities defines the physical characteristics of a community and its neighborhoods. Lower intensities create a very different physical environmental and character than higher intensities. In particular, population and housing densities define the physical characteristics of a community’s residential areas and neighborhoods. The physical intensity of buildings also affects the visual and physical character of the neighborhoods, and industrial and commercial areas.

While many design issues can affect the physical quality of an area, the intensity of buildings is one of the more powerful influences over the character of an area. Lower intensities (usually measured as the floor area of buildings divided by lot area [Floor Area Ratio or FAR]) create an open or less intense physical environment. As the FAR increases, the built environment becomes more and more dominant over other physical characteristic of the area or site. The intensity of such development gives a place much of what may be called its “sense of place” with which people identify.

Building intensities and densities can provide a measurement of “demand” for public services and the market for private goods and services relative to the area of the city. For example, a city or area with higher densities generates more traffic, requires more police services, more park land, etc. per acre of land than lower density areas. Conversely, higher densities can also reduce the demand for some public services on a per unit basis. The effect of densities on traffic is particularly important. While lower densities require people to travel greater distances between home, work, shopping and elsewhere, higher densities concentrate traffic in fewer locations.

However, the effect of density on service demand per housing unit is complex and varies by the location of such density. It is fairly well documented in planning literature that density can reduce traffic generation per unit (but not per acre) if the density is well located relative to commercial services, employment opportunities, public services and full service transit. Poorly located density would not achieve these benefits and could even increase the overall need for transportation investments. Other services tend to be even more variable in this regard by location, as well as type, of housing. Dense family housing may

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2Similarly higher density areas can attract businesses to serve the more concentrated market provided by higher densities.
require more parks due to the lack of individual yards. Apartment complexes composed of young adults may increase police service needs, while apartment complexes of seniors may reduce it.

An important step in any planning program is to determine the capacity of a community to accommodate residential growth. By specifying allowable densities in various parts of the city, a land use plan and its zoning ordinance sets the ultimate limits for residential growth or, expressed in different terms, it sets the envelope within which growth can occur. The existing densities express the amount of residential development that currently exists within that envelop. The difference between existing densities and planned densities then is the capacity that the plan allows for growth above what exists today. This analysis describes the current baseline of residential development in the City.

The accompanying photographs illustrate the range of densities found in the city, from six units per acre (first photo), 12 units per acre (second photo) and over thirty units.
METHODOLOGY AND DATA LIMITATION

This report blends information from three separate sources; the 2000 Census of Population, the Santa Barbara Assessor’s Office, and original field work by City of Goleta personnel. Each data source develops its information for different purposes using different methodologies and therefore are not necessarily consistent in the data each reports. The US Census of Population reports the number of people in an area and initially defines the geography used here to calculate densities—generally census blocks. Data limitations regarding US census information is described in the background report on Characteristics of Population.

The assessor maintains a complete database of properties in the city for tax purposes. While this database does include a classification of use, it does not record the number of housing units on the property in digital format. In October of 2003 City personnel conducted a survey of housing units in the City of Goleta. This survey consisted of a “windshield survey” of each single family unit and apartment structure in the city. This survey counted housing units, inventoried basic characteristics such as architectural styles, material of construction, number of stories and rated the condition of each structures external walls, roof and yard. Methodologies associated with that effort is described in the background report on housing conditions.

The City survey of housing units counted 5,388 units in single family structures and 3,366 multiple family units in 270 properties. Added to that number in this report are 622 mobile homes and 2,167 condominiums, assisted care units, and other residences as derived from assessor records. This gives a total of 11,493 units in the city by city count compared to 10,780 recorded by estimate of the city in the census in 2000.

Methodology to estimate population density in the city is from census information. Where census blocks are entirely in the city, the population reported directly by the census is divided by the entire area of the block to derive the gross population density of each block. An estimate of the number of houses is used in those cases where the census block is divided by the city limits and only the area of the block in the city is used. Since gross density includes all area in the block, densities are lower in those areas with other uses than in blocks that consist primarily of housing uses. Since this methodology is based on the US Census, this part of the analysis is for the year 2000.

Gross housing densities are calculated in the same manner as population densities, except that the housing units counted in the year 2003 was used instead of the census count of population. Net densities are calculated in a more involved process. With the use of geographic information systems the area of
each lot with a housing unit is calculated. Open space areas in condominium developments and newer single family developments are included in the net area in order to maintain consistency between these developments and older single family uses. The area of all these lots was added for each census block along with the number of units for each block. The number of units was divided by the area to determine the net residential densities.

Since densities are different for single family uses than multiple family uses, another approach was included in this methodology to describe the density differences among single family neighborhoods. In these areas this analysis employs the common technique of expressing density in terms of average lot size rather than the number of units per acre. Average lot sizes were calculated by averaging (arithmetically) the average lot size for just single family lots.

In some cases the census blocks contain a concentration of housing with large expanses of other uses. In these cases the density is both understated relative to other areas and, more importantly, gives the misleading impression of housing being present over large areas of the city where none is actually found. Consequently some census blocks were adjusted to more appropriately reflect actual housing patterns.

Since there is no established digitized source of information giving floor area for buildings an estimating procedure is here.³ The footprint of every building in the city (as of August 2003) is recorded from aerial photography in GIS. The lot coverage of these buildings is then calculated by the Geographical Information System (GIS) for each building. The number of stories for each building was then determined as part of the housing windshield survey. The FAR can then be calculated based on this estimate for each lot in the city. For the purposes of this report, FAR is presented on an estimated net basis.

Since the information related to floor area ratios in this report is generated by estimating floor space from aerial photography it is very generalized. While this procedure is useful in illustrating general patterns of building intensities, it should not be relied on for detailed planning related to specific sites in the city.⁴

³ Assessor records given to the city on property characteristics does not include this information.
⁴ The accuracy of this methodology is related to the size of buildings. The error factor is higher for smaller single family structures where it tends to over estimate than for larger commercial structures.
**POPULATION DENSITIES**

**Goleta Compared to Other Areas**

The average population density for the entire city is 5.7 people per acre or 3,665 people per square mile. Densities in this range are generally considered “moderate,” “urban” or even “high density” for broad areas.5

Figure 1 compares the gross density of population per square mile of the City of Goleta in 2000 with other Central Coast cities. The average for all cities is reported two ways in the figure; an arithmetic average of all the cities and a weighted average, the sum of units for all cities divided by the sum of the area of all cities. The City of Goleta has about average gross densities calculated either way.

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Gross Population Densities by Census Block

Map 1 presents the population density of the city by census block. This calculation is by gross acre—the population reported by the US Census for each block divided by the total number of acres in the entire block—including streets and other uses.

Population densities vary from a high concentration of 64 in a few smaller blocks in Old Town, to no people in some blocks that are composed entirely of other uses. Blocks with higher concentrations of multiple family uses have, as would be expected, higher population densities in the range of 28 to 64 people per acre. Population densities in most single family areas range from four to 16 people per acre, with neighborhoods in the Northeast part of the city being somewhat less dense than in other parts of the city.

Map 1

City of Goleta, California
Population Density by Adjusted Census Block

Legend
Population Density by Block
Population Per Acre

January, 2004
HOUSING DENSITIES

There are three ways that residential densities are compared. Gross densities and net density looks at the concentration of housing from two perspectives. Gross density examines the concentration of housing as a part of an overall use pattern in the city, irrespective of whether the housing units themselves are built closely together. Net densities on the other hand measure the intensity of residential development itself, irrespective of the presence of other uses. Average lot sizes focus on how intensely single family areas area built without considering multiple family structures.

Gross Housing Densities

Gross housing densities are similar to population densities described above. While single family neighborhoods average less than 7 units per gross acre, multiple family densities can reach 47 units per acre.

Map 2

City of Goleta, California
Gross Housing Density by Adjusted Census Block
2000

Legend
City Limits
Density by Blocks
Gross Density by Block
0
0 - 3
3 - 6
6 - 12
12 - 20
>20

January, 2004
**Net Housing Densities**

Net housing densities are calculated on the basis of counting only the area of lots that have housing units on them (this includes associated open space parcels in some newer single family and condominium developments). The Map 3 shows the net densities by block similar to the previous maps. As shown by this map there is some variation by area of the city among single family neighborhoods. The Northeastern area has densities under 6 units per acre, while densities of higher than 6 units are more common in other parts of the city. Multiple family densities in Old Town and off Entrance Drive are in the 16 to 47 unit range. Moderately high densities are found near the higher densities areas in Old Town and near Calle Real in the north east.

The overall average net density of the city is approximately 7.5 units per acre.

**Map 3**

City of Goleta, California
Net Housing Density by Adjusted Census Block 2000

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Legend
City Limits
Density by Block
Net Density (Units Per Acre)
0
0 - 3
3 - 6
6 - 12
12 - 20
20 - 47

January, 2004
Average Single Family Lot Sizes.

Map 4 provides a more detailed look at the density of single family neighborhoods. Here density is measured by average lot size for single family neighborhoods. In contrast to Map 3, Map 4 does not include any open space area with the lot identified as a single family lot. Consequently, some newer developments that incorporate common space with very small lots into their design are represented at more intensity on Map 4 than on Map 3.

As noted on Table 1 and Figure 2, lower average lot sizes tend to be found in the Northeast while smaller lots are found near Old Town where the oldest developments are found. Over half of the lots in the western part of Goleta are in the 6,500 to 7,500 square foot range, while less than 12% of the 2,319 lots fall within this range in the northeast and nearly half the northeast lots fall in the 7,500 9,000 square foot range. These differences tend to create different neighborhood character between these areas of the community.
**Table 1**

<table>
<thead>
<tr>
<th>Lot Size in Sq. Ft.</th>
<th>Northeast</th>
<th>Northwest</th>
<th>Southeast</th>
<th>Southwest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;6,500</td>
<td>112</td>
<td>304</td>
<td>101</td>
<td>161</td>
<td>678</td>
</tr>
<tr>
<td>6,500-7,500</td>
<td>257</td>
<td>943</td>
<td>79</td>
<td>480</td>
<td>1,759</td>
</tr>
<tr>
<td>7,500-9,000</td>
<td>1,113</td>
<td>412</td>
<td>22</td>
<td>161</td>
<td>1,708</td>
</tr>
<tr>
<td>&gt;9,000</td>
<td>837</td>
<td>199</td>
<td>20</td>
<td>71</td>
<td>1,127</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,319</strong></td>
<td><strong>1,858</strong></td>
<td><strong>222</strong></td>
<td><strong>873</strong></td>
<td><strong>5,272</strong></td>
</tr>
</tbody>
</table>

**Percent of Area**

<table>
<thead>
<tr>
<th>Lot Size in Sq. Ft.</th>
<th>Northeast</th>
<th>Northwest</th>
<th>Southeast</th>
<th>Southwest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;6,500</td>
<td>4.8%</td>
<td>16.4%</td>
<td>45.5%</td>
<td>18.4%</td>
<td>12.9%</td>
</tr>
<tr>
<td>6,500-7,500</td>
<td>11.1%</td>
<td>50.8%</td>
<td>35.6%</td>
<td>55.0%</td>
<td>33.4%</td>
</tr>
<tr>
<td>7,500-9,000</td>
<td>48.0%</td>
<td>22.2%</td>
<td>9.9%</td>
<td>18.4%</td>
<td>32.4%</td>
</tr>
<tr>
<td>&gt;9,000</td>
<td>36.1%</td>
<td>10.7%</td>
<td>9.0%</td>
<td>8.1%</td>
<td>21.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

**Percent by Lot Size**

<table>
<thead>
<tr>
<th>Lot Size in Sq. Ft.</th>
<th>Northeast</th>
<th>Northwest</th>
<th>Southeast</th>
<th>Southwest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;6,500</td>
<td>16.5%</td>
<td>44.8%</td>
<td>14.9%</td>
<td>23.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>6,500-7,500</td>
<td>14.6%</td>
<td>53.6%</td>
<td>4.5%</td>
<td>27.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>7,500-9,000</td>
<td>65.2%</td>
<td>24.1%</td>
<td>1.3%</td>
<td>9.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>&gt;9,000</td>
<td>74.3%</td>
<td>17.7%</td>
<td>1.8%</td>
<td>6.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44.0%</strong></td>
<td><strong>35.2%</strong></td>
<td><strong>4.2%</strong></td>
<td><strong>16.6%</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

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**Figure 2**

*City of Goleta, California*

**Distribution of Single Family Lots by Size and Area**

*2003*
BUILDING INTENSITIES

Location of Buildings

Map 5 presents the developed pattern of the City of Goleta. It maps each building as of the summer of 2003. As illustrated, the residential areas are characterized by an organized and compact pattern of smaller single family dwellings. Larger structures interspersed through these areas are either churches or schools. This pattern dominates most of the Northwest, Southwest and Northeast areas of the city. The developed pattern in the Old Town area in the Southeast is somewhat more compact. In sharp contrast, the development pattern in the south central part of the city consists of larger commercial structures. Large open areas are found in the north central area (Bishop Ranch and Los Carneros Park) and the most southwestern part of the city (Ellwood Mesa and Sandpiper Golf Course).

Map 5

City of Goleta, California
Building Pattern
2000

Legend

Buildings
City_Limits
Floor Area Ratio

Map 6 portrays the development pattern by net Floor Area Ratio (FAR). Net Floor Area Ratios measures the intensity of development relative to the size of each developed site—excluding undeveloped or minimally developed parcels. This methodology treats a few newer single family dwellings as having more intensity of development. These developments placed each dwelling on a relatively small lot, reserving the intervening area as common open space. This pattern is particularly characteristic of two developments shown on the map as intensely developed along North Fairview.

It is important to note that, in general, the intensity of development along the central Hollister business park area is similar to most of the residential areas. The larger size of commercial buildings in this area tends to be offset by the buildings being more widely spaced in a less intensive campus-like atmosphere.

There are two pronounced nodes of higher density development using this methodology -- the multiple family area of Mathilda/Ellwood Beach Drive in the Southwest and in Old Town between Fairview and Kellogg. The map also shows
a spot pattern of higher FARS in residential areas—generally illustrating the dispersed pattern of two story structures. Some neighborhoods, such as the one in the center of the map along Cathedral Oaks, standout as having a high proportion of two-story structures. In addition, a couple of pockets of multiple family structures, such as the multifamily area north of Cathedral Oaks in the Northwest, also standout as being of higher density.

What this map does not adequately show is the effect of parking lots on the intensity of development. While the two larger shopping areas, Camino Real and Calle Real, are shown has having relatively low intensities of development as measured by FAR, extensive parking areas dominate these areas, giving them the feeling of being more intensely developed than other areas. In contrast extensive landscaping reduces the impact of parking lots in the business park areas.

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7 While the map accurately portrays the overall pattern of building intensity, care should be used in applying it to particular sites or blocks since it was developed on the basis of estimates from aerial photography.
Representative Building Intensities

- Shopping Areas
- Single Family Area
- Newer Single Family
- Old Town
- Moderate Intensity Multiple Family

Business Park Areas
PLANNING IMPLICATIONS FOR GOLETA

The built character of the city largely consists of compact single family residential areas of moderate density, a central area with larger but lower intensity commercial and industrial uses, and more intensely developed areas in Old Town and around Entrance Drive in the Southwestern area of the city.

The City of Goleta has a variety of housing densities. Higher densities are focused in two areas, Old Town and in the area served by Entrance Drive in the southwestern part of the city. Since housing tends to be more concentrated in these areas, it would be expected that these areas would also tend to focus demand for public services. However, both areas contain the smallest amount of neighborhood park space in the entire city. Both are also somewhat removed from the more significant commercial centers in the community, although Old Town does contain some limited services.

Moderate densities are found scattered in several areas, just north of Calle Real in the Northeast (in close proximity to commercial services), in four mobile home parks (all located well away from commercial services), in the most extreme north eastern area of the city (quite distant from services), and in areas near Old Town. The moderate density area south and west of the Camino Real Marketplace is fairly well situated relative to both commercial and public services.

Single family neighborhoods in most of the city tend to be similar in densities, although the residential densities in the northeastern part of the city do tend to have larger lots than are found in other areas. The pattern of single family development tends to be orderly and compact, and there is an absence of any low density sprawl. Single family residential neighborhoods have moderate single family densities. Only a few areas have less than three units per net density. Residential blocks are closely grouped with consistent densities.

The built character of the city largely consists of compact single family residential areas of moderate density, a central area with larger but lower intensity commercial and industrial uses with relatively more intensely developed areas in Old Town and around Entrance Drive in the Southwestern area of the city.

Densities are often considered an important factor in transportation system planning since densities have a substantial influence on the amount of distance people need to travel for work, goods, services, entertainment, recreation, etc. In a recent Brookings Policy Brief, 8 noted planning expert Anthony Downs discussed appropriate densities for communities near the periphery of an urban

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area (such as Goleta) at being at least 3,500 people per square or above 4.38 net units per acre. Goleta has gross densities well above the recommendation with net densities of 7.5 units per acre. Goleta’s gross densities of 3,665 are just above his recommended level.9

9 The reason that the city is well above the recommendation for net density and just above it for gross density probably is that Goleta has more commercial and industrial areas than most communities on a periphery and such uses tend to lower gross densities where net densities that count just residential areas are higher