

APPENDIX E:

DATA METHODOLOGY MEMO

This page intentionally left blank



MEMORANDUM

DATE: January 2, 2019

To: Christopher Koontz, City of Long Beach

FROM: Ashley Davis and Arthur Black, LSA

SUBJECT: Methodology for Calculating Growth in Socioeconomic Data Associated with the Long Beach General Plan Land Use Element

Travel demand generated by demographic elements of a city such as population, housing units, and employment have an effect on mobility, air quality, and other aspects of the environment. The Long Beach General Plan Land Use Element affects the distribution of the future quantity of these elements throughout Long Beach. This memorandum describes how the quantity of future growth in demographic data was calculated and how this growth was distributed throughout the land uses and neighborhoods of Long Beach.

Quantity of Growth

Although the City of Long Beach (City) provides some input data for the demographic projection process, ultimately the City's plans must accommodate demographic projections provided by State and regional planning agencies. The California State Department of Finance and California Employment Development Department prepare projections of population and employment growth for the State and its regions. For the Southern California region, the Metropolitan Planning Organization (MPO) is the Southern California Association of Governments (SCAG). SCAG uses the data provided by the State and projects population and employment growth for subregions and jurisdictions as part of the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) process. For the 2016 RTP/SCS, SCAG forecasts a population growth of 18,230 new residents and employment growth of 28,511 new jobs in Long Beach by 2040.

Projecting housing needs follows a similar process, whereby the State (i.e., the Department of Housing and Community Development) provides regional housing projections to the region (i.e., SCAG), which in turn projects housing growth for local jurisdictions. Unlike other data projections, rather than being simply informative, the housing allocation provided to jurisdictions through the Regional Housing Needs Assessment (RHNA) process is enforceable through the Housing Accountability Act. As an outcome of the most recent RHNA process, the City is required to plan for 7,048 new dwelling units to accommodate future population growth. However, due to insufficient construction of new housing units in the past (within Long Beach and the region), Long Beach has many residential areas where housing units are overcrowded. The City has engaged in an Assessment of Fair Housing with the United States Department of Housing and Urban Development.

As an outcome of this assessment, it was determined that the City has anticipated housing needs for 21,476 housing units to address existing housing needs. In total, Long Beach requires 28,524 housing units to address future (7,048) and existing (21,476) housing needs. It is this number of units, which

complies with both the State and federal assessments, that must be accommodated in City planning documents.

As a result of the processes described above, the following quantities of demographic data growth are anticipated in the proposed Land Use Element:

- **Population:** 18,230 new residents, for a total of 484,485 by 2040
- **Housing:** 28,524 new dwelling units, for a total of 192,318 by 2040
- **Employment:** 28,511 new jobs anticipated, for a total of 181,665 by 2040

Distribution of Growth

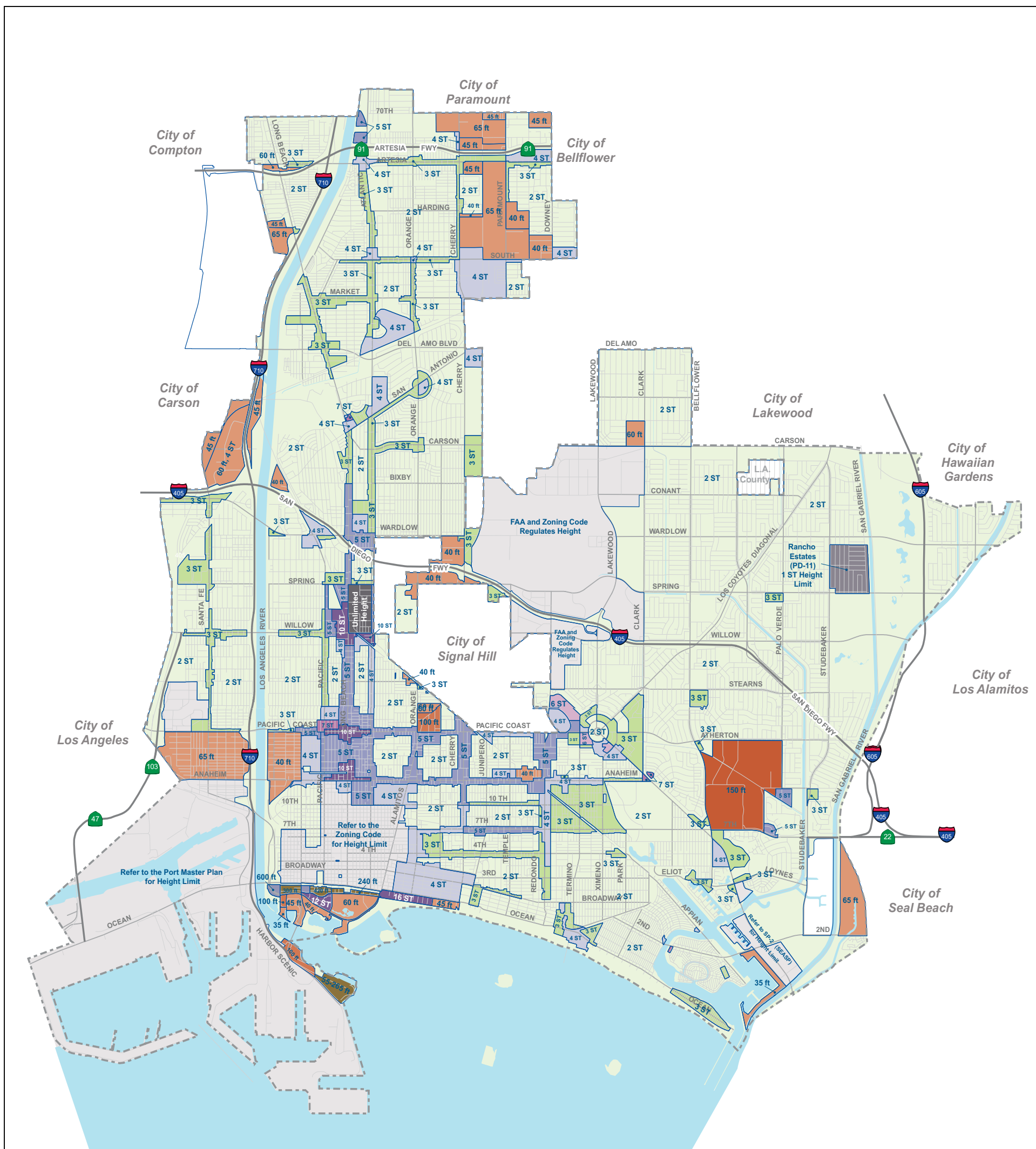
Current trends related to overcrowding indicate that population growth is likely to occur whether or not it is planned for in Long Beach. However, land use designations outlined in the General Plan Land Use Element have some effect on the location of housing and places of employment. To assess the effect of the proposed Land Use Element, the citywide quantity of new demographic data described above further needs to be distributed across the city.

In a departure from the existing Land Use Element, which segregates property with traditional single-use land use designations, the updated Land Use Element establishes 14 PlaceTypes that would divide Long Beach into district neighborhoods, each with their own sense of character and place. PlaceTypes would allow for a combination of land uses at varying densities and intensities to allow for greater flexibility and a mix of compatible land uses within these areas. Figure 1 displays the proposed locations of PlaceTypes.

Under the proposed Land Use Element, approximately 13 percent of the city is proposed to result in concentrated land use changes as compared to existing conditions. These areas are referred to “Major Areas of Change” throughout the proposed Land Use Element. The Major Areas of Change signify areas where demographic growth is anticipated to be most profound; however, areas that are not designated as “Major Areas of Change” and/or are not anticipated to result in changes in existing land use patterns may also experience demographic growth. Figure 2 displays the Major Areas of Change.

Existing Land Uses

Existing land use patterns were considered when determining how future demographic growth was likely to be distributed throughout Long Beach. The consulting firm MIG categorized the existing land use types consistent with the character of the new PlaceTypes and determined the existing distribution of demographic data within the PlaceTypes. Table A shows the existing distribution of demographic data for 2012, the base year of the 2016 RTP/SCS.



Legend

Maximum Building Heights

- 2 Stories
- 3 Stories
- 4 Stories
- 5 Stories
- 6 Stories
- 7 Stories
- 10-16 Stories
- 35 - 75 Feet
- 80 - 100 Feet
- 135 - 150 Feet
- 240 Feet and Over

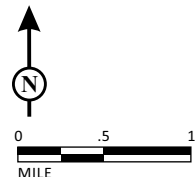
Please refer to height number for maximum building height

Building Height Boundary

40 FT Building Height (Feet and/or Stories)

4 ST

LSA



SOURCE: Proposed Land Use Element, City of Long Beach, March 2018

I:\CLB1804\G\Chapter 3\PlaceType Height Limitations.cdr (10/12/2018)

FIGURE 1

This page intentionally left blank

Areas of Change Description

- 1 More Open Space
- 2 Convert to Neo-Industrial Uses
- 3 Promote Regional-Serving Uses
- 4 Transition from Industrial to Commercial Uses
- 5 Promote Transit-Oriented Development Uses
- 6 Continue Downtown Development
- 7 Promote Infill and Redevelopment to Support Transit
- 8 Redevelop to Highest and Best Use



Legend

PlaceTypes

OS - Open Space

Neighborhoods

N - Founding and Contemporary Neighborhood

MFR -L - Multi-Family Residential - Low

MFR -M - Multi-Family Residential - Moderate

Mixed Use

NSC-L - Neighborhood-Serving Center or Corridor - Low

NSC-M - Neighborhood-Serving Center or Corridor - Moderate

TOD-L - Transit-Oriented Development - Low

TOD-M - Transit-Oriented Development - Moderate

Employment

CC - Community Commercial

I - Industrial

NI - Neo-Industrial

Unique

RSF - Regional-Serving Facility

DT - Downtown

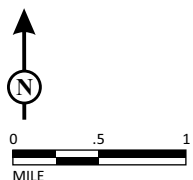
WF - Waterfront

Light Rail Transit



Metro Blue Line Station and 1/4 Mile Radius

LSA



SOURCE: Proposed Land Use Element, City of Long Beach, March 2018

I:\CLB1804\G\Chapter 3\Major Areas of Change.cdr (10/12/2018)

FIGURE 2

This page intentionally left blank

Table A: Existing (2012) Demographic Data Distribution

PlaceType	Housing Units	Population	Employment
Open Space	0	0	11,993
Founding and Contemporary Neighborhood	104,019	302,902	39,075
Multi-Family – Low	7,326	17,734	288
Multi-Family – Moderate	12,124	32,132	0
Neighborhood Serving Centers and Corridors – Low	5,216	14,956	5,433
Neighborhood Serving Centers and Corridors – Moderate	9,538	25,711	6,149
Community Commercial	2,922	8,970	12,670
Transit-Oriented Development – Low	2,741	10,255	3,459
Transit-Oriented Development – Moderate	1,955	7,347	2,467
Neo-Industrial	1,384	5,060	2,580
Industrial	958	3,496	7,193
Downtown	11,768	27,112	16,660
Waterfront	2,843	4,821	8,390
Regional Serving Facility	1,000	5,759	36,797
TOTAL	163,794	466,255	153,154

Sources: MIG and Southern California Association of Governments (SCAG).

Previously Analyzed and Approved Growth

Many of the planned changes in PlaceType have already been analyzed through various Specific Plans (e.g., Downtown Plan, Midtown Specific Plan, Douglas Park Rezone Project, and Southeast Area Specific Plan) that are being incorporated into the proposed Land Use Element. Additionally, City staff has reviewed discrete project applications. These applications provided data regarding the geographic location, size, and PlaceType for the specific approved and anticipated projects, but also trends indicating the potential for future development applications. The previously approved Specific Plans, previously approved development projects, and data on development trends greatly informed the distribution of demographic growth.

Housing

The Specific Plans indicated that 17.5 percent of housing growth would occur in the Downtown PlaceType, 12.7 percent of housing growth would occur in the Transit-Oriented Development areas of the Midtown Specific Plan, and 9.1 percent of housing growth would occur in the Southeast Area Specific Plan. Cumulatively, these previous plans allocated 39.3 percent of the anticipated future housing.

The remaining housing was distributed across remaining PlaceTypes with potential for residential development. Development applications and trends indicate that 7.7 percent of housing growth (a combination of accessory dwelling units and single-family infill development) is likely to occur in Founding and Contemporary Neighborhoods. The allocation of the remaining 53 percent of housing growth was weighted based on the density levels proposed in the Land Use Element. Specifically, Moderate Density Transit-Oriented Development may be denser than Low Density Transit-Oriented Development, which is denser than Moderate Density Multi-Family or Neighborhood Serving Centers, which are denser than Low Density Multi-Family or Neighborhood Serving Centers. PlaceTypes such as Waterfront and Neo-Industrial have some residential development today and

may see some growth by 2040. Table B shows the resulting distribution of the anticipated 28,524 new housing units.

Table B: Demographic Growth Distribution and Future (2040) Demographic Data

PlaceType	Housing Units			Population			Employment		
	2012	2040	Δ	2012	2040	Δ	2012	2040	Δ
Open Space	0	0	0	0	0	0	11,993	12,737	744
Founding and Contemporary Neighborhood	104,019	106,215	2,196	302,902	304,305	1,403	39,075	39,487	412
Multi-Family – Low	7,326	8,474	1,148	17,734	18,468	734	288	306	18
Multi-Family – Moderate	12,124	14,419	2,295	32,132	33,599	1,467	0	30	30
Neighborhood Serving Centers and Corridors – Low	5,216	6,364	1,148	14,956	15,690	734	5,433	5,770	337
Neighborhood Serving Centers and Corridors – Moderate	9,538	11,833	2,295	25,711	27,178	1,467	6,149	6,531	382
Community Commercial	2,922	2,922	0	8,970	8,970	0	12,670	13,456	786
Transit-Oriented Development – Low	2,741	7,995	5,254	10,255	13,613	3,358	3,459	3,674	215
Transit-Oriented Development – Moderate	1,955	8,355	6,400	7,347	11,437	4,090	2,467	2,620	153
Neo-Industrial	1,384	1,484	100	5,060	5,124	64	2,580	2,937	357
Industrial	958	958	0	3,496	3,496	0	7,193	7,442	249
Downtown	11,768	16,760	4,992	27,112	30,302	3,190	16,660	21,860	5,200
Waterfront	2,843	2,943	100	4,821	4,885	64	8,390	8,911	521
Regional Serving Facility	1,000	3,596	2,596	5,759	7,418	1,659	36,797	55,904	19,107
TOTAL	163,794	192,318	28,524	466,255	484,485	18,230	153,154	181,665	28,511

Sources: MIG, Southern California Association of Governments (SCAG), and City of Long Beach Downtown Plan, Midtown Specific Plan,

Note: Future forecasted values are estimates and may not be exact where Specific Plan or Traffic Analysis Zone boundaries overlap multiple PlaceTypes.

Douglas Park Rezone Project, and Southeast Area Specific Plan.

Δ = change

Population

As new housing units are constructed in an area with existing overcrowded housing, the overcrowding problem is anticipated to decline. However, population is not anticipated to decline in any area of Long Beach as a result of the proposed Land Use Element. Population growth was allocated to PlaceTypes according to the increase in housing. For example, if 8 percent of new housing is anticipated to be in Moderate Density Multi-Family PlaceTypes, then 8 percent of the anticipated population growth is likely to be in Moderate Density Multi-Family PlaceTypes. Table B shows the resulting distribution of the anticipated 18,230 new residents.

Employment

The previous Specific Plans analyzed concentrated employment growth in the Downtown (5,200 new jobs) and Douglas Park (17,965 new jobs) neighborhoods. In Founding and Contemporary Neighborhoods, employment growth was estimated to be proportional to population growth. In other areas of Long Beach, the proportion of existing employment in a PlaceType is likely a good indicator of the potential for employment growth in the future. However, the division of industrial employment growth was rebalanced between Industrial and Neo-Industrial PlaceTypes to reflect the anticipated faster growth in Neo-Industrial areas. Table B shows the resulting distribution of the anticipated 28,511 new jobs.

Change from Existing Conditions

Table B shows the distribution of housing, population, and employment demographic growth across the 14 PlaceTypes. Table B also shows the resulting 2040 demographic data when this growth is added to existing demographic data. The percentage change from existing conditions can be calculated from the demographic data presented in Table B. Performing this exercise shows that the neighborhoods with previously analyzed and approved Specific Plans are anticipated to experience substantial demographic growth. For example, in the Downtown area, housing is anticipated to increase 42 percent, population is anticipated to increase 12 percent (as described previously, much of the housing growth is needed to alleviate existing overcrowding), and employment is anticipated to increase 31 percent over baseline conditions (i.e., 2012, the base year for the 2016 RTP/SCS). Similar large increases in housing and population are anticipated in the Transit Oriented Development PlaceTypes (which account for much of the Midtown Specific Plan). In the Regional Serving Facility PlaceType (much of which is within Douglas Park), employment is anticipated to increase 52 percent over baseline conditions.

While housing, population, and employment have increased in all areas of Long Beach in the past and are expected to increase in all areas of the City in the future, the magnitude of change described in the paragraph above is only anticipated in the Specific Plan areas. Within the Founding and Contemporary Neighborhoods, allocating demographic growth in the manner described above results in an anticipated 2 percent housing increase, a 0.5 percent increase in population, and a 1 percent increase in employment over baseline conditions by 2040.

Existing Housing Units and Non-Residential Square Footage

Similar to the distribution of existing demographic data presented in Table A, MIG determined the number of housing units and the amount of non-residential building square footage within Long Beach during the 2012 baseline conditions. Table C provides this information for the areas defined by the new PlaceTypes. The total number of housing units in each PlaceType is identical between Tables A and C, but Table C further identifies the housing units as either single-family or multi-family. Table C specifies whether non-residential space is commercial, office, industrial, or public facilities/institutional.

General Plan Buildout Housing Units and Non-Residential Square Footage

As stated previously, growth in demographic data is likely to occur regardless of the proposed Land Use Element. Similarly, growth in housing units and non-residential building size may occur regardless of the proposed Land Use Element. However, in the same way that the proposed Land Use Element would affect the distribution of demographic growth, it would affect the distribution of building growth.

All new housing units outside of Founding and Contemporary Neighborhoods would be multi-family. In Founding and Contemporary Neighborhoods, 58 percent of existing dwelling units are single-family, so 58 percent of new units in Founding and Contemporary Neighborhoods were added to single-family (this category includes accessory dwelling units). The remaining 42 percent of housing growth anticipated in Founding and Contemporary Neighborhoods would be in multi-family developments, as it is today. The resulting future distribution of housing units is shown in Table D.

Table C: 2012 Citywide Housing Units and Non-Residential Square Footage

PlaceType	Residential Units			Non-Residential Building Square Footage				
	Single-Family	Multi-Family	Total	Commercial	Office	Industrial	Public Facilities/ Institutional	Total
Open Space	-	-	-	678,900	37,300	1,101,000	3,137,900	4,955,100
Founding and Contemporary Neighborhood	60,524	43,495	104,019	4,803,100	709,900	653,900	8,780,700	14,947,600
Multi-Family – Low	611	6,715	7,326	42,800	2,100	-	63,500	108,400
Multi-Family – Moderate	411	11,713	12,124	-	-	-	-	-
Neighborhood Serving Centers and Corridors – Low	760	4,456	5,216	1,890,300	165,600	99,800	146,400	2,302,100
Neighborhood Serving Centers and Corridors – Moderate	486	9,052	9,538	2,121,500	262,700	169,600	87,000	2,640,800
Community Commercial	85	2,837	2,922	4,274,400	341,300	1,062,300	142,800	5,820,800
Transit-Oriented Development – Low	272	2,469	2,741	998,000	199,100	7,500	200,000	1,404,600
Transit-Oriented Development – Moderate	195	1,760	1,955	787,300	52,000	6,000	163,100	1,008,400
Neo-Industrial	88	1,296	1,384	383,900	14,200	1,311,900	19,100	1,729,100
Industrial	145	813	958	319,800	368,700	4,066,800	196,500	4,951,800
Downtown	345	11,423	11,768	1,954,200	3,899,300	49,400	600,800	6,503,700
Waterfront	6	2,837	2,843	2,086,900	772,200	-	501,700	3,360,800
Regional Serving Facility	6	994	1,000	674,500	1,160,000	9,042,800	7,434,500	18,311,800
2012 Total	63,934	99,860	163,794	21,015,600	7,984,400	17,571,000	21,474,000	68,045,000

Sources: MIG (March 2016)

Table D: 2040 Citywide Housing Units and Non-Residential Square Footage

PlaceType	Residential Units			Non-Residential Building Square Footage				
	Single-Family	Multi-Family	Total	Commercial	Office	Industrial	Public Facilities/ Institutional	Total
Open Space	-	-	-	746,470	41,012	1,210,582	3,260,588	5,258,652
Founding and Contemporary Neighborhood	61,798	44,417	106,215	4,878,304	721,015	664,138	8,840,703	15,104,160
Multi-Family – Low	611	7,863	8,474	19,877	975	0	94,892	115,744
Multi-Family – Moderate	411	14,008	14,419	11,668	572	0	0	12,240
Neighborhood Serving Centers and Corridors – Low	760	5,604	6,364	1,983,341	173,751	104,712	177,792	2,439,596
Neighborhood Serving Centers and Corridors – Moderate	486	11,347	11,833	2,198,853	272,278	175,784	149,741	2,796,656
Community Commercial	85	2,837	2,922	4,515,814	360,576	1,122,298	142,800	6,141,488
Transit-Oriented Development – Low	272	7,723	7,995	951,691	189,862	7,152	343,615	1,492,320
Transit-Oriented Development – Moderate	195	8,160	8,355	682,522	45,080	5,201	338,021	1,070,824
Neo-Industrial	88	1,396	1,484	437,000	16,164	1,493,358	21,837	1,968,359
Industrial	145	813	958	331,354	382,021	4,213,735	196,500	5,123,610
Downtown	345	16,415	16,760	2,431,634	5,392,148	64,289	737,229	8,625,300
Waterfront	6	2,937	2,943	2,240,059	828,872	0	504,437	3,573,368
Regional Serving Facility	6	3,590	3,596	1,262,512	2,171,258	16,926,078	7,505,452	27,865,300
2040 Total	65,208	127,110	192,318	22,691,099	10,595,584	25,987,327	22,313,607	81,587,617
2012 Total	63,934	99,860	163,794	21,015,600	7,984,400	17,571,000	21,474,000	68,045,000
Δ	1,274	27,250	28,524	1,675,499	2,611,184	8,416,327	839,607	13,542,617

Sources: MIG, City of Long Beach Downtown Plan, Midtown Specific Plan, Douglas Park Rezone Project, and Southeast Area Specific Plan
 Δ = change

Non-residential building size is anticipated to increase according to employment growth, which is a demographic growth area disclosed in Table B. Data in Table A regarding total employment by PlaceType and data in Table C regarding commercial, office, and industrial space by PlaceType reveals that about 380 square feet (sf) per employee is provided in Founding and Contemporary Neighborhoods, about 670 sf per employee is provided in Neo-Industrial areas, about 690 sf per employee is provided in Industrial areas, about 500 sf per employee is provided in Regional Serving Facilities, and an average of 408 sf per employee is provided for all other PlaceTypes. Based on the new employment disclosed in Table B, the total amount of new non-residential space can be calculated for each PlaceType.

This total non-residential space would occur as commercial, office, industrial, or public facilities/institutional buildings based on the community's needs. For example, public facilities/institutional buildings are likely to grow in proportion to the population that they serve. Since 2012 to 2040 citywide population is projected to increase by 4 percent, public facilities/institutional space would likely also increase by 4 percent (i.e., new 839,607 sf citywide). In the baseline, 15 percent of the public facilities/ institutional space is in Open Space (e.g., parks), which is likely to respond to citywide population growth. Therefore, 15 percent of public facilities/institutional growth was allocated to open space (i.e., 122,688 sf). The remaining 716,919 sf of public facilities/institutional growth was allocated according to the percent of population growth in each PlaceType. However, Moderate Density Multi-Family areas have no public facilities/institutional space in existing conditions, and no new space was allocated to this PlaceType. The resulting future distribution of public facilities/institutional space is shown in Table D.

Growth in commercial, office, and industrial building size is driven by market trends that are revealed by examining the existing proportion of space serving each land use as shown in Table C. The public facilities/institutional growth calculated as described above was subtracted from the total new square footage and allocated the remainder to commercial, office, and industrial based on the baseline percent of non-public facilities/institutional uses in each PlaceType. In Low Density Multi-Family, Low Density Transit-Oriented Development, and Moderate Density Transit-Oriented Development PlaceTypes, the amount of public facilities/institutional growth resulting from the methodology above exceeds the total growth in non-residential space. The result is a projection that some non-residential space would be removed from Multi-Family and Transit-Oriented Development PlaceTypes and replaced with residential and public facilities/institutional use. In other words, as areas identified for Multi-Family and Transit-Oriented Development uses redevelop, the redevelopment is likely to replace existing (primarily commercial retail) uses. The resulting distribution of commercial, office, and industrial space is shown in Table D.

This page intentionally left blank