

MOUNTAIN HOUSE JOBS HOUSING REVIEW

PREPARED FOR THE SAN JOAQUIN COUNTY
COMMUNITY DEVELOPMENT DEPARTMENT

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> FINAL REPORT November 2019

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Section 1: EXECUTIVE SUMMARY

1.1 PURPOSE OF THE STUDY

This Mountain House Jobs Housing Review (the Study) has been prepared in fulfillment of Chapter Three Section 3.9 of the Mountain House Master Plan (MHMP) which specifies that the County shall review progress of the Mountain House jobs/housing program at the following intervals:

- Prior to approval of any Specific Plan containing residential development, but no sooner than after 2,000 residential units have been constructed (excluding the first Specific Plan or Specific Plan Amendment);
- When 4,000, 8,000, 12,000, and 16,000 residential units have been completed and annual monitoring information becomes available, if a review has not already been conducted in the previous calendar year; and
- At any other times determined appropriate by the Board of Supervisors (e.g., scheduling
 of a jobs/housing review by the Board to evaluate the circumstances for nonachievement of jobs/housing ratios).

The jobs/housing review has been triggered by the completion of more than 4,000 residential units. As of the end of December 2018, 5,932 residential units have been completed in Mountain House.

The MHMP jobs/housing program tracks the balance within the community between jobs and housing (the jobs to housing ratio). Mountain House has a job to housing ratio goal of 0.99 by project buildout. This ratio means that for every house in the community there are 0.99 jobs in the community.

1.2 ECONOMIC CONTEXT AND BACKGROUND

Mountain House is situated in the Altamont Corridor within San Joaquin County and abutting Alameda County. **Map 1** on the next page shows the Mountain House Census Designated Place (CDP) in relationship to other cities along the Altamont Corridor; specifically, Tracy and Manteca in San Joaquin County, and Pleasanton and Livermore in Alameda County. The CDP does not yet encompass the entire MHMP area; however, residential development outside of the CDP is very small to date. There is no new non-residential development south of Grant Line Road.

Development of Mountain House began in 2002. Today, residential land uses are a little over one-third developed; however, only a small amount of commercial building has been completed compared to buildout described in the MHMP. All the residential development to date has been single family (detached homes, homes with second units, and condominiums).

Map 1
Map of the Altamont Corridor



Almost all the non-residential development has been public-sector development (schools, college, and public services). Commercial development consists of a community market, a credit card processing office, real estate offices, a gymnasium, chiropractor, and dental offices.

Data shows that most employed Mountain House residents are commuting for work, with more than half of employees travelling at least 45 minutes and more than 25 miles. In addition, most jobs in Mountain House are being filled by persons living outside of Mountain House. Approximately nine percent of jobs in Mountain House are filled by persons living in the community. While this percentage is low, it is similar to the city of Pleasanton. Wages of jobs located in Mountain House are very similar to those of similar occupations in Alameda County and San Joaquin County.

1.3 Jobs to Housing Ratio Findings

The primary finding of the Study is that the jobs to housing balance is not as high as it was estimated to be at this stage of development in the MHMP. Ninety-eight percent of employed persons living in Mountain House commute elsewhere for work. Because of minimal commercial and industrial development, job creation has not reached the estimate of 5,872 jobs at 5,932 residential units developed in the MHMP (based on achieving a MHMP jobs to housing ratio of 0.99 which is the buildout goal) or 4,686 jobs using a ratio of 0.79 (the MHMP projected ratio with completion of 4,000 units). Total Mountain House jobs (including full and part time jobs) is estimated at 605 as of December 2018. Almost all the jobs in Mountain House have been created by institutional uses such as schools, Delta College, and public services. Lammersville School District generated 393 out of the total 605 jobs in Mountain House.

The MHMP estimated a best-case jobs to housing ratio of 0.79 with development of 4,000 housing units. This Study finds the best-case ratio to be 0.17 with 5,932 units completed. The minimum ratio, which is defined in the MHMP and in Section 3 of the Study, is 0.09 with 5,932 units completed, which compares to an estimate of 0.70 in the MHMP with development of 4,000 units.

Figure 1 depicts the different jobs to housing ratios calculated in the Study for Mountain House.

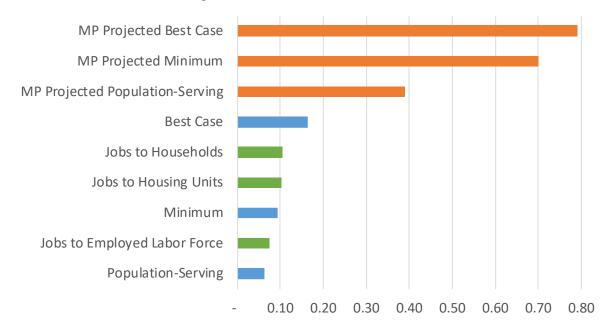
The orange colored bars in the figure show the estimated MHMP projected ratios at 4,000 units. These are labeled "MP Projected Best Case", "MP Projected Minimum", and "MP Projected Population-Serving".

The blue bars labeled "Best Case", "Minimum", and "Population-Serving", show calculated current ratios at 5,932 units completed, using the same formulas in the MHMP. Population-Serving only counts jobs that serve Mountain House residents. The figure shows that within Mountain House the number of jobs generated per residential unit is not as high as estimated in the MHMP using any of the three jobs to housing ratio methodologies.

Figure 1 also shows industry standard jobs to housing ratios. These are green bars labeled "Jobs to Households", "Jobs to Housing Units", and "Jobs to Employed Labor Force".

Figure 1

Mountain House Jobs/Housing Ratios



The minimum ratio accounts for all jobs excluding any construction-phase related jobs in Mountain House and can be compared to other communities along the Altamont Corridor. **Table 1** shows that the Mountain House jobs to housing ratios are lower than those of the comparison communities; however, as Mountain House continues to develop the ratio is anticipated to improve. The best-case ratio cannot be compared with other communities because it includes an estimate of jobs created during the construction of new buildings which is both uncommon and difficult to measure.

Table 1
Comparison Jobs to Housing Ratios

Ratio	Pleasanton	Livermore	Tracy	Manteca	Mountain House	Joaquin County
Mountain House MP Ratios						_
Minimum	1.74	0.98	0.57	0.50	0.09	0.78
Best Case	n/a	n/a	n/a	n/a	0.17	n/a
Industry Standard Ratios						
Jobs to Housing Units	2.18	1.44	0.90	0.66	0.10	0.96
Jobs to Households	2.27	1.49	0.93	0.70	0.11	1.03
Jobs to Employed Labor Force	1.62	0.95	0.57	0.52	0.07	0.78

Source: Mountain House Specific Plan and HEC.

1.4 ORGANIZATION OF THE STUDY

Following the executive summary are three sections:

- 1. Section 2 presents economic analysis on land use, population, housing, jobs, labor force, and wages.
- 2. Section 3 provides the jobs to housing ratios methodologies and results.
- 3. Section 4 includes the findings of the Study.

Appendix A provides support tables for the Jobs/Housing review.

Section 2: ECONOMIC ANALYSIS

2.1 LAND USE AND DEVELOPMENT

The MHMP includes development of 4,350 gross acres with 15,705 total residential units, and 11,207,276 square feet of commercial and industrial buildings at project buildout. In addition, it includes development of schools, public facilities, recreation spaces and other public uses. **Table 2** summarizes land use at buildout of Mountain House. Of note, the MHMP anticipates an average of 2.50 persons per unit, an average of 480 square feet of commercial space per employee, and an average of 639 square feet per industrial land use employee. These factors result in an estimated total population of 39,191 and 19,903 commercial and industrial (private-sector) jobs. The MHMP also projects 1,700 jobs to be generated by institutional uses, which includes schools and other public uses, and recreational land uses.

Map 2 shows development of Mountain House as of December 2018. The map shows each of the neighborhoods included in the MHMP and illustrates that development to date has occurred in neighborhoods A/B, C, D, E, F, G, and H. Five elementary schools and the high school have been built, as well as a few commercial and other institutional buildings. Delta College operates out of commercial coach buildings in the southern portion of the plan area.

Table 3 quantifies cumulative development by year through the end of 2018. In total, 5,932 residential units (38 percent of buildout units) have been completed. More than 85% of the residential units are single family. No multi-family (apartment) buildings have been developed. Non-residential development completed includes 41,428 building square feet of commercial space and 625,586 building square feet of institutional space (including 30,000 square feet of commercial coach buildings at Delta College). Commercial development to date represents less than 1 percent of potential buildout of commercial space in Mountain House. About one quarter percent (1/4%) of all other non-residential use acreage has been developed. **Tables A-1** through **A-3** in Appendix A provide supporting data to the summarized information shown in **Table 3**.

2.2 POPULATION AND HOUSING

The 2017 ACS reported population for Mountain House was primarily housed in owner occupied housing (73 percent); 27% of the population was housed in rental units.

As shown in **Table 2** on the next page, the MHMP persons per dwelling unit factors range from 1.80 for age-restricted units to 3.12 for very low and low-density housing; for all residential development, the persons per dwelling unit average is 2.50.

The United States Census 2017 5-Year American Community Survey (ACS) data, which is the most recent available for the Study, reports an average of 3.58 persons per occupied unit for Mountain House. This compares to the San Joaquin County (County) average of 3.24. Using the 2017 ACS average of 3.58 person per occupied unit and a vacancy rate of 3.2 percent, the population of Mountain House is estimated at 20,573 (as of the end of December 2018).

Table 2
Master Plan Developable Properties

	Gross	Net	Unit Density/	Residential Units / Non-Residential	Persons per Unit / Jobs	Population	Sq. Ft.
Buildout Land Use	Acres	Acres	Floor Area	Square Feet	per Acre	/ Jobs	per Job
Residential							
Very Low Density	63.7		2.00	121	3.12	378	
Low Density	884.3		4.50	3,932	3.12	12,268	
Low Density / Age Restricted	257.4		4.50	1,158	1.80	2,085	
Medium Density	866.1		6.00	5,267	2.70	14,221	
Medium Density / Age Restricted	177.6		6.00	1,066	1.80	1,918	
Medium High Density	182.0		14.00	2,527	2.00	5,054	
Medium High Density / Senior Housing	5.0		14.00	70	2.00	140	
High Density	40.2		20.00	804	2.00	1,608	
High Density / Senior Housing	11.5		20.00	230	2.00	460	
Mixed Use Town Center				200	2.00	400	
Bonus Units							
Town Center				240	2.00	480	
HD Housing				90	2.00	180	
Total Residential	2,487.8			15,705	2.50	39,191	
Non-Residential							
Commercial [2]		95%	[1]				[1]
Neighborhood Commercial	12.5	11.9	0.25	129,319	24.0	300	431
Community Commercial	129.3	122.8	0.25	1,337,673	24.0	3,103	431
General Commercial	29.2	27.7	0.25	302,089	24.0	701	431
Office Commercial	60.7	57.7	0.35	879,161	44.0	2,671	329
Commercial Recreation (Golf Course)	222.2	211.1	n/a	60,000	n/a	100	n/a
Town Center Mixed Use	39.1	37.1	1.00	1,618,036	51.0	1,994	811
Old River Mixed Use	14.0	13.3	0.50	289,674	51.0	714	406
Subtotal Commercial [3]	507.0	481.7		4,615,951	218.0	9,583	480
Industrial [2]							
Limited Industrial - N. of Byron	83.9	79.7	0.40	1,388,780	26.0	2,181	637
Limited Industrial - S. of Byron	204.3	194.1	0.40	3,381,737	32.3	6,599	512
General Industrial	110.0	104.5	0.40	1,820,808	14.0	1,540	1,182
Subtotal Industrial	398.2	378.3		6,591,325	72.3	10,320	639
Schools							
K-8	160.0	140.8			2.5	400	
High School	46.5	40.9			2.5	116	
Community College	107.9	95.0			n/a	532	
Subtotal Schools	314.4	276.7				1,048	
Public							
Transit	10.0	8.8			5.0	50	
Wastewater/Service Yards	50.0	44.0			5.0	250	
Water Treatment Plant	18.5	16.3			5.0	93	
Public Facilities (public)	12.2	10.7			5.0	61	
Public Facilities (private)	20.3	17.9			5.0	102	
Subtotal Public	111.0	97.7			25.0	555	
Open Space / Recreation							
Neighborhood Park	63.9	63.9			0.2	13	
Community Park	185.1	185.1			0.2	37	
Regional Park	82.0	82.0			0.2	16	
Lake / Dry Creek / Golf Course	155.7	155.7			n/a	31	
Water Quality Basin	21.0	21.0			n/a	0	
Wetland / Resource Conservation	24.7	24.7			n/a	0	
Subtotal Open Space / Recreation	532.4	532.4				97	
Total Non-Residential	1,863.0	1,766.7		11,207,276		21,604	
Total Gross Acres [4]	4,350.8						

 $Source: Mountain\ House\ Master\ Plan\ revised\ March\ 2008.$

^[1] Floor Area Ratios (FAR) are derived from Specific Plan II FARs.

^[2] Commercial and Industrial building square footage is calculated by multiplying 95% of MHMP gross acerage for each land use category by FAR for said land use category.

 $[\]label{eq:commercial} \textbf{[3] Calculation of square feet per employee excludes commercial recreation}.$

 $[\]label{eq:continuous} \textbf{[4] Gross acerage excludes arterial roadways and specified collector roads in the Town Center.}$

Mountain House Land Use Parcels with Buildings Town Center CSD Boundary Parcels with Buildings Mountain House Land Use

Map 2

Table 3
Cumulative Increase in Housing Units, Non-Residential Building Sq. Ft. and Estimated Jobs

Units, Building Sq. Ft. and Jobs	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of Housing Units [1]	222	758	1,201	1,982	2,711	3,064	3,198	3,254	3,419	3,626	4,039	4,272	4,661	5,160	5,281	5,932
Number of Persons [2]	770	2,629	4,165	6,874	9,402	10,626	11,091	11,285	11,857	12,575	14,008	14,816	16,165	17,895	18,315	20,573
Non-Residential Building Square	Feet															
Commercial	11,181	11,181	39,821	39,821	39,821	39,821	39,821	39,821	39,821	39,821	39,821	41,428	41,428	41,428	41,428	41,428
Insitutional	0	71,818	71,818	71,818	133,375	163,375	163,375	232,868	240,699	240,699	240,699	545,318	545,318	545,318	545,318	625,586
Jobs																
Population-Serving	26	100	192	192	249	249	249	303	352	352	352	482	482	482	482	525
Regional	0	0	0	0	0	67	67	67	80	80	80	80	80	80	80	80
Total Jobs	26	100	192	192	249	316	316	370	432	432	432	562	562	562	562	605

Source: San Joaquin County.

^[1] Includes single family homes, second units, and condominiums in neighborhoods A/B, C, D, E, F, G and H.

^[2] Cumulative population is based on 2017 ACS factors of 3.58 persons per occupied unit and 96.8% occupancy.

Application of the MHMP average persons per unit of 2.50 to 5,932 units multiplied by an occupancy factor of 95 percent (also assumed in the Master Plan) results in a population estimate of 14,830. The calculated population is greater using 2017 ACS data than using MHMP estimates of persons per unit and vacancy rate.

Table 4 below compares persons per unit with Altamont Corridor comparison cities and the County. All of the comparison cities have an average persons per occupied unit greater than the MHMP assumed. Note that the table shows two columns for Mountain House. The first column provides the ACS data and the second column provides the known data at the County level with inferences for number of occupied units, persons per unit, labor force, labor force employed, and the unemployment rate. The difference between the ACS number of jobs and actual number of jobs is most likely due to the fact that the ACS counts jobs differently (full and part time jobs and primary jobs versus total jobs). Self-employed persons may be included in the ACS data; they are not included in the County-level data.

Table 4
Population, Housing, Labor Force and Jobs

Item	Pleasanton	Livermore	Tracy	Manteca	Mountain House	Mountain House [1]	San Joaquin
		Source	e: Americar	n Factfinder	(2017 ACS D	ata)	
Total Population	79,341	88,232	87,613	75,314	15,010	20,573	724,153
Total Housing Units	29,064	32,458	26,359	24,644	4,328	5,932	239,253
Occupied Units (Households)	27,922	31,347	25,469	23,495	4,190	5,743	223,808
Persons per Unit	2.84	2.81	3.44	3.21	3.58	3.58	3.24
		Source	e: Americar	r Factfinder	(2017 ACS D	ata)	
Labor Force	40,604	48,986	45,109	35,341	6,446	8,835	329,535
Labor Force Employed	39,199	47,069	41,756	31,778	6,020	8,251	296,264
Unemployment Rate	3.5%	3.9%	7.4%	10.1%	6.6%	6.6%	10.1%
		Sc	ource: On ti	he Map (201	7 ACS Data)		
Jobs	68,294	51,413	29,920	16,862	826	605	245,891

Source: US Census Bureau.

Map 3 on the next page illustrates the Altamont Corridor census places.

2.3 LABOR FORCE, JOBS AND WAGES

2.3.1. Labor Force

The civilian labor force represents those persons aged 16 and over able to work. Per the US Census Bureau, the total Mountain House civilian labor force was 6,446 persons (43 percent of total population) in 2017. Of those persons able to work, 6,020 were reported as employed.

^[1] The Mountain House data is as of December 2018 using 2017 ACS persons per unit, as well as 2017 ACS labor force to population ratio and unemployment rate.

Map 3
Altamont Corridor Census Places



Table 5 shows occupations of the employed Mountain House labor force in 2017. More than 50% of residents were employed in management, business, science and arts occupations, about one-quarter in sales and office occupations, and the remainder in service, natural resources, construction and maintenance, and production, transportation and material moving.

Table 5
Occupations of Mountain House Labor Force

Occupation	Labor Force	% of Labor Force
Occupation of Civilian Labor Force		
Management, Business, Science & Arts	3,209	53%
Service	470	8%
Sales and Office	1,559	26%
Natural resources, construction & maintenance	397	7%
Production, transportation & material moving	385	6%
Total	6,020	100%

Source: Bureau of Labor Statistics and 2017 5-year American Community Survey.

The 2017 unemployment rate for Mountain House was approximately 6.6 percent. **Table 4** compares unemployment rates for 2017. The unemployment rate in Mountain House was higher than in Pleasanton and Livermore, but lower than in Tracy, Manteca, and San Joaquin County.

2.3.2 Jobs

It is estimated that the total number of jobs in Mountain House is currently 605. Of these jobs, 80 are considered regional jobs. The MHMP distinguishes between population-serving jobs and regional jobs. Population-serving jobs are jobs created to service the resident population of Mountain House. Examples include teachers, Community Services District (CSD) staff, real estate office staff, gym staff, and so forth. The Study counts Delta College jobs and a portion of the Lammersville School District administrative staff jobs as regional because they service population outside of Mountain House.

On average, there are about 250 square feet per employee in developed commercial spaces (see **Table 6**). No industrial uses have yet been developed in Mountain House. Square feet per employee is typical for the types of uses in the Wicklund Commercial Center, which includes a market, chiropractor, dental office, and fitness center. Regionally, these types of businesses are occupied in the range of 200-250 square feet per employee. Note that the MHMP estimated 480 square feet per employee for commercial buildings.

Table 6
Estimated Square Feet per Employee in Mountain House

Non-Residential	Total Space	Space Occupied	Vacancy Rate	Number of Employees	Square Feet per Employee (Occupied Space)
		(approx.)		[1]	
	Bldg. Sq. Ft.	Bldg. Sq. Ft.			Bldg. Sq. Ft.
Commercial Uses		[2]			
Wicklund Commercial Center	11,181	7,268	35%	26	280
Subdivision Sales Office	1,607	1,607	0%	8	201
Professional Offices & Services Bldg [3]	28,640	22,912	20%	92	250
Subtotal Commercial Uses	41,428	31,787	23%	126	253
Institutional Uses					
Delta College	30,000			67	448
Lammersville School District					
Administrative Offices	7,831			62	126
Mountain House High School	232,728			64	3,636
Altamont Elementary	66,131			49	1,350
Bethany Elementary	61,557			57	1,080
Hansen Elementary	80,268			43	1,867
Questa Elementary	69,493			54	1,287
Wicklund Elementary	62,309			64	974
Library	5,760			9	640
Fire Station	9,509			10	951
Subtotal Institutional Uses	625,586			479	1,306
Subtotal Non-Residential	667,014			605	
Population-Serving				525	
Regional [4]				80	

Source: San Joaquin County, Lammersville School District, and Mountain House CSD.

The following discussion on jobs is derived from the US Census Bureau's data tool 'On the Map' using 2017 ACS data. The total number of jobs reported in Mountain House was 826. Of those jobs, 71 (9 percent) were filled by persons also living in Mountain House. **Table 7** shows number of workers living in each comparison community in the Altamont Corridor as well as the number of persons living in the area employed elsewhere. The data in **Table 7** indicates whether a community primarily commutes elsewhere to work.

^[1] Full and part-time positions as of December 2018.

^[2] Approximate square feet based on HEC research.

^[3] A portion of the building is the administrative offices of the Mountain House Community Services District.

^[4] Includes Delta College and a portion of the Lammersville School District Administrative staff.

Table 7
Persons Living and Working in the Area – Including Comparison Places

Employment	Pleasanton	Livermore	Tracy	Manteca	Mountain House	San Joaquin County
Workers in the Area					[1]	
Employed in Area, Live Elsewhere	61,852	40,763	24,409	13,311	755	107,074
Living and Working in the Area	6,442	10,650	5,511	3,551	71	138,817
Total Workers in the Area	68,294	51,413	29,920	16,862	826	245,891
Percent of Workers Living and						
Working in the Same Area	9%	21%	18%	21%	9%	56%
					[2]	
Living in the Area	37,264	45,953	35,921	31,522	4,071	288,874
Live in Area, Employed Elsewhere	30,822	35,303	30,410	27,971	4,000	150,057
Percentage of Employed Labor Force						
Working Elsewhere	83%	77%	85%	89%	98%	52%

Source: http://onthemap.ces.census.gov/ using 2017 ACS data.

Only 9 percent of workers live and work in Pleasanton; about 21 percent of persons in Livermore and Manteca and 18 percent of persons in Tracy work where they live. For San Joaquin County, 56 percent of persons live and work in the same county.

Table 8 on the following page shows that of the persons commuting into Mountain House for work just over a quarter originated from Tracy. Of the employed persons living in Mountain House, 98 percent were employed elsewhere. Location of jobs includes cities in the Altamont Corridor and elsewhere (see **Table 9**). The data show that most people who live in Mountain House are travelling elsewhere for work and that most people working in Mountain House are originating from elsewhere. These patterns are similar to those of the cities in the Altamont Corridor, although the percentage of persons commuting into the area for work is slightly higher in Mountain House.

^[1] See Table 8.

^[2] See Table 9.

Table 8
Workers Employed in Mountain House Living Elsewhere

Origin (Where Worker Lives)	Workers	Percentage of Workers
Tracy	200	26%
Stockton	61	8%
Manteca	45	6%
Livermore	28	4%
Brentwood	19	3%
Modesto	13	2%
San Jose	16	2%
Lathrop	10	1%
Elk Grove	10	1%
Other	353	47%
Total	755	100%

Source: http://onthemap.ces.census.gov/ using 2017 ACS data.

Table 9
Residents in Mountain House Commuting

Mountain House Residents Commuting	Workers	Percentage of Workers
Tracy	380	10%
Livermore	337	8%
San Jose	253	6%
Pleasanton	246	6%
Stockton	201	5%
Fremont	142	4%
Oakland	139	3%
San Francisco	120	3%
Sacramento	112	3%
Modesto	87	2%
Other	1,983	50%
Total	4,000	100%

Source: http://onthemap.ces.census.gov/ using 2017 ACS data.

Evidence that employed persons residing in Mountain House are travelling beyond Mountain House is also found in **Table 10** below. A large proportion of residents (about 59 percent) are travelling at least 25 miles to work. Many residents are travelling further than 60 miles to work.

Table 10
Jobs Distance from Mountain House

	Employed	
Distance from Mountain House	Labor Force	% of Total
Less than 10 miles	569	14%
10 to 24 miles	1,077	26%
25 to 60 miles	1,715	42%
Greater than 60 miles	710	17%
Total Employed Labor Force	4,071	100%

Source: http://onthemap.ces.census.gov/ using 2017 ACS data.

Table 11 compares travel time to work for residents in Mountain House with residents in San Joaquin County using 2017 ACS data. More than 60 percent of Mountain House residents spend more than 45 minutes travelling to work. In contrast, for the County as a whole, about 25 percent of residents spend more than 45 minutes travelling to work.

Table 11
Travel Time to Work

	Mountain House	San Joaquin County
Travel Time	% of Persons Travelling	% of Persons Travelling
< 10 minutes	4%	13%
10-14 minutes	3%	15%
15-19 minutes	2%	15%
20-24 minutes	4%	13%
25-29 minutes	7%	5%
30-34 minutes	5%	10%
35-44 minutes	11%	4%
45-59 minutes	22%	7%
60+ minutes	42%	18%
Total	100%	100%

Source: 2017 5-year American Community Survey, US Census Bureau.

2.3.3 Wages

Almost all the jobs in Mountain House are generated by institutional uses such as Lammersville School District (the largest employer), Mountain House CSD, and Delta College. **Table A-4** in Appendix A provides sample wages for jobs in Mountain House.

In **Table 12** below the sample of Mountain House jobs by occupation is compared with wages for San Joaquin County using Stockton Metropolitan Statistical Area (MSA) data and Alameda County using the Oakland-Fremont-Hayward Metropolitan Division data which is supplied by the California Economic Development Department. Since the sample size is not large for Mountain House, the Mountain House wages as a percentage of San Joaquin County wages and Alameda County wages should not be given much weight. They do generally indicate however that wages for institutional jobs are similar to those found in other parts of San Joaquin County, and in Alameda County.

Table 12
Comparison of 2018 Mean Annual Wages

	2018 1st Quarter M	ean Annual Wages	2018	Mountain H	ouse
Occupation	San Joaquin County [1]	Alameda County [2]	Sample Median Wages	San Joaquin Co.	As % of Alameda Co.
All Occupations	\$47,821	\$64,221	\$67,863	142%	106%
Management Occupations	\$112,196	\$143,232	\$139,220	124%	97%
Business and Financial Operations Occupations	\$71,677	\$91,375	\$52,533	73%	57%
Computer and Mathematical Occupations	\$77,267	\$109,549	\$60,237	78%	55%
Architecture and Engineering Occupations	\$86,284	\$100,491	\$96,144	111%	96%
Life, Physical, and Social Science Occupations	\$66,615	\$91,768		n/a	n/a
Community and Social Services Occupations	\$49,250	\$58,765	\$80,257	163%	137%
Legal Occupations	\$78,922	\$124,344		n/a	n/a
Education, Training, and Library Occupations	\$60,715	\$63,111	\$75,443	124%	120%
Arts, Design, Entertainment, Sports, and Media Occupations	\$49,809	\$57,343		n/a	n/a
Healthcare Practitioners and Technical Occupations	\$96,205	\$104,705		n/a	n/a
Healthcare Support Occupations	\$37,472	\$40,733		n/a	n/a
Protective Service Occupations	\$58,909	\$65,276		n/a	n/a
Food Preparation and Serving-Related Occupations	\$27,598	\$30,509	\$36,234	131%	119%
Building and Grounds Cleaning and Maintenance Occupatio	\$31,558	\$38,707	\$67,001	212%	173%
Personal Care and Service Occupations	\$26,991	\$31,218		n/a	n/a
Sales and Related Occupations	\$37,675	\$48,925		n/a	n/a
Office and Administrative Support Occupations	\$38,641	\$46,655	\$50,655	131%	109%
Farming, Fishing, and Forestry Occupations	\$27,116	\$33,722		n/a	n/a
Construction and Extraction Occupations	\$54,272	\$69,398		n/a	n/a
Installation, Maintenance, and Repair Occupations	\$50,604	\$59,733		n/a	n/a
Production Occupations	\$37,748	\$44,289		n/a	n/a
Transportation and Material Moving Occupations	\$40,823	\$44,852		n/a	n/a

Source: California EDD Occupational Employment Statistics Survey, Lammersville School District and Mountain House CSD.

^[1] Stockton MSA.

^[2] Oakland-Fremond-Hayward Metropolitan Division.

Section 3: JOBS TO HOUSING ANALYSIS

3.1 Jobs to Housing Ratios

Jobs-housing ratios (ratios) provide an indicator of how well land uses are meeting economic development goals. An area with a jobs-housing balance ratio greater than 1.0 has more jobs than workers available within the area, suggesting an inflow of workers, which in turn implies greater drive time, and potentially congestion and pollution in an area. An area with a jobshousing balance smaller than 1.0 has fewer jobs than workers available within the area, suggesting an outflow of workers; this also implies greater drive time and associated increased congestion and pollution in an area. Jobs to housing balance is a tool for local planners to assess how balanced their land uses are to meet the needs of current economic drivers and future potential growth.¹

The MHMP includes the calculation of three ratios. All three ratios are calculated as the ratio of required housing to available housing. The MHMP Project buildout ratio of 0.99 is calculated as follows:

Ratio = Required Housing = (# Jobs / Average # Employed Residents per HH) x (1+ vacancy rate)

Available Housing = # of Housing Units Built and Available for Occupancy

The calculation of employed residents per household in the Altamont Corridor is shown in **Table A-5** in Appendix A. Available housing is the number of completed residential units for two of the ratios; for one ratio, available housing is the number of completed residential units three years ago. Required housing differs between the three ratios because the number of jobs is different in each ratio. The three ratios are defined as:

- 1. Population-serving jobs ratio: Available housing reflects units completed. The total number of jobs includes only jobs that directly serve the residents of Mountain House.
- 2. Minimum ratio: Available housing reflects a 3-year lag in units completed. The total number of jobs includes all jobs (population-serving and regional).
- 3. Best case ratio. Available housing reflects units completed. The total number of jobs includes all jobs and direct construction jobs.

Neither the formula used to calculate the ratios nor the inclusion of direct construction jobs are typical in calculation of jobs to housing ratios. In this section of the report the MHMP ratios are compared with industry standard ratios.

¹ California Government Code Section 65890.1 "balancing of employment-generating land uses and residential land uses improves economic and housing opportunities and reduces loss of economic productivity caused by transportation delay."

3.1.1 MHMP Ratios

Table 13 below shows the MHMP ratios using the formula defined in the MHMP. The number of employed residents per household, which is a key assumption in the jobs/housing ratio formula, is currently the same as that estimated in the MHMP according to 2017 ACS data. The vacancy rate will change over time depending on factors such as total supply of units on the market, the general health of the economy, and the job market. The 2017 ACS data indicates a vacancy rate of 3.2 percent whereas the MHMP estimated a vacancy rate of 5.0 percent.

Table 13
Calculated Mountain House Master Plan Ratios

		Calculated MHMP Ratios						
Item	Formula	Population	Min. Ratio	Best Ratio	Buildout			
		Serving Only		[1]	Estimate			
		[2]	[3]	[2]				
Residential Units Completed [2], [3]	а	5,932	4,661	5,932	16,105			
Number of Permanent Jobs	b	525	605	1,397	21,924			
Employed Residents per Household [4]	С	1.44	1.44	1.44	1.44			
Vacancy Rate	d	3.2%	3.2%	3.2%	5%			
Required Housing	e = (b/c)*(1+d)	377	434	1,004	15,986			
Jobs / Housing Ratio	f = e/a	0.06	0.09	0.17	0.99			
Master Plan Estimates @ 4,000 Units		0.39	0.70	0.79				

Source: HEC and "Economic Impact Study of the Proposed Housing Development in Stockton, CA", March 25, 2015 by the Eberhardt School of Business, University of the Pacific.

Average Number of Homes Built per Year 371
Ratio of Construction Jobs to Homes 2.138
Construction Jobs Generated 793

The MHMP estimated that at approximately 4,000 units developed the jobs to housing ratio would be 0.39 for population-serving jobs, 0.70 under the minimum ratio, and 0.79 under the best-case ratio. The current estimates for population-serving jobs and best-case ratios at 5,932 units are 0.06 and 0.17, respectively. The current estimate for the minimum ratio at 4,661 nits completed at the end of 2015 is 0.09. The jobs to housing ratio is lower at this stage in development than it was estimated to be in the MHMP using any of the three different MHMP ratios.

Using the MHMP formula, the minimum ratio is compared with Altamont Corridor comparison places and the County in **Table 14.** The minimum ratio for Mountain House is much lower than for the comparison places. Pleasanton has a ratio of 1.74. All the other communities have ratios

^[1] There is no data source that provides the exact number of construction jobs generated by development in Mountain House. HEC estimated direct construction jobs using results of an input-output analysis prepared by the University of the Pacific for new housing in Stockton. The study concludes that for every 1,000 homes built in San Joaquin County there are 2,138 direct construction jobs generated. The ratio of 2.1 is applied to the average number of units built per year (2003-2018).

^[2] Residential units completed at the end of 2018.

^[3] Residential units completed at the end of 2015.

^[4] The MHMP assumes 1.44 employed residents per household throughout project development; this matches 2017 ACS data.

less than one, which implies that there are less jobs in those communities than can be filled by the resident labor force. In Pleasanton, there are more jobs available than the resident labor force can fill.

Table 14
Calculation of Jobs/Housing Ratios – Includes Comparison Places

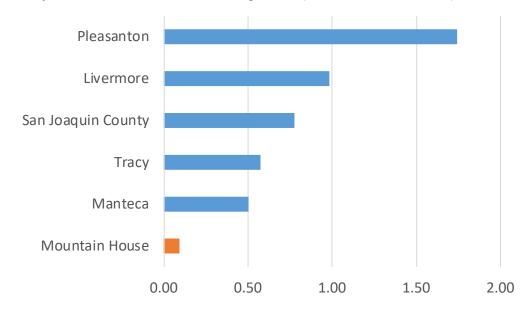
Item	Formula	Pleasanton	Livermore	Tracy	Manteca	Mountain House	San Joaquin County
			All	ratios are "i	minimum ra	tios"	
Residential Units Available [1]	а	26,980	31,473	26,223	25,306	4,661	239,405
Number of Permanent Jobs	b	63,462	46,744	23,732	16,377	605	230,784
Employed Residents per Household	С	1.40	1.56	1.64	1.35	1.44	1.32
Vacancy Rate	d	3.9%	3.4%	3.4%	4.7%	3.2%	6.5%
Required Housing	e = (b/c)*(1+d)	46,981	30,936	14,964	12,673	434	185,597
Jobs / Housing Ratio	f = e/a	1.74	0.98	0.57	0.50	0.09	0.78

Source: San Joaquin County, Mountain House Master Plan, California Department of Finance, and HEC.

Comparison ratios are illustrated in **Figure 2.** It is expected that as Mountain House continues to develop and more commercial space becomes available the minimum ratio will improve.

Table 15 on the following page compares the three industry standard ratios using data provided in **Table 4**. The standard industry ratio calculations also show Mountain House having lower jobs to housing ratios than the comparison places.

Figure 2
Comparison of Minimum Job/Housing Ratios (Master Plan Definition)



^[1] Residential units as of 1/1/2016.

Table 15
Jobs to Housing Ratios Using Industry Standard Ratios – Includes Comparison Places

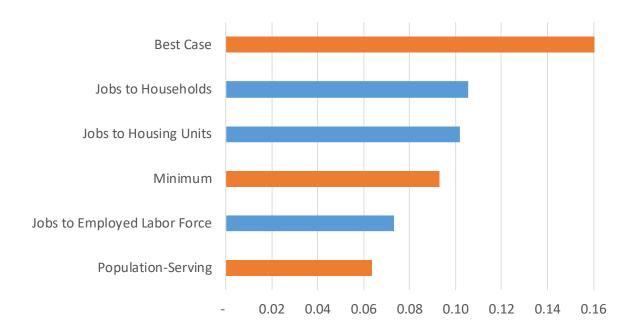
Ratios [1]	Pleasanton	Livermore	Tracy	Manteca	Mountain House	San Joaquin County
Jobs to Housing Units Ratio	2.18	1.44	0.90	0.66	0.10	0.96
Jobs to Households Ratio	2.27	1.49	0.93	0.70	0.11	1.03
Jobs to Employed Labor Force Ratio	1.62	0.95	0.57	0.52	0.07	0.78

Source: HEC.

[1] Ratios calculated using data shown in Table 4 (2015 and 2017 ACS data).

Figure 3 compares the MHMP ratios (orange bars) and standard industry ratios (blue bars) for Mountain House at 5,932 units of development.

Figure 3
Comparison of Mountain House Ratios



Section 4: FINDINGS

The following major findings can be made from the Study:

4.1 LAND USE, POPULATION, AND JOBS

- MHMP residential development is at about 38 percent of buildout. Commercial development is less than 1 percent developed, and other non-residential land uses are about one quarter percent (1/4%) developed. Total population of Mountain House is estimated at 20,573. Development of commercial space, and consequently total jobs generated, is behind the MHMP estimates at development of 4,000 residential units.
- Total job creation is currently 605 jobs, most of which has been generated by
 institutional land uses. Because of minimal commercial and industrial development, job
 creation has not reached the estimate of 5,872 jobs at 5,932 residential units developed
 in the MHMP (based on achieving a MHMP jobs to housing ratio of 0.99 which is the
 buildout goal) or 4,686 jobs using a ratio of 0.79 (the MHMP projected ratio with
 completion of 4,000 units).
- The unemployment rate of the civilian labor force in 2017 (most recent year of data available) was better than nearby communities in San Joaquin County. Unemployment in the communities of Pleasanton and Livermore in Alameda County was lower than in Mountain House.
- Ninety-eight percent of people who live in Mountain House are employed/work elsewhere (not in Mountain House). This compares with 52 percent of the population in San Joaquin County, and between 77 percent and 89 percent in cities along the Altamont Corridor. Generally, commuting for work is more prevalent in the Altamont Corridor than elsewhere in the County. More than half of workers travel more than 45 minutes (and more than 25 miles) from their residence in Mountain House to work.
- Job occupations of Mountain House residents are more than 50 percent management, business and science, one-quarter sales and office occupations, and the remainder other occupations. Management and business occupations typically pay higher wages than the mean annual wage of all occupations in the region.
- Of the total number of jobs in Mountain House, 9 percent are filled by people who also live in Mountain House. The percentage is similar to Pleasanton but lower than the other Altamont Corridor cities where about 20 percent of jobs are filled by persons living in those cities.

 Wages for jobs (almost all institutional) in Mountain House are similar to wages in other parts of the region including the Stockton metropolitan area and the Oakland-Fremont-Hayward metropolitan area.

4.2 **JOBS TO HOUSING RATIOS**

- At the 4,000-unit development stage, the MHMP estimated a minimum jobs to housing ratio of 0.70, and a best-case ratio of 0.79. Based on MHMP ratios, the current minimum ratio is estimated to be 0.09 and the best-case ratio is estimated to be 0.17. Actual ratios are lower than projected in the MHMP at the current (2018) stage of buildout.
- The Mountain House minimum ratio of 0.09 compares to 1.74 for Pleasanton, 0.98 for Livermore, 0.57 for Tracy, and 0.50 for Manteca. This result indicates that more people commute into Pleasanton than commute out of Pleasanton for work, Livermore is balanced, and more people commute out of Tracy, Manteca, and Mountain House for work than commute in.

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Table A-1

Mountain House Jobs / Housing Review

Annual Increase in Housing Units, Non-Residential Square Feet and Estimated Jobs

Units, Building Sq. Ft. and Jobs	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of Housing Units [1]	222	536	443	781	729	353	134	56	165	207	413	233	389	499	121	651
Estimated New Persons [2]	770	1,859	1,536	2,709	2,528	1,224	465	194	572	718	1,432	808	1,349	1,731	420	2,258
Non-Residential Building Square	Feet															
Commercial	11,181	0	28,640	0	0	0	0	0	0	0	0	1,607	0	0	0	0
Institutional	0	71,818	0	0	61,557	30,000	0	69,493	7,831	0	0	304,619	0	0	0	80,268
Jobs																
Population-Serving	26	74	92	0	57	0	0	54	49	0	0	130	0	0	0	43
Regional	0	0	0	0	0	67	0	0	13	0	0	0	0	0	0	0
Total Jobs	26	74	92	0	57	67	0	54	62	0	0	130	0	0	0	43

Source: San Joaquin County.

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^[1] Includes single family homes, second units, and condominiums in neighborhoods A/B, C, D, E, F, G and H.

^[2] Cumulative population is based on 2017 ACS factors of 3.58 persons per occupied unit and 96.8% occupancy.

Table A-2
Mountain House Jobs / Housing Review
Annual Completion of Residential Units in Mountain House

Completed Residential Units	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Single Units	208	516	435	605	632	297	103	54	164	207	413	231	245	416	121	451	5,098
Second Units	14	20	8	30	51	21	9	2	1	0	0	2	85	83	0	200	526
Condominiums	0	0	0	146	46	35	22	0	0	0	0	0	59	0	0	0	308
Total Complete Units	222	536	443	781	729	353	134	56	165	207	413	233	389	499	121	651	5,932

Source: San Joaquin County Historical Sales Data and Community Development Department.

Table A-3
Mountain House Jobs / Housing Review
Annual Development of Non-Residential Square Feet

Non-Residential Use	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Commercial Uses																	
Wicklund Commercial Center	11,181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,181
Subdivision Sales Office	0	0	0	0	0	0	0	0	0	0	0	1,607	0	0	0	0	, -
Professional Offices	0	0	28,640	0	0	0	0	0	0	0	0	0	0	0	0	0	
Subtotal Commercial	11,181	0	28,640	0	0	0	0	0	0	0	0	1,607	0	0	0	0	
Institutional Uses																	
Delta College	0	0	0	0	0	30,000	0	0	0	0	0	0	0	0	0	0	30,000
Lammersville School District	0	62,309	0	0	61,557	0	0	69,493	7,831	0	0	298,859	0	0	0	80,268	580,317
Library	0	0	0	0	0	0	0	0	0	0	0	5,760	0	0	0	0	5,760
Fire Station	0	9,509	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,509
Subtotal Institutional	0	71,818	0	0	61,557	30,000	0	69,493	7,831	0	0	304,619	0	0	0	80,268	625,586
Total Non-Residential	11,181	71,818	28,640	0	61,557	30,000	0	69,493	7,831	0	0	306,226	0	0	0	80,268	667,014
Jobs																	
Population-Serving	26	74	92	0	57	0	0	54	49	0	0	130	0	0	0	43	525
Regional	0	0	0	0	0	67	0	0	13	0	0	0	0	0	0	0	80
Total Jobs	26	74	92	0	57	67	0	54	62	0	0	130	0	0	0	43	605

Source: San Joaquin County January 2019 and HEC.

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Table A-4 Mountain House Jobs / Housing Review Sample Wages for Jobs in Mountain House

	2018 Annual		2018 Annual
Job	Wages	Job	Wages
Management Occupations		Education, Training, and Library Occupations	<u> </u>
General Manager	\$199,241	Library Technician	\$33,280
Administrative Services Director	\$157,222	High School Principal	\$132,947
Assistant Superintendent	\$146,617	Teacher CL2	\$69,031
Public Works Director	\$173,434	Teacher CL3	\$73,921
O & M Supervisor	\$97,642	Teacher CL4	\$76,965
School Director of Maintenance & Ops	\$74,280	Teacher CL5	\$102,888
Chief Business Official of Schools	\$120,886		
Director Certificated Management	\$131,822	Food Preparation and Serving-Related Occup	oations
		Food Services Director	\$53,980
Business and Financial Operations Occupati	ons	Food Services Admin. Secretary	\$41,870
Accounting Technician I	\$52,533	Food Leader (School)	\$36,234
Accountant I	\$54,299	Food Service Worker	\$33,280
K-8 Office Supervisor	\$44,554	Cafeteria Tech	\$28,330
Administrative Assistant	\$44,554		
Business Services Specialist	\$53,706	Building and Grounds Cleaning and Mainten	ance Occupations
HR Analyst	\$53,706	Senior Public Works Inspector	\$75,351
Accounting Clerk	\$40,997	Inspector/Code Enforcement Officer	\$69,707
		Maintenance Worker II	\$41,925
Architecture and Engineering Occupations		Supervisor of Operations - Schools	\$64,295
Engineer I	\$68,793		
Engineer II	\$83,229	Office and Administrative Support Occupation	ons
Engineer IV	\$109,058	Accounting Technician	\$52,533
Engineer V	\$110,318	Administrative Secretary	\$24,593
		Deputy Secretary of the Board	\$87,829
Community and Social Services Occupations	5	Schools Executive Assistant	\$66,932
School Counselor	\$88,516	Office Assistant	\$43,286
Coordinator of Special Education	\$88,962	High School Office Supervisor	\$48,776
Recreation Coordinator	\$64,941	District Courier	\$29,744
School Nurse	\$74,280		
Occupational Therapist	\$86,233	Computer and Mathematical Occupations	
Speech Pathologist	\$59,072	IT Program Manager	\$70,670
		Info Tech I	\$40,331
		Information Technician	\$60,237

Source: Lammersville School District and Mountain House CSD, 2019.

Table A-5
Mountain House Jobs / Housing Review
Employed Residents per Household - Includes Comparison Places

Calculation	Pleasanton	Livermore	Tracy	Manteca	Mountain House	San Joaquin County
Miles from Mountain House	21	12	6	19	0	n/a
Miles from Pleasanton	0	9	27	40	21	n/a
Persons per Unit (see Table 4)	2.84	2.81	3.44	3.21	3.58	3.24
Employed Residents (see Table 4)	39,199	48,986	41,756	31,778	6,020	296,264
Households (see Table 4)	27,922	31,347	25,469	23,495	4,190	223,808
Employed Residents per Household	1.40	1.56	1.64	1.35	1.44	1.32

Source: US Census 5-year 2017 American Community Survey and HEC.