

Memorandum

To: Konnie Dobrev
EPD Solutions, Inc.

From: Dr. Bravish Mallavarapu, Director and Senior Economist

Date: October 10, 2019

Project: Persons per Household Evaluation by Residential Unit Types
The Bowery, Santa Ana, CA

SRHA Job # 1373

Per your request, this memorandum presents the estimated household-size by residential product type, comparable to the proposed multifamily development for the Bowery project in Santa Ana, California. Ratios for the number of persons per household have been developed by unit size (number of bedrooms), including studio, one-bedroom, two-bedroom and three-bedroom apartments. These ratios have been developed from the Census American Community Survey (ACS) 2017 1-year Public Use Microdata Sample (PUMS) for a study area that includes multifamily developments comparable to the proposed project. The results are summarized in Table 1.

Geographies for Analysis

Census data from the 2017 ACS PUMS one-year estimates has been assembled and analyzed for a study area composed of Santa Ana and select cities neighboring Santa Ana with developments comparable to the proposed project. As shown in Figure 1, the ACS data is obtained by the current 2010 Public Use Microdata Area (PUMA) GEOID definitions corresponding to the cities and communities, as follows – Santa Ana (0605916 and 0605917), Tustin, North Tustin and unincorporated county (605905), Western portion of Irvine (605904); Costa Mesa and Fountain Valley (605918).

Methodology

Data for the defined study area is analyzed as cross-tabulations identifying the household segments comparable to the demand profile for the proposed project, including unit asking rents of \$2,000 and over for the development, based on the project information provided. Population and household numbers are developed using microdata analytical methods for household segments in the market area using the following schema:

- Rental households
 - In multifamily units (5 or more units in structure)
 - By the number of bedrooms (studio, one, two and three bedrooms)
 - Paying asking rents over \$2,000 per month

The above demand segmentation, per our discussions, provides a comparable set of data points for the cross-tabulation analysis for the Bowery.

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Household Size Estimates for Market Area Demand Segment

We analyzed the ACS microdata for the above study area and have observed that the sample size for the Santa Ana PUMAs are very small for households spending \$2,000 or more on monthly rents. The share of such households is only 5 percent of similar households in the entire study area, compared to an overall 24 percent share across households of all rent categories. In our opinion, the small sample size of the Santa Ana PUMAs is likely to increase the margin of error and skew the persons per household calculation. Consequently, we have defined a **'Market Area'** comprising all the PUMAs listed above but not including those in Santa Ana.

Market Area persons per household (PPH) ratio estimates by the number of bedrooms and asking rent range, based on the segmentation strategy, is summarized below in Table 1.

For renter households paying \$2,000 and over per month in asking rents, household sizes vary from around 1.17 PPH in studios, 1.50 PPH in one-bedroom units, 2.73 PPH in two-bedroom units and 3.38 PPH in three-bedroom units for a combined weighted average of around 2.45 PPH.

Table 1
Persons per Household Estimates for Rental Multifamily Households: 2016
Santa Ana Market Area

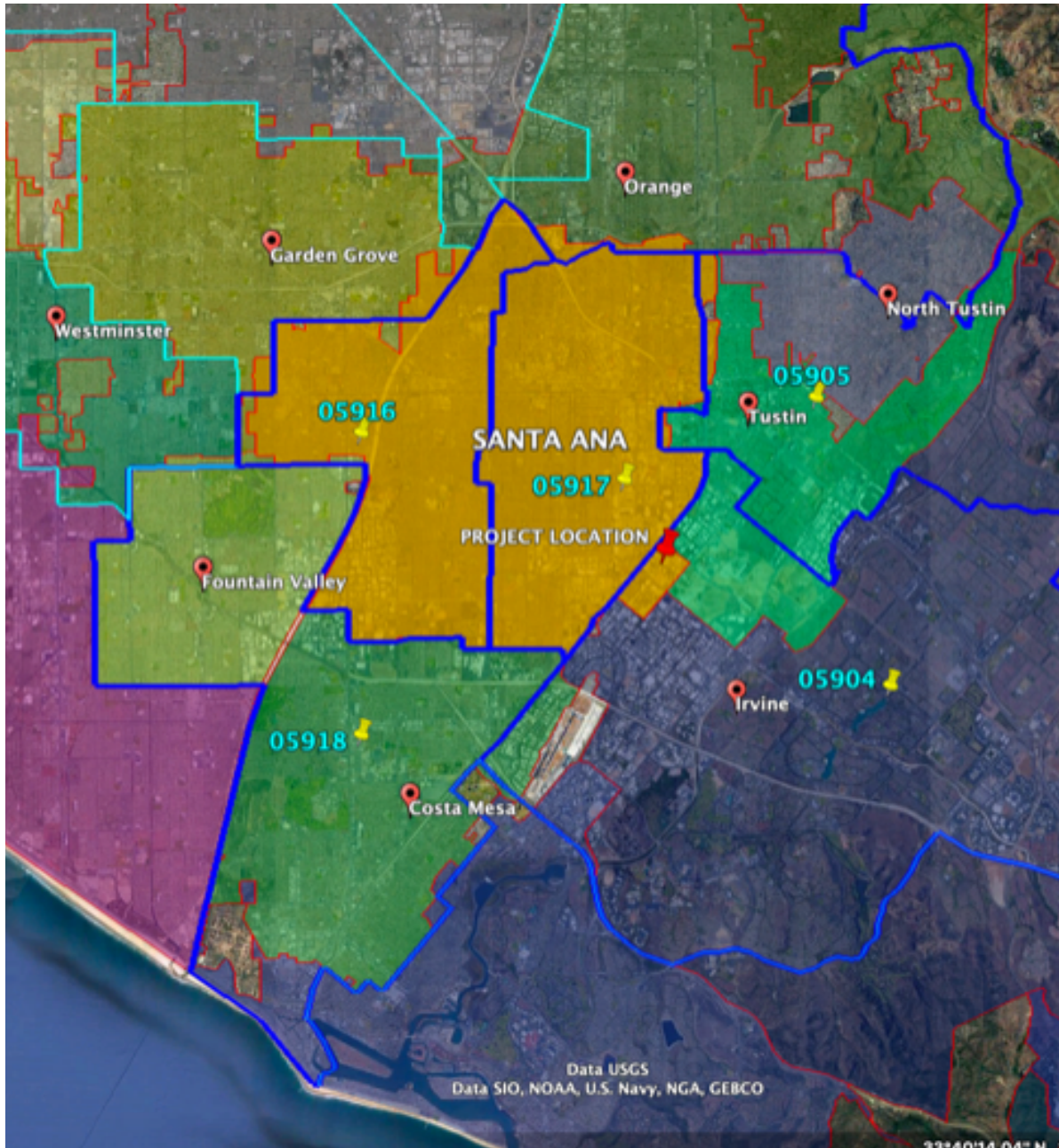
ASKING RENT RANGE	Studio	1 Bedroom	2 Bedrooms	3 Bedrooms	TOTAL
\$2,000 and Over					
Market Area ¹	1.17	1.50	2.73	3.38	2.45

1. Market Area defined by Tustin, North Tustin and unincorporated county (605905), Western portion of Irvine (605904); Costa Mesa and Fountain Valley (605918).

Source: Stanley R. Hoffman Associates, Inc.
Census American Community Survey 2017, Public Use Microdata Sample (PUMS) 1-year Estimates.

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Figure 1
Census Public Use Microdata Areas and Corresponding Cities
Santa Ana Study Area



Source: Stanley R. Hoffman Associates, Inc.
US Census Bureau, Public Use Microdata Areas and Census Places, Tiger Shapefiles; Google Earth