### MEMORANDUM

- To: Andy Ross, City of Livermore
- From: Economic & Planning Systems
- Subject: Livermore General Plan Economics Existing Conditions Supplement; EPS #211020

Date: March 7, 2024

This memorandum supplements the Economics Chapter of the Livermore General Plan Update Existing Conditions Report (March 7, 2022). Economic and Planning Systems (EPS) authored that Economics chapter as the world emerged from the COVID-19 pandemic. The datasets available at the time did not capture economic or population trends in 2022 and 2023. Furthermore, data collection preceded the release of 2020 U.S. Census data, which are used by state and regional entities to calibrate their own estimates of population and economic statistics. The Existing Conditions Report and this supplemental memorandum seek to inform community discussion around socioeconomic factors relevant to the General Plan and related public policies.

The focus of this memorandum is analysis of historic and projected population, household, and employment growth. The memorandum covers historic growth in Livermore and considers a range of regional forecasts for future growth. These demographic and economic forecasts may inform planning for future residential and non-residential land use in Livermore. Given significant uncertainty concerning the growth potential of the city over the next two to three decades, EPS considered multiple forecasts from both public and private sector sources.

The following Key Findings summarize salient points from review of current socioeconomic trends and forecasts. In addition to these growth metrics, this supplement to the Existing Conditions Report also revisits key population and economic data previously reported. **Appendix A** presents detailed tables containing up-todate information from a range of public sources, collected and reported consistently with data tables presented in the 2022 Existing Conditions Report.

The Economics of Land Use



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### **Key Findings**

# 1. The COVID-19 pandemic impacted historic socioeconomic growth patterns across California and the U.S., and new data reveal a notable population decline in Livermore and much of California between 2019 and 2023.

Broadly, COVID-19-related deaths, a decrease in birth rates, federal policies restricting immigration, and an increase in domestic out-migration resulted in population decline. Available data indicate that the population in Livermore fell by roughly 6,000 between 2019 and 2023, a decrease of about 7 percent. While population in Alameda County also fell during this period, by about 23,000 (-1.4 percent), nearby jurisdictions including Dublin (+7,900) and San Ramon (+700) grew. Livermore's growth trajectory reveals that population increased steadily from 2010 to 2019 and declined from 2019 to 2023. The current population is about the same as it was in 2013.

# 2. Despite total population declines during the Pandemic era, the number of households in Livermore continued to grow, so much so that housing vacancy fell to just 3.6 percent.

The reduction in Livermore's population did not mitigate the housing shortage in the local market. Housing stock in Livermore increased from about 30,300 in 2010 to nearly 33,200 in 2023. This increase of roughly 2,800 units was easily absorbed by the market. The number of occupied housing units increased by an even greater amount over this time period, resulting in less available housing. Even as population declined during the Pandemic years, the number of households in Livermore grew, from 31,300 in 2019 to over 32,000 in 2023. A decline in total population in combination with an increase in the number of households means that fewer people are living in each household on average. This is likely the result of a combination of factors, including deaths, delayed marriages, and lower birth rates. In addition, housing vacancy in Livermore fell from about 4.0 percent in 2010 to only 3.4 percent in 2023, making it increasingly challenging to find a home in the city.

### 3. Looking forward, public and private sector forecasting unanimously anticipates continued household growth in the region, though some projections indicate population may continue to decline over time.

Plan Bay Area projections indicate that the number of households in Alameda County could grow by about 190,000 by 2045, though other forecasting indicates much more modest growth. A forecast from Moody's Analytics suggests Alameda County might add as few as 19,000 households by 2045, an increase of about 3.2 percent over 2023. The range of projections for population growth is even more varied, with Plan Bay Area indicating population growth could be almost 400,000 by 2045, while the Moody's forecast indicates population may contract by 15,000 countywide, and the Caltrans forecast shows roughly 130,000 fewer residents.

## 4. Historic data confirm job growth in Livermore and countywide projections agree the regional economy is unlikely to significantly contract in coming decades.

Available employment data for Livermore show that there were about 11,000 more jobs based in the city in 2021 than in 2010, an increase of about 26 percent, even with the loss of almost 2,000 jobs between 2019 and 2021. These jobs data reflect employer reporting to the federal government and do not account for work-fromhome local employment that emerged during Covid-19 lockdowns. The jobs data show that Livermore's growth in manufacturing, retail, professional services, construction, and food and accommodations industries, among other sectors, has created new professional opportunities in the city. At the county level, economic forecasting generally indicates the regional economy will continue to expand. Plan Bay Area and Woods & Poole project roughly 30 to 35 percent job growth over 2023 by 2045, respectively, while Moody's Analytics is forecasting near zero job growth over the same period.

### **Socioeconomic Trends and Forecasts**

This section details the data sources relied on to establish updated socioeconomic trends and forecasts for Livermore and Alameda County, followed by data reporting and interpretation. Additional socioeconomic data provided for reference in **Appendix A** update population and economy reporting previously documented in the Existing Conditions Report.

### **Historic Data Sources**

EPS relies on data from the US Census Bureau and California Department of Finance to articulate trends in population and housing in Livermore.

- **U.S. Census Bureau.** A combination of data from the Decennial Census and Census Bureau's Population Estimates Program (PEP) establishes a long-term population trend for the city. Census data date back to 1880 and include a population count for the city every decade (except in 1930). This trend analysis supplements decennial data with annual data starting in 2000. The annual data from PEP rely on births, deaths, and migration to calculate population change between decennial censuses to produce time series estimates of population change. In addition, EPS also collected data from the most recent American Community Survey 5-Year Estimates and from the Census Bureau's LED-LEHD program to update Existing Conditions Report tables presented in **Appendix A**.
- **California Department of Finance (DOF).** The California Department of Finance publishes estimates for population, housing units, and household size for every county and city in the state. It is the state's official source for demographic data for state planning and budgeting purposes. The estimates combine data from U.S. Census Bureau with numbers reported from local jurisdictions. Historic DOF data on housing unit growth, household growth, and housing vacancy reveals recent trends in housing demand, now including for the Covid-19 Pandemic era.

### **Alameda County Growth Projections**

This memorandum reports Alameda County-level population and employment forecasts from both public entities and private firms to evaluate a range of growth scenarios. Forecasting is largely unavailable at the local level and regional forecasts are a good indicator of broader growth potential that any city in the region might compete for. The following sources of growth projections are considered.

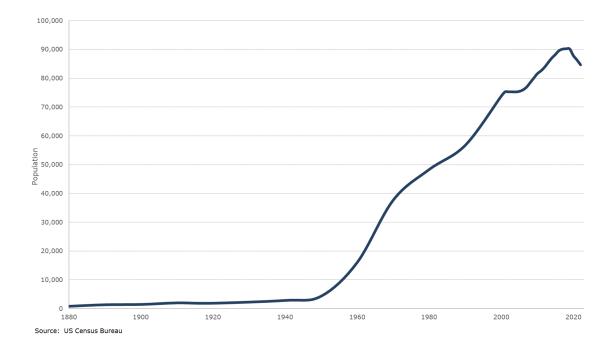
- Association of Bay Area Governments (ABAG). ABAG's draft forecasts of households, population, and employment were developed for Plan Bay Area 2050 Plus (PBA 2050+) using multiple economic models. ABAG completed the original PBA 2050 analysis in 2021. The newer PBA 2050+ draft forecasts indicate that population will reach a lower level by 2050 relative to what was assumed in Plan Bay Area 2050. This reflects both regional and national factors. At the national level, both the U.S. Census Bureau and the Congressional Budget Office indicate a lower national population outlook by mid-century. The 2050+ forecast begins from a lower 2020 population starting point due adjustments to reflect Covid-19 socioeconomic conditions. ABAG's regional growth forecast reflects a combination of current conditions as well as the vision of the proposed Plan and its transportation, housing, economy, and environmental strategies. PBA 2050+ projections reported here rely on EPS allocations to the county level.
- **California Department of Transportation (Caltrans).** Caltrans offers household, population, and employment forecasts for transportation planning purposes. Caltrans forecasts reflect output from the agency's in-house statistical modeling, including population and jobs forecasts from 2000 to 2050. Estimates are updated annually. This memorandum presents Caltrans projections for Alameda County that were released in 2023.
- Moody's Analytics. Moody's Analytics is the data arm of "Moody's" a global integrated risk assessment firm. Moody's Analytics offers regional socioeconomic projections that rely on federal data sources and the firm's proprietary statistical models. EPS purchased new Alameda County data directly from Moody's, including population, household, and employment estimates from 1970 to 2054.
- Woods & Poole Economics. Woods & Poole Economics is an independent data firm that specializes in long-term county economic data and demographic data projections. Its forecasts of households, population, and employment span from 1969 to 2050. Estimates are updated annually. This memorandum presents projections for Alameda County that were released in 2023.
- **California Department of Finance (DOF).** DOF's Demographic Research Unit is responsible by statute for maintaining county and state population projections. DOF relies on a "demographic balancing" method that calculates population through analysis of natural increase (births minus deaths) and net migration. Current DOF projections incorporate historical data available as of July 2022, including from the latest decennial Census. The projections consider historical trends from 1990 through 2019 and extend to 2060. DOF does not offer household growth forecasts.

• **JobsEQ.** JobsEQ is a private-sector dataset and software tool offered by Chmura Economics, a firm that collects and analyzes employment data from the U.S. Bureau of Labor Statistics. The dataset provides historical and forecasted employment data, reported on a quarterly basis from 2002 to 2032.

For each of the socioeconomic forecasts, EPS graphed the long-term historical and projected future estimates from 1969 to 2050, showing the full range of data observed. In addition, the memorandum offers closeup of the data, focused on the years from 2017 to 2035, to examine more recent trends and near-term projections.

### **Livermore Socioeconomic Trends**

EPS retrieved city-level estimates of population from Census Bureau data sources.<sup>1</sup> The long-term trend reveals the historic growth of Livermore from a small ranching community and railroad town in the late 19<sup>th</sup> and early 20<sup>th</sup> century, to home of a National Laboratory in the 1950s, to the 80,000+ person city it is today. As shown in **Figure 1**, Livermore's population started to grow rapidly midcentury and has continued to rise, with minor lags, including after the "dot com" era. The data reveal a notable decrease of about 6,000 residents beginning 2019. Data presented for years prior to 2000 do not include possible population fluctuations in population between decennial census reporting.



### Figure 1 Livermore Population, 1880 to 2023

<sup>1</sup> Annual estimates were available beginning in 2000, such that the trend features greater noise for 2000 to 2023 compared to the years before that, which only show data for every decade.

Since 2010, Livermore has added 2,815 housing units, or an additional 9.3 percent. The number of households (occupied housing units) increased by an even greater amount, 2,908, or 10 percent. With household growth slightly outpacing the number of net new housing units, the housing vacancy rate in Livermore dropped from 4.0 percent in 2010 to 3.4 percent in 2023. A vacancy rate of 5 percent typically suggests a healthy housing market, with lower levels of vacancy generally indicating housing scarcity which places upward pressure on housing costs. The falling vacancy rate in Livermore indicates strong demand for housing, despite decreases in population during the same time period. **Figure 2** charts the housing units, households, and vacancy rates in Livermore.

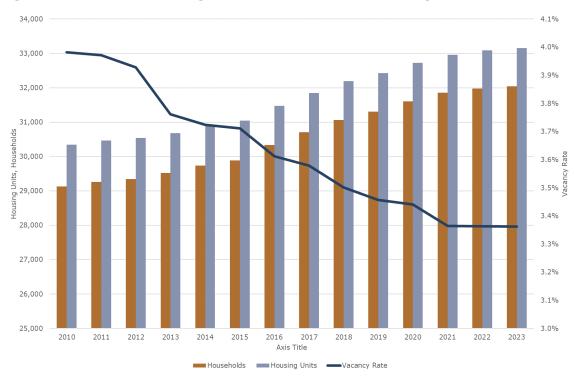
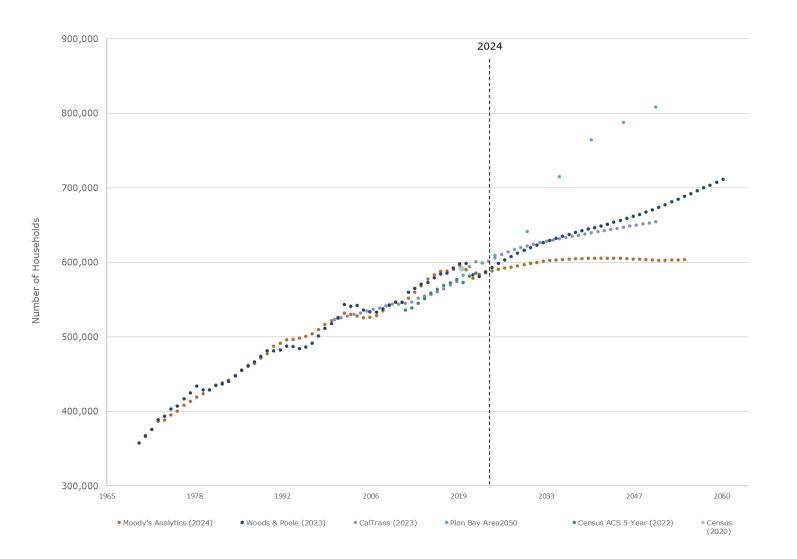


Figure 2 Livermore Housing Units, Households, and Vacancy Rate, 2010 to 2023

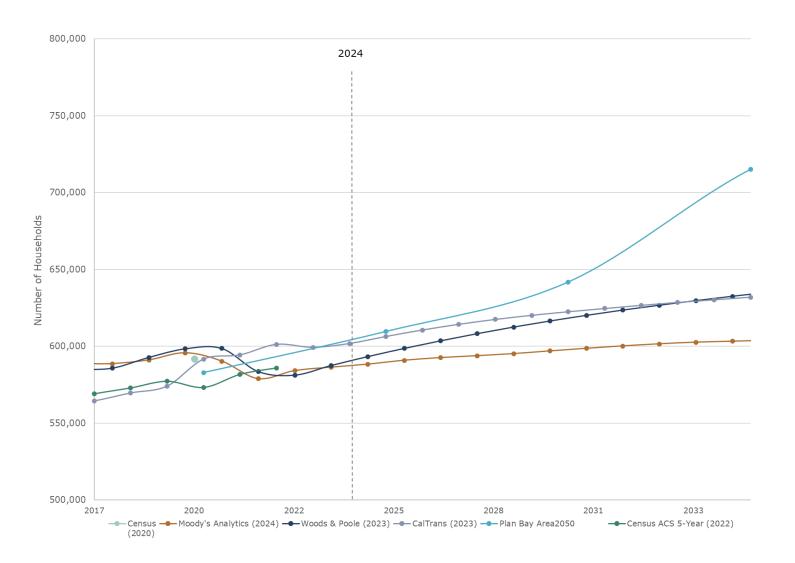
Source: California Department of Finance E-5

### Alameda County Household Growth Projections

Data sources considered here offer a wide range of potential growth scenarios for Alameda County. The forecasts acknowledge the recent dip in household counts from 2020 to 2022 but project a return to growth in the longer term. Plan Bay Area 2050 Plus forecasts the highest growth outlook, estimating approximately 809,000 households countywide by 2050. Moody's Analytics has the most conservative forecast, predicting that household growth will begin to flatten around 2030 and remain around 600,000 through 2050. **Figure 3** and **Figure 4** present historical and projected estimates of the number of households in Alameda County, with the latter offering a focused look at 2017 through 2035.



### Figure 3 Alameda County Household Estimates, 1969 to 2060



### Figure 4 Alameda County Household Estimates, 2017 to 2035

### **Alameda County Population Growth Projections**

The Pandemic caused an inflection point in population growth in 2020, with heightened deaths, slowed births, and increased out-migration reversing a long pattern of growth in Alameda County. Like Livermore, countywide data reveal a drop in population from 2020 to 2022. While most forecasts show that the population level will remain relatively flat for the remainder of the decade and begin to rise afterwards, Plan Bay Area and Woods & Poole projections show a return to growth could happen sooner.

**Figure 5** and **Figure 6** show the historical and forecasted population in Alameda County from 1969 to 2060. Plan Bay Area 2050 forecasts the highest rate of population growth, estimating over 2 million residents in Alameda County by 2050, an addition of nearly 440,000. At the other end of the spectrum, Moody's and CalTrans project future population declines starting around 2030. CalTrans is especially negative in growth, predicting a population drop of around 200,000 to about 1.4 million by 2050 (with a loss of roughly 130,000 by 2045). Despite populations declines projected by Moody's and CalTrans, the same forecasts project that the number of households in the county will remain flat or grow, suggesting that changes in household size are a key factor affecting housing demand in the future.

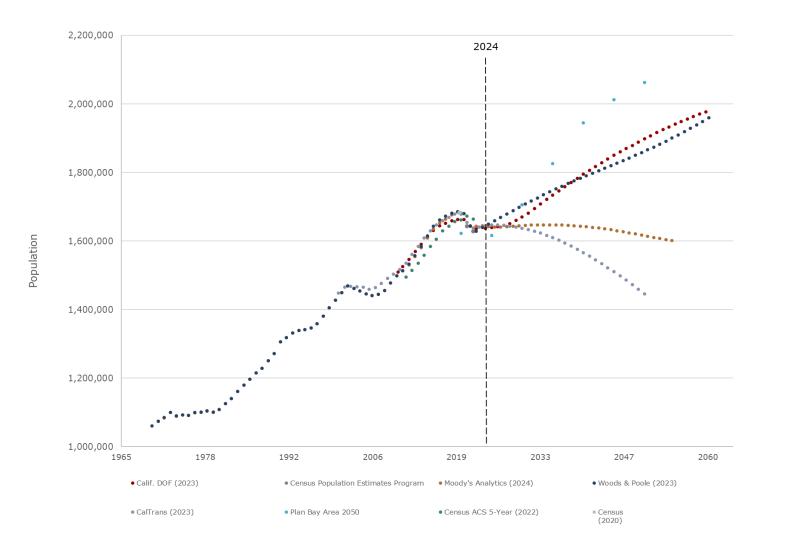
### Alameda County Household Size and Vacancy

EPS looked at household size trends in Alameda County from DOF to validate the household size trend and verify its potential influence on the population and household forecasts. In the last decade, household sizes dropped from their peak of 2.84 per household in 2015 to 2.60 in 2023 (a decrease of 8.5%), as seen in **Figure 7**. This meaningful decline in average household size could be explained by several factors, including deaths, delayed marriages, and lower birth rates, among other factors. The historic data confirm the potential for shrinking household size and help explain how household growth has outpaced population growth. In addition, housing vacancy from 2010 to 2023 declined in Alameda County, mirroring Livermore's trend in the last decade, as shown in **Figure 8**. Despite population loss, housing demand across the county remains elevated.

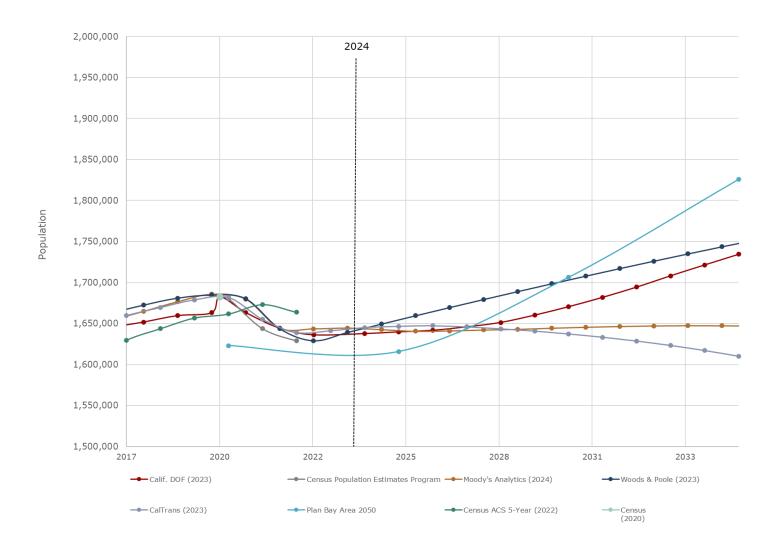
### **Alameda County Employment**

This memorandum also documents updated employment trends and projections for Alameda County. Similar to population and household count estimates, the analysis presents a range of economic forecasting estimates from various sources. The jobs forecasts observed include long-run outlooks that range from zero growth to robust economic expansion in the coming decades. **Figure 9** and **Figure 10** show the forecasted number of jobs in Alameda County from 1969 to 2060. Both PBA 2050+ and Woods & Poole forecast strong employment growth, ranging from roughly 30 percent to 35 percent job growth, respectively, between 2023 and 2045. Moody's projects virtually no net new job growth through 2050.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Woods & Poole employment data differ from other employment forecasts because underlying data are from the U.S. Bureau of Economic Analysis (vs. Bureau of Labor Statistics). BEA employment estimates include employment categories not fully covered by BLS (e.g., farm labor contractors, foreign/ international employment, at-home self-employment) BEA adjusts estimates to account for employment not fully accounted for in BLS estimates.



### Figure 5 Alameda County Population Estimates, 1969 to 2060

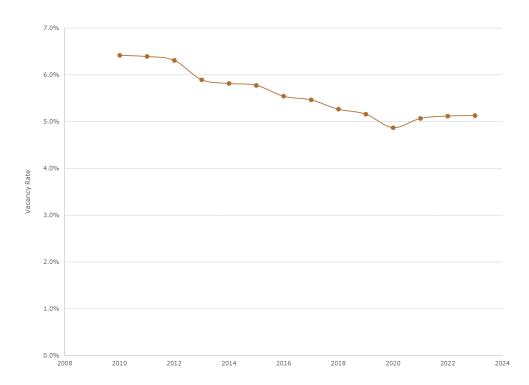


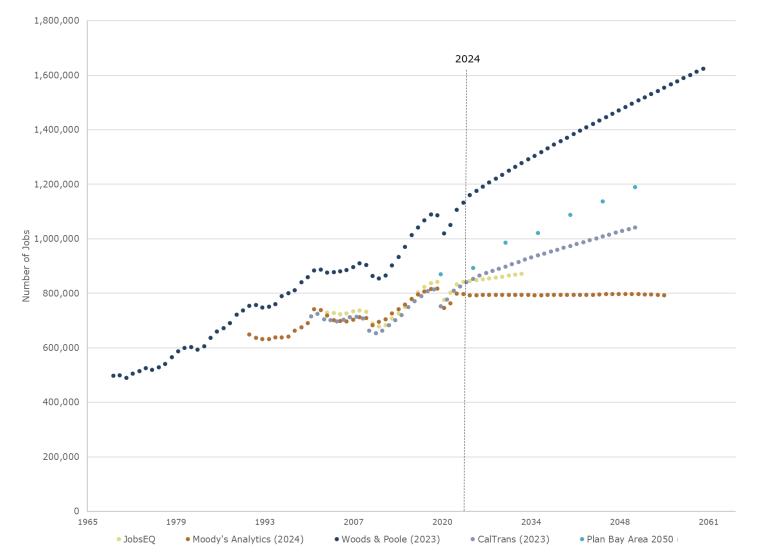
### Figure 6 Alameda County Population Estimates, 2017 to 2035



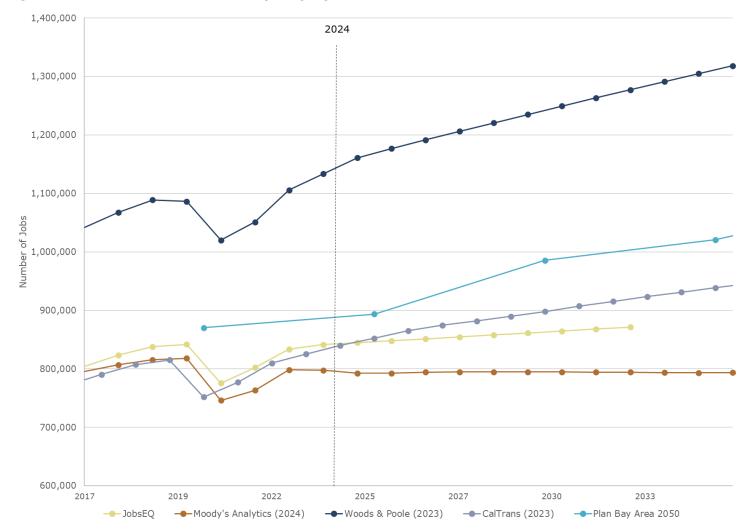
Figure 7 Alameda County Household Size, 2010 to 2023

Figure 8 Alameda County Vacancy Rate, 2010 to 2023





### Figure 9 Alameda County Employment Estimates, 1969 to 2060



### Figure 10 Alameda County Employment Estimates, 2017 to 2035

### Appendix A:

Livermore General Plan Existing Conditions Report

Updated Tables and Figures



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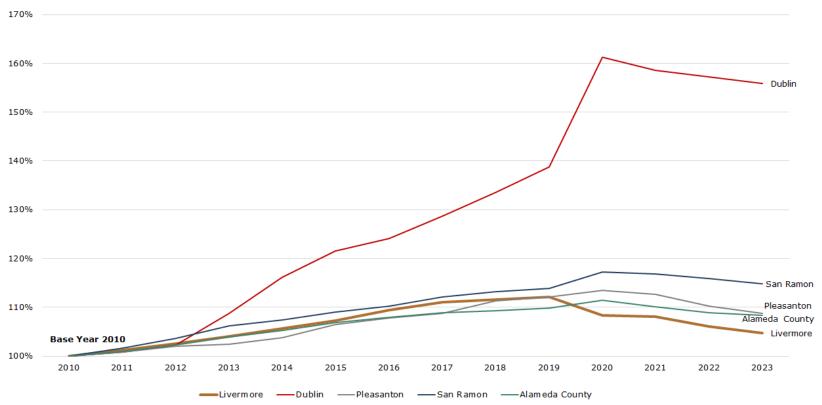
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				_	2016-2	-	2021-	
						Annual Growth		Annual Growth
Population	2011	2016	2021	2023	Change	Rate	Change	Rate
Livermore	81,975	88,635	87,476	84,793	-1,159	-0.3%	-2,683	-0.6%
Dublin	46,412	57,124	73,009	71,750	15,885	5.0%	-1,259	-0.3%
Pleasanton	70,879	75,813	79,174	76,459	3,361	0.9%	-2,715	-0.7%
San Ramon	73,373	79,559	84,339	82,870	4,780	1.2%	-1,469	-0.4%
Tri-Valley	272,639	301,131	323,998	315,872	22,867	1.5%	-8,126	-0.5%
Alameda County	1,525,761	1,631,230	1,663,371	1,636,194	32,141	0.4%	-27,177	-0.3%

### Table A- 1 Population Trends, 2011-2023

Source: 2021 DOF E-5

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### Figure A-1 Population Growth Index, 2010-2023

Source: DOF; Economic & Planning Systems

Median Household	2011	2016	2010	2022	2011-	Annual Growth	2019-	2022 Annual Growth Rate
Income (nominal)	2011	2016	2019	2022	Change	Rate	Change	rate
Livermore	\$ 96,322	\$104,223	\$127,452	\$152,590	\$ 7,901	1.6%	\$25,138	6.2%
Dublin	\$111,481	\$128,403	\$150,299	\$191,039	\$16,922	2.9%	\$40,740	8.3%
Pleasanton	\$118,713	\$130,170	\$156,400	\$181,639	\$11,457	1.9%	\$25,239	5.1%
San Ramon	\$124,014	\$134,188	\$160,783	\$190,829	\$10,174	1.6%	\$30,046	5.9%
Alameda County	\$ 70,821	\$ 79,831	\$ 99,406	\$122,488	\$ 9,010	2.4%	\$23,082	7.2%

### Table A- 2 Median Household Income, 2010-2022

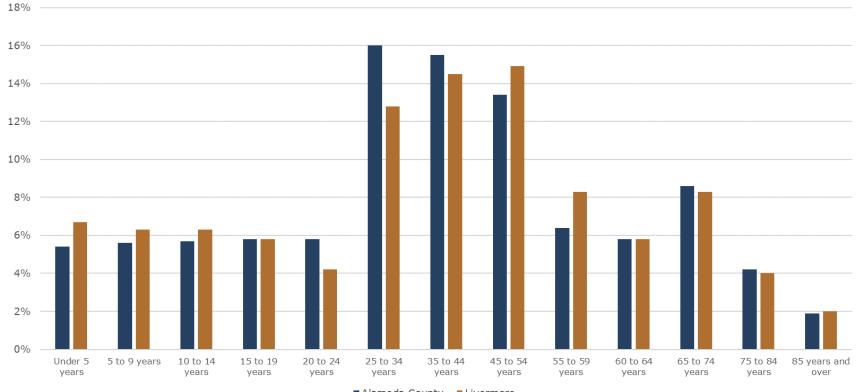
Source: US Census ACS 5-Year Estimates 2011, 2016, 2019, 2022.

Race and Ethnicity	Livermore	Dublin	Pleasanton	San Ramon	Alameda County
White	62.1%	29.7%	45.7%	37.7%	34.0%
Black or African American	1.7%	4.3%	1.7%	2.8%	10.2%
American Indian and Alaska Native	0.7%	0.7%	0.4%	0.3%	0.9%
Asian	16.1%	53.5%	41.1%	48.1%	32.1%
Native Hawaiian and Other Pacific Islander	0.5%	0.4%	0.4%	0.4%	0.8%
Some Other Race	6.5%	2.4%	3.7%	2.5%	12.1%
Two or More Races	12.4%	9.2%	7.1%	8.2%	9.9%
Hispanic/Latino (of any race)	22.6%	10.1%	11.3%	8.3%	22.2%

### Table A- 3 Comparison of Race/Ethnicity Composition, 2022

Source: US Census ACS 5-Year Estimates 2022

Note: Percentages may sum to greater than 100% because the U.S. Census' Hispanic/Latino ethnicity categorization may capture individuals of any race



### Figure A- 2 Livermore and Alameda County Age Distribution, 2022

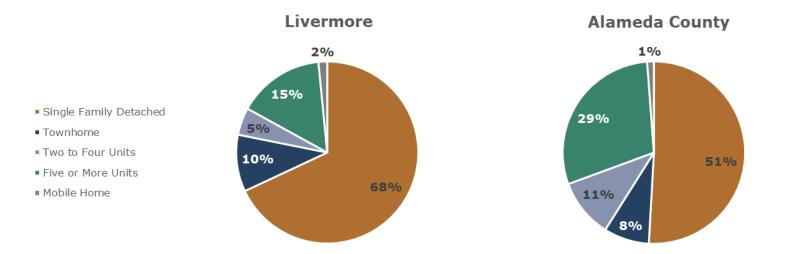
Alameda County Livermore

Median Age	2011	2016	2019	2022
Livermore	39.0	39.4	39.8	40.3
Dublin	34.7	36.8	36.7	37.1
Pleasanton	38.7	42.0	42.4	41.5
San Ramon	36.7	38.3	40.2	40.5
Alameda County	36.4	37.2	37.6	38.4

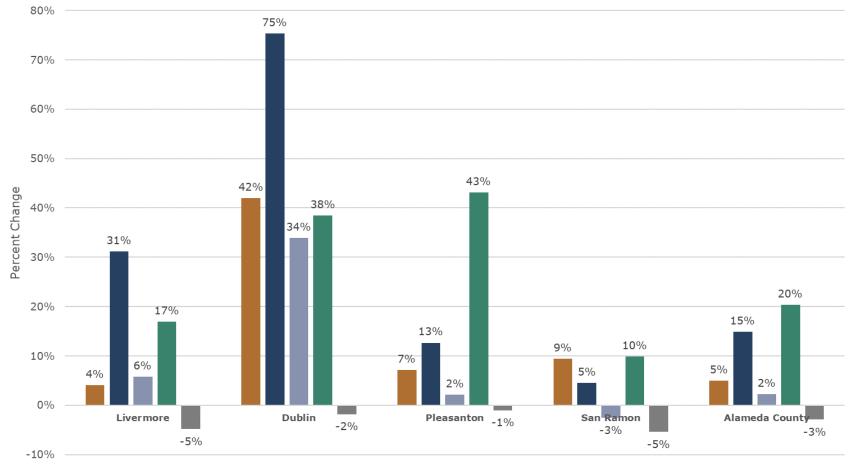
### Table A- 4 Median Age Trends, 2011-2022

Source: US Census ACS 5-Year Estimates 2011, 2016, 2019, 2022.

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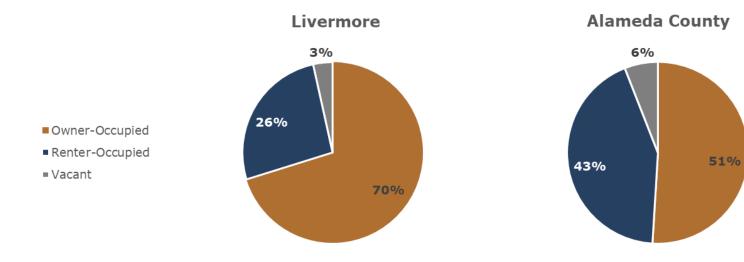
### Figure A- 3 Livermore and Alameda County Housing Type Comparison, 2022



#### Figure A-4 Change in Housing Types Compared to Tri-Valley Cities and Alameda County, 2013-2023

■ Single Family Detached ■Townhome ■Two to Four Units ■Five or More Units ■Mobile Home

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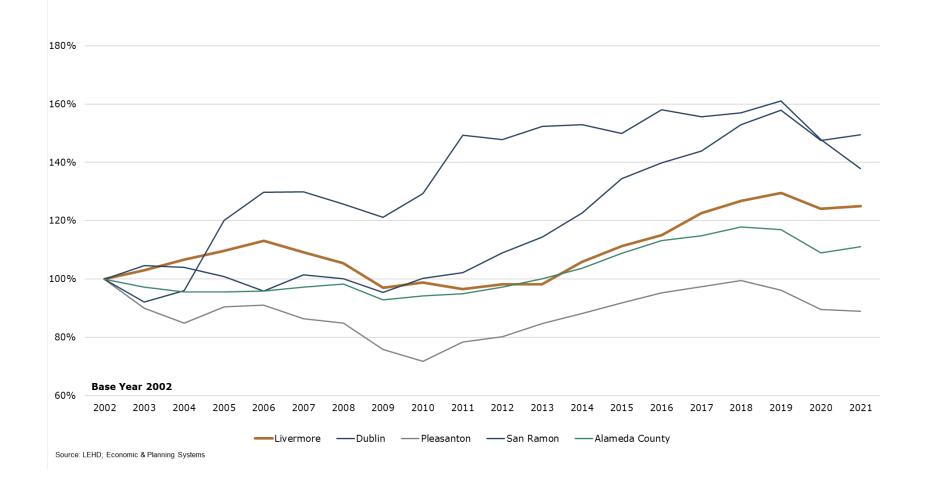
### Figure A-5 Livermore and Alameda County Housing Tenure Comparison, 2022

#### Table A- 5 Housing Tenure, 2022

Housing Tenure	Owner- Occupied	Renter- Occupied	Vacant
Livermore	70%	26%	3%
Dublin	62%	34%	4%
Pleasanton	66%	31%	4%
San Ramon	70%	28%	2%
Alameda County	51%	43%	6%

Source: American Community Survey 5-Year Estimate, 2022

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#### Figure A- 6 Employment Growth Index, 2002-2021

### Table A- 6 Regional Employment Counts, 2002-2021

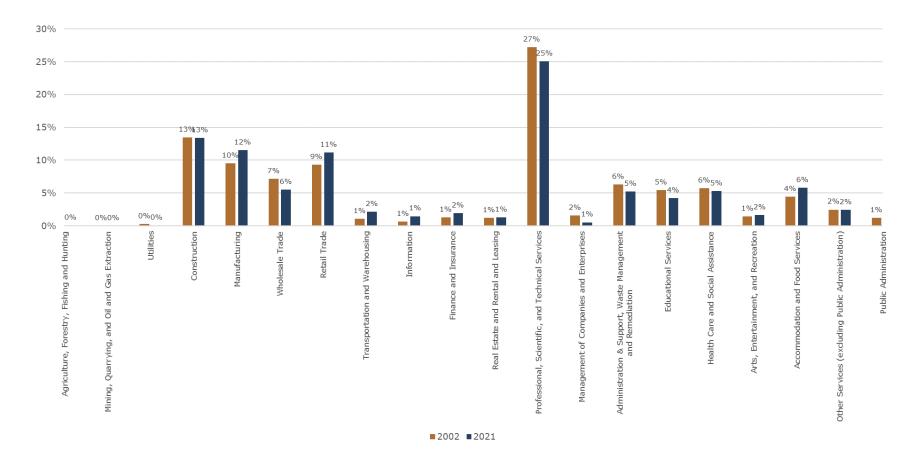
					2002-2011			2011-2021		
Total Jobs	2002	2011	2018	2021	Total Change	Average Annual Change	Annual % Change	Total Change	Average Annual Change	Annual % Change
-										
Livermore	41,788	40,363	53,007	52,220	-1,425	-158	-0.4%	11,857	1,186	2.6%
Dublin	15,980	16,320	24,437	23,881	340	38	0.2%	7,561	756	3.9%
Pleasanton	66,911	52,461	66,572	59,534	-14,450	-1,606	-2.7%	7,073	707	1.3%
San Ramon	27,598	41,190	43,315	38,037	13,592	1,510	4.5%	-3,153	-315	-0.8%
Alameda County	690,591	656,373	813,398	767,190	-34,218	-3,802	-0.6%	110,817	11,082	1.6%

Source: LEHD; Economic & Planning Systems

					2	Ĺ	
Employment Sector	2002	2011	2018	2021	Total Change	Average Annual Change	Annua % Change
Agriculture, Forestry, Fishing and Hunting	38	12	73	27	-11	-1	-1.8%
Mining, Quarrying, and Oil and Gas Extraction	0	4	0	0	0	0	
Utilities	124	135	43	39	-85	-4	-5.9%
Construction	5,634	3,561	6,881	7,013	1,379	73	1.2%
Manufacturing	3,987	3,436	5,780	6,032	2,045	108	2.2%
Wholesale Trade	2,983	3,419	3,544	2,896	-87	-5	-0.2%
Retail Trade	3,887	3,313	5,829	5,839	1,952	103	2.2%
Transportation and Warehousing	445	1,126	893	1,125	680	36	5.0%
Information	278	2,149	1,407	768	490	26	5.5%
Finance and Insurance	542	504	1,015	1,029	487	26	3.4%
Real Estate and Rental and Leasing	508	508	726	683	175	9	1.6%
Professional, Scientific, and Technical Services	11,363	10,832	11,504	13,106	1,743	92	0.8%
Management of Companies and Enterprises	672	622	272	283	-389	-20	-4.4%
Administration & Support, Waste Management and Remediation	2,641	1,768	3,458	2,741	100	5	0.2%
Educational Services	2,263	2,270	2,436	2,223	-40	-2	-0.1%
Health Care and Social Assistance	2,409	1,999	2,569	2,771	362	19	0.7%
Arts, Entertainment, and Recreation	598	922	1,477	849	251	13	1.9%
Accommodation and Food Services	1,870	2,437	3,504	3,026	1,156	61	2.6%
Other Services (excluding Public Administration)	1,035	1,106	1,025	1,258	223	12	1.0%
Public Administration	511	240	571	512	1	0	0.0%
Total	41,788	40,363	53,007	52,220	10,432	549	1.2%

### Table A- 7 Livermore Employment by Sector, 2002-2021

Source: LEHD; Economic & Planning Systems



### Figure A-7 Livermore Employment by Sector, 2002 and 2021

Employer	Use	Employees
Lawrence Livermore National Laboratory	Government/R&D	9,291
Sandia National Laboratories	Government/R&D	1,842
Livermore Valley Joint USD	Public School System	1,380
Lam Research	R&D, Manufacturing	1,055
Form Factor	Manufacturing	825
Kaiser Permanente	Health Care	813
Gillig	Manufacturing	640
U.S. Foodservice Inc.	Food Distribution	562
Topcon Positioning Systems	R&D, Manufacturing	410
Las Positias College	Education	305

### Table A- 8 Livermore Top Employers, 2022

Source: Comprehensive Annual Financial Report (CAFR) FY 2022-2023, City of Livermore; EPS.

### Table A- 9 Livermore Sector Growth, 2002-2021

Employment Sector	Rank	Total Change	Average Annual Change	Annual % Change
Manufacturing	1	2,045	108	2.2%
Retail Trade	2	1,952	103	2.2%
Professional, Scientific, and Technical Services	3	1,743	92	0.8%
Construction	4	1,379	73	1.2%
Accommodation and Food Services	5	1,156	61	2.6%
Transportation and Warehousing	6	680	36	5.0%
Information	7	490	26	5.5%
Finance and Insurance	8	487	26	3.4%
Health Care and Social Assistance	9	362	19	0.7%
Arts, Entertainment, and Recreation	10	251	13	1.9%
Other Services (excluding Public Administration)	11	223	12	1.0%
Real Estate and Rental and Leasing	12	175	9	1.6%
Administration & Support, Waste Management and Remediation	13	100	5	0.2%
Public Administration	14	1	0	0.0%
Mining, Quarrying, and Oil and Gas Extraction	15	0	0	
Agriculture, Forestry, Fishing and Hunting	16	-11	-1	-1.8%
Educational Services	17	-40	-2	-0.1%
Utilities	18	-85	-4	-5.9%
Wholesale Trade	19	-87	-5	-0.2%
Management of Companies and Enterprises	20	-389	-20	-4.4%

Source: Economic & Planning Systems

Rank	Work Destination of Wo Livermo		Live in	Home Destination of Workers Employed in Livermore					
	County	Amount	% Total	County	Amount	% Total			
1	Alameda County, CA	21,165	49%	Alameda County, CA	17,929	36%			
2	Santa Clara County, CA	6,750	16%	San Joaquin County, CA	8,416	17%			
3	Contra Costa County, CA	3,927	9%	Contra Costa County, CA	6,532	13%			
4	San Francisco County, CA	2,930	7%	Santa Clara County, CA	3,126	6%			
5	San Mateo County, CA	2,070	5%	Stanislaus County, CA	2,667	5%			
6	San Joaquin County, CA	1,101	3%	Sacramento County, CA	1,275	3%			
7	Los Angeles County, CA	732	2%	San Mateo County, CA	806	2%			
8	Sacramento County, CA	691	2%	Solano County, CA	759	2%			
9	Orange County, CA	428	1%	Los Angeles County, CA	653	1%			
10	Stanislaus County, CA	286	1%	San Francisco County, CA	562	1%			
	All Other Locations	<u>2,832</u>	<u>7%</u>	All Other Locations	<u>6,480</u>	<u>13%</u>			
	Total	42,912	100%	Total	49,205	100%			

#### Table A- 10 Livermore Commute Patterns

Source: LEHD 2021; Economic & Planning Systems