


Monterey Bay 2040

Moving Forward

Sustainability.
Mobility.
Accessibility.
Economy.
Social Equity.






2040 Metropolitan Transportation Plan / Sustainable Communities Strategy

Final
June 2018

PLANNING EXCELLENCE
AMBAG
Association of Monterey Bay Area Governments

Moving Forward Monterey Bay 2040

Final

June 2018

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Executive Summary

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Introduction

Solutions to the region's transportation needs require a comprehensive planning effort that coordinates land use patterns and transportation investments with the objective of developing an integrated, multimodal transportation system. The Metropolitan Transportation Plan (MTP) and its Sustainable Communities Strategy (SCS) are built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2040.

Our Vision

A Sustainable Future

The word "sustainable" is used in many contexts. In the case of this Plan it refers to the mandates arising from Senate Bill (SB) 375, California's Sustainable Communities and Climate Protection Act, to develop a Sustainable Communities Strategy. At the heart of SB 375 is the requirement to coordinate transportation investments with land use patterns such that the region makes informed decisions about where to invest the region's limited resources and simultaneously reduce greenhouse gases by providing more direct access to destinations as well as by providing alternative transportation options. Instead of basing investments solely on transportation need, this Plan is required to analyze where people are going and how they want to get there in order to build a transportation network that addresses the mobility and accessibility needs of the region. One strategy included in this Plan to achieve this is more focused growth in high quality transit corridors. Another strategy in the Plan is to provide more travel choices as well as a safe and efficient transportation system with improved access to jobs and education for our residents. Additionally, the 2040 MTP/SCS supports job creation through economic development, ensures our region's economic competitiveness through strategic investments in freight, and improves environmental outcomes for the region's residents by 2040.

Senate Bill 375

Under SB 375, the SCS should demonstrate the land use and transportation measures that will be used to meet the region's greenhouse gas emission reduction targets as established by the California Air Resources Board (CARB) - a zero percent per capita change by 2020 and five percent per capita reduction by 2035 from passenger vehicles. Both targets are compared to 2005 levels of greenhouse gases. SB 375 was enacted to support the state's goals of Assembly Bill 32, the Global Warming Solutions Act of 2006. Meeting these targets will point the region toward overall sustainability and will provide benefits beyond reducing emissions.

Senate Bill 375

Senate Bill 375, passed in late 2008, requires the 18 Metropolitan Planning Organizations (MPO) in California to reduce transportation related per capita greenhouse gas emissions through a coordinated land use and transportation plan called the Sustainable Communities Strategy, or SCS. The SCS comprises a new chapter in AMBAG's Metropolitan Transportation Plan and will help shape the region's long range transportation plan, including the financing of transportation projects.

Under SB 375, the SCS must identify a regional development pattern and transportation system that can meet the regional greenhouse gas (GHG) targets reductions from cars and light trucks for 2020 and 2035.

Pursuant to statute, the California Air Resources Board (CARB) adopted targets for each of the 18 MPOs across the state. Based upon the recommendation issued by the AMBAG Board of Directors, CARB adopted the following targets for the Monterey Bay Area in September 2010:

2020: 0% increase from 2005 per capita GHG emissions

2035: 5% reduction from 2005 per capita GHG emissions

If the SCS cannot meet the GHG targets, an "Alternative Planning Scenario" must be prepared to show how the targets could be achieved.

Regional Growth

The Monterey Bay Area is projected to grow more slowly than the state and nation. A map of the region is shown in Figure ES-1. In 2015, there were 755,403 people in the Monterey Bay Area spread over an area of 5,157 square miles. In 2040, the population is expected to reach 883,300. Additionally, there were 262,660 housing units in the region in 2015. The region is expected to add over 42,000 more housing units by 2040 and more than 57,000 new jobs as shown in Figures ES-2 and ES-3.

Goals & Policies

AMBAG adopted a framework of goals and policy objectives to guide the development of the 2040 MTP/SCS. Chapter 1 presents these goals and policies within the context of the regional vision for 2040. The goal areas are:

- *Access and Mobility*
- *Economic Vitality*
- *Environment*
- *Healthy Communities*
- *Social Equity*
- *System Preservation and Safety*

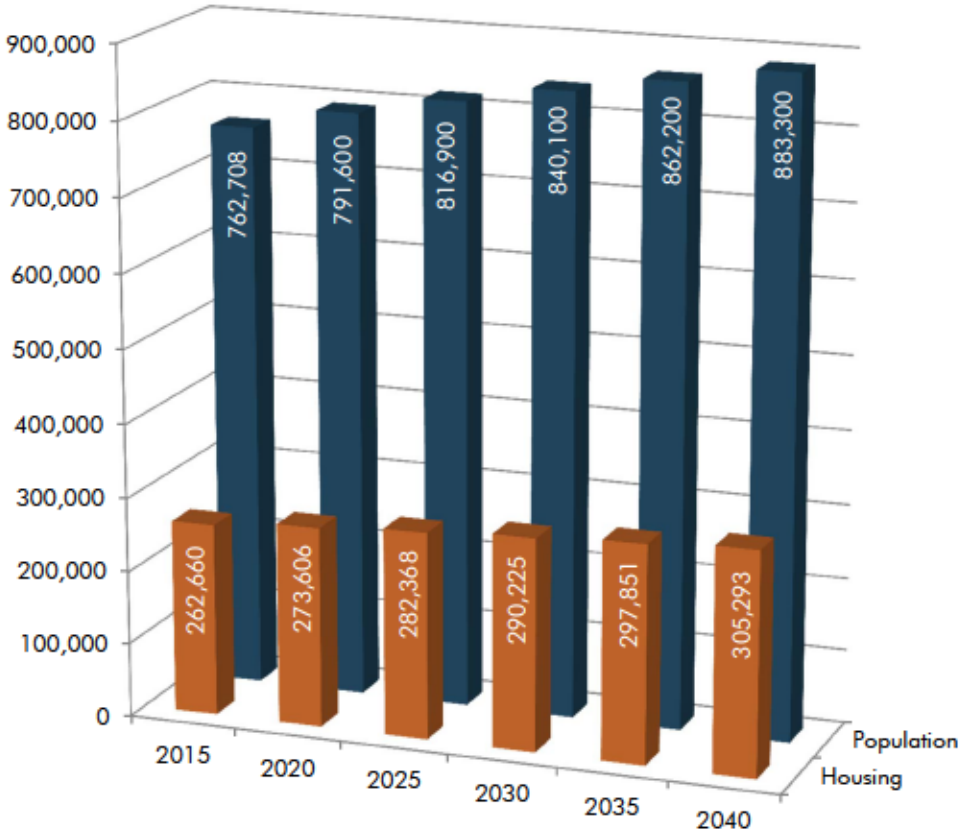
Transportation Investments

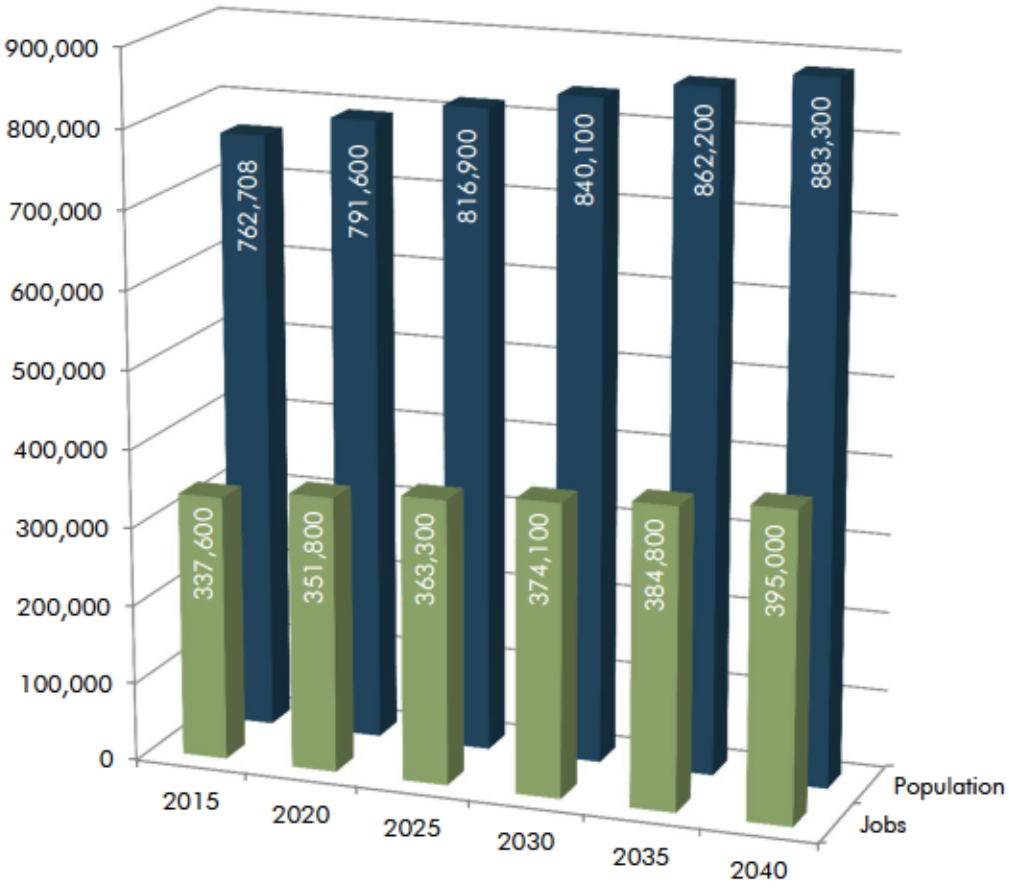
The 2040 MTP/SCS contains a number of improvements to the region's multimodal transportation system. These improvements include closures of critical gaps in the network that hinder access to jobs and daily needs, as well as the strategic expansion of the transportation system to provide the region with increased mobility.

One of the Plan's goals is to reduce per capita greenhouse gas emissions over the next 25 years, however, the total demand to move people and goods will continue to grow due to the region's projected population increase.

Figure ES-1: Regional Map

Figure ES-2 and ES-3: Population, Housing Units and Jobs





Source: AMBAG 2018 Regional Growth Forecast

A strategic expansion of the transportation system is needed to provide the region with the mobility it needs. The 2040 MTP/SCS targets this expansion around mutually supportive bus transit, rail, key roadway, and active transportation projects. The Plan does so as cost effectively as possible by employing strategies such as combining maintenance and operations projects with bicycle and pedestrian facility improvements. These transportation systems must be improved and expanded to improve the accessibility and connectivity needed to become a truly viable alternative for the region as a whole. Chapter 2 discusses these investments in greater detail.

Financial Plan

Of all the challenges facing the region today, there is perhaps none more critical than funding. Currently, the region faces a funding shortfall just to maintain and operate the existing system. With projected growth in population, employment, and demand for travel over the next twenty years, the costs of multimodal transportation are increasing, compounding the need for new sources of revenue.

The region must consider ways to stabilize existing revenue sources and supplement them with reasonably available new sources. The region needs a long-term, sustainable funding plan that ensures the region receives its fair share of funding and supports an efficient and effective transportation system that grows the economy, provides mobility choices, and improves quality of life.

Chapter 3 provides such a financial plan and identifies how much money is available to support the region's transportation investments. The Plan includes a revenue forecast of approximately $9.9 billion that includes local, state, and federal sources reasonably expected to be available over the timeline of the 2040 MTP/SCS.

Sustainable Communities Strategy

Chapter 4 contains the SCS which demonstrates the region's ability to exceed the GHG emission reduction targets set forth by the CARB. The SCS outlines the region's plan for integrating the transportation network within an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The overall SCS land use development pattern complements the proposed transportation network which emphasizes multimodal system enhancements, system preservation, and improved access to high quality transit.

Performance Measures

In support of the goals and policies established through public participation efforts and stakeholder involvement, a dozen performance measures were established to measure how well the Plan performs. The investments in the 2040 MTP/SCS are expected to result in significant benefits to the region with respect to transportation and mobility, economic activity and job creation, sustainability, and environmental justice. As described in Chapter 5, the 2040 MTP/SCS exceeds the greenhouse gas emission reduction targets set by CARB by achieving a three percent per capita reduction for 2020 and a six percent per capita reduction for 2040.

Public Participation

The development of the 2040 MTP/SCS involved implementation of one of the most comprehensive and coordinated public participation plans ever undertaken by AMBAG, exceeding legislative requirements.

AMBAG engaged a wide range of stakeholder groups, elected officials, special interest groups and the general public through a series of meetings and workshops. An interactive website expanded AMBAG's ability to engage and involve stakeholders and the public in shaping the 2040 MTP/SCS. The input received through this process was critical in defining a preferred land use and transportation

strategy and meeting/exceeding the 2040 MTP/SCS goals and policies. Chapter 6 details the public outreach process to involve and engage stakeholders and the public throughout the 2040 MTP/SCS planning process.

1 Vision

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Setting

Solutions to the region's transportation needs require a comprehensive planning effort that coordinates land use and transportation and develops an integrated, multimodal transportation system. The Metropolitan Transportation Plan (MTP) and its Sustainable Communities Strategy (SCS) are built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2040.

The region's population is largely concentrated in urban areas consisting of the 18 incorporated cities, which accounts for 66 percent of the total regional population. Unincorporated areas account for the remaining 34 percent. With the exception of Hollister and Salinas, major urban development in the Monterey Bay Area primarily occurs along the Bay coastal plains and foothills of the Monterey Peninsula from the City of Santa Cruz in the north to the City of Carmel-by-the-Sea to the south. The Santa Cruz, Watsonville, Seaside-Monterey, and Salinas urbanized areas are the most densely developed in the region.

In 2015, there were 762,676 people in the Monterey Bay Area spread over an area of 5,157 square miles. By 2040, the population is expected to reach 883,300. Additionally, there were 240,278 housing units in the region in 2015. The region is expected to add more than 42,000 more housing units by 2040.

The largest industries in the region by revenue and employment are tourism, agriculture, education, military, and other government sectors. These trends are expected to continue through 2040.

Senate Bill 375

The SCS is a new element of the MTP, as required by SB 375, and is designed to demonstrate how the region will meet the regional greenhouse gas (GHG) reduction targets established by the California Air Resources Board (CARB). For the Monterey Bay region the targets are a zero percent per capita change by 2020 and five percent per capita reduction by 2035.

To achieve these GHG targets, the SCS examines development patterns, transportation investments, and transportation measures or policies that are determined to be feasible. In addition, the SCS must be consistent with the Regional Housing Needs Assessment (RHNA) and must address protection of resource areas. If the SCS does not meet regional GHG reduction targets, an Alternative Planning Strategy (APS) must be developed to demonstrate how the targets could be achieved.

Implementation of the 2040 MTP/SCS is anticipated to achieve a four percent per capita reduction by 2020 and a nearly seven percent per capita reduction by 2035.

A Sustainable Future

The 2040 MTP/SCS serves as a blueprint for addressing the mobility and sustainability challenges faced in the region. The 2040 MTP/SCS will improve the quality of life for residents by implementing sound land use and transportation choices for the future. By 2040 the region is envisioned to have more travel choices and a safer, more efficient transportation system that provides improved access to jobs and education. Additionally, the Plan will support job creation, expand the region's economic competitiveness through investments in freight, and improve environmental quality for the region's nearly one million residents by 2040.

This 2040 MTP/SCS is built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2040.

Regional Growth

The Monterey Bay Area is projected to grow more slowly than the state and nation. By the year 2040, the region's population is forecasted to exceed 883,300 people. That's an increase of more than 120,000 people; along with more than 42,000 new housing units and over 57,000 new jobs. See Tables 1-1 through 1-3 for detailed forecast figures.

The regional growth forecast was developed by the Population Reference Bureau, which takes a jobs based approach to forecasting trends in growth for the region. The assumption is that the economy is a better predictor of population growth than traditional sources of migration data. Detailed information on the Regional Growth Forecast is included in Appendix A.

Jobs

The Monterey Bay Area is projected to add 57,400 jobs between 2015 and 2040.

The region is projected to experience job growth at a slightly slower rate than the state and nation. The primary reason is the region's below-average concentration in fast-growing sectors such as Information and Professional and Business Services. The region also has a below-average exposure to growth in foreign trade. Positive growth factors include an expected above average performance relative to state trends in the agriculture and tourism sectors.

Agricultural jobs are projected to increase modestly and, by 2040, will be the third largest major industry sector after Service and Public. Public job levels are also projected to increase modestly following recession cutbacks as government, schools and healthcare providers will be required to serve 120,000 additional residents in 2040 as compared to 2015.

The largest job gains in absolute numbers and percentage increases are in Service and Public jobs: Service 23,900, 21 percent increase, and Public 20,300, 22 percent increase from 2015 to 2040. This growth will be led by growth in sectors associated with health care and social services for an aging population.

The Retail sector is projected to experience nearly a ten percent growth or approximately 3,800 jobs.

Construction job levels are projected to rebound from recent lows but remain below pre-recession levels through 2040, adding only 700 jobs throughout the region. Although there is a substantial gain measured from 2015 job levels, it is primarily driven by a slow return to more normal construction levels in the region.

2040 Industrial job levels are projected to increase by 2,900 jobs, or a 20 percent growth. These projections do not anticipate any major move of high tech manufacturing jobs from Silicon Valley to the Monterey Bay Area.

The Monterey Bay Area has more residents per job than the national average and that trend is expected to continue to 2040. This is due to the fact that a large portion of AMBAG's residents commute to jobs outside the region, primarily to jobs in Santa Clara County. AMBAG projects that the ratio of population to jobs will return to the average regional levels by 2020.

Additionally, the Monterey Bay Area has an above average share of residents who live in group quarters and are not tied to the regional job market. This trend has continued since 1990 although the mix of group quarters residents has changed. Out commuting is expected to increase in line with Silicon Valley job growth but prison and college group quarters population are not expected to increase as fast as in the past, therefore reinforcing the existing interregional commute pattern.

The number of people per job surged during the recession as job levels fell while the population continued to grow. Between 2015 and 2020, job levels are projected to increase faster than the population as previously unemployed residents find work during the economic recovery. Between 2020 and 2040, job levels will grow more slowly than population as baby boomers retire from the workforce but remain in the population.

Population and Housing

The job growth forecast was translated into population growth using an analysis of residents per job, population to job ratio growth, and demographic trends over the last twenty years. Housing was derived from population using an analysis of trends for household size based on sex, race and ethnicity as well as age.

The Monterey Bay Area has more residents per job than the national average and that trend is expected to continue to 2040. The population projections were derived by anticipating that the growth of the regional population-to-job ratio will move in line with the national trend as it has in the past, even though the ratio itself is higher. Based on the high population-to-job, the trending growth line and the demographics of the region, the regional population is projected to increase from 762,676 in 2015 to 883,300 in 2040 for an increase of nearly 16 percent, or 120,624 residents.

Projections for housing are derived from population estimates using demographic profiles containing data on gender, age, race and ethnicity to determine household formation rates for each category. These profiles and more information on the calculations for jobs, housing and population are included in Appendix A.

Table 1-1a: Employment by Industry Monterey County Coastal

Monterey County - Costal	2015	2020	2025	2030	2035	2040
Regional Total	337,600	351,800	363,300	374,100	384,800	395,000
Monterey County Total	203,550	211,799	218,203	224,207	230,212	235,822
Carmel-By-The-Sea						
Agricultural	16	17	17	17	17	17
Construction	46	46	47	48	49	49
Industrial	106	111	115	117	120	122
Retail	450	458	467	476	483	492
Service	1,907	1,956	2,022	2,091	2,157	2,215
Public	223	219	233	245	257	269
Self-Employed	187	190	195	201	207	213
TOTAL	2,935	2,998	3,096	3,195	3,289	3,378
Del Rey Oaks						
Agricultural	0	0	0	0	0	0
Construction	17	17	17	18	18	18
Industrial	5	5	6	6	6	6
Retail	118	120	123	125	127	129
Service	151	157	165	173	180	188
Public	24	24	25	26	27	29
Self-Employed	44	47	51	56	60	63
TOTAL	359	371	387	404	418	432
Marina						
Agricultural	13	14	14	14	14	15
Construction	385	389	393	400	408	416
Industrial	210	222	229	235	240	245
Retail	1,359	1,386	1,413	1,450	1,481	1,528
Service	2,168	2,267	2,384	2,503	2,618	2,731
Public	1,571	1,708	1,751	1,795	1,840	1,888
Self-Employed	634	664	702	742	771	798
TOTAL	6,340	6,649	6,886	7,140	7,373	7,620
Monterey						
Agricultural	988	1,031	1,036	1,039	1,045	1,046
Construction	906	916	925	944	962	981
Industrial	1,367	1,417	1,467	1,509	1,542	1,575
Retail	3,355	3,419	3,485	3,551	3,603	3,668
Service	13,431	13,831	14,432	15,049	15,615	16,144
Public	12,090	11,896	12,605	13,241	13,896	14,558
Self-Employed	1,894	1,923	2,020	2,073	2,152	2,200
TOTAL	34,030	34,434	35,970	37,405	38,814	40,173
Pacific Grove						
Agricultural	0	0	0	0	0	0
Construction	190	192	194	198	201	205
Industrial	92	98	101	105	107	110
Retail	753	768	783	797	809	824
Service	1,977	2,021	2,093	2,182	2,251	2,317
Public	1,508	1,533	1,606	1,674	1,744	1,815
Self-Employed	481	483	495	510	525	538
TOTAL	5,000	5,093	5,272	5,466	5,637	5,808
Sand City						
Agricultural	0	0	0	0	0	0
Construction	117	118	120	122	124	127
Industrial	110	117	121	125	128	131
Retail	691	711	725	739	749	763
Service	468	488	526	566	602	628
Public	63	62	64	66	68	70
Self-Employed	68	72	76	80	85	90
TOTAL	1,517	1,569	1,633	1,698	1,758	1,810
Seaside						
Agricultural	0	0	0	0	0	0
Construction	316	319	323	329	335	342
Industrial	150	160	167	172	176	195
Retail	1,677	1,710	1,743	1,776	1,801	1,834
Service	2,315	2,392	2,480	2,572	2,658	2,740
Public	4,193	4,565	4,678	4,795	4,913	5,039
Self-Employed	999	1,016	1,065	1,082	1,136	1,149
TOTAL	9,650	10,161	10,455	10,726	11,020	11,299

Source: AMBAG 2018 Regional Growth Forecast

Table 1-1b: Employment by Industry Monterey County Inland

Monterey County - Inland	2015	2020	2025	2030	2035	2040
Regional Total	337,600	351,800	363,300	374,100	384,800	395,000
Monterey County Total	203,550	211,799	218,203	224,207	230,212	235,822
Gonzales						
Agricultural	3,320	3,568	3,583	3,604	3,629	3,640
Construction	15	15	15	16	16	16
Industrial	22	143	159	164	168	172
Retail	100	102	104	106	107	109
Service	377	446	483	520	556	592
Public	311	341	349	357	365	374
Self-Employed	333	348	371	401	437	469
TOTAL	**4,477**	**4,963**	**5,064**	**5,166**	**5,278**	**5,371**
Greenfield						
Agricultural	5,393	5,797	5,822	5,839	5,872	5,881
Construction	27	27	27	28	28	29
Industrial	40	57	84	87	89	91
Retail	189	243	298	313	318	324
Service	330	343	360	376	393	409
Public	455	471	491	509	528	548
Self-Employed	590	614	647	660	682	702
TOTAL	**7,024**	**7,552**	**7,729**	**7,813**	**7,911**	**7,982**
King City						
Agricultural	1,102	1,235	1,260	1,264	1,271	1,273
Construction	29	29	29	30	31	31
Industrial	99	145	150	165	168	172
Retail	399	407	415	423	428	436
Service	743	770	803	836	868	899
Public	1,648	1,665	1,749	1,825	1,903	1,983
Self-Employed	422	442	457	471	484	493
TOTAL	**4,441**	**4,692**	**4,862**	**5,013**	**5,154**	**5,287**
Salinas						
Agricultural	11,503	12,673	12,737	12,783	12,859	12,882
Construction	1,574	1,591	1,607	1,649	1,691	1,733
Industrial	2,230	2,304	2,354	2,414	2,475	2,520
Retail	9,169	9,334	9,480	9,651	9,792	9,977
Service	13,428	14,112	14,882	15,763	16,495	17,256
Public	21,084	21,689	22,740	23,627	24,536	25,468
Self-Employed	5,408	5,569	5,861	6,072	6,312	6,457
TOTAL	**64,396**	**67,270**	**69,660**	**71,958**	**74,160**	**76,294**
Soledad						
Agricultural	889	956	960	963	968	969
Construction	9	9	9	9	9	10
Industrial	208	222	230	237	243	249
Retail	292	298	304	310	314	320
Service	523	540	560	580	600	618
Public	939	961	1,005	1,046	1,087	1,130
Self-Employed	582	599	627	641	663	681
TOTAL	**3,442**	**3,584**	**3,694**	**3,786**	**3,885**	**3,978**
Balance of County						
Agricultural	30,875	32,854	32,968	33,044	33,226	33,264
Construction	1,469	1,484	1,499	1,519	1,539	1,559
Industrial	1,781	1,826	1,878	1,921	1,951	1,981
Retail	3,248	3,276	3,326	3,382	3,412	3,452
Service	12,766	13,071	13,599	14,031	14,534	14,956
Public	5,491	5,587	5,755	6,002	6,255	6,514
Self-Employed	4,308	4,404	4,472	4,539	4,598	4,664
TOTAL	**59,939**	**62,503**	**63,497**	**64,438**	**65,516**	**66,390**

Source: AMBAG 2018 Regional Growth Forecast

Table 1-1c: Employment by Industry San Benito County

San Benito County	2015	2020	2025	2030	2035	2040
Regional Total	337,600	351,800	363,300	374,100	384,800	395,000
San Benito County Total	18,000	19,240	19,957	20,617	21,264	21,913
Hollister						
Agricultural	399	402	404	405	407	408
Construction	924	944	954	973	992	1,011
Industrial	1,791	1,852	1,924	1,984	2,032	2,080
Retail	2,355	2,496	2,545	2,593	2,630	2,679
Service	2,853	3,270	3,478	3,689	3,892	4,088
Public	3,528	3,787	3,953	4,108	4,267	4,429
Self-Employed	1,234	1,283	1,350	1,380	1,429	1,477
TOTAL	**13,082**	**14,035**	**14,608**	**15,132**	**15,650**	**16,172**
San Juan Bautista						
Agricultural	0	0	0	0	0	0
Construction	15	15	15	16	16	16
Industrial	59	62	65	67	68	70
Retail	53	56	57	59	59	60
Service	215	229	240	251	262	272
Public	158	168	176	183	191	198
Self-Employed	58	59	61	64	66	68
TOTAL	**559**	**591**	**615**	**639**	**662**	**685**
Balance of County						
Agricultural	1,401	1,413	1,419	1,423	1,431	1,433
Construction	161	165	166	170	173	176
Industrial	409	457	473	486	497	508
Retail	592	652	665	679	687	700
Service	673	690	727	765	799	831
Public	614	712	730	748	767	787
Self-Employed	509	525	553	575	597	620
TOTAL	**4,359**	**4,614**	**4,734**	**4,846**	**4,951**	**5,056**

Source: AMBAG 2018 Regional Growth Forecast

Table 1-1d: Employment by Industry Santa Cruz County

Santa Cruz County	2015	2020	2025	2030	2035	2040
Regional Total	337,600	351,800	363,300	374,100	384,800	395,000
Santa Cruz County Total	116,050	120,761	125,141	129,275	133,324	137,265
Capitola						
Agricultural	0	0	0	0	0	0
Construction	66	66	67	68	69	71
Industrial	57	61	64	66	67	69
Retail	1,769	1,790	1,824	1,858	1,886	1,920
Service	3,257	3,354	3,483	3,617	3,744	3,859
Public	1,441	1,449	1,533	1,609	1,687	1,766
Self-Employed	472	479	493	509	525	542
TOTAL	**7,062**	**7,199**	**7,464**	**7,727**	**7,979**	**8,228**
Santa Cruz						
Agricultural	190	204	205	206	207	207
Construction	550	553	559	580	601	623
Industrial	2,206	2,284	2,371	2,443	2,501	2,559
Retail	4,796	4,848	4,943	5,037	5,109	5,203
Service	12,753	13,098	13,703	14,329	14,909	15,471
Public	17,660	19,169	19,777	20,381	20,997	21,648
Self-Employed	2,832	2,932	3,089	3,178	3,293	3,375
TOTAL	**40,986**	**43,090**	**44,647**	**46,153**	**47,616**	**49,085**
Scotts Valley						
Agricultural	3	3	3	3	3	3
Construction	103	104	105	107	109	111
Industrial	1,757	1,814	1,874	1,922	1,963	2,004
Retail	1,153	1,164	1,187	1,211	1,227	1,250
Service	2,487	2,546	2,608	2,661	2,721	2,773
Public	1,450	1,451	1,500	1,543	1,585	1,620
Self-Employed	521	529	542	557	571	587
TOTAL	**7,475**	**7,612**	**7,820**	**8,004**	**8,180**	**8,349**
Watsonville						
Agricultural	2,338	2,517	2,527	2,535	2,549	2,553
Construction	1,326	1,335	1,348	1,365	1,382	1,398
Industrial	1,660	1,920	2,005	2,077	2,133	2,188
Retail	3,646	3,682	3,756	3,829	3,880	3,953
Service	5,072	5,180	5,454	5,732	5,990	6,236
Public	6,754	6,963	7,317	7,641	7,973	8,311
Self-Employed	1,848	1,885	1,976	2,022	2,101	2,132
TOTAL	**22,644**	**23,482**	**24,382**	**25,200**	**26,008**	**26,772**
Balance of County						
Agricultural	5,869	6,316	6,344	6,362	6,399	6,408
Construction	1,555	1,565	1,581	1,613	1,644	1,676
Industrial	1,068	1,147	1,189	1,224	1,252	1,280
Retail	4,036	4,079	4,159	4,239	4,297	4,377
Service	10,184	10,515	10,994	11,487	11,930	12,350
Public	11,295	11,779	12,464	13,080	13,714	14,356
Self-Employed	3,876	3,938	4,097	4,186	4,305	4,384
TOTAL	**37,883**	**39,339**	**40,826**	**42,191**	**43,541**	**44,831**

Source: AMBAG 2018 Regional Growth Forecast

Table 1-2: Population

Geography	2015	2020	2025	2030	2035	2040	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	**762,676**	**791,600**	**816,900**	**840,100**	**862,200**	**883,300**	**0.59%**	**15.82%**
Monterey County	**432,637**	**448,211**	**462,678**	**476,588**	**489,451**	**501,751**	**0.59%**	**15.97%**
Carmel-By-The-Sea	3,824	3,833	3,843	3,857	3,869	3,876	0.05%	1.36%
Del Rey Oaks	1,655	1,949	2,268	2,591	2,835	2,987	2.39%	80.48%
Gonzales	8,411	8,827	10,592	13,006	15,942	18,756	3.26%	122.99%
Greenfield	16,947	18,192	19,425	20,424	21,362	22,327	1.11%	31.75%
King City	14,008	14,957	15,574	15,806	15,959	16,063	0.55%	14.67%
Marina	20,496	23,470	26,188	28,515	29,554	30,510	1.60%	48.86%
Monterey	28,576	28,726	29,328	29,881	30,460	30,976	0.32%	8.40%
Pacific Grove	15,251	15,349	15,468	15,598	15,808	16,138	0.23%	5.82%
Salinas	159,486	166,303	170,824	175,442	180,072	184,599	0.59%	15.75%
Sand City	376	544	710	891	1,190	1,494	5.67%	297.34%
Seaside	34,185	34,301	35,242	36,285	37,056	37,802	0.40%	10.58%
Soledad	24,809	26,399	27,534	28,285	29,021	29,805	0.74%	20.14%
Balance of County	104,613	105,361	105,682	106,007	106,323	106,418	0.07%	1.73%
San Benito County	**56,445**	**62,242**	**66,522**	**69,274**	**72,064**	**74,668**	**1.13%**	**32.28%**
Hollister	36,291	39,862	41,685	43,247	44,747	46,222	0.97%	27.36%
San Juan Bautista	1,846	2,020	2,092	2,148	2,201	2,251	0.80%	21.94%
Balance of County	18,308	20,360	22,745	23,879	25,116	26,195	1.44%	43.08%
Santa Cruz County	**273,594**	**281,147**	**287,700**	**294,238**	**300,685**	**306,881**	**0.46%**	**12.17%**
Capitola	10,087	10,194	10,312	10,451	10,622	10,809	0.28%	7.16%
Santa Cruz	63,830	68,381	72,091	75,571	79,027	82,266	1.02%	28.88%
Scotts Valley	12,073	12,145	12,214	12,282	12,348	12,418	0.11%	2.86%
Watsonville	52,562	53,536	55,187	56,829	58,332	59,743	0.51%	13.66%
Balance of County	135,042	136,891	137,896	139,105	140,356	141,645	0.19%	4.89%

Source: AMBAG 2018 Regional Growth Forecast

Table 1-3: Housing Units

Geography	2015	2020	2025	2030	2035	2040	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	**262,660**	**273,606**	**282,368**	**290,225**	**297,851**	**305,293**	**0.60%**	**16.23%**
Monterey County	**139,177**	**144,491**	**149,032**	**153,708**	**158,151**	**163,186**	**0.64%**	**17.25%**
Carmel-By-The-Sea	3,417	3,432	3,436	3,441	3,456	3,462	0.05%	1.32%
Del Rey Oaks	741	874	1,020	1,180	1,297	1,361	2.46%	83.67%
Gonzales	1,987	2,109	2,508	3,083	3,792	4,456	3.28%	124.26%
Greenfield	3,794	4,140	4,403	4,635	4,863	5,081	1.18%	33.92%
King City	3,283	3,672	3,863	4,058	4,210	4,276	1.06%	30.25%
Marina	7,334	8,172	8,776	9,324	9,692	10,014	1.25%	36.54%
Monterey	13,637	13,846	14,126	14,322	14,627	14,908	0.36%	9.32%
Pacific Grove	8,184	8,271	8,303	8,343	8,431	8,516	0.16%	4.06%
Salinas	43,001	44,797	46,683	48,805	50,505	53,043	0.84%	23.35%
Sand City	176	238	298	371	493	619	5.16%	251.70%
Seaside	10,913	11,126	11,264	11,517	11,878	12,342	0.49%	13.09%
Soledad	3,927	4,338	4,552	4,735	4,926	5,107	1.06%	30.05%
Balance of County	38,783	39,476	39,800	39,894	39,981	40,001	0.12%	3.14%
San Benito County	**18,262**	**19,936**	**21,285**	**22,191**	**23,155**	**23,955**	**1.09%**	**31.17%**
Hollister	10,757	11,690	12,177	12,643	13,114	13,522	0.92%	25.70%
San Juan Bautista	750	817	846	870	894	914	0.79%	21.87%
Balance of County	6,755	7,429	8,262	8,678	9,147	9,519	1.38%	40.92%
Santa Cruz County	**105,221**	**109,179**	**112,051**	**114,326**	**116,545**	**118,152**	**0.46%**	**12.29%**
Capitola	5,537	5,601	5,642	5,703	5,762	5,823	0.20%	5.17%
Santa Cruz	23,535	26,365	27,706	28,634	29,443	30,167	1.00%	28.18%
Scotts Valley	4,691	4,750	4,818	4,869	4,887	4,895	0.17%	4.35%
Watsonville	14,131	14,615	15,121	15,614	16,053	16,426	0.60%	16.24%
Balance of County	57,327	57,848	58,764	59,506	60,400	60,841	0.24%	6.13%

Source: AMBAG 2018 Regional Growth Forecast

Goals & Policies

AMBAG began developing the 2040 MTP/SCS when the Board of Directors adopted the following goals and policy objectives:

- *Access and Mobility* – Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region.
- *Economic Vitality* – Raise the region's standard of living by enhancing the performance of the transportation system.
- *Environment* – Promote environmental sustainability and protect the natural environment.
- *Healthy Communities* – Protect the health of our residents; foster efficient development patterns that optimize travel, housing, and employment choices and encourage active transportation.
- *Social Equity* – Provide an equitable level of transportation services to all segments of the population.
- *System Preservation and Safety* – Preserve and ensure a sustainable and safe regional transportation system.

This framework of goals and policy objectives was used to guide the development of the 2040 MTP/SCS. Performance measures were established to evaluate how well the 2040 MTP/SCS performs in each of these areas.

Plan Overview

The 2040 MTP/SCS is a living document that must be updated to reflect the most current information and conditions and remain relevant and useful. Updating the Plan requires an examination of the progress the region is making, not just in terms of delivering projects, but also in terms of meeting the region's vision, goals, and objectives. The 2040 MTP/SCS complies with the Clean Air Act and the region is in attainment for air quality conformity.

Coordination

AMBAG is the federally designated metropolitan planning organization (MPO) for the counties of Monterey, San Benito, and Santa Cruz. As the MPO, AMBAG develops the 2040 MTP/SCS and updates it every four years through a bottom-up process involving numerous stakeholders. Transportation investments in the Monterey Bay Area that receive state and federal funds or require federal approvals must be consistent with the MTP/SCS and included in AMBAG's Metropolitan Transportation Improvement Program (MTIP). The MTIP is a four-year program and represents the near-term commitments of the 2040 MTP/SCS.

The 2040 MTP/SCS is a technical update to the 2035 MTP/SCS which was adopted in 2014. AMBAG worked closely with stakeholders to develop a new growth forecast and an updated multimodal transportation network with land use patterns and strategies based on reasonably available revenues.

AMBAG developed the 2040 MTP/SCS in close coordination with its three regional transportation planning agencies (RTPAs). Each of the three counties in the Monterey Bay Area has a RTPA responsible for countywide transportation planning and implementation - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito County Council of Governments. AMBAG also worked in close coordination with the region's transit operators, local jurisdictions, Caltrans, the Monterey Bay Area Resources, state and federal resource agencies, local agency formation commissions and other special purpose public agencies.

Scenario Development and Evaluation

During the development of the 2035 MTP/SCS, AMBAG developed and evaluated scenarios that included various land use assumptions and transportation system improvements and investments to see how each scenario could achieve the GHG targets established by CARB for the tri-county region

as well as other performance measures. Extensive outreach with partner agencies, local jurisdictions, key stakeholders and the public was ongoing throughout the 2035 MTP/SCS planning process through workshops and meetings, surveys and interactive tools.

Beginning in 2015, AMBAG began the technical update to the 2035 MTP/SCS. This planning effort began by gathering and updating critical data as well as working with local jurisdictions on growth forecasts for 2020, 2035 and 2040. The regional growth forecast was then used as the growth parameter for the updating the various transportation and land use scenarios for the 2040 MTP/SCS.

Utilizing input from the public and stakeholders, AMBAG updated the land use and transportation scenarios through 2040. AMBAG evaluated these scenarios using a set of transportation, environmental and equity performance measures approved by the Board of Directors. These MTP/SCS scenarios were refined with continued extensive input from partner agencies and key stakeholders as well as from community workshops held in spring 2017. Ultimately, the AMBAG Board selected a single preferred scenario in June 2017. The preferred scenario builds on the region's success over the last four years in implementing the previous MTP/SCS and moves the region forward in meeting mobility, integrated land use and transportation strategies, and other regional goals. The components of the 2040 MTP/SCS are described briefly in the next section and in more detail in the succeeding chapters of this document.

Strategies and Investments

The MTP sets forth an integrated approach to transportation investments, described in Chapter 2, that makes the most out of the existing transportation system by investing in system preservation and maintenance and strategic system expansion and transportation management strategies. These transportation investments will provide more travel choices for the region's residents and visitors.

Scenario Planning

Scenario planning is an analytical tool that can help transportation professionals prepare for what lies ahead. Scenario planning provides a framework for developing a shared vision for the future by analyzing various forces (e.g., health, transportation, economic, environmental, land use, etc.) that affect growth. Scenario planning, which can be done at the statewide level or for metropolitan regions, tests various future alternatives that meet state and community needs. A defining characteristic of successful public sector scenario planning is that it actively involves the public, the business community, and elected officials on a broad scale, educating them about growth trends and trade-offs and incorporating their values and feedback into future plans.

Source: Federal Highway Administration, http://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/

In Chapter 3, the financial plan identifies the funding strategies that are considered to be reasonably available through 2040.

In Chapter 4, the SCS identifies a future land use and development pattern integrated with transportation networks, programs and strategies.

The performance measures for the 2040 MTP/SCS are included in Chapter 5. These metrics quantify the transportation, environmental, economic and equity benefits of the Plan.

The public participation plan for developing the 2040 MTP/SCS is described in Chapter 6 and a glossary is included in Chapter 7.

2 Transportation Investments

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Introduction

This chapter sets forth the investments and strategies that constitute the 2040 MTP/SCS. Transportation investments should seek to both optimize the performance of the existing system as well as strategically expand the system. This includes improvements ranging from systems preservation, roadway, rail, bus, bicycle and pedestrian facilities, transportation demand management, and transportation systems management strategies. As a result, the region will have more travel choices via an efficient multimodal transportation system.

The existing regional network consists of 481 miles of highways, 1,060 miles of regional transit service, and more than 1,200 miles of regional arterials. When implemented, the improvements in the 2040 MTP/SCS will develop an improved multimodal network while maintaining the existing system.

Existing System

The existing Monterey Bay Area transportation system is comprised of roadways, transit, rail, bicycle and pedestrian networks, airports and aviation, goods movement, and management strategies. The following chapter discusses the existing system and the Plan's investments for strategic expansion.

System Preservation

The Monterey Bay Area has invested billions of dollars into building and expanding the multimodal transportation system. This 2040 MTP/SCS places a high priority on protecting the region's existing system and ensuring that the transportation system is being operated as safely, efficiently, and effectively as possible.

Safety

In 2012, Congress passed the Moving Ahead for Progress in the 21st Century Act (MAP-21), which requires states to develop safety performance targets. Congress then passed the Fixing America's Surface Transportation Act (FAST Act) in 2015 which further expanded the role of performance measures. The California Department of Transportation (Caltrans) originally developed a Strategic Highway Safety Plan with an overarching goal to reduce the California roadway fatality rate to less than 1.0 fatality per 100 million vehicle miles traveled (VMT) by 2010. Caltrans updated the Strategic Highway Safety Plan in 2015 to incorporate these performance measures while setting various strategies that state agencies can implement to reduce fatalities and highlight complementary actions that can be performed by regional and local governments.

The projects and programs included in the 2040 MTP/SCS aim to reduce collisions and fatalities by improving the overall safety of the system. MAP-21 and the FAST Act require AMBAG to set and monitor safety performance metrics for the region. In addition, by reducing security vulnerabilities throughout the transportation infrastructure in the Monterey Bay area, the overall strength of the transportation system will be improved. General system upgrades will keep the system in a state of good repair and improve emergency preparedness.

AMBAG, the Regional Transportation Planning Agencies (RTPAs) - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito Council of Governments - and various local, state, and federal agencies continue to work together to improve the safety and security of the transportation system. Additionally, AMBAG will set and begin monitoring safety performance as federally required, refer to Chapter 5 for more detailed information on performance management.

Strategic System Expansion

One of the 2040 MTP/SCS's primary goals is to reduce per capita greenhouse gas emissions over the next 25 years. However, the total demand to move people and goods will continue to grow due to population increases. A strategic expansion of the transportation system will provide the region with the mobility and accessibility its residents need. The 2040 MTP/SCS targets this expansion around bus transit, rail, key roadways and active transportation. These networks must be improved in order to provide the accessibility and connectivity needed for a diverse population. Included in this chapter are descriptions of these strategic improvements with example projects. For a complete list of funded projects see the Regional Transportation Plans for each of the three counties.

Highways and Local Arterials

The three counties and 18 incorporated cities in the region are responsible for an extensive network of county and city roads and streets. Some of these roadways are regionally significant freeways, expressways, arterials and collectors, which not only serve local traffic, but also provide access and mobility for long distance trips within the region as well as trips that start or end outside of the region.

A regionally significant project refers to a transportation project that is on a facility which serves regional transportation needs (such as access to and from the area outside the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, or employment centers; or transportation terminals) and would normally be included in the modeling of the metropolitan area's transportation network. At a minimum, this includes all principal arterial highways and all fixed guideway transit facilities that offer a significant alternative to regional highway travel. (23 CFR § 450.104)

Projects for these roadways are included within the 2040 MTP/SCS and are included in the Project List (Appendix C). The 2040 MTP/SCS provides over $3.0 billion for highway investments and almost $2.7 billion for local streets and roads.

Highways

The Monterey Bay Area includes many highways that connect people between the three counties as well as outside the region. All of these highways need ongoing upkeep and improvements to continue providing safe access to all areas of the region. Figure 2-1 illustrates the 2040 Highway Network. However, the region cannot afford to fund all needed highway projects or there would be no revenue remaining for other transportation modes. The following are examples of regionally significant highway projects included in the 2040 MTP/SCS.

- U.S. 101 corridor
- SR 1, SR 68 and SR 156 West improvements
- SR 25 improvements
- SR 156 widening
- SR 1 auxiliary lane improvements (Santa Cruz)

Figure 2-1: 2040 Regional Highway Network

A ***queue jump*** is a type of roadway geometry used to provide preference to buses at intersections. It consists of an additional travel lane on the approach to a signalized intersection. This lane is often restricted to transit vehicles only. A queue jump lane is usually accompanied by a signal which provides a phase specifically for vehicles within the queue jump. Vehicles in the queue jump lane get a "head-start" over other queued vehicles and can therefore merge into the regular travel lanes immediately beyond the signal. The intent of the lane is to allow the higher capacity vehicles to cut to the front of the queue, reducing the delay caused by the signal and improving the operational efficiency of the transit system.

Local Arterials

Local streets and roads – including the curbs and gutters, sidewalks, access ramps, bicycle paths, stop signs and traffic signals – are a critical component of the region's transportation system. The majority of travel, whether by car, bicycle, bus or foot, is done on local streets and roads. Please refer to the respective RTPA Regional Transportation Plans for additional information on regionally and nationally important local streets and roads.

Some examples of regionally significant projects on local arterials include:

- Marina – Salinas Multimodal (bus/roadway) Corridor improvements
- U.S. 101/5th Street operations improvements

Transit

The region has three RTPAs which are responsible for long term transit planning for the Monterey Bay Area. This planning function is performed in partnership with the region's three transit operators, Monterey-Salinas Transit (MST), Santa Cruz Metropolitan Transit District (METRO), San Benito Transit (County Express). Additional public transit providers include Amtrak and six paratransit operators.

A key focus of this 2040 MTP/SCS was to invest in an ambitious transit network that significantly expands the role that transit plays in meeting the region's mobility needs. The 2040 MTP/SCS has incorporated transportation and transit enhancement activities as required by the FAST Act.

The 2040 MTP/SCS provides $3.0 billion in transit capital and operating investments. Over half of this funding is consumed by the cost of operating and maintaining the transit system. The balance pays for capital expenses such as purchasing new vehicles, infrastructure associated with adding routes and stations to the bus and rail system, building new storage and maintenance facilities, and improvements to help buses move more quickly through traffic. Figure 2-2 illustrates the 2040

Figure 2-2: 2040 Regional Transit Network

Bus Rapid Transit

Bus Rapid Transit (BRT) is a high-capacity, transit solution that can achieve some of the same performance benefits of rail modes without the same high cost capital and operating investments as rail. This integrated system uses buses or specialized vehicles on roadways or dedicated lanes to quickly and efficiently transport passengers to their destinations, while offering the flexibility to meet a variety of local conditions. BRT system elements can easily be customized to community needs and incorporate state-of-the- art, low-cost technologies that attract more passengers and ultimately help reduce overall traffic congestion.

There are many elements to a BRT system, some or all of which can be incorporated to make a BRT more attractive than congested roadways. These include, but are not limited to: dedicated or semi-dedicated lanes, enhanced stations with real time arrival information, innovative vehicles that improve passenger comfort, improved and quicker fare collection, intelligent transportation system technologies such as transit signal priority, quicker, more efficient service and distinctive branding and identity.

The benefits to BRT service include decreased travel time, increased reliability, improved accessibility, increased safety and security as well as increased capacity. The integration of these BRT system elements have shown to increase ridership. (TCRP Project A-23, 2003)

Source: National Bus Rapid Transit Institute, http://www.nbrti.org/

Transit Network, including bus rapid transit and rail.

Bus Transit

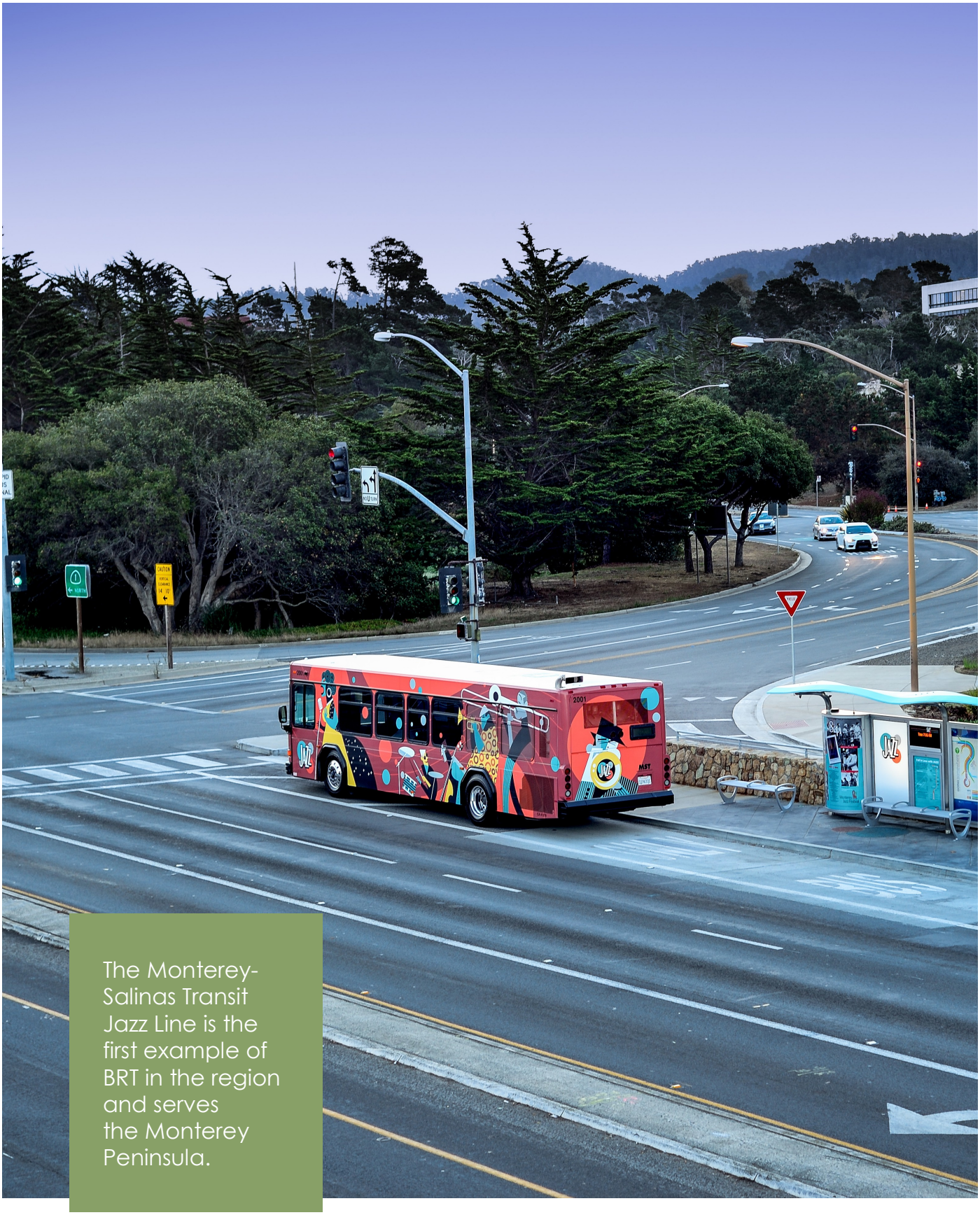
Bus transit is provided by MST, METRO and County Express. This Plan not only provides operations funding for transit agencies to expand their service, but also includes a land use pattern that dramatically increases the number of jobs within a ½ mile of transit, thereby encouraging more people to use the system. In addition to public transit providers, Greyhound Bus Lines and Amtrak provide longer distance intercity service. Employee buses and airport shuttles are also part of the transportation system.

Bus Rapid Transit and Express Service

The 2040 MTP/SCS allocates additional funding to bus transit in the region. Fixed route bus lines in the region are continuously evaluated and adjusted. Additionally, new bus rapid transit (BRT) and express routes are planned in many key regional corridors, including:

- Marina – Salinas Multimodal Corridor
- Monterey BRT (MST study)
- Salinas BRT
- Monterey South County express bus transit enhancements
- Hollister to Salinas and Watsonville

Bus rapid transit is often designed for longer distance and higher speed service, usually on a dedicated facility, and may also include higher frequency service particularly during commuting hours. Many of the new BRT routes in the region have 15 minute peak service planned whereas express buses often have 30 minute or more peak service frequencies. Bus rapid transit also could serve as a precursor to future planned rail services. When a dedicated facility is not available, bus rapid transit lite or express service can still serve the same route with high speeds by utilizing transit priority infrastructure such as queue jumps. Bus rapid transit lite is bus rapid transit without the benefit of a dedicated lane. By utilizing any combination of the other features of BRT, the BRT lite still provides



The Monterey-Salinas Transit Jazz Line is the first example of BRT in the region and serves the Monterey Peninsula.

time savings over regular express and local transit services. Features of BRT can include, but are not limited to: dedicated bus lanes, queue jumps, signal prioritization, off-board fare systems, level boarding stations and real-time arrival information systems.

Assembly Bill (AB) 946 (Stone, 2013) authorizes MST and Santa Cruz METRO legislative authority to evaluate bus-on-shoulder solutions to alleviate traffic congestion along state highways similar to other programs implemented throughout the country. Using bus on shoulders is a low cost strategy to improve bus running times and reliability for transit systems.

In 2016, MST and Santa Cruz METRO kicked-off a joint feasibility study for Bus on Shoulder Transit Operations on Highway 1 and the rail right-of- way in Monterey County. The study is expected to conclude in the Fall 2018.

Expanded Local Service

A system of high frequency local bus services on key corridors will provide both improved local service plus access to BRT and rail services. Some examples of regionally significant local transit service include:

- South County (Monterey) transit enhancements - including express or commuter based service
- UCSC & inter-city bus frequency improvements
- System wide operations funding
- Bus fleet replacement with alternative propulsion - specifically battery electric transit buses

Travel by transit offers many benefits to the performance of the regional transportation network in the Monterey Bay Area region. First, transit provides an opportunity for reducing VMT, through shifts from low occupancy modes such as driving alone to a very high occupancy mode of travel. Second, for commute trips, which tend to occur at peak periods of travel demand when congestion is highest, transit service can provide substantial congestion relief. High quality transit service also provides mobility for both transit dependent and choice riders, residents and employees in higher density, and mixed use areas where auto travel can be impractical.

Commuters are more likely to take transit if they can easily walk or bike from their home or job to a transit stop or station. As a result, walking and cycling infrastructure improvements are often an effective way to support transit use. Good intermodal connections, such as convenient park-and-ride locations, on-board bike racks, secure bicycle parking, safe and pleasant access routes, and shortcuts can enhance the appeal of both non-motorized and transit modes. Additional information on park-and-ride locations is included in the RTPA's county-level Regional Transportation Plans.

Demand Response Service

In addition to the three fixed route bus operators, there are several small demand-responsive public bus and van transit systems operate in the region:

- San Benito County Express
- MST RIDES
- Greenfield Auto Lift
- King City Transit
- METRO ParaCruz
- Community Bridges Lift Line

A full list of providers is included in the Coordinated Plan.

Coordinated Plan

A Public Transit-Human Services Transportation Plan (Coordinated Plan) has been prepared by AMBAG for the tri-county region as required by federal statutes. The Coordinated Plan identifies local transit needs for the elderly, disabled, and low income, and facilitates applications for the FTA Section 5310 grant program. It also includes strategies and activities to address identified gaps in the transit network and achieve efficiencies in service delivery. The Coordinated Plan, last adopted by AMBAG in October 2013, is currently being updated and will be completed by Fall 2018.

Passenger Rail

Rail projects are an important component of the regional transportation network that will enhance mobility opportunities for the region's diverse population and lead to economic vitality for the region. The planned rail services complement each other and result in reducing auto trips from regional highways.

California State Rail Plan

Federal law requires that states develop state rail plans no less frequently than every five years to be eligible for federal funding for high-speed rail and intercity passenger rail programs. The law also encourages states to develop strategies and policies for enhanced passenger and freight rail services that benefit the public. The 2013 California State Rail Plan makes the state compliant with 49 U.S.C. Sec. 22102 concerning state rail plans and state rail administration.

The California State Rail Plan establishes a statewide vision and objectives, sets priorities, and develops implementation strategies to enhance passenger and freight rail service in the public interest. It provides a comprehensive listing of long range investment needs for California's passenger and freight infrastructure and supports the state's goal of developing an integrated, multimodal transportation network.

Amtrak

The only regular rail passenger currently operating in the region is provided by Amtrak, the most popular long distance passenger train in the United States. The Coast Starlight, which connects Los Angeles to Seattle, stops in Salinas, the only Amtrak rail station in the region. This route operates one train in each direction daily. In the future, Amtrak will expand service by offering the Coast Starlight services which will stop at new additional stations in Soledad and King City.

Rail passengers can ride the Amtrak bus to connect to the Capitol Corridor route, which runs daily between San Jose and Sacramento. There are also three round trip connecting bus services between the state Capitol and Monterey County daily. Each major area of Monterey County – the Monterey Peninsula, Salinas, and the South Monterey County cities – is served by this connecting bus service. The Amtrak Capitol Corridor service provides four round trips between San Jose and Sacramento on weekdays and six round trips on weekends. The Capitol Corridor connecting bus service to Monterey County serves Watsonville, Salinas, California State University Monterey Bay (CSUMB) and four locations within the City of Monterey.

Commuter and Light Rail

The Transportation Agency for Monterey County (TAMC) and the Santa Cruz County Regional Transportation Commission (SCCRTC) are working to bring rail service to Monterey and Santa Cruz Counties, so that residents can travel to jobs, education and entertainment.

Rail services planned for Monterey County are:

- *Capitol Corridor Extension to Salinas* – An extension of commuter rail service from Santa Clara County to Salinas

In 2012, the Santa Cruz County Regional Transportation Commission (SCCRTC) purchased a rail line extending almost 32 miles from Davenport to Pajaro. The SCCRTC is currently evaluating the rail right-of-way for the most effective and efficient use as a transportation facility. In 2014, the SCCRTC conducted a passenger rail feasibility study which evaluated the feasibility of several passenger rail service scenarios. As a follow up, the SCCRTC is now conducting an Unified Corridor Study which will evaluate the transportation uses of the rail right-of-way along with improvements to the parallel corridors of Soquel Drive/Avenue and Highway 1. The goal of this effort is to determine the best combination of projects and improvements along each route so that they complement one another and enhance the mobility in the region. The study is scheduled to be completed in December 2018.

Active Transportation

For the purposes of the 2040 MTP/SCS, active transportation refers to bicycling and walking. Walking and bicycling are essential parts of the region's transportation system, are low cost, do not emit greenhouse gases, can help reduce roadway

congestion, and increase health and quality of life of residents. Additionally these types of facilities can often be implemented as part of maintenance and operations projects making this kind of investment very cost effective.

As the region works toward reducing congestion and greenhouse gases, walking and bicycling will become more essential to meet the region's future needs. To make active transportation a more attractive and feasible mode of travel for the different users in the region, additional infrastructure improvements need to be made. Given that all trips, including automobile trips, start with walking, it is important to ensure that the sidewalks and streets are accommodating to all users. In all, the 2040 MTP/SCS's active transportation improvements nearly $640 million.

Bicycle and Pedestrian Facilities

When Caltrans and local jurisdictions provide bicycle and pedestrian amenities, they not only are encouraging recreational opportunities but are also providing an alternative to driving. In the region, the RTPAs administer the distribution and use of bicycle and pedestrian funds as provided for under the Transportation Development Act (TDA).

TAMC and SCCRTC provide ongoing bicycle programs covering facilities planning, policy development, education/promotion, and staffing of the respective county Bicycle Advisory Committees. Program efforts are focused on coordination and incorporation of bicycle planning and promotion into all planning activities including general plan development, capital improvement programming, development review, environmental review, and other transportation system management efforts. Some examples of bicycle and pedestrian projects around the region are:

- Monterey Bay Sanctuary Scenic Trail
- Carmel to Pebble Beach bicycle facility
- Bicycle sharing, lockers, bus shelters and wayfinding signs
- Sidewalk enhancements
- Bicycle and pedestrian plans

Bicycle Network

A considerable bicycle network exists, particularly in the urbanized portions of the region. Although there is a general lack of continuity in bike lanes striped on the region's street network, progress has been made in planning and funding bikeway improvements as well as bicycle supportive facilities. TAMC and SCCRTC are developing a Monterey Bay Sanctuary Scenic Trail. Continued emphasis on improving bicycle routes that safely connect employment centers and residential locations will increase commuter bicycle use. A map of the regional bicycle network is shown in Figure 2-3.

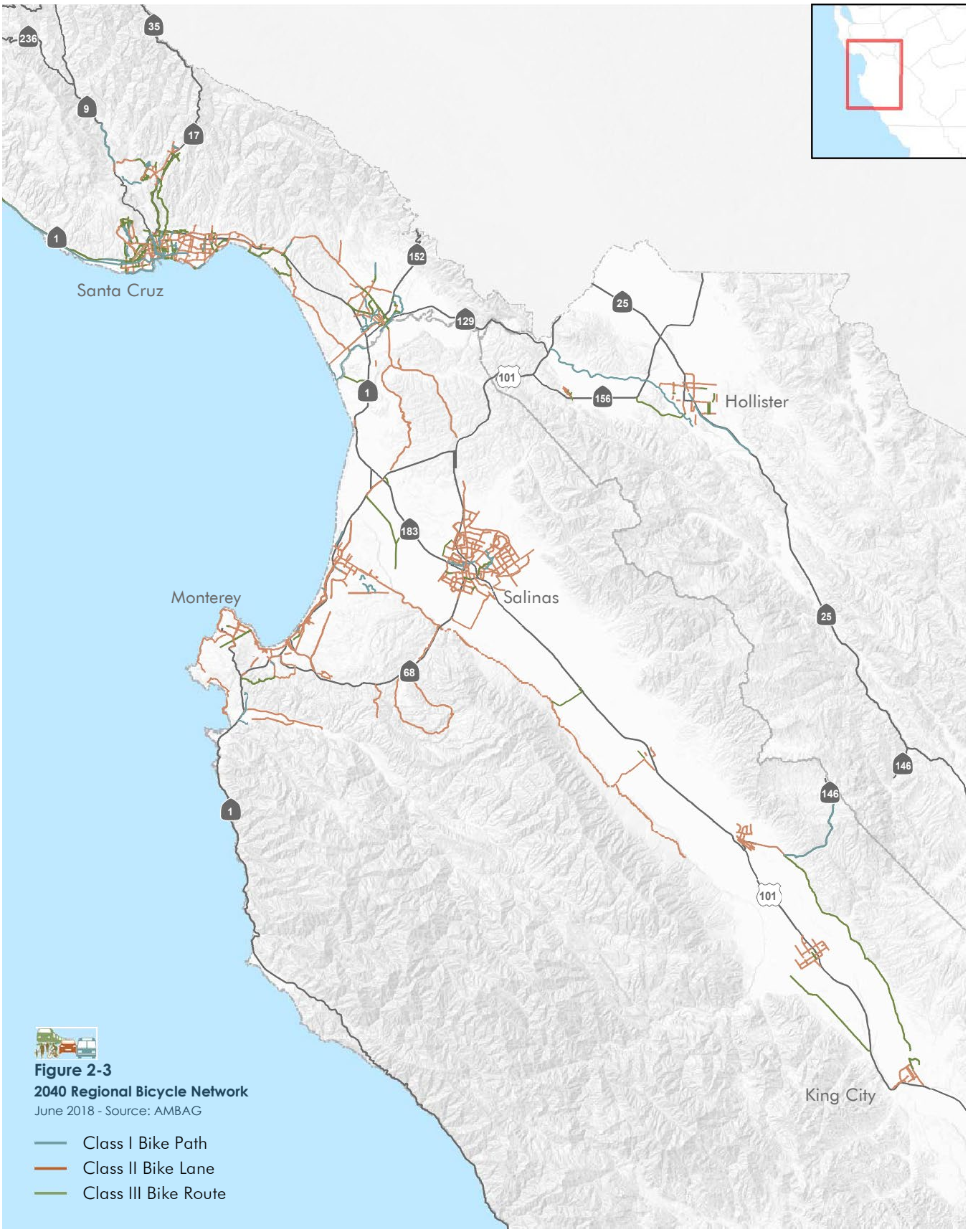
Bikeways in the region are classified in four categories:

- *Class I Bikeway* – Typically called a "bike path" or "multiuse path," a Class I bikeway provides bicycle travel on a right-of-way completely separated from any street or highway. Class I bikeways are not for the exclusive use of bicyclists, and can be used by pedestrians, joggers, and other non-motorized users.
- *Class II Bikeway* – Often referred to as a "bike lane," a Class II bikeway provides a striped lane for one-way travel on a street or highway.
- *Class III Bikeway* – Generally referred to as a "bike route," a Class III bikeway may include signage or sharrows and provides for shared use with vehicles.
- *Class IV Bikeway* – Often referred to as a "Cycle Track," a Class IV bikeway provides bicycle travel in designated lanes on roadways which are also separated from traffic by barricades, such as bollards or curbs.

Pedestrian Facilities

Pedestrian travel is a vital part of the transportation, economic and social life of the Monterey Bay Area, and pedestrian amenities — such as appropriately sized sidewalks, crosswalks, curb cuts, landscaping, and benches — are seen as beneficial additions that make communities walkable, friendly, and

Figure 2-3: 2040 Regional Bicycle Network



livable.

Pedestrian facilities including sidewalks, streets, and trails are fundamental to the functioning of Monterey Bay Area neighborhoods. Cities that promote walking in all its forms are promoting healthy neighborhoods and communities. Local jurisdictions are working to achieve an effective pedestrian network by implementing pedestrian infrastructure improvements in conjunction with new and redeveloped streets, and working closely with the public to identify where existing gaps in pedestrian facilities exist. In some areas, local jurisdictions are implementing traffic calming projects to slow vehicular traffic and create more attractive pedestrian environments.

More emphasis is being placed on walking as a viable, inexpensive, nonpolluting, and healthy way to travel. Most pedestrian infrastructure is in the form of sidewalks; however, there are many significant trails in the region. Multipurpose trails are separated from roadways and are usually shared by more than one user type including rollerbladers, bicyclists, skateboarders, pedestrians, horses, and joggers.

Opportunities for additional shared use facilities may be present in the region. For example, Pacific Gas and Electric (PG&E) owns and operates pipelines that distribute natural gas to most communities throughout the region via 12" and 20" pipelines. Many of these pipelines have 25 to 100 foot easements that could be utilized for pedestrian and bicycle paths. Additionally, PG&E has easements throughout the state for electrical transmission lines, some of which have been made into linear greenbelts with bicycle and pedestrian paths.

Complete Streets

The Complete Streets Act of 2008 (AB 1358) requires cities and counties to incorporate the concept of complete streets in their general plan updates to ensure that transportation plans meet the needs of all users of the roadway system. AMBAG supports and encourages implementation of complete streets policies in the 2040 MTP/SCS. The Regional Complete Streets Guidebook, included as Appendix H, was developed by staff from the Transportation Agency for Monterey County, the San Benito County Council of Governments and the Santa Cruz County Regional Transportation Commission. Regional agencies will work with local jurisdictions as they implement complete streets strategies within their jurisdiction by providing information and resources to support local planning activities. Complete streets must be context sensitive to adjacent land uses in order to function well for diverse roadway users. Recognizing that roadways have primarily been designed to serve the automobile, regional complete streets efforts highlight bicycle and pedestrian access as an essential design objective. Additionally, the California State Pedestrian and Bicycle Plan, *Toward an Active California*, lays out foundational policies and actions that Caltrans and its partner agencies will take to achieve the department's ambitous statewide goals to double walking and bicycling trips by 2020.

Safe Routes to School

SAFETEA-LU established the Safe Routes to School program to "enable and encourage primary and secondary school children to walk and bicycle to school" and to support infrastructure related and educational projects that are geared toward providing a safe, appealing environment for walking and bicycling. Safe Route to School programs can play a critical role in eliminating some of the vehicle trips that occur during peak periods to drop off or pick up students by ensuring safe routes to bike or walk to school.

Under MAP-21, and continued in the FAST Act, Safe Routes to School has been combined with other bicycling and walking programs into a new program called Transportation Alternatives. There is less funding available for Transportation Alternatives than for the programs that were consolidated and there is no longer dedicated funding for Safe Routes to School.

Trails

The Monterey Bay Sanctuary Scenic Trail (MBSST) is planned to be a multiuse recreation and interpretive pathway that links existing and newly established

Complete Streets - Streets for All Users

Complete streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Complete streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from bus stops and train stations.

Making these travel choices more convenient, attractive, and safe means people do not need to rely solely on automobiles. They can replace frustrating trips in their cars with bus rides or heart healthy bicycle and walking trips. Complete streets improves the efficiency and capacity of existing roads too, by moving people in the same amount of space –
think of all the people who can fit on a bus or streetcar versus the same amount of people each driving their own car. Getting more productivity out of the existing road and public transportation systems is vital to reducing congestion.

Complete streets are particularly prudent as more communities are tightening their budgets and looking to ensure long term benefits from investments. An existing transportation budget can incorporate Complete streets projects with little to no additional funding, accomplished through re-prioritizing projects and allocating funds to projects that improve overall mobility. Many of the ways to create more complete roadways are low cost, fast to implement and high impact.

Source: Smart Growth America, http://www.smartgrowthamerica.org/

Wide sidewalks with amenities not only makes the street more usable for all modes it also improves the attractiveness of the street.

Active transportation includes walking. Pedestrian crossings with textured pavers and short crossing distances improves safety.

Complete streets does not exclude planning for automobiles, rather it incorporates improvements that make it easier for all modes to coexist.

Active transportation includes bicycling. Separated facilities increase safety and therefore increase the possibility that people of all ages will use alternate modes of transportation.

Complete streets attract more people to get out of their cars. As people walk to their destination they are more likely to patronize other businesses along the way.

Active transportation includes bicycling to get to the bus. Accommodations on buses for bicycles is important so that people have more options to get to and from bus stops.

trail segments into a continuous coastal trail around the Monterey Bay. The MBSST Final Master Plan and Environmental Impact Report was adopted by SCCRTC in November 2013. The TAMC MBSST Final Master Plan was adopted in January 2008.

In addition to providing bicycle and pedestrian facilities, interpretive features educate users of the trail about the natural and cultural resources of the Monterey Bay National Marine Sanctuary and its environs. The trail is located and designed so visitors can explore and enjoy the coastal communities of Santa Cruz and Monterey Counties, while respecting residential, agricultural, and environmentally sensitive surroundings along the trail.

The approximately 110 mile coastal trail corridor provides public access along Monterey Bay from Santa Cruz to Monterey. The trail is envisioned for pedestrians and bicyclists, with each trail section dictated by natural landforms and features, existing land uses, and desired destinations. The project links existing local trails, bridging the gaps between them. Sections of the MBSST network will be included in the California Coastal Trail, a 1,200 mile hiking trail which will eventually extend the entire length of the California Coast.

The development of the trail has been and will continue to be coordinated with appropriate agencies such as the State Coastal Conservancy, the California Coastal Commission, resource agencies and local jurisdictions. Refer to the MBSST Master Plans for more information.

Aviation

Airports within the region function for movement into and out of the region for both people and goods. The major passenger airport in the region is the Monterey Regional Airport.

California Aviation System Plan

The California Aviation System Plan is a multi-element plan prepared by the Department of Transportation (Caltrans), Division of Aeronautics, with the goal of developing and preserving of airports responsive to the needs of the state. There are 14 public use airports in the Central Coast Region, the planning region for the California Aviation System Plan. This Plan considers the following Monterey Bay Area airports to be the region's highest priority facilities for enhancement:

- *Hollister Municipal*
- *Watsonville Municipal*
- *Mesa Del Rey Municipal*
- *Salinas Municipal*
- *Marina Municipal*

Enhancements to these airports would improve regional and state system capacity and safety.

Monterey Bay Area Airports

The region has six publicly owned civil aviation airports:

- *Monterey Regional*
- *Salinas Municipal*
- *King City Municipal (Mesa del Rey)*
- *Marina Municipal*
- *Watsonville Municipal*
- *Hollister Municipal*

Of these six, only the Monterey Regional Airport has scheduled air carrier service.

In addition to the publicly owned airports, several private airports operate in the region. Of these, the Frazier Lake Airpark is the only one that allows public use. The remainder of the privately owned airports are used for agricultural, business, and private purposes.

In addition, there are currently two operational military airfields in the Monterey Bay Area:

- *Camp Roberts Army Airfield and Heliport*
- *Fort Hunter-Liggett Army Heliport.*

Most of the local airports are small and do not have scheduled air carrier service (Watsonville Municipal Airport).

Much of the region's agricultural goods are currently transported by truck, though the MTP/SCS looks towards converting these trips to rail in the long term.

Monterey Regional Airport

Monterey Regional Airport (MRY) has two parallel runways with the longest at 7,598 feet. There is a control tower and instrument landing capability. This airport is the major regional airport, with commercial freight, passenger traffic, military traffic, and general aviation needs. The facility is located north of SR 68 (Monterey-Salinas Highway) and east of the City of Monterey. The 498 acre airport is the only airport in California operated as a self-governing district, the Monterey Peninsula Airport District. In 2016, five commercial airlines served the airport for a total of 191,480 enplanements.

Primary air-carrier airports with annual enplanements over 10,000 are required to have an Airport Ground Access Improvement Program. State Routes 1 and 68 provide the primary ground access to the airport for both people and freight. MST provides public transit service from Monterey and Salinas to the airport, during daytime hours on Mondays through Saturdays, only. An airport limousine service and taxicabs also serve the airport. Many local hospitality industries provide their own shuttle services for guests. A new Master Plan and Airport Layout Plan were initiated in 2014 and completed in 2016. The Master Plan is currently in environmental review, which is expected to be completed in 2018. Additional information on airport access can be found in the TAMC Regional Transportation Plan.

Salinas Municipal Airport

Salinas Municipal Airport is located three miles southeast of the City of Salinas on a 763 acre site. It has four runways with the longest at 6,004 feet. There is a control tower and instrument landing capability. Operated for general aviation purposes by the City of Salinas, 77,896 general aviation operations took place in 2016, with 223 based aircraft.

Mesa Del Rey Municipal Airport in King City

King City Municipal (Mesa del Rey) Airport is located north of King City on 214 acres. In 2015, it handled 7,862 general aviation operations with one 4,500 foot runway. There is neither a control tower nor instrument landing capability at this airport. A publicly owned airport, it is operated by the City of King for general aviation purposes and has19 based aircraft. The airport is home to the Sean D. Tucker Academy that provides in-depth study of aircraft control. This is an advantage for the Mesa Del Rey Airport, which could prove to be beneficial to the patronage of the airport if widely promoted.

Marina Municipal

Marina Municipal Airport is located north of Reservation Road in the City of Marina on 845.5 acres of the former Fritzsche Army Airfield. This general aviation airport had an estimated 40,000 operations in 2016 on its one, 3,485 foot runway. The regional Airport Surveillance Radar is located northwest of this airport.

Watsonville Municipal

Watsonville Municipal Airport is located on a 330 acre site to the northwest of Watsonville. In 2015, there were an estimated 55,000 general aviation operations on two runways, the longest at 4,500 feet. There is no control tower but the airport has instrument landing capability. Operated by the City of Watsonville, this is the sole public use airport in Santa Cruz County, and is classified as a general transport airport serving general aviation and business jets.

Hollister Municipal

Hollister Municipal Airport is located northwest of the City of Hollister on 343 acres. It services 168 aircraft and there were an estimated 73,000 operations in 2016. In addition to the 6,350 foot runway, Hollister Municipal also has a 3,150 foot runway. There are no control tower or instrument landing capabilities at this airport. A publicly owned airport, it is operated by the City of Hollister for general aviation purposes.

Frazier Lake Airpark

Frazier Lake Airpark is the only privately owned airport in the region that is open to the general public. It is located 4 miles northwest of Hollister Municipal Airport. Frazier Lake Airpark has a 2,500 foot grass turf runway and a 3,000 foot water runway for sea planes. In 2015, there were 7,821 general aviation operations, and 95 based aircraft.

Airports Economic Impact Study

The Airports Economic Impact Study prepared by AMBAG in 2003, was designed to evaluate the economic impacts of each of the Monterey Bay region's six public airports on the local vicinity served by the airport and to provide a regional picture of the combined airports importance to the three county economy. The total direct, indirect and induced economic benefit of the six regional airports was estimated to be $1.38 billion annually. The Monterey Bay Area's airports play an important role in the total regional economy, providing service to agriculture, tourism, government, emergency services and other business interests throughout the region.

Regional Airport System Plan

The Regional Airport System Plan (RASP) was completed by AMBAG in 2006. The RASP projects a moderate growth rate in aircraft operations as a result of increased activity in general aviation and a continuation of growth by air taxi services. Additionally, projections recently prepared by Monterey Peninsula Airport District (MPAD) for the Monterey Regional Airport Master Plan forecasted continued increasing passenger enplanements over the next 20 years. With availability for increased operations, the existing general public airports in the region could absorb aircraft from other regions.

Table 2-1: Top Regional Agricultural Crops (Millions/Year)

County	Top Crops (Millions)
Monterey	Berries, Strawberries, Fresh Market ($746.1)
	Lettuce, Romaine ($483.3)
	Lettuce, Head ($436.0)
San Benito	Vegetables, Unspecified ($39.9)
	Lettuce, Bulk Salad Products ($21.1)
	Nursery Products, Misc ($20.4)
Santa Cruz	Berries, Strawberries, Fresh Market ($172.6)
	Berries, Raspberries ($104.3)
	Flowers Cut, Unspecified ($60.0)

Source: AMBAG, Central Coast California Commercial Flows Study, 2012

Goods Movement

The Central Coast is well known for the variety of agricultural products grown here. The Salinas Valley is commonly referred to as "America's Salad Bowl" due to the sheer amount of produce grown and exported to markets in other parts of the country and elsewhere.

Strawberries and other berries are key crops throughout the region, and are the number one crops by value in Monterey and Santa Cruz Counties. See Table 2-1 for a list of the region's top agricultural products by county. Lettuce, wine grapes, broccoli, and nursery products also are important agricultural products for the Central Coast. The region is a key producer of wine. Monterey County, for example, produced grapes for wine valued at $238 million in 2008. Both Monterey and San Benito Counties are major producers of field crops, fruits and nuts, vegetable/row crops and livestock.

The agricultural industry is critical to the success of the regional economy and its health partly depends on the ability to move goods not just throughout the region but outside of the region. Agriculture relies on the connectivity and condition of railways and local roads that connect crop production with buyer markets via major state routes and U.S. 101. Therefore, it is necessary for the health of the region that all the major roads, highways and railways carrying goods to and from crop production locations (such as U.S. 101, SR 46, SR 129, SR 152, SR 156 and SR 183) are maintained to support efficient delivery and shipment of goods. Figure 2-4 illustrates the Goods Movement Network. A summary of the various plans and studies that document the importance of goods movement to the region and the efforts to improve the delivery of agricultural products to consumer markets is discussed in this section.

The majority of the goods in the region are delivered to buyer markets via the highway and road network rather than railways. However, there is a recognized need for transitioning the Central Coast's truck freight to rail freight in order to alleviate pressure on the region's highways and

Figure 2-4: Goods Movement System

roads as well as to reduce congestion and increase safety for all users of those roads.

Central Coast Coalition

The purpose of the Central Coast Coalition is to increase the awareness of the US 101 corridor along the central coast as a major economic asset to the regions, the state and the nation, and to secure investments for its improvement. The Central Coast Coalition is comprised of the Santa Barbara Association of Governments, Council of San Benito County Governments, Transportation Agency of Monterey, San Luis Obispo Council of Governments, Santa Cruz County Regional Transportation Commission, and AMBAG. The group has been meeting since 2010 and has worked together to develop and distribute information about the corridor including but not limited to improvement needs, funding options and strategies, as well as economic impacts and benefits. Additionally, the group seeks out funding for improvements within the corridor, coordinates with Caltrans District 5 to develop projects, and seeks support from public and private partners to raise awareness about the importance of the corridor.

California Freight Mobility Plan

Caltrans is currently developing the California Freight Mobility Plan, an update to the Goods Movement Action Plan, issued in two phases in 2005 and 2007. Similar to the Goods Movement Action Plan, the California Freight Mobility Plan will address current freight conditions, identify important trends, and respond to major issues in goods movement across all modes and regions of California. In addition, the updated plan will respond to a number of contemporary issues in terms of community impacts, trucking, new legislation, regional differences and linkages, and greenhouse gas emissions reduction strategies. The California Freight Mobility Plan was completed in December 2014.

Commercial Flows Study

Over the next several decades, the Central Coast region can expect to see significant increases in freight movement due to both population increases and a continued expansion of the region's agricultural and industrial production. As a result of this demand for freight by both the local population and industries, a focus on enhancing the efficiency

and safety of the region's goods movement system is critical to supporting the economic health of the region and the quality of life for its residents.

To respond to this challenge, six major agencies across the five counties – comprising the California Central Coast region, from Santa Cruz County in the north to Santa Barbara County in the south – partnered with Caltrans District 5 to prepare this study of freight flows, issues, needs, and deficiencies in the region. The recommendations that came out of the 2012 Commercial Flows Study were the result of engaging private and public sector stakeholders in the Freight Actions Strategy Taskforce. The recommendations include operational improvements and capacity increases to the major corridors that move freight traffic.

Salinas Valley Truck-to-Rail Intermodal Facility Feasibility Study

One of the key factors in maintaining the competitiveness of the Salinas Valley agricultural industry is to provide additional methods of shipping products to important markets. The main markets are primarily located in the eastern United States. Given upward pricing pressure on the trucking industry due to rising fuel costs, as well as safety concerns, and problems with truck traffic congestion, freight and transportation stakeholders are looking for alternatives for transporting goods. The rail system is one of the main options available.

The purpose of the Truck-to-Rail Study, prepared by AMBAG in 2011, was to analyze the potential for building and operating a truck-to-rail intermodal facility to support the movement of perishable agricultural products from this region. This study builds off a previous study commissioned by the Grower-Shipper Association of Central California in Fall 2008 which showed there was both a desire on the part of the growers/shippers in the Salinas Valley to expand methods of shipping from truck only and that rail would be a cost competitive option for shippers.

This study also analyzed the impact of the significant number of trucks leaving the Salinas Valley has on air quality, roadway congestion, safety and quality of life in this region. Using modeling software, this study determined that greenhouse gas emissions could be reduced by as much as 59 percent by switching from truck to rail freight and that other pollutants could be reduced by an average of 35 percent. The study identified two potential locations in Chualar and Gonzales for a truck-to- rail intermodal facility based on operations logistics and cost feasibility. A preliminary environmental assessment of the two sites was also prepared.

U.S. 101 Corridor Freight Study

The primary freight corridor in the Monterey Bay Area is U.S. 101. It is the main north-south route between Los Angeles and San Francisco. The U.S. 101 corridor supports the economic vitality of the Central Coast area as a major goods movement corridor and is a key commute route.

AMBAG was awarded a Caltrans Partnership Planning grant in 2013 to identify short term and long term strategies to improve freight mobility and transportation operations along U.S. 101 from San Benito County through Santa Barbara County. The U.S. 101 Freight Study will assess opportunities for improved freight operations, safety, and efficiency, and will identify funds for recommended improvements. It will build off of the aforementioned studies which identify the commodities, goods movement patterns, and intermodal station feasibility to analyze opportunities for freight. Final recommended improvements provide better connectivity between adjacent communities. The study was completed in 2016.

Transportation Management Programs

Transportation Demand Management (TDM) and Traffic Systems Management (TSM) are two types of techniques used to improve the efficiency and effectiveness of the transportation system. In TDM, the focus is on changing peoples' travel behavior; in TSM, system operational and/or service

improvements are implemented to facilitate traffic flow. When successfully employed, these techniques decrease travel demand and improve operations and/or services prior to committing to significant investment for new supply or new capacity. Planning for TDM and TSM strategies requires looking at the transportation system as an interconnected whole in order to reduce GHG emissions.

AMBAG's Vanpool Program

AMBAG subsidizes and manages the Regional Vanpool Program. The funding provides a monthly subsidy of $350 per vanpool for the first 12 months of operation. The subsidy encourages more workers to join a vanpool because of the reduced cost, thereby reducing emission and providing employment opportunities to individuals who cannot afford to own and operate a vehicle or do not have a driver's license.

As of June 30, 2017, the program had started 189 new vanpools, reducing an estimated of 57.5 million vehicle miles traveled and removing 1,808 vehicles from the roads in the region. 148 vanpools serve the agricultural industry. Under this Plan, AMBAG will continue to expand vanpool service - specifically to agricultural workers - to provide a safe, flexible, and affordable means of transportation.

Demand Management

TDM strategies reduce vehicular demand and thereby congestion, particularly during peak periods. In total, the 2040 MTP/SCS allocates nearly $42 million to TDM strategies.

Ridesharing

Ridesharing strategies include vanpool services for larger employers and rideshare matching services. The implementation of ridesharing programs and projects, such as providing vanpool services to commuters, is an effective strategy leading to reduction of the number of vehicle trips which helps to meet the GHG targets.

Vanpools

Over the years, AMBAG has recognized that there is a limited set of transportation options for individuals who would like to use sustainable modes of transportation, or cannot afford the cost of driving a car. Since 2009, the Monterey Bay region has benefited from the regional vanpool program operated by AMBAG. The program provides a viable and cost efficient rideshare opportunity to employees and students who live, work, or attend college in Monterey, Santa Cruz, and San Benito Counties. The program also provides a sustainable transportation solution for the region's unique land use, demographic and employment characteristics. Moreover, the regional vanpool program fills an important market niche by helping traditionally underserved population groups (including but not limited to low income and minority population, rural communities, agriculture workers, etc.).

The agricultural industry is a major employer in the region, currently comprising over 18 percent of all employment. Agricultural workers

represent a unique sector that is particularly well suited to vanpools. They often work irregular hours, at multiple worksites, and/or for multiple employers. The seasonal and remote nature of work destinations makes fixed route transit service impractical because average one-way commute distances exceed 20 miles and farm workers often need to travel to multiple work locations within one work day. The regional vanpool program provides agricultural employees with a safe and affordable form of transportation, thus providing flexibility and increased employment opportunities.

Telecommuting

TDM investments aim to reduce peak hour congestion by promoting flexible work schedules and telecommuting. Flexible work schedules allow employees to work fewer days in exchange for longer hours on the days they do work. Telecommuting has increased dramatically over the past decade and nearly six percent of all workers in the Monterey Bay Area telecommute most of the time, and an even greater number telecommute at least one day per month.

Systems Management

TSM increases the productivity of the existing multimodal transportation system, thereby reducing the need for expensive system expansion. TSM relies in part on intelligent transportation system (ITS) technologies to increase traffic flow and reduce congestion. This 2040 MTP/SCS dedicates more than $26 million to TSM projects and programs.

Regional ITS Architecture

The Central Coast Intelligent Transportation Systems Architecture and Implementation Plan, prepared by Caltrans in 2010, establishes a framework for the regional integration of transportation systems. It not only looks within the MPO boundaries, but strategically addresses integration between MPO's and with Caltrans from the broader Central Coast perspective.

AMBAG continues to maintain, revise, and validate, as needed, the Central Coast Regional ITS Architecture in consultation with all regional agencies including but not limited to the three RTPAs and Caltrans. ITS projects to be implemented over next 25 years are described in the project lists contained in Appendix C.

Transportation System Management Strategies

In the Monterey Bay region, TSM efforts will help improve the efficiency of the existing transportation system and help the region meet its GHG reduction targets. See Table 2-2 for a summary of regional TSM strategies and associated benefits.

Future Transportation Technologies

Transportation plans must also be responsive to emerging technologies that make existing modes more efficient and to new transportation modes that better address the needs of a changing society. Technological innovations have the potential to make existing transportation choices more widely available and easier to use throughout the region. By providing more options for local and regional trips, technological innovations have the potential to shift travel to less environmentally damaging

Table 2-2: TSM Strategies

Strategy	Benefit
Incident Management	Reduces incident related congestion
Ramp Metering	Alleviates congestion and reduces accidents at on ramps and interchanges
Traffic Signal Synchronization	Minimizes wait times at traffic signals
Traffic Signal Preemption	Improves operational efficiency of transit and allows better service of emergency vehicles
Advanced Traveler Information	Provides real-time traffic conditions, alternative routing and transportation choices such as 511 programs or Waze
Improved Data Collection	Monitor system performance
Transit Automatic Vehicle Location (AVL)	Enables monitoring of transit vehicles and ensures on time performance

modes, lessen the negative environmental impacts associated with current vehicle use, increase system efficiency, improve safety and reduce auto-related collisions and fatalities. Although they may have limited applicability in many parts of our region today, there is little doubt that certain technological innovations in transportation will grow significantly during the time frame of the 2040 MTP/SCS and beyond. Changing demographics and broad economic trends have led to a demand for more flexible transportation options, the expansion of the sharing economy and calls for communities where people can live, work and play within a small area.

Autonomous Vehicles

New emerging technologies are developing that have the potential to fundamentally alter travel patterns and how goods and services are delivered. Automated vehicles are those in which at least some aspect of a safety-critical control function (e.g., steering, throttle, or braking) occurs without direct driver input. Automated vehicles may be autonomous (i.e., use only vehicle sensors) or may be connected (i.e., use communications systems such as connected vehicle technology, in which cars and roadside infrastructure communicate wirelessly). These emerging technologies have the potential to make the transportation system safer, more efficient and reliable, and to reduce criteria pollutant and greenhouse gas emissions. Google's autonomous car project, known as Waymo, began in 2009 and now has over three million miles of driverless operation in four cities across the nation.

Other private technology companies have also began testing driverless cars with success. The 2040 MTP/SCS recognizes these advancements and AMBAG will be monitoring this technology to potentially incorporate autonomous car operations in future horizon years.

Shared Mobility

Shared Mobility refers to new mobility paradigms as well as old models that are finding new markets and methods of delivery, thanks to new technology platforms. Shared Mobility encompasses a wide range of services including:

- Carsharing
- Ridesourcing (also known as Transportation Network Companies)
- Vanpool and Private Employer Charters

For all these services, mobile computing and payment systems are reducing transaction costs and opening up traditional mobility services to a wider population of producers and consumers. The net effect of these services on transportation mode choices and VMT is still to be determined. However, preliminary research shows that the availability and use of these services correlates with a reduction in individual vehicle ownership. Ridesourcing is a term coined by researchers to refer to mobile phone-based applications that put riders in touch with drivers for a fee. Some drivers on one platform are professionals, while many other drivers are non-professionals earning income from giving rides.

In recent years, several technology companies have leveraged this mobile technology to create platforms for on demand ridesharing. These companies, such as Uber and Lyft, have become known as Transportation Network Companies (TNCs). AMBAG has studied the impact of these TNCs and found that they have the potential to complement current and planned transit services, particularly in more rural areas, suburban communities and urban mixed use environments within the region. Several transit agencies across the state have begun partnering with these TNC's as a way to augment non urban corridor services.

Alternative Fuels and Electric Vehicles

AMBAG has taken steps to assess what regional infrastructure is needed to accommodate more alternative fuel choices across the region. In 2013, AMBAG and other regional organizations completed the Monterey Bay Plug-In Electric Vehicle Readiness Plan. The goal of this plan is to encourage the mass adoption of plug-in electric vehicles in the region and reduce greenhouse gas emissions by providing a toolbox of recommended approaches for public, private and non-profit organizations. These tools range from innovative approaches to plug-in electric vehicle marketing

and streamlining electric vehicle supply equipment permitting, to guidelines on establishing an electric vehicle fleet. For more information on EV readiness and alternative fuels, please refer to Chapter 4.

While this Plan does not include technologies such as autonomous cars or Transportation Network Company partnerships, it recognizes that these technologies are emerging. As projects that incorporate new emerging technologies are proposed by local jurisdictions to the transportation planning agencies and start to become more widely adopted, AMBAG will consider and potentially incorporate them in the future.

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3 Financial Plan

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Introduction

The financial plan identifies how much money is available to support the region's surface transportation investments, including transit, highways, local road improvements, system preservation, and demand management goals. It also addresses the need for investment in goods movement infrastructure. Improving ground access in and around major goods movement facilities and enhancing major highways and public transit are critical to maintaining the health of the Monterey Bay Area's economy. The 2040 MTP/SCS calls for various revenue sources for implementing a program of infrastructure improvements to keep freight and people moving.

The 2040 MTP/SCS includes reasonably available revenue sources to supplement existing transportation dollars. The Monterey Bay Area's financially constrained plan includes a core revenue forecast of existing local, state, and federal sources along with funding sources that are reasonably available over the time horizon of the 2040 MTP/SCS. The financial plan also includes action steps to obtain the revenues necessary for implementing the region's transportation vision.

Currently there are considerable challenges associated with financing transportation investments. The Plan highlights the importance of finding new and innovative ways to pay for transportation, including the ever expanding backlog of investment needs just to maintain the existing transportation system.

Revenue & Expenditure Categories

The 2040 MTP/SCS is based on existing and reasonably available revenues. The existing revenues identified are those that have been committed or historically available for the building, operation, and maintenance of the current roadway and transit systems in the Monterey Bay Area. Essentially, these revenues are existing transportation funding sources projected to 2040.

Financial Assumptions

The financial forecasts in the 2040 MTP/SCS are based on reasonably foreseeable revenues. The projections are calculated using a combination of historical averages, current trends, and/or state and federal actions.

Actual revenues will vary from year to year. The financial projections and estimation methods used in the 2040 MTP/SCS were developed collectively with transportation planning agencies in the Monterey Bay Area including AMBAG, the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission,

the San Benito County Council of Governments, the California Department of Transportation (Caltrans), Monterey-Salinas Transit, the Santa Cruz County Metropolitan Transit District, the three Counties, and 18 cities. Projections are consistent with figures shown in the California Transportation Commission's State Transportation Improvement Program Fund Estimate and FederalTransportation Improvement Program.

Year of Expenditure (YOE)

Federal law requires regions to escalate revenue sources and project costs to reflect "year of expenditure dollars" (YOE). The rationale for this rule is to present a more accurate picture of costs, revenues, and deficits associated with the long range plan. Table 3-1 shows projected revenue in today's dollars as well as in escalated (future) dollars. The text below describes each revenue source using today's dollars.

Revenue Sources

State and federal planning regulations require the development of a revenue constrained plan. The Financial Plan is based on current and reasonably available sources and levels of federal, state, and local transportation revenue, projected out to the year 2040. Revenue forecasts are thus a key part of the 2040 MTP/SCS development. A full list and description of funding sources is included in Appendix B.

The major sources of revenue for transportation can be divided into three categories: federal, state and regional/local.

Federal Revenues

Federal transportation bills must be reauthorized by Congress to provide a predictable source of federal funding for projects and all federal funding is subject to the annual budget process and congressional appropriations. For some years Congress kept extending continuing resolutions without updating priorities for spending or grant allocation formulas. On July 6, 2012 President Obama signed into law a new two year transportation authorization, entitled Moving Ahead for Progress in the 21st Century (MAP-21). The first long term highway authorization enacted since 2005, MAP-21 creates a streamlined, performance based and multimodal program to address the challenges facing the U.S. transportation system.

MAP-21 was followed by the Fixing America's Surface Transportation Act (FAST Act) in December 2015. The FAST Act authorized $305 Billion nationwide and built on the policy framework of MAP-21 including continuous efforts to streamline project delivery and new dedicated funding for freight projects.

Federal revenue sources for the region total just over $1.2 billion, 12.1 percent of the region's total forecast revenue through 2040. The region qualifies for federal revenue from almost 20 different programs. However, just two of these programs constitute over a third of all federal revenue: the Surface Transportation Block Grants and the Urbanized Area Formula Program. The major revenue sources are detailed below.

Surface Transportation Block Grants

The Surface Transportation Block Grants (STBG) represents the most flexible federal fund source available for local uses. Funds can be used for projects on any Federal-aid highway (ranging from national highways to city arterials), rural minor collectors, bridge projects, transit capital projects, and bus facilities.

Eligibility for use of STBG funds has been expanded over the years to include environmental provisions, modification of sidewalks to meet Americans with Disabilities Act requirements, and infrastructure based intelligent transportation systems capital improvements. The region forecasts over $188 million from this federal program over the course of the next 22 years.

Urbanized Area Formula Program

The Urbanized Area Formula (or known as Section 5307) is the original federal transit assistance program for transit operators in urbanized areas with a population of 50,000 or more. Federal Transit Administration (FTA) Section 5307 block grants are apportioned annually to urbanized areas

The Gas Tax and the Highway Trust Fund

The federal government funds transportation projects and programs in part through taxes and fees related to use of the transportation system. The Highway Revenue Act of 1956 tied the gas tax to transportation projects through the Federal-Aid Highway program. The 1956 act created a dedicated transportation funding account, the Highway Trust Fund (HTF). In the early 1980s, Congress expanded the definition of federal highways and created new programs to address transit infrastructure as well as established a Mass Transit Account within the trust fund.

Since 1956, Congress has taken gradual steps to increase the gas tax and diversify the taxes and fees associated with funding the transportation system. Congress has traditionally counted on ever increasing gas tax revenues generated from ever increasing traffic volumes to keep up with the need for transportation funding. However, mileage driven per person has hit a plateau in recent years and improvements in fuel efficiency are slowing fuel consumption. During the recent recession, gas tax receipts fell well below funding levels authorized in the legislation. Since fiscal year 2008, Congress has transferred $34.5 billion from the Treasury to the Highway Trust Fund to address shortfalls. In its most recent estimates, the Congressional Budget Office (CBO) projected the fund will reach a shortfall before the end of 2014. The Mass Transit Account remains solvent today, though its long term health is also believed to be in jeopardy. The current funding approach is unsustainable and most industry observers agree new sources of funds for transportation projects are essential.

Source: Transportation for America, "Transportation 101: An Introduction to Federal Transportation Policy," http://t4america.org/docs/Transportation%20101. pdf

through a complex formula weighted by population density and revenue vehicle miles, or rail miles, if applicable.

For urbanized areas with populations less than 200,000, funding may be used for either capital or operating costs at local option and without limitation. Local match requirements vary depending on the use of 5307 funds.

Operations require a 50 percent federal, 50 percent local match; and capital acquisitions and associated capital maintenance items are allowed at a 80 percent federal, 20 percent local match rate. If they choose, operators can use Section 5307 funds for planning purposes. The region forecasts more than $220 million from this federal program through 2040.

State Revenues

State revenue sources total over $2.7 billion, or 28.5 percent of the region's total forecast revenue for the life of the Plan. This represents a significant increase in the State's revenue impact on the MTP/SCS. This is due to the passage of the Road Repair and Accountability Act of 2017, or better known as SB 1. SB 1 greatly increased transportation revenues throughout the state through increases in gasoline sales and excise taxes and vehicle registration fees. Most of the new state funds from SB 1 are allocated through existing programs including two programs – State Highways Operation and Protection Program (SHOPP) and the Regional Share State Transportation Improvement Program (STIP). The SHOPP and STIP account for over 80 percent of total state funding. The major state revenue sources are detailed below.

State Highways Operation and Protection Program

The State Highways Operation and Protection Program includes state highway rehabilitation, traffic safety, seismic safety, and traffic operational improvements. The SHOPP, a four year program, is adopted separately from the State Transportation Improvement Program. The Rehabilitation and Safety and Other Highway Construction elements previously included under the STIP are incorporated under the SHOPP.

New projects for the SHOPP are given priority and programmed according to rehabilitation, safety and operational needs. No new project is programmed unless Caltrans has a completed project study report (PSR) or equivalent document identifying a specific project scope and estimated cost. Funding from this source is forecasted to total over $1.2 billion for the life of the 2040 MTP/SCS plus an additional $715 million in new SHOPP funding from SB 1 creating almost $2 billion in revenue over 22 years.

State Transportation Improvement Program

The State Transportation Improvement Program (STIP) was significantly changed with the enactment of Senate Bill (SB) 45 in 1997. SB 45 simplifies the transportation programming process by combining seven previous funding categories into one pot of funds which is then divided into two categories. Prior to its division, however, Caltrans support, planning, and maintenance and rehabilitation needs are taken from the total. The remaining funding is then divided into the two categories: Regional Improvement Program and Interregional Transportation Improvement Program.

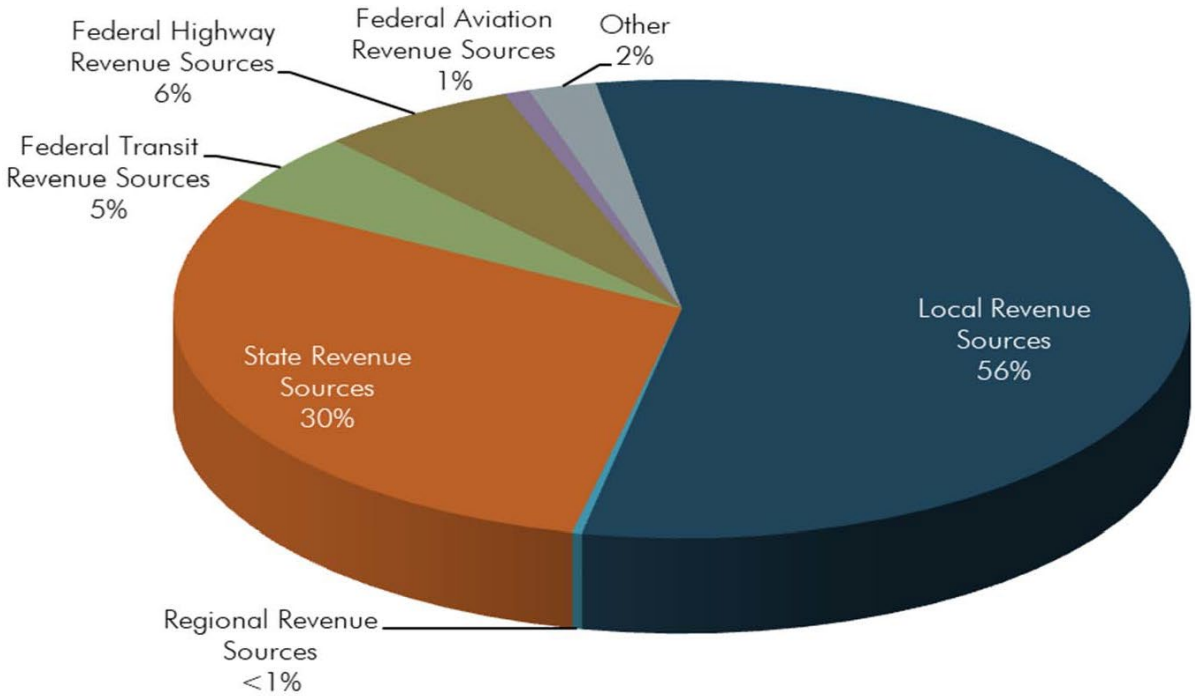
Prior to 2010, state sales tax on gasoline funded discretionary projects through the Transportation Investment Fund, which distributed revenues to the STIP, local streets and roads, and transit. In 2010, the sales tax revenues were "swapped" for an increased excise tax (initially 17.3 cents) recalculated each year to ensure revenue neutrality. This policy shift significantly reduced STIP funding to the Monterey Bay Area, and while SB 1 addresses the STIP by tying the excise tax to CPI, the STIP still lags behind the needs of the program.

The Monterey Bay Area forecasts over $300 million in revenue from the STIP in total. The 2040 MTP/SCS projects are consistent with the STIP fund estimate, Interregional Transportation Improvement Program, and Federal Transportation Improvement Program.

Active Transportation Program

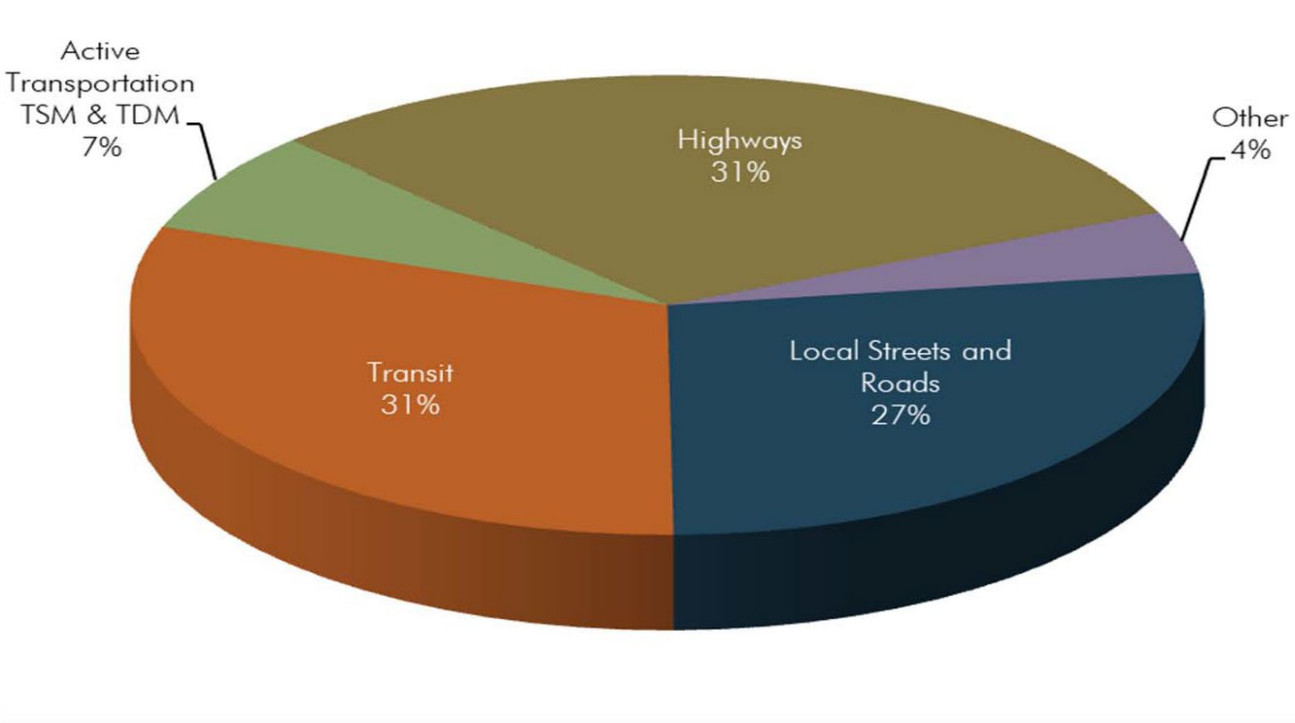
MAP-21 has consolidated many of the dedicated

Figure 3-1: Total Revenue by Source



Source: AMBAG, SBtCOG, SCCRTC and TAMC

Figure 3-2: Total Expenditures by Project Type



Source: AMBAG, SBtCOG, SCCRTC and TAMC

Table 3-1: Total Revenue by Source

Revenue Sources (all figures in $1000's)	Total in Today's Dollars	Percent of Total Funding (Today's Dollars)	Total in Future Dollars	Percent of Total Funding (Future Dollars)
Local Revenue Sources	$5,552,362	55.9%	$6,488,127	55.2%
Gas Tax	$701,835	7.1%	$701,835	6.0%
Local Misc. Revenues	$1,475,534	14.8%	$1,783,843	15.2%
TDA	$552,420	5.6%	$674,278	5.7%
Transit Revenues	$637,433	6.4%	$777,628	6.6%
Transit Sales Tax	$661,925	6.7%	$803,689	6.8%
Transportation Sales Tax	$1,036,000	10.4%	$1,259,639	10.7%
Local SB1 Revenues	$487,214	4.9%	$487,214	4.1%
Regional Revenue Sources	$30,976	0.3%	$37,952	0.3%
AB 2766	$30,976	0.3%	$37,952	0.3%
State Revenue Sources	$2,936,820	29.5%	$3,527,775	30.0%
ATP	$206,965	2.1%	$252,601	2.2%
SB1 State Revenues	$85,800	0.9%	$85,800	0.7%
SB1 SHOPP Addition	$715,110	7.19%	$873,371	7.43%
SB1 STA Addition	$118,345	1.2%	$144,297	1.2%
SHOPP	$1,263,105	12.7%	$1,541,731	13.1%
STA	$132,963	1.3%	$162,405	1.4%
State Misc. Revenues	$91,564	0.9%	$103,633	0.9%
STIP	$322,968	3.2%	$363,937	3.1%
Federal Transit Revenue Sources	$502,648	5.1%	$632,709	5.3%
Programs	$151,934	1.5%	$197,456	1.7%
Metropolitain/State Planning	$2,981	0.0%	$3,641	0.0%
Nonurbanized Rural Area Formula Program	$44,286	0.4%	$54,302	0.5%
Small Transit Intensive Cities Program	$69,212	0.7%	$83,938	0.7%
Urbanized Area Formula Program	$224,235	2.3%	$273,373	2.3%
Federal Rail Revenue Sources	$10,000	0.1%	$10,000	0.1%
Federal Highway Revenue Sources	$621,599	6.3%	$757,921	6.5%
Federal Highway Misc. Revenues	$295,449	3.0%	$359,617	3.1%
Highway Safety Improvement Program	$108,174	1.1%	$132,210	1.1%
Surface Transportation Block Grant	$217,976	2.2%	$266,094	2.3%
Federal Aviation Revenue Sources	$80,773	0.8%	$99,137	0.8%
FAA Airport Improvement Program	$80,773	0.8%	$99,137	0.8%
Other	$215,000	2.2%	$215,000	1.8%
VTA/SBtCOG Project Partnership Fund	$215,000	2.2%	$215,000	1.8%
Grand Total	$9,940,177	100.0%	$11,748,621	100.0%

Source: AMBAG, SBtCOG, SCCRTC and TAMC

funding streams for active transportation projects (Transportation Enhancements, Safe Routes to School, and Recreational Trails) under a single new program: the Transportation Alternatives Program (TAP). This equated to roughly a 30 percent cut to active transportation program funding. On the other hand, MAP-21 increased the Highway Safety Improvement Program (HSIP) and has clarified that the safety of all road users should be improved, not just motorists. Additionally, MAP-21 gives great flexibility for Caltrans to shift, or flex, money between its many programs–representing a potential opportunity to actually increase the amount of federal funding that supports pedestrian and bicycle projects and programs across the state.

On September 26, 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP) in the Department of Transportation (Senate Bill 99, Chapter 359 and Assembly Bill 101, Chapter 354). The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program for active transportation. The funding in this program will be administered on a competitive grant basis with a 25 percent set aside for disadvantaged populations. With a massive infusion of funds from SB 1 into the ATP program, the region tripled its forecasts to over $206 million in revenue from the competitive ATP grant funding program.

Transportation Development Act - State Transit Assistance Fund

The Transportation Development Act (TDA) of 1971, enacted by the California Legislature to improve existing public transportation services and encourage regional transportation coordination, provides funding to be allocated to transit and non-transit related purposes that comply with regional transportation plans. The TDA provides two funding sources: the Local Transportation Fund (LTF) and the State Transit Assistance Fund (STA). The LTF portion of TDA funding is described further below under "Local Revenues." The STA is derived from the statewide sales tax on gasoline and diesel fuel that was recently increased under SB 1. Statute requires that 50 percent of STA funds are allocated according to population and 50 percent be allocated according to operator revenues from the prior fiscal year. The region forecasts over $250 million in TDA/STA funds.

Local Revenues

At over $5.5 billion, local revenues constitute nearly 56 percent of all transportation funding for the Monterey Bay Area in the 2040 MTP/SCS. The Transportation Development Act/Local Transportation Fund (5.6%), the Highway User Tax/Gas Tax (7.1%), miscellaneous revenue and developer fees (14.8%), transit revenue (6.4%), and new transportation sales taxes (10.4%), transit sales tax (6.7%) and local SB 1 revenues (4.9%) constitute over four-fifths of all local revenues. The major revenue sources are detailed below.

Transportation Development Act - Local Transportation Fund

The TDA extended sales tax to gasoline purchases and earmarked one-quarter of one cent of all sales tax proceeds for public transit improvements in the county where the revenue was generated. Jurisdictions may use these Local Transportation Fund (LTF) amounts for street and road purposes if a finding is made by the jurisdiction involved that there are "no unmet transit needs that are reasonable to meet." The reasonableness criteria is defined by each Regional Transportation Planning Agency administering the funds. The Monterey Bay Area forecasts over $552 million from the TDA/LTF category.

Gas Tax

The gas tax funds that are apportioned from the state to cities and counties are to be used exclusively for local roadway projects. Gas tax revenues are dependent upon the amount of gasoline consumed since the tax is assessed on a per gallon basis rather than on the cost of gasoline. Any unobligated balance in these funds is transferred to the State Highway Account.

In the past decade, gas tax revenues have not kept up with demand and in turn have put pressure on other funding sources to make up the deficiency. With the passage of SB 1, local gas tax revenue has been reestablished as a major cornerstone of local

transportation funding.

The region is forecast to receive over $1.1 billion in gas tax revenues, including over $487 million from SB 1 gas tax increases over the life of the Plan.

Transit Fares

All the public transit operators in the Monterey Bay metropolitan region charge a user fee (fare) for persons to ride their service. Although the intent is for the users of the service to contribute a small portion of the cost to operate the system, it also is to ensure that each operator can meet pre-established farebox recovery ratio standards for the continued receipt of Transportation Development Act funds. The farebox recovery ratio is the amount collected from passenger fares divided by the cost of providing the service. In the Monterey Bay metropolitan region, this amount ranges from 10 percent (usually the general public transit and paratransit programs have low farebox recovery ratios) to up to 40 – 50 percent (e.g. Express Bus services).

Transit fares will constitute nearly $638 million of revenue for the Monterey Bay Region through 2040. Other sources of transit revenue include more than $660 million from local tranist sales tax and revenue from ad space. The combined total revenue from transit is forecasted to be over $1.2 billion or 24 percent of all local revenue sources for the life of this Plan.

Miscellaneous Revenue and Developer Fees

An additional source of funding which is used in many places throughout the Monterey Bay region is traffic impact fees. A traffic mitigation impact fee distributes the costs of transportation improvements among all new developments based on the size of a proposed development or estimates of a project's trip generation capacity. Caltrans notes that fair-share, per unit fees for new development that have a direct nexus to mitigating the impacts of additional trips created, are appropriate. San Benito County has implemented an impact fee program within the County and the City of Hollister for some years. In Monterey County, the Cities of Greenfield, King City, Salinas and Soledad have impact fee programs. The Fort Ord Reuse Authority also collects fees to fund transportation improvements needed to accommodate redevelopment of the former Fort Ord.

In addition to jurisdictions' traffic impact fee programs, the Transportation Agency for Monterey County has developed a countywide regional traffic impact fee program to move transportation projects forward. Other revenue categories in miscellaneous revenues include airport revenues, city/county general funds, and leases. In total the region forecasts to collect over $1.4 billion in miscellaneous revenues and developer fees including regional developer fees.

Local Transportation Sales Tax

In November 2016 the Transportation Agency of Monterey County and the Santa Cruz County Regional Transportation Commission passed local sales tax measures, Measure X and Measure D respectively, to fund transportation projects of all modes in their respected counties. This significant local investment in transportation will account for a much needed stable funding source for local road maintenance, transit operations, active transportation investments and other congestion reducing projects. Additionally with the passage of these local funding sources, both Monterey County and Santa Cruz County are now considered "self-help" counties making them eligible for additional state grant funding.

Measure X in Monterey County, a three-eighths cent sales tax, will be prioritized to address maintenance of local roads, increase road safety and reduce traffic congestion, improve mobility and make active transportation safer. Based on these priorities the sales tax revenue is divided into two accounts with 60 percent allocated to local road maintenance and safety and 40 percent allocated to regional safety, mobility and walkability. Measure X is expected to generate roughly $440 million over 22 years.

Measure D in Santa Cruz County, a one-half cent sales tax, is designed to address major transportation issues including local road repair and increased safety, traffic congestion, mobility for seniors and those with disabilities, investments in active transportation and increase

alternative transportation options. The sales tax revenue generated will be divided into five programs including 30 percent to neighborhood projects for local road repair with set asides for Highway 9 improvements and Highway17 wildlife crossing projects, 25 percent to highway corridors including transportation demand management programs and safety programs, 20 percent to transit focusing on senor mobility, 17 percent to active transportation projects and the remaining 8 percent to preserve and analyze the rail corridor. Measure D is expected to generate nearly $420 million over 22 years.

San Benito Council of Governments' local sales tax measure in San Benito County narrowly missed the two-thirds required voter approval in the June 2016 primary election. This Plan reasonably assumes that San Benito will pass a local sales tax measure for transportation by the year 2020 based on polling in 2016 and the lessons learned in the most recent campaign. AMBAG along with SBtCOG believe that a future local sales tax measure would generate roughly $156 million between 2020 and 2040.

In total, these local sales tax measures for transportation projects will generate over $1.0 billion in dedicated revenue, which equates to 10.4 percent of all revenue expected in the 2040 MTP/SCS.

Highway 156 Toll Revenues

Tolling revenues for State Route 156 West are included as a reasonably available revenue source for Monterey County as Local Miscellaneous Revenues. TAMC has been working closely with Caltrans to outline the tasks, activities and agreements necessary to consider tolling via a public-private partnership as an option to fund construction of the State Route 156 West Corridor project. The agency completed a Tolling Traffic and Revenue Study for State Route 156 in 2013 and took action to further study the feasibility of the project. TAMC and Caltrans also held a private industry workshop to gauge private interest

Table 3-2: Total Expenditures by Project Type

Expenditures (all figures in 1,000's)	Total in Today's Dollars	Percent of Total Expenditures (Today's Dollars)	Total in Future Dollars	Percent of Total Expenditures (Future Dollars)
Active Transportation / Transportation System & Demand Management	**$708,240**	**7.1%**	**$837,092**	**7.1%**
Active Transportation	$640,007	6.4%	$756,445	6.4%
Transportation Demand Management	$41,864	0.4%	$49,480	0.4%
Transportation System Management	$26,369	0.3%	$31,166	0.3%
Highways	**$3,049,331**	**30.7%**	**$3,604,105**	**30.7%**
Highway - New Capacity	$1,485,521	14.9%	$1,755,786	14.9%
Highway - Operations & Maintenance	$1,563,810	15.7%	$1,848,318	15.7%
Local Streets and Roads	**$2,690,875**	**27.1%**	**$3,180,434**	**27.1%**
Local Streets & Roads - New Capacity	$385,139	3.9%	$455,208	3.9%
Local Streets & Roads - Operations & Maintenance	$2,305,736	23.2%	$2,725,225	23.2%
Other	**$436,176**	**4.4%**	**$515,531**	**4.4%**
Airports, Planning, Other	$436,176	4.4%	$515,531	4.4%
Transit	**$3,055,555**	**30.7%**	**$3,611,461**	**30.7%**
Paratransit Operations and Capital	$410,850	4.1%	$485,597	4.1%
Transit - New Capacity	$425,271	4.3%	$502,642	4.3%
Transit - Operations	$1,647,283	16.6%	$1,946,978	16.6%
Transit - Fleet Rehab and Capital	$572,151	5.8%	$676,244	5.8%
Grand Total	**$9,940,177**	**100.0%**	**$11,748,621**	**100.0%**

Source: AMBAG, SBtCOG, SCCRTC and TAMC

in investing in the tolling project. The region is forecasting over $185 million in revenue from tolling on State Route 156.

Strategies to implement this revenue include:

- Execution of a Pre-Development Agreement between Caltrans, TAMC and a private developer team in which the developer participates in project planning, value engineering, determining financial feasibility and other activities that take place before the construction procurement phase.
- Completion of an investment-grade Traffic and Revenue Study, as other products needed to inform TAMC's decision to proceed with tolling for the project.
- Preparation of a Supplemental Environmental Impact Report.
- Evaluation of various design and financing options that would allow building both phases of the project.

Revenue Constrained Scenario

As the 2040 MTP/SCS is a long range planning document, projects listed in the Plan do not represent any specific commitment of funds to any project. Projects are approved by the Regional Transportation Planning Agency for respective federal or state funding sources and then amended into the Metropolitan Transportation Improvement Program (MTIP) prior to funding being dedicated to an individual project. As such, the MTP represents a long range list of projects through which those programmed funding will be advanced into the MTIP for implementation.

Financing for the 2040 MTP/SCS is shown in the Tables 3-1 and 3-2. The tables identify revenue sources and financial amounts reasonably expected to be available over the life of the Plan as well as expenditures.

Unconstrained Projects

Based on the analysis of travel demand in the region to 2040, needs have been identified for transportation improvements and associated operations, maintenance, and rehabilitation. These needs require funding above and beyond assumed revenues included in the 2040 MTP/SCS. The total known unconstrained need for the Monterey Bay Area is more than $22 billion.

4 Sustainable Communities Strategy

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Introduction

The word “sustainable” is used in many contexts. In the case of this Plan it refers to the mandates arising from Senate Bill (SB) 375 to develop a Sustainable Communities Strategy. At the heart of SB 375 is the requirement to coordinate transportation investments with land use patterns such that the region makes informed decisions about where to invest the region’s limited resources and simultaneously reducesgreenhouse gases by providing more direct access to destinations as well as by providing alternative transportation options. This Plan is required to analyze where people are going and how they want to get there in order to build a transportation network that addresses the mobility and accessibility needs of the region. One strategy included in this Plan to achieve this is more focused growth in high quality transit corridors. Another strategy in the Plan is to provide more travel choices as well as a safe and efficient transportation system with improved access to jobs and education for the region’s residents. Additionally, the 2040MTP/SCS supports job creation through economic development, ensures the region’s economic competitiveness through strategic investments in freight, and improves environmental outcomes for the region’s residents by 2040.

The passage of SB 375 directs AMBAG to consider future land use patterns in conducting its long range transportation planning. The mandates of SB 375 provide the region with a renewed opportunity for integrated planning for the future. The purpose of SB 375 is to implement the state’s greenhouse gas (GHG) emissions reduction goals for cars and light trucks. This law requires the California Air Resources Board (CARB) to determine per capita GHG emission reduction targets for each metropolitan planning organization (MPO) in the state at two points in the future—2020 and 2035.

In accordance with Government Code Section 65080(b)(2)(B)(vii), the 2040 MTP/SCS achieves GHG emission reductions of four percent per capita in 2020 and a nearly seven percent per capita in 2035, surpassing CARB’s reduction targets of zero and five percent for the same years.

Under SB 375, AMBAG and California’s 17 other MPOs must address GHG reduction as part of a broader “Sustainable Communities Strategy,” or SCS. Transportation strategies contained in this MTP such as managing transportation demand and making certain transportation system improvements, are major components of the SCS. However, the SCS also focuses on the land use growth pattern for the region, because geographical relationships between land uses —including density, diversity, and intensity — help determine the need for travel. Therefore, AMBAG’s SCS includes not only projections regarding the transportation network, but land use as well.

Specifically, SB 375 calls for the preparation of an SCS that “sets forth a forecasted development pattern for the region, which, when integrated

Assembly Bill (AB) 32 and Senate Bill (SB) 375

California has a number of regulations regarding greenhouse gases (GHGs) and they are often confused with each other, in particular SB 375 is confused with AB 32. The major difference is AB 32 reduces GHGs from all sectors, whereas SB 375 is only concerned with transportation, specifically passenger vehicles.

California's major initiative for reducing GHG emissions is outlined in AB 32, the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels, and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions.

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by aligning transportation planning and funding, land use planning and state housing mandates at the regional level in order to reduce VMT and transportation- related GHG emissions. As mandated by CARB, AMBAG must reduce per capita GHG emissions from passenger vehicles in order to meet the SB 375 target. For the AMBAG region, the targets set by CARB are not to exceed 2005 per capita levels of GHGs by 2020 and to reduce GHG emissions by 5 percent per capita from 2005 levels by 2035.

with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the state Air Resources Board." [CGC Section 65080(b)(2)(B)(vii)].

In summary, under SB 375, an SCS must:

- Identify existing and future land use patterns;
- Identify transportation needs and the planned transportation network;
- Consider statutory housing goals and objectives;
- Identify areas to accommodate long term housing needs;
- Identify areas to accommodate 8 year housing needs;
- Consider resource areas and farmland; and
- Comply with federal law for developing an MTP.

These requirements, as outlined in California Government Code Section 65080(b)(2)(B), do not mean that the SCS creates a mandate for land use policies at the local level. In fact, SB 375 specifically states that the SCS cannot dictate local general plan policies (see Government Code Section 65080(b)(2)(J)). Rather, the SCS is intended to provide a regional policy foundation that local governments may build upon as they choose, which includes quantitative growth projections for each city and county in the region. In addition, some projects consistent with the SCS may be eligible for a streamlined environmental review process.

The key difference between past and current regional planning efforts is a sharper focus on reducing GHG emissions from cars and light trucks. For these vehicles, the state has developed a three-tiered approach to reducing GHG emissions. In addition to the regional land use policies and transportation investments contained in the 2040 MTP/SCS, the state has enacted laws to increase vehicle fuel efficiency and to increase the use of

alternative, lower carbon transportation fuels. AMBAG and other regional stakeholders are supporting infrastructure planning for alternative fuels and zero emissions vehicles, which is addressed later in this chapter.

California Transportation Plan

Senate Bill 391 of 2009 required the California Department of Transportation to prepare the California Transportation Plan, a long range transportation plan, by December 2015. This system must reduce GHG emissions to 1990 levels from current levels by 2020, and 80 percent below the 1990 levels by 2050 as described by AB 32 and Executive Order S-03-05 respectively. In June 2016, the California Transportation Plan 2040 was completed and demonstrates how major metropolitan areas, rural areas and state agencies can coordinate planning efforts to achieve critical statewide goals. SB 375 addresses the regional GHG emissions from the transportation sector and SB 391 addresses the statewide GHG emissions from the transportation sector, both in support of AB 32.

Creating the 2040 MTP/SCS

The 2040 MTP/SCS contains ambitious goals to meet the region's challenges and are informed by the policies identified in Chapter 1. In recent years, AMBAG and its local jurisdictions have laid the groundwork for the 2040 MTP/SCS by engaging in a variety of efforts to plan for more sustainable communities such as the Blueprint – "Envisioning the Monterey Bay." Building on this foundation, AMBAG's first step in developing the SCS was to coordinate with its local and regional partners in both information gathering and strategy development to create a realistic and implementable 2040 MTP/SCS. AMBAG also engaged the public and regional stakeholders to determine their priorities of the region. This "bottom-up" approach has included local jurisdictions, the three regional transportation planning agencies (RTPAs), transit operators, Caltrans, Monterey Bay Air Resources District and a wide array of stakeholders.

Regional Transportation Planning Agencies

As the agencies statutorily responsible for the implementation of transportation projects in their respective counties, AMBAG's three RTPAs - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito County Council of Governments- have a critical role in the development of the 2040 MTP/SCS. Early in the development process, the RTPAs worked closely with AMBAG to identify key priorities for consideration in the 2040 MTP/SCS's scenario planning process. The RTPAs remained actively involved throughout the entire scenario planning process, offering meaningful input as AMBAG decision-makers considered the various policy alternatives. Given the new requirements of SB 375, it will be critical for the RTPAs to embrace the concept of integrating transportation planning with land use planning for this region to develop a truly sustainable 2040 MTP/SCS.

Land Use & Transportation Connection

Scenario Planning

Scenario planning analyzes a series of potential futures. In developing the region's first, Sustainable Communities Strategy, it was used to evaluate potential combinations of land use patterns and transportation investment. The resulting scenarios were analyzed and evaluated in context of the 2035 MTP/SCS' goals and performance measures; and were used to develop the scenarios for this 2040 MTP/SCS.

Building off of the scenarios developed for the last MTP/SCS and further refining them, this 2040 MTP/SCS analyzed three scenarios. AMBAG used relevant data and information gathered from local governments and the RTPAs - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito County Council of Governments - to develop scenarios using a process that engaged the entire region in envisioning a more sustainable future. For the SCS, it is assumed that the AMBAG Regional Growth Forecast (three county total) is a constraint (fixed upper limit) to the amount of total development in the region and the majority of growth is restricted to the Spheres of Influence of any given city. All growth is consistent with General Plans and was based on direction from jurisdiction planning staff. Detailed documentation of the development of the scenarios can be found in Appendices E and F.

Regional Growth Forecast

The 2040 MTP/SCS depends on an accurate and credible forecast for future growth in population, housing, and employment as a basis for determining the region's infrastructure needs. Beginning in summer 2015, AMBAG conducted over 100 meetings with 18 cities, three counties, Local Agency Formation Commissions and local universities to receive local input on the regional population, housing and employment growth forecast for the 2040 MTP/SCS.

The Regional Growth Forecast uses data from the 2010 Census, data from the California Employment Development Department and InfoUSA, as well as updated 2015 population and household data from the California Department of Finance. Meetings with local jurisdictions led to refinement of the forecast figures, as well as obtain a consensus on the Regional Growth Forecast to serve as the foundation for the 2040 MTP/SCS. Detailed information on the Regional Growth Forecast can be found in Appendix A.

Overall Land Use Pattern

Land use patterns that provide a diverse mixture of goods and services in combination with residential uses have been shown to reduce vehicle miles traveled and thereby reduce greenhouse gas emissions. Combining mixed use development with infill development, rather than building on the fringes of urbanized areas, reduces greenhouse gas emissions by reducing the distance that people have to travel to get their basic needs met.

However, such smart growth strategies are not enough to encourage people to switch modes of travel from single occupant vehicles to transit, bicycling or walking. Transportation infrastructure that makes alternative modes more attractive also needs to be in place. For this reason the land use pattern in the SCS, as shown in Figures 4-1 through 4-13, assumes increased density via infill development and mixed use in existing commercial corridors in combination with high quality transit service, bus service that has headways of 15 minutes or less during the peak period or rail service. Figure 4-10 depicts the High Quality Transit Areas.

By combining increased density and accessibility to transit there is a higher likelihood that people will chose to use transit over driving. Additionally, these same corridors and the streets that connect to other neighborhoods are envisioned to have a greater investment in bicycle and pedestrian infrastructure such that people can chose to walk or bike for shorter distance trips. Making streets friendlier for all users of the network is the concept of complete streets that is being encouraged at the local level.

Scenario Planning

Scenario planning is an analysis tool that allows the comparison of potential future outcomes of policy decisions. Scenarios are stories in which a narrative helps illustrate how present day decisions might yield future outcomes. The narrative is grounded in empirical work that supports the assessment of scenarios for credibility and likelihood. Simply put, AMBAG and its partners used "what if" planning.

During the MTP/SCS planning process, AMBAG in coordination with a range of stakeholders, including the planning directors from around the region, evaluated a series of scenarios in terms of the impact on greenhouse gas emissions and several other performance measures. For this MTP/SCS the process produced 3 more refined scenarios.

Through this effort, scenarios build on the existing urban footprint and are guided by identified emerging trends and local General Plans. What is at stake in scenario planning is not the past, but the future population and employment growth that will increase and shape the existing footprint into the future.

For each scenario there is a set of necessary conditions or requirements, including limited financial resources. Each scenario varies in character and changes the emphasis on types of transportation investments and land use patterns to measure the effect across a series of performance measures. The best performing and most publicly acceptable scenario is selected for the Sustainable Communities Strategy.

Past Planning Efforts

"Envisioning the Monterey Bay," or the Blueprint for short, prepared by AMBAG in 2010, was the first regional effort to develop a coordinated vision of the future for the Monterey Bay Area. It described how the communities of the Monterey Bay Area could grow in a sustainable fashion over the next 25 years. It explored how the housing and transportation choices in the region can be expanded to provide a more compact land use pattern with supportive infrastructure. The Blueprint set the stage for the dialogue that planners and community stakeholders have engaged in with the development of the region's first SCS. At its core the Blueprint was an effort to educate ourselves about the options for sustainable growth as a region prior to implementing the mandates of SB 375.

Place Types

To better analyze land use patterns and consider scenario alternatives, AMBAG created a set of place types which established a set of land use designations common to general plans for the three counties and 18 cities in the region during the development of the 2035 MTP/SCS. These place type categories are meant to act as a common "language" so that the diverse general and specific plans across the Monterey Bay Area may be compared in a consistent and standard manner.

Development of the place types began with a review of the predominant land uses and development patterns in the Monterey Bay region, leading to the creation of initial place type categories and a preliminary place type matrix. The following metrics and characteristics were established as the primary determinants of place type designations:

- Density – The general density of a particular land use, expressed as Floor to Area Ratio (FAR) and/or as dwelling units per acre
- Setting – The surrounding land use and development context
- Character – The urban and built form, including building placement, street pattern, and pedestrian or auto-orientation
- Transportation – The level of transit access, quality of the pedestrian environment, and presence of bicycle infrastructure

Based on these characteristics, a place type matrix was created and place type designation assignments were made. The Place Type Matrix was updated as part of the 2040 MTP/SCS. The assignment of place types was based primarily on existing land use designations, transit service maps and aerial imagery, but also relied upon information from local jurisdictions. The Place Type maps and descriptions of residential densities and building intensities are included in Appendix I. The 2040 MTP/SCS includes place types that transition commercial corridors into mixed use areas served by high quality transit. Outside of those mixed use areas the place types largely remain the same as the baseline.

SCS Toolkits

Developed collaboratively between AMBAG, transportation partners, local jurisdictions and stakeholders, an SCS Implementation Toolkits, with examples of projects and best practices to help achieve regional and local sustainability goals and emission reduction targets through efforts to provide housing, jobs and services in proximity to one another and to better link them by transit and safe and convenient bicycle and pedestrian access. The wide variety of tools are grouped in separate Infill Housing, Economic Development and Transportation sections of the Toolkit. Each of these sections opens with a summary matrix of all of its tools that indicates which ones are most applicable to the variety of settings or "Place Types" found in the region. These place types were developed prior to the Toolkit to help inform local and regional efforts to achieve MTP/SCS objectives. Because individual communities in the region may include a range of place types and transitions between them, tools in the SCS Implementation Toolkit may be useful in a variety of settings. Together, any number of tools from one or more sections of the SCS toolkits can be used to improve quality of life, support investment and improve safety and accessibility in any of the diverse communities that make up the region. The SCS toolkits are available at www.ambagSCS.com.

High Quality Transit Corridors and Stops

SB 375 defines high quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. Projects quality as a transit priority project if they are within a ½ mile of a high quality transit corridor or a major transit stop. (GC 21155 (b)) A major transit stop is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (GC 21064.3).

Given these definitions for the purposes of the SCS AMBAG has focused on corridors that meet the definition of high quality transit corridors as defined in SB 375. For the sake of consistency in this document major transit stops are referred to as high quality transit stops and include rail meeting the definition of the government code. Additionally, the service provided at major transit stops is referred to as high quality transit service.

Opportunity Areas

Senate Bill 375 also includes provisions for CEQA streamlining for developments that meet a specific set of criteria (per definition in California Public Resources Code Section 21155). At a minimum this criteria includes proximity to high quality transit. Areas that qualify for streamlining are called "opportunity areas." A "Sustainable Communities Opportunity Area" is an area within ½ mile of an existing or planned "high quality transit corridor" (per definition in California Public Resources Code Section 21155(a)) or "major stop" (per California Public Resources Code Section 21064.3) that has the potential for transit oriented development including mixed use. High quality transit is service with headways of 15 minutes or less during peak period or rail service.

During the past year, AMBAG worked with local jurisdictions to identify Opportunity Areas in the region. Opportunity Areas are places in the region with the highest chance for successful sustainable growth in the future; they are generally located where Transit Priority Areas (TPAs) and Economic Development Areas (EDAs) within the AMBAG region overlap. This effort also identified Transit Priority Areas as locations that have both supportive land use densities and high quality transit service/connections for each Opportunity Area. Opportunity Areas are used to identify a set of potential Transit Priority Projects that supports the SCS. The Opportunity Areas maps and descriptions are included in Appendix I.

Economic Development

The Monterey Bay Area is comprised of a diverse population and has very distinct industries that support the local economy. While the tri-county area is considered a mid-sized region, there are many jurisdictions within the area that are small and relatively rural in nature. These areas are home to the region's low income and minority populations as they are the most affordable places to live. These populations are responsible for the production of the agricultural goods that are generally considered to be the backbone of the region's economy.

Similarly, the tourism and hospitality industry, considered to be just as important as agriculture to the economy, is supported by thousands of low income minority workers. Despite the importance of these two industries to the region, jobs in these areas are mostly low income.

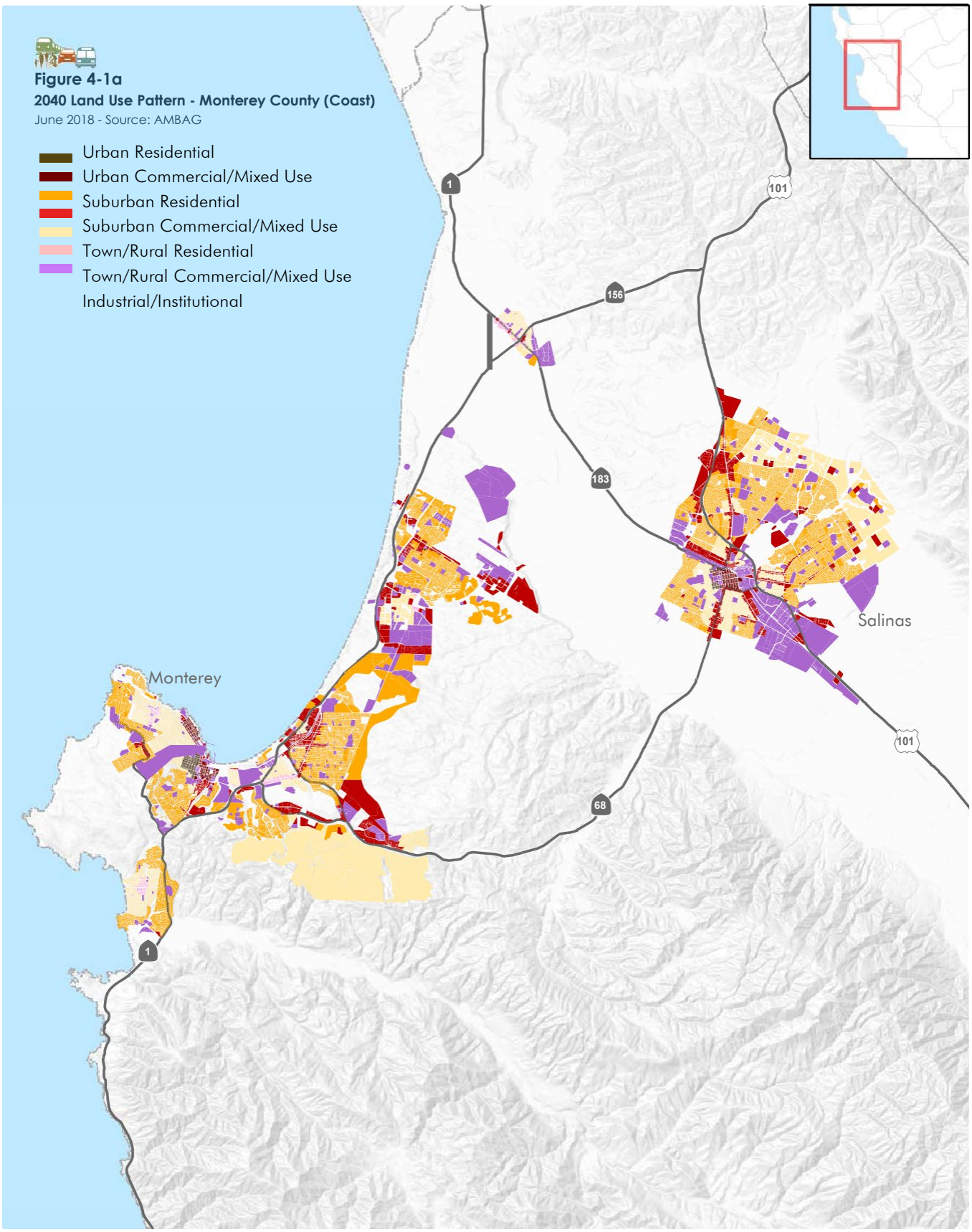
While low wage workers support and make possible the engine of the regional economy they tend to live in cities that struggle to collect enough revenue to support their residents with basic services. The land value in these cities is low compared to the coastal areas, people have access to fewer services, and are isolated from the more well-marketed tourist attractions near the ocean. Low land values, lack of infrastructure and small, dispersed populations make it difficult to attract development. Additionally, the jobs that provide the livelihood for many of these workers are far outside of the jurisdictions they live in. The combination of these factors creates a persistent jobs/housing imbalance within the region.

Often jobs/housing imbalances are tackled by implementing a combination of mixed use and infill development as well as increased transportation investment. However, applying this approach regionwide does not take into account the attractiveness of different markets for development in any given jurisdiction. Development markets are complex and land use policies or goals that do not consider the market potential for varying types of development will not be successful.

Previous studies have shown that these low cost areas may not yield a high enough residual land value for developers to find mixed use or residential development profitable. Assuming that development in the form of mixed use will help to address the need for jobs in low cost areas ignores the reality of market conditions. Changes in policy, construction costs, pricing, and other factors could help with long term financial feasibility of development in these areas.

In the short term, it may be appropriate to encourage commercial types of development in these areas as this type of development has been shown to yield higher residual land values, with a long term strategy towards mixed use. Until then,

Figure 4-1a: 2040 Land Use Pattern North Monterey County



Much of the AMBAG region is rural with dispersed land use patterns and very few job opportunities. The region's rural areas include large low income and minority populations that typically have long commutes to agricultural fields or to service and hospitality jobs in high cost coastal areas far away from home. This is the most difficult commute pattern in the region to address with transportation investments. Compounding the issue, rural populations are underrepresented in the regional planning process because of difficulties in engaging them which makes it challenging to design effective strategies to reduce VMT and greenhouse gases in rural areas. In order to implement the 2035 MTP/SCS and to help develop the 2040 MTP/SCS AMBAG formed the Rural Task Force to better inform the regional planning process of the needs in rural areas. AMBAG will work with rural cities and public agencies, non-profits and community organizations to ensure a broad cross section of rural stakeholders are represented on the Rural Task Force.

economic development policies that help to create jobs and attract commercial development could greatly benefit the population by providing better access to services as well creating jobs closer to their home.

Traditionally economic development in this region has been the responsibility of each local jurisdiction. However, the mandates of SB 375 require the MPO to consider land use within the 2040 MTP/SCS. As a regional dialogue regarding the variety of land use in the region began, it became apparent that the transportation hurdles in the region cannot be addressed in isolation of the regional economy.

Previous analysis utilizing developer interviews regarding the feasibility of mixed use development in the region found that the highest barriers to development are fees, risks and uncertainties associated with the entitlement process. Fees exceed 10 percent of development costs in many jurisdictions in the region; this can prove cost prohibitive for mixed use development. To further exacerbate the issue, fees are higher in the mid to low cost areas of the region, where achievable price points are lower compared to the high cost areas of the region where achievable price points are higher. Fee reductions would reduce costs and thus enhance financial returns for new development.

Perceived uncertainty associated with the entitlement process also appears to be a barrier to new development. While developers may target a 15 percent return on cost, many would accept a lower return if risk and uncertainty were minimized. A reliable entitlement process could therefore enhance the feasibility of future development.

In addition to jobs/housing and land use policies, transportation strategies to provide alternative means to driving alone can also impact the regional economy. By providing better and more transportation alternatives the region can reduce the amount of money people must spend on transportation thereby injecting that same money back into the local economy.

There are extreme differences in housing and economic characteristics of the jurisdictions within

Figure 4-1b: 2040 Land Use Pattern South Monterey County

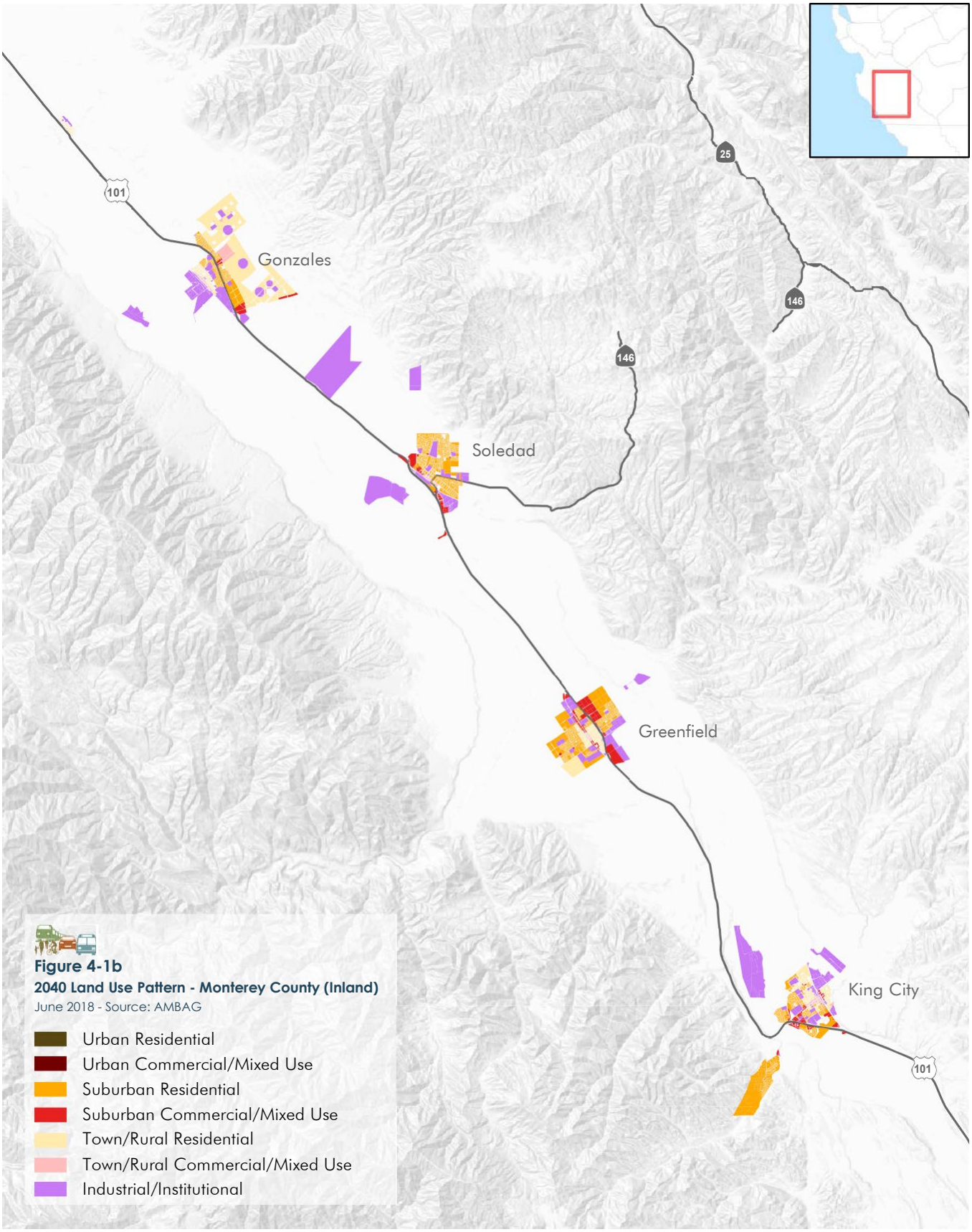


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Figure 4-2: 2040 Land Use Pattern San Benito County

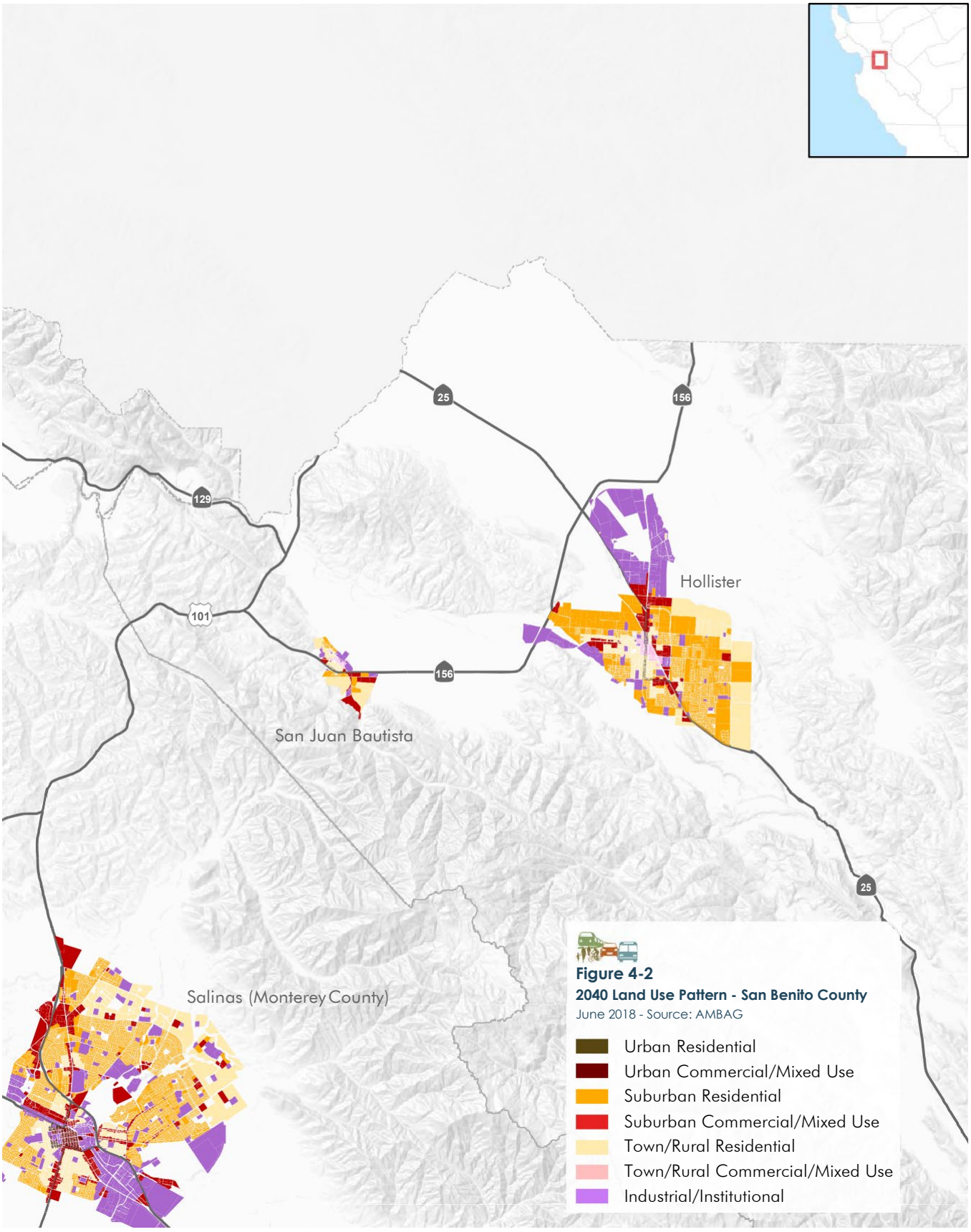

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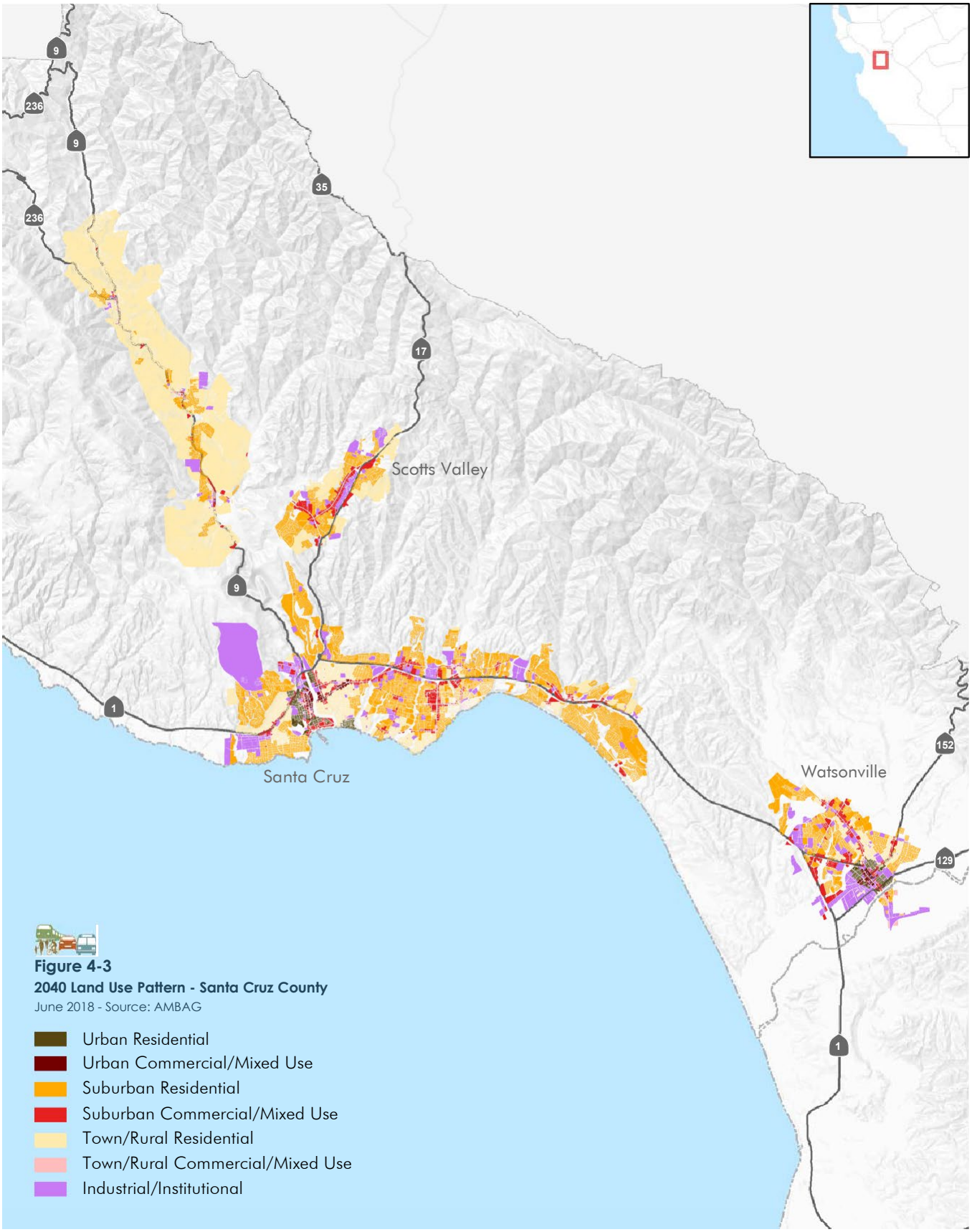
Figure 4-3: 2040 Land Use Pattern Santa Cruz County



the region. To that end, the approach taken with land use and transportation investments should not be the same throughout the region. To achieve a higher quality of life and implement the policies and goals outlined in Chapter 1, it is important to invest more regional effort into understanding this diversity so that regional land use and transportation strategies take into account and respond appropriately to the needs of all jurisdictions.

The implementation strategies included in this 2040 MTP/SCS include a series of strategies focused solely on economic development and better understanding the dynamics of rural and low cost areas so that the needs and interests of these populations are better reflected in the regional planning process.

Over the past couple years, AMBAG developed a set of SCS implementation toolkits to help local jurisdictions and other organizations implement the SCS. The Economic Development Toolkit targets providing funding for infrastructure that will support infill housing and transportation improvements.

Transportation System and Programs

Integrated Multimodal Network

The 2040 MTP/SCS calls for an expanded transportation network that will complement the overall land use pattern. Working together, these complementary land use and transportation strategies can significantly reduce GHG by increasing transit ridership, increasing walking and biking, and reducing the auto trips.

Transit

As shown in Figure 4-4, the 2040 MTP/SCS calls for an expansion of the public transit network and transit service on new and existing routes, resulting in greater transit accessibility and connectivity throughout the region. The 2040 MTP/SCS introduces bus rapid transit and rail passenger service in the region in key corridors. These include extension of the Capital Corridor to Salinas and bus rapid transit services in the Monterey County.

Roadways

The 2040 MTP/SCS includes strategic capacity and technology enhancements to existing highways (as shown in Figure 4-5) as well as local streets. These enhancements, combined with transit, rail and active transportation improvements complement the preferred land use pattern and support the expected growth throughout the region. The overall land use pattern relies on the development of high quality transit stations and efficient transportation corridors, which leads to significant GHG reductions and other benefits due to a higher walk/bike mode share, more transit use, and shorter auto trips.

Active Transportation

The 2040 MTP/SCS also includes a notable increase in the regional active transportation network. Figure 4-6 shows the bicycle network in 2040. Active transportation is an essential part of the region's transportation system, is low cost, does not produce greenhouse gases, can help reduce roadway congestion, and increases health and the quality of life of residents. Active transportation will receive over $640 million or nearly seven percent in available revenues under the 2040 MTP/SCS. This emphasis signifies an important opportunity to advance the goals of SB 375 by increasing non-motorized modes of transportation, thereby expanding access to transit and improving public health and air quality. The Regional Transportation Planning Agencies - Transportation Agency for Monterey County, Santa Cruz County Regional Transportation Commission and San Benito Council of Governments - worked closely with cities and counties to identify a list of projects that will add and enhance walking and biking facilities to make these modes more attractive for short distance trips, including trips to access transit. Additionally, the RTPAs developed the Regional Complete Streets Guidelines to assist local jurisdictions in project design and implementation. The guidelines can be found in Appendix H.

Programs and Strategies

In addition to infrastructure improvements to the transportation network there are less costly programs and strategies that can improve the flow

Figure 4-4: 2040 Regional Transit Network

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Figure 4-5: 2040 Regional Highway Network

of traffic on the transportation network as well as the effectiveness of the transportation system as a whole.

Transportation Systems Management

Transportation System Management (TSM) measures also support the goals of the 2040 MTP/SCS by making improvements to improve operational efficiency. These techniques contribute to improved traffic flow, better air quality, improved system accessibility, and safety. The following TSM measures support the forecasted land use development pattern of the 2040 MTP/SCS:

- Enhanced incident management
- Ramp metering
- Traffic signal synchronization
- Improved data collection

Transportation Demand Management

In addition to the transportation network, the 2040 MTP/SCS also relies on strategic and extensive Travel Demand Management (TDM) measures that support planned land use patterns. These cost- effective strategies improve the effectiveness of the transportation system by supporting a shift from single occupancy vehicle use to other alternatives. TDM measures will receive a total of more than $41 million in available revenues.

The 2040 MTP/SCS employs the following TDM measures to improve mobility and access:

- Promoting telecommuting and flexible work schedules
- Complete streets improvements to increase first mile/last mile connectivity
- Expanding vanpool programs
- Expanding traveler information systems

Public Health

The 2040 MTP/SCS recognizes the impact that transportation and land use decisions have on the health of the region's residents. A substantial body of research shows that certain aspects of the transportation infrastructure, including public transit, sidewalks and safe street crossings near schools, and bicycle paths, are associated with more walking and bicycling, greater physical activity, and lower obesity rates. Local jurisdictions implementing Health in All Policies strategies can greatly help improve public health in local communities. The Plan supports the integration of transportation and land use policies to promote improved public health. The 2040 MTP/SCS seeks to promote active transportation options, and a decrease in bicycle and pedestrian fatalities and injuries through increased funding of active transportation facilities and transportation demand management measures.

The 2040 MTP/SCS also sets forth a vision for a less carbon intensive vehicle fleet. Through partial zero and zero-emission vehicle technologies, the 2040 MTP/SCS promotes a more sustainable future for the region that includes less tail pipe emissions from the vehicles that are on the road.

Energy and Alternative Fuels

The transportation of people and goods in cars, trucks, buses, and on motorcycles is the single largest source of GHG emissions in the region. The levels of fuel consumption and GHG partly result from the region's reliance on petroleum-based gasoline and diesel fuels, as well as the average fuel efficiency of vehicles.

The region's need for gasoline and diesel is projected to decline from about 129 million gallons per day in 2010 to about 112 million gallons per day by 2035. (California Energy Commission, "Transportation Energy Forecasts and Analyses for the 2009 Integrated Energy Policy Report.") The projected reduction in fuel consumption is due in large part to state fuel efficiency standards for vehicles and state mandated increases in the supply and use of alternative transportation fuels. Electric vehicles in particular are an important alternative to conventional vehicles as they have the potential to reduce greenhouse gas emissions resulting from the consumption of fossil fuels, particularly in a state with a cleaner energy mix.

Figure 4-6: 2040 Regional Bicycle Network

SB 375 and Electric Vehicles

After AB 32 was signed into law the California Air Resources Board (CARB) developed a Scoping Plan which provides a regulatory approach to reduce emissions from all sources and sectors within the state including energy, transportation, water, construction, manufacturing, agriculture, etc. SB 375 enacts the first programmatic effort to meet California's climate change objectives under AB 32 through regional planning initiatives. However, SB 375 is strictly concerned with the reduction of greenhouse gas emissions from the transportation sector, specifically passenger vehicles, whereas AB 32 considers all sectors.

In discussions of how the region should meet its GHG targets, people often wonder why the region cannot reach the targets by planning for more electric vehicles. AMBAG is involved in regional planning efforts to support electric vehicle infrastructure and has included it as part of the 2040 MTP/SCS. However, SB 375 is focused very specifically on the reduction of CO2 emissions from cars and light trucks through the coordination of land use patterns and transportation improvements that result in reduced emissions. AB 32 and the Pavely fuel standards already propose separate regulatory changes for vehicle and light truck fuel emission and efficiency standards.

Increasing electric vehicle use will help achieve statewide policies aimed at reducing greenhouse gas emissions. California has a number of policies to encourage widespread adoption of electric vehicles.

AB 32 requires the state to reduce emissions to 1990 levels by 2020, and Executive Order S-3-05 calls for a 80 percent reduction below 1990 levels by 2050. Key elements of the state's AB 32 Scoping Plan for achieving these goals include the Zero Emissions Vehicle Program and Low Carbon Fuel Standards. It is expected that as many as one-third of the fleet in California by 2030 will need to be made up of battery electric vehicles, plug-in hybrids, and fuel cell vehicles to help meet emissions reduction goals.

California Executive Order B-16-2012 seeks to have over 1.5 million zero emission vehicles on the road by 2025. The Electrification Coalition's Electrification Roadmap suggests that to reduce the transportation sector's reliance on oil, 75 percent of light duty vehicle miles traveled should be electrified by 2040. For the Monterey Bay Area, this would equate to more than 18 million daily miles driven by the region's residents.

SB 32 (Pavley, 2016) extends the AB 32 required reductions of GHG emissions by requiring a GHG reduction of at least 40 percent of 1990 levels by 2030.

California has also adopted a low carbon fuel standard that will require a reduction in the carbon intensity of California's transportation fuels by at least 10 percent by 2020. This will be achieved by offering a variety of fuel options for personal vehicles that include electricity, natural gas, propane, and biofuels.

AMBAG has taken steps to assess what regional infrastructure is needed to accommodate more alternative fuel choices across the region. In 2012, AMBAG adopted the Electric Vehicle Infrastructure for the Monterey Bay Area Plan. This plan presents a siting prioritization method to help identify potential charging locations and presents a framework for establishing a robust electric vehicle

charging network in the region. The siting analysis in the plan provides guidance to local and regional stakeholders based on potential demand for electric vehicle charging stations. The three major goals of the siting analysis are:

- Provide charging opportunities for plug-in electric vehicle owners that lack access to home charging.
- Extend the range of plug-in electric vehicle for intra- and interregional travel along various corridors.
- Maximize all electric miles by providing opportunities for charging while minimizing the risk of stranded plug-in electric vehicles.

This study was the precursor to the Monterey Bay Plug-In Electric Vehicle Readiness Plan (2012), a comprehensive regional plan to promote plug-in electric vehicle adoption throughout the region.

In 2013, AMBAG and other regional organizations completed the Monterey Bay Plug-In Electric Vehicle Readiness Plan. The goal of this plan is to encourage the mass adoption of plug-in electric vehicles in the region and reduce greenhouse gas emissions by providing a toolbox of recommended approaches for public, private, and non-profit organizations. These tools range from innovative approaches to plug-in electric vehicle marketing and streamlining electric vehicle supply equipment permitting, to guidelines on establishing an electric vehicle fleet. The Readiness Plan identifies specific regional targets for significantly expanding plug-in electric vehicle adoption in the Monterey Bay Area by 2015, 2020 and 2025.

AMBAG and our transportation partners continue to work with local jurisdictions and other organizations to implement charging stations and to increase adoption of electric vehicles around the region.

AMBAG Energy Watch Program

Within the Monterey Bay Area, the 21 local governments are committed to energy efficiency and climate planning and are working in collaboration with other local governments and their communities. It was through this shared vision of maximizing energy as a resource that the AMBAG Energy Watch program was developed in 2006. This program is funded by the California Public Utilities Commission and is a partnership of the AMBAG with Pacific Gas and Electric Company (PG&E).

The stated vision of the California Public Utilities Commission Long Term Energy Efficiency Strategic Plan for local governments is as follows: “By 2020, California’s local governments will be leaders in using energy efficiency to reduce energy use and global warming emissions both in their own facilities and throughout their communities.”

The diverse range of programs and services provided by AMBAG Energy Watch has been developed to serve this vision. As noted in the California Public Utilities Commission’s Long Term Energy Efficiency Strategic Plan, California is the second largest GHG emitting state in the United States. And within California, electricity production is the second largest source of GHG emissions. Maximizing energy efficiency is a critical strategy in the reduction of GHG emissions.

The AMBAG Energy Watch programs are designed in two major categories. The first category is implementation programs. These programs achieve direct and measurable energy efficient targets through the installation of energy efficiency equipment. These programs have been developed to serve the diverse stakeholders in the region including residents, municipalities, special districts, non-profit organizations, agriculture, school districts and hospitality businesses. The second category of programs is in the area of climate planning support for jurisdictions. The AMBAG Energy Watch program worked collaboratively with staff from each of the 21 AMBAG jurisdictions to complete each jurisdiction’s 2005 municipal and community-wide greenhouse gas inventory, as well as their 2009 and 2010 community-wide greenhouse gas inventory updates. This data was used in the creation of a draft community-wide Energy Action Strategy (EAS) developed for each of the jurisdictions, which in some cases were incorporated into their Climate Action Plans.

The region's open space is at the crux of its tourist economy. Preserving it is a high priority for residents and businesses.

Agriculture is the economic engine of the region and is an important asset to preserve.

The AMBAG Energy Watch Program has provided nearly 90 million annual kWh of energy savings since its inception in 2006 and is projected to provide an annual savings of eight million kWh in energy savings in 2017.

Climate Change and Adaptation

The transportation sector has been identified as a key contributor of GHGs, but also is threatened by the impacts of continued climate change. The Monterey Bay region is expected to change, even under the most optimistic scenarios, due to climate change. Potential impacts include more frequent and intense heat waves and wildfires, rising sea levels and higher storm surges, the loss of native plant and animal species, and a higher demand for electricity, particularly during peak periods. Developing and implementing measures to help the region adapt to these potential changes will be critical in protecting the regional transportation network.

More frequent hot days and prolonged periods of extreme heat will increase the risk of buckling highways and railroad tracks. This could lead to increased and more frequent maintenance costs, premature deterioration, or even the failure of some transportation infrastructure. More frequent and severe wildfires that are followed by rainfall would increase the risk of mudslides and erosion. This could disrupt major infrastructure such as roadways and rail lines. Rising sea levels and stronger storm surges would likely impact communities, roadways, railways and other vital lines of coastal transportation. Existing fortifications may need to be enhanced as sea levels rise and storm surges intensify, and areas not previously considered at risk may need to be protected. Preparing transportation infrastructure for climate change impacts is a new priority as future projects are designed and the current system is maintained.

The tools and methodologies for evaluating and adapting to such impacts are still in the early stages of development and will require ongoing monitoring.

Resource Areas, Farmland and Mitigation

Central coast residents share a strong attachment to the region's open spaces and are economically dependent on the accessibility of this open space. Equally important to the region's economic wellbeing are the thousands of acres of farmland that produce billions of dollars' worth of berries and other produce. In addition to identifying areas where development is projected to occur, the SCS identified protected parklands and open space, natural resource areas, and farmland using the best practically available scientific information.

Of the 3.3 million acres within the Monterey Bay region, about 20 percent have been previously conserved as parks or open space and are included in the SCS land use pattern. These lands range from public use parks to rural open space and U.S. Forest Service Lands. As part of this regional greenprint analysis, AMBAG assembled and applied the following additional data layers.

- Protected, sensitive, or special status species as defined by local, state or federal agencies
- Lands subject to conservation, agricultural easements and the Williamson Act and areas designated by the State Mining and Geology Board as areas of statewide significance
- Areas designated for open space or agricultural uses in local general plans
- Farmland classified as prime or unique or of statewide importance designation
- Areas containing biological resources
- Administrative boundary restrictions
- Habitat connectivity

Figures 4-8 and 4-9 show the location of these parks, open space and farmlands.

AMBAG is involved in resiliency planning efforts such as the Pajaro River Watershed Flood Protection and the Elkhorn Slough Natural Infrastructure Pilot project on the Pacific Coast Highway. Additionally,

regional efforts have been ongoing in wildlife corridor planning.

The region is incorporating environmental mitigation as much as possible into corridor planning efforts and funding has been included in the recently approved local sales tax measures.

Protecting the Region's Natural Resources

The SCS land use pattern incorporates adopted habitat plans as well as the conservation of other sensitive resource lands such as steep slopes, wetlands, and floodplains as reflected in plans by local jurisdictions. These local and regional plans ensure the conservation of plant and animal species, and natural habitats through low density zoning, conservation easements, and land purchases.

One of the largest habitat plans to date is the Fort Ord Habitat Management Plan which will eventually become the Habitat Conservation Plan. In 1997, after the closure of the former Fort Ord, the Fort Ord Reuse Authority made a commitment to conserve nearly two-thirds of the former army base as open space. The Habitat Management Plan is primarily funded by federal, state, and local government annual appropriations, whereas the Habitat Conservation Plan would also provide additional habitat management resources through collection of Fort Ord Reuse Authority Development Fees or Community Facilities District Special Tax payments from reuse of the former Fort Ord. The Habitat Management Plan does not provide incidental take coverage of state and federal listed species to state and local entities, whereas the Habitat Conservation Plan, if approved by federal and state Wildlife Agencies, would provide incidental take coverage for a period of 50 years to allow restoration of sensitive habitats and a regional framework for habitat protection and base reuse. Figure 4-7 shows the location of the region's natural resources.

Construction Aggregate

In addition to natural habitat the region is home to another important resource, aggregates. Aggregates are used in variety of construction projects, such as roads, bridges, streets, bricks and concrete. Every town and city, along with every road connecting them are built and are maintained with aggregates. More than 90 percent of asphalt pavements and 80 percent of concrete are aggregates. Natural aggregates make up the largest component of nonfuel mineral materials consumed in the United States. In highways, natural aggregates are mixed into asphalt and concrete and are used as road base. In addition to construction projects, many items such as, paint, paper, plastics, and glass also require sand, gravel, or crushed stone. Aggregates are also used as soil erosion control programs and water purification. In addition to new resources, aggregate product can be recycled and repurposed into new construction projects.

Historic mineral production within the Monterey Bay Area included sand and gravel mining for construction materials, mining for industrial materials (diatomite, clay, quartz, and dimension stone) and metallic minerals (chromite, placer gold, manganese, mercury, platinum, and silver). The public depends on several categories of minerals found in Monterey, San Benito and Santa Cruz Counties for a variety of everyday uses. For example, minerals such as sand and gravel are used to make concrete for buildings and asphalt to pave roads.

Natural aggregates, which consist of crushed stone and sand and gravel, are among the most abundant natural resources and a major basic raw material used by construction, agriculture, and industries employing complex chemical and metallurgical processes. Despite the low value of the basic products, natural aggregates are a major contributor to and an indicator of the economic well-being of the nation. Of the non-metallic minerals, construction-grade aggregate is the most abundant and commonly used mineral resource in the Monterey Bay Area.

Figure 4-7: 2040 Natural Resource Areas

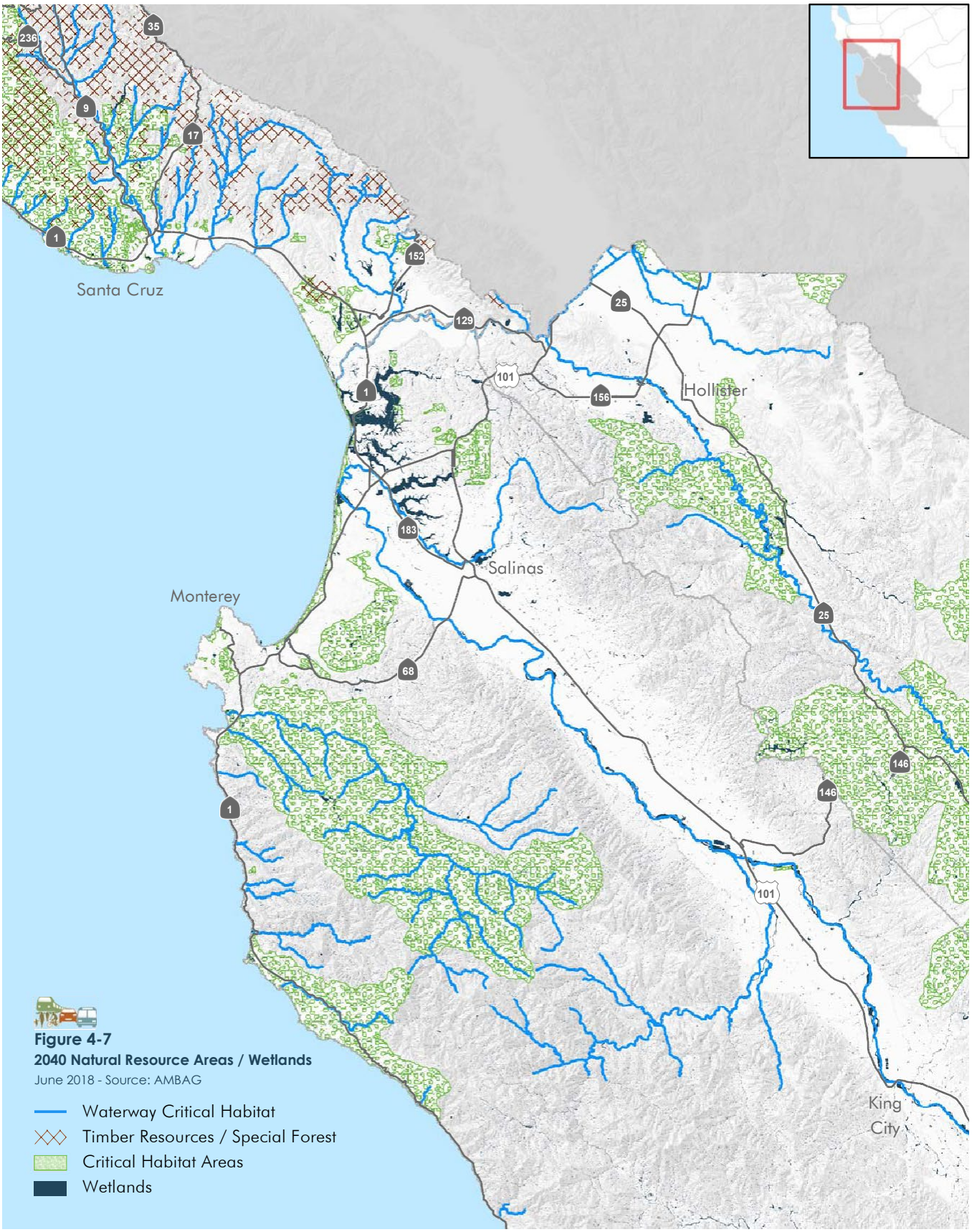

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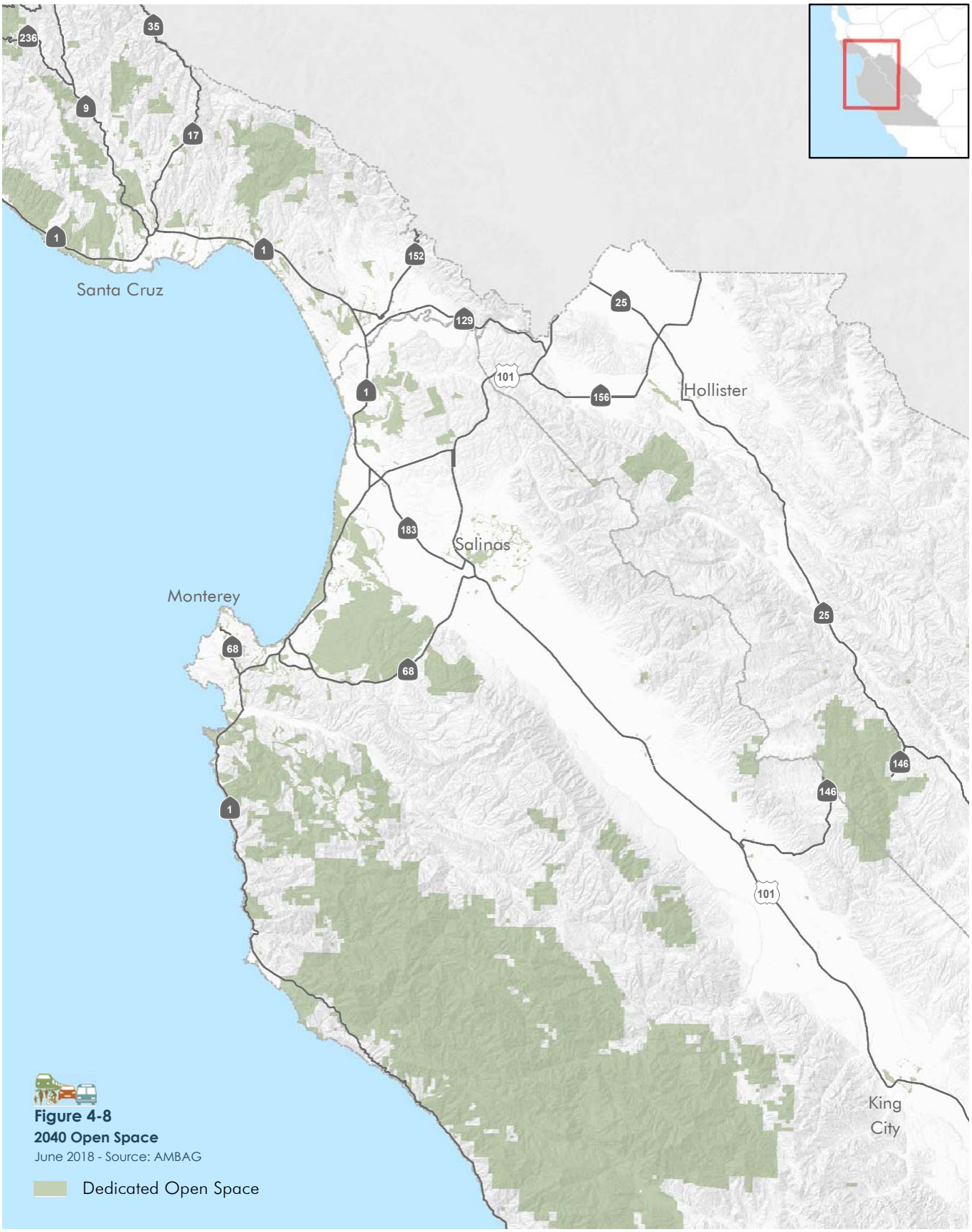
Figure 4-8: 2040 Open Space



Protecting the Region's Farmland

The Farmland Mapping and Monitoring Program, administered by the Division of Land Resource Protection at the California Department of Conservation, produces maps and statistical data to analyze impacts to California's agricultural resources. To characterize existing and potential farmland, agricultural lands are rated according to soil quality and irrigation status. Farmland Mapping and Monitoring Program maps are updated every two years using aerial photographs, a geographic information system, public review, and field reconnaissance. Lands important for agriculture are placed in one of four categories of productivity established by the United States Department of Agriculture. These lands are categorized according to their specific qualities of soil, slope, degree of wetness, flooding hazards and other factors. Within the Monterey Bay region, the Farmland Mapping and Monitoring Program has identified 313,188 acres of land as "Important Agricultural Lands" combined with Williamson Act Lands. The Monterey Bay Area has a total of 1,668,261 acres of preserved agricultural land which represents 51 percent of the region's total land area.

These lands are reflected in the SCS land use pattern and they are not threatened due to zoning ordinances or the purchase of land for conservation easements. In the SCS land use pattern, 97 percent of the region's existing agricultural land is expected to remain available for agriculture. Ninety-six percent of the region's agricultural land is planned for agricultural use only, and less than one percent is planned as low density, rural residential land that allows and often encourages agricultural use.

Figure 4-9 includes agricultural preserves such as areas under Williamson Act contracts. The California Land Conservation Act, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value.

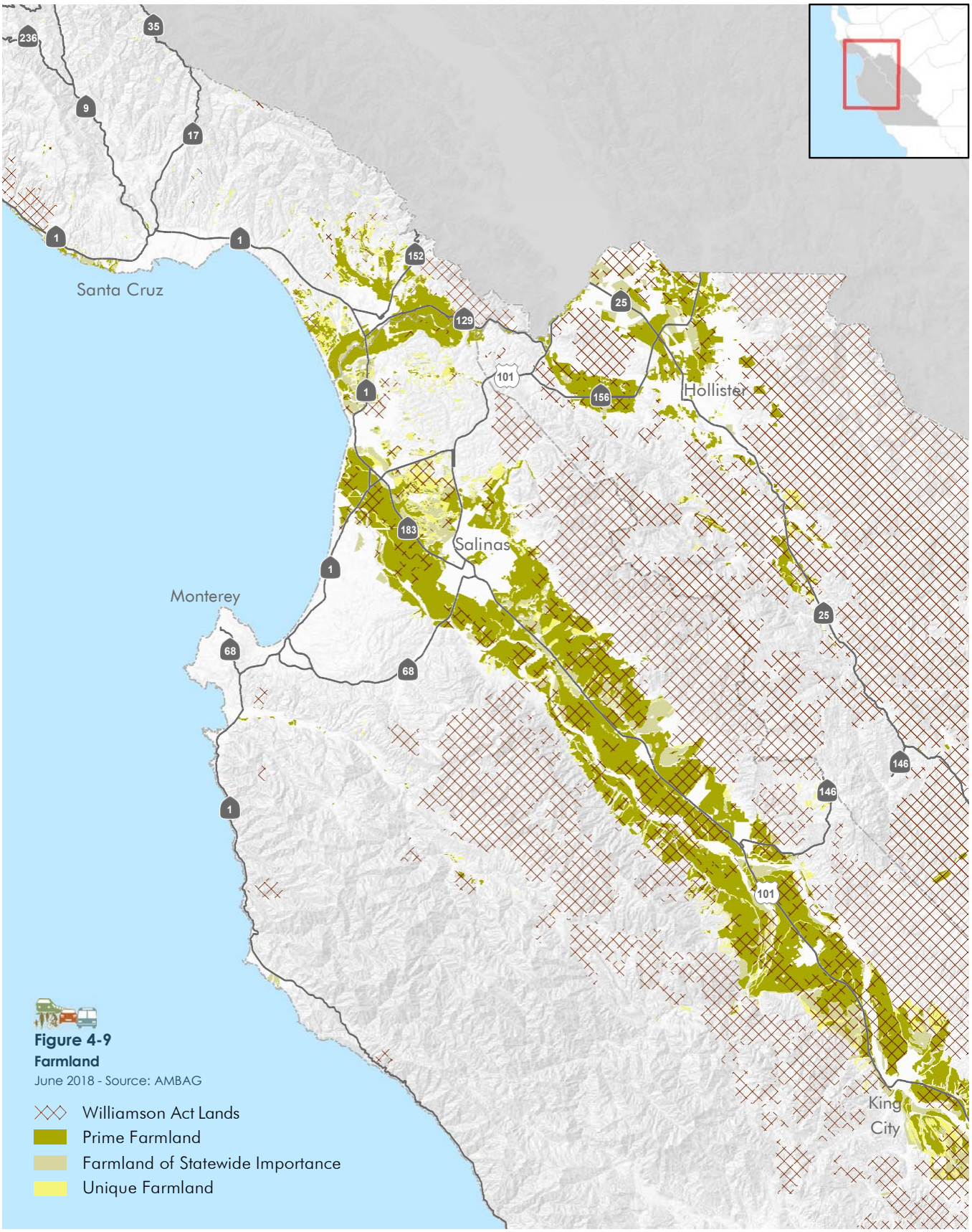
Environmental Mitigation

Transportation investments have the potential to impact the environment both positively and negatively. The 2040 MTP/SCS has beenextensively evaluated for its potential impacts as part of the required California Environmental Quality Act (CEQA) environmental review. The evaluation is available as the Environmental Impact Report.

In order to minimize the negative environmental impacts of transportation projects, mitigation of impacts may be necessary. Regional mitigation efforts rather than the traditional project-specific mitigation provide the greatest benefit for habitat and wildlife by leveraging resources available across a larger geographic area. Regional mitigation can result in conserving larger, scarce, multi-resource ecosystems and increase habitat connectivity which improves both the quantity and quality of habitat. AMBAG and its partner agencies are making efforts to collect data on mitigation opportunities and engage in early consultation with resource agencies in order to improve opportunities for and results of mitigation measures.

The Regional Ecological Framework Project was funded by the Strategic Highways Research Program 2, and based on Transportation Research Board Integrated Ecological Resource FrameworkResearch (C06). The Regional Ecological Framework Project produced a series of maps identifying sensitive resource areas near planned regional transportation projects in the Monterey Bay Area Region, promoting early mitigation and better project planning among transportation agencies. By providing awareness of potential environmental conflicts early in the project development process, these maps allow transportation agencies throughout the region to engage in earlier consultation with resource agencies such as the Environmental Protection Agency, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and other resource agencies. This early consultation allows project proponents to adjust their projects to avoid impacting sensitive resources, reducing environmental impacts, allowing projects to move forward with fewer delays, speeding project implementation and mediating increased project

Figure 4-9: Farmland



costs associated with extended environmental mitigation.

The Pajaro Compass is a framework to advance voluntary conservation in the Pajaro River Watershed. The Pajaro Compass is an assessment that identifies important features on the landscape; including agriculture, biodiversity and habitat connectivity, water resources, recreation, etc.

As a regional planning document, the 2040 MTP/SCS allows for early consideration of broad mitigation strategies. In fact, the 2040 MTP/SCS must include a "discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the "plan."

The Environmental Impact Report (EIR) associated for the 2040 MTP/SCS serves as the first tier of environmental review for identified transportation improvement projects and programmatically evaluates the environmental impacts of the Plan. The EIR identifies mitigation measures that programmatically apply to individual transportation projects based on a review of general project parameters and locations for all potentially significant environmental impacts of the 2040 MTP/SCS. Transportation project sponsors are responsible for more in-depth, project-level environmental analysis and mitigation to more precisely quantify impacts and specify mitigation measures based on project-level design details and site-specific review. However, where applicable, the 2040 MTP/SCS can provide a framework for mitigation at a regional level. The EIR contains a MMRP that is intended to ensure that the mitigation measures identified in the EIR are effectively implemented by the applicable jurisdictions and responsible agencies. The applicable jurisdictions and responsible agencies with projects contained in the 2040 MTP/SCS are encouraged to adopt the Mitigation Monitoring and Reporting Program (MMRP) or an adaptation of it specific to its independent discretion and/or special expertise.

Accommodating the Region's Housing Needs

The SCS land use pattern accommodates the nearly 40,000 new households that will be needed over the next 25 years to serve a projected growth of more than 120,000 additional people.

The SCS land use pattern addresses the needs of all economic segments of the population. Based on the capacity for planned housing development the region will be able to accommodate the projected housing needs for residents of all income levels.

Regional Housing Needs Allocation

California Housing Element law requires that every eight years, AMBAG shall develop a methodology for distributing projected housing need in four income categories – very low, low, moderate and above moderate – to local jurisdictions in Monterey and Santa Cruz Counties and sets forth a process, objectives and factors to use for that methodology. The Council of San Benito County Governments (SBtCOG) performs this function for San Benito County. This process, the Regional Housing Needs Allocation (RHNA), is coordinated by the California Department of Housing and Community Development (HCD). The 2040 MTP/SCS did not include an updated RHNA. Per state law, RHNA will be updated as part of the MTP/SCS scheduled for adoption in 2022.

In the past, the RHNA was conducted separately from the MTP process. SB 375 now links the RHNA and MTP/SCS processes to better integrate housing, land use, and transportation planning. Integrating processes helps ensure that the state's housing goals are met. The RHNA occurs before each housing element cycle, which SB 375 changed from a five-year to an eight-year cycle.

The AMBAG region received its RHNA Determination (for Monterey and Santa Cruz Counties) from HCD for the housing element cycle (2014-2023), as shown in Table 4-2. San Benito County local jurisdictions are also shown in Table

Figure 4-10: 2040 High Quality Transit

Table 4-1: Housing Capacity from Adopted Housing Elements

Jurisdiction	Estimated Total
AMBAG Region	49,352
Monterey County Total	12,342
Carmel-By-The-Sea (2015-2023)	74
Del Rey Oaks (2015-2023)	N/A
Gonzales (2015-2023)	739
Greenfield (2015-2023)	726
King City (2015-2023)	1,598
Marina (2015-2023)	5,056
Monterey (2015-2023)	117
Pacific Grove (2015-2023)	210
Salinas (2015-2023)	2,022
Sand City (2015-2023)	452
Seaside (2015-2023)	N/A
Soledad (2015-2023)	N/A
County of Monterey (2015-2023)	1,398
Santa Cruz County Total	32,943
Capitola (2015-2023)	150
Santa Cruz (2015-2023)	667
Scotts Valley (2015-2023)	410
Watsonville (2015-2023)	14,445
County of Santa Cruz (2015-2023)	17,271
San Benito County Total	4,067
Hollister (2015-2023)	1,619
San Juan Bautista (2015-2023)	560
County of San Benito (2014-2023)	1,888

4-2. The AMBAG RHNA Plan allocates the RHNA Determination by jurisdiction. (For the San Benito RHNA, refer to SBtCOG's RHNA Plan.) Based on the RHNA Plan each jurisdiction will need to identify adequate sites to address its RHNA allocations in the four income categories when updating its housing element. Updated housing elements were completed by all but three local jurisdictions.

Table 4-1 shows that Monterey and Santa Cruz Counties have enough housing capacity to accommodate the RHNA allocations. San Benito County also has the housing capacity to accommodate the RHNA as described in the San Benito RHNA Plan. The allocations do not exceed forecasted growth and can be accommodated through infill and redevelopment. The AMBAG and SBtCOG RHNA Plans are consistent with the 2040 MTP/SCS.

Meeting GHG Targets

On September 23, 2010, CARB set targets for lowering GHG in the Monterey Bay region. They call for a zero percent increase, in per capita GHG emissions from passenger vehicles by 2020 (compared with 2005); and a five percent per capita reduction by 2035 through land use and transportation planning. New GHG targets are expected for the next MTP/SCS.

The 2040 MTP/SCS demonstrates that the Monterey Bay region will meet these targets by focusing housing and employment growth in urbanized areas; protecting sensitive habitat and open space; and investing in a transportation system that provides residents, workers and visitors with transportation options that are more effective and diverse.

Additionally, the 2040 MTP/SCS includes economic development strategies to encourage job growth in communities that are currently job poor as well as planning for new housing in communities that are currently job rich help to address the jobs/housing imbalance in the region and reduce vehicle miles traveled. The process to develop the Plan was based upon modeling these forecasted land use patterns and future transportation networks, along with the

Table 4-2: RHNA Housing Allocation

Geography	Total Allocation	Very Low	Low	Moderate	Above Moderate
AMBAG Region	12,624	3,034	1,777	2,335	5,298
Monterey County*	7,386	1,780	982	1,349	3,095
Carmel-By-The-Sea	31	7	5	6	13
Del Rey Oaks	27	7	4	5	11
Gonzales	293	71	46	53	123
Greenfield	363	87	57	66	153
King City	180	43	28	33	76
Marina	1,308	315	26	239	548
Monterey	650	157	102	119	272
Pacific Grove	115	28	18	21	48
Salinas	2,229	537	351	407	934
Sand City	55	13	9	10	23
Seaside	393	95	62	72	164
Soledad	191	46	30	35	80
Balance of County	1,551	374	244	283	650
Santa Cruz County*	3,044	734	480	556	1,274
Capitola	143	34	23	26	60
Santa Cruz	747	180	118	136	313
Scotts Valley	140	34	22	26	58
Watsonville	700	169	110	128	293
Balance of County	1,314	317	207	240	550
San Benito County**	2,194	520	315	430	929
Hollister	1,316	312	189	258	557
San Juan Bautista	41	10	6	8	17
Balance of County	837	198	120	164	355

Source:
*Monterey County and Santa Cruz County (AMBAG, Regional Housing Needs Allocation Plan: 2014-2023. Adopted June, 2014)
**San Benito County (Council of San Benito County Governments, Final Regional Housing Needs Allocation Plan. Adopted July, 2014)

use of sustainable development principles that have been standard planning practice in the region for some time, and an extensive public outreach process.

California Environmental Quality Act (CEQA) Streamlining

Provisions in SB 375 include opportunities for streamlining the CEQA process, when certain conditions are met, as an incentive for implementing projects that are consistent with this SCS. Generally, there are two types of projects for which CEQA requirements can be streamlined, once the MPO adopts an MTP/SCS that meet the greenhouse gas targets established by CARB:

- Transit priority projects streamlining
- Residential/mixed use projects streamlining

SB 375 includes specific requirements for the CEQA streamlining. The discussion below provides a general outline of the requirements.

Transit Priority Projects

A Transit Priority Project (TPP) is a project within an Opportunity Area and is eligible for CEQA streamlining if it is:

- Consistent with the SCS;
- Contains at least 50 percent residential use;
- Proposed to be developed at a minimum 20 dwelling units per acre; and
- Located within one half mile of a major transit stop or high quality transit corridor that is included in the MTP.

A "Sustainable Communities Opportunity Area" is an area within one half mile of an existing or planned "high quality transit corridor" or "major stop" that has the potential for transit oriented development including mixed use. High quality transit is service with headways of 15 minutes or less during peak period or rail service. Figure 4-10 depicts the High Quality Transit Areas.

If a project meets these criteria, it may be analyzed under a new environmental document created by SB 375, called the Sustainable Communities Environmental Assessment, or through an EIR for which the content requirements have been reduced. Alternatively, a TPP can be considered a Sustainable Communities Project and be eligible for a new full CEQA exemption if it further meets the additional requirements beyond the base criteria.

Residential/Mixed Use Projects Consistent with the SCS

Residential and mixed use projects that are consistent with the SCS qualify for streamlined CEQA review if at least 75 percent of the total building square footage consists of residential use or if the project is a Transit Priority Project (TPP). If a project meets these requirements and is consistent with the use designation, density, building intensity and applicable policy of the SCS, any environmental review conducted will not be required to discuss:

- Growth inducing impacts;
- Any project-specific or cumulative impacts from cars and light duty truck trips generated by the project upon its completion on climate change or the regional transportation network; or
- A reduced density alternative.

It is not known how many projects in the Monterey Bay Area would meet the criteria to qualify for the CEQA exemption or streamlining. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining consistency of any future project with the SCS.

Implementation Strategies

The 2040 MTP/SCS is first and foremost a transportation plan. However, the transportation network in the 2040 MTP/SCS and the growth

patterns envisioned must complement each other. Integration of transportation and land use is essential for improved mobility and access to transportation options.

To encourage implementation of the SCS, SB 375 provides CEQA incentives for development projects that are consistent with the regional SCS and help meet greenhouse gas emission reduction targets. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining consistency of any future project with the SCS. Cities and counties maintain their existing authority over local planning and land use decisions.

Additionally, to achieve the goals of the 2040 MTP/SCS, public agencies at all levels of government may implement a wide range of strategies. Table 4-3 list specific strategies that AMBAG, RTPAs, local jurisdictions, and other stakeholders may consider in order to successfully implement the SCS.

Table 4-3: Implementation Strategies

Strategy	Responsible Party
Economic Development	
Encourage infill housing by working with local jurisdictions to update municipal policies, such as reduced fees tax credits or exemptions, graduated density bonuses, and reduced parking requirements for redevelopment, affordable housing, or mixed use in Opportunity Areas.	AMBAG; local jurisdictions
A taskforce should be created to understand and address the economic development and transportation needs of rural areas. The following topic areas are suggested areas to be further explored by the task force: 1) Land Use and Conservation: policies and plans that shape rural areas; 2) The Infrastructure of Agriculture: transportation challenges to the production process; 3) Economic Opportunities: new ways to grow revenue and support better access to jobs; 4) Forest Management: building up economic and environmental value; and 5) Regulations; navigating federal and state environmental guidelines. Once the task force is convened the scope, responsibilities, and role of the group will be further defined.	AMBAG; economic development agencies and non-profits; local jurisdictions
Conduct research on economic sectors in the region to identify and understand high value industry sectors and "clusters" and work with other public agencies and private entities to provide policy and regulatory support for those sectors.	AMBAG; economic development agencies and non-profits; local jurisdictions
Compile and coordinate research and development that supports the green economy which can then be used to attract small, private business that would not otherwise be able to afford extensive research and development costs.	AMBAG; economic development agencies and non-profits
Provide a forum to coordinate the various economic development efforts by both the private and public sector throughout the region in order to maximize desirable economic development on a regional level.	AMBAG; economic development agencies and non-profits
Research ways to encourage vocational training facilities to educate the existing workforce for middle income jobs as well as leverage existing educational institutions to attract more middle income jobs.	AMBAG; local jurisdictions; universities; community colleges
Work with the Planning Directors Forum to further define and evaluate Opportunity Areas as areas for transit oriented development, as well as educate jurisdictions on the definition of transit priority project (TPP) areas per SB 375 to take advantage of CEQA streamlining benefits.	AMBAG; local jurisdictions
Stay abreast of new local initiatives, such as economic development plans, in order to more fully integrate transportation planning efforts with economic development issues and opportunities in urban and rural areas.	AMBAG
Support the reduction of impact fees and costs to developers for projects that will result in a net increase of jobs within enterprise zones or areas with a low job-housing ratio. Explore the economic impact of implementing an impact fee program that would incorporate multimodal projects and reductions for infill in parts of the region that do not currently have one	AMBAG; RTPAs

Table 4-3: Implementation Strategies (continued)

Strategy	Responsible Party
Land Use & Environment	
Prioritize corridor investment projects along high quality transit corridors that serve multiple modes of travel in the development of the Metropolitan Transportation Plan and Regional Transportation Plans. Supportive investments include enhancements for high quality transit, technology development, bicycle and pedestrian improvements and safer intersections.	AMBAG; local jurisdictions
Support mitigation efforts that reduce the impact transportation and land use projects have on open space and farmland by providing readily available data on natural resources and prime farmland to public agencies, exploring a mitigation bank program and participating in resource management planning activities.	AMBAG; RTPAs
Continue to work with local jurisdictions on long range land use planning by refining the land use typologies for the region and better defining opportunity areas.	AMBAG; local jurisdictions
Prioritize projects for funding that are consistent with the Sustainable Communities Strategy goals and/or that have complete streets elements per the adopted Sustainable Communities Strategy and Regional Complete Streets Guidelines in order to encourage use of active transportation options for short trips and improve quality of life	RTPAs; local jurisdictions
Investment in safe bicycle and pedestrian routes that improve connectivity and access to common destinations, such as connections between residential areas and schools, employment centers, neighborhood shopping, and transit stops and stations, supporting efforts throughout the region to improve connectivity and realize public health benefits from these investments.	RTPAs; local jurisdictions
Legislative	
Work with State and Federal agencies to provide new and reformed transportation funding methods and sources to implement the Sustainable Communities Strategy that are stable, predictable, flexible, adjustable and adequate in the whole to operate and expand the system.	AMBAG; RTPAs
Support the following legislative agenda: 1) Reinstate tax increment financing and redevelopment for areas identified as Sustainable Communities Investment Areas; 2) Collaborate with other mid to small size regions to ensure that reporting and performance measure requirements do not exceed reasonably available staffing and financial resources; and 3) work with legislatures to reduce the voter threshold from two-thirds to 55 percent for passing transportation related tax measures.	AMBAG; RTPAs

Table 4-3: Implementation Strategies (continued)

Strategy	Responsible Party
Technical Assistance/Education	
Continue to improve the Bicycle Model tool and AMBAG Regional Data Viewer as well as make available other data products that will help to assist local jurisdictions in the development of bicycle networks that have better connectivity and meet the origin and destination needs of thecommunity	AMBAG
Continue to provide forums for regional dialogue regarding local plans and projects so that localities can leverage each other's work for more coordinated regional planningefforts.	AMBAG; RTPAs
Develop educational and demonstration materials for General Plan updates that help jurisdictions to easily and readily incorporate concepts and goals from the Sustainable Communities Strategy into their General Plan. Update the SCS toolkits as needed. Coordinate these materials with Climate Action Plan concepts and goals to ensure consistent and mutually supportive strategies are developed to reduce greenhouse gases.	AMBAG; local jurisdictions
Keep appraised of federal and state program funding cycles and specific funding opportunities, advise local agencies about them in a timely way, and help to zero in on projects that fit program requirements and are far enough along in delivery to maximize chances for success at bringing federal or state discretionary funds into the region	AMBAG; RTPAs
Seek grant funding to develop a regional economic modeling tool that helps to identify and address the reasons for the jobs/housing imbalance in the region as well as simulate the effects of various kinds of economic development.	AMBAG
Educate and provide resource material to local jurisdiction elected officials and the public about the economic benefits of sustainable development to both the public and privatesector.	AMBAG; local jurisdictions; RTPAs
Provide grant technical support as well as letters of support to jurisdictions and public agencies looking to implement projects that are consistent with the Sustainable Communities Strategy.	AMBAG
Work with the Office of Planning and Research (OPR) to educate local jurisdictions about new CEQA options and analysis requirements including streamlining in SB 375, SB 743, and potential future legislation that includes CEQA incentives.	OPR; AMBAG; local jurisdictions
Increase public perception of the value, benefits, and use of transit, vanpool, and rideshare services, via activities such as the 511 website, image and product-specific advertising, promotion of new and restructured services, theguaranteed ride home program, outreach for special events, and education for those unfamiliar with alternative modes, including transit services and bicycle facilities, with both access and safety education.	RTPAs; transit agencies

Table 4-3: Implementation Strategies (continued)

Strategy	Responsible Party
Transportation	
Facilitate local jurisdiction adoption and implementation of a complete streets policy by recommending adoption of the region's guidelines. Encourage local jurisdictions to implement design principles consistent with the regional complete streets guidelines where feasible completing local streets and road projects. Initiate a technical assistance program to help local agencies develop street designs or implement complete streets that are sensitive to their surroundings and context.	AMBAG; RTPAs; local jurisdictions
Encourage and support Caltrans in seeking traffic management and safety improvements along with highway rehabilitation projects from the State Highway Operations and Protection Program. Ensure that both urban and rural needs are targeted.	AMBAG; RTPAs; Caltrans
Take steps to improve safety and security at crosswalks, transit stops and along main access routes to transit, including rural areas, with higher priority for low income, minority and high crime areas.	RTPAs; local jurisdictions
Collaborate with jurisdictions and employers to provide local community shuttles or circulators that serve transit oriented development, high quality transit stops and neighborhood commercial centers providing an incentive for residents and employees to make trips on transit.	AMBAG; local jurisdictions; large regional employers; transit agencies
Continue to identify and promote projects that transition freight from trucks to rail, such as an intermodal station in the Salinas Valley.	AMBAG and TAMC in coordination with regional freight stakeholders
Continue to study the impacts of freight and goods movements on major arterials and corridors and support projects that increase freight mobility through and within the region.	AMBAG
Continue to plan for and provide infrastructure for electric vehicles using the region's PEV Readiness Plan, while also planning for and considering evolving transport methods from driverless cars to informal ridesharing networks.	AMBAG; MBARD; Others
Continue to seek funding to support the regional vanpool program and market vanpooling throughout the region.	AMBAG
Continue the region's commitment to transportation demand management programs as a strategy for safety education and promotion of alternative travel modes for all types of trips. Market transportation demand management strategies towards tourists so that once people arrive to the Monterey Bay Area they have resources to get out of their cars.	RTPAs
Support work-based programs that encourage emission reduction strategies and incentivize active transportation commuting or ride-sharing modes.	AMBAG; RTPAs
Work with Caltrans to incorporate multimodal design into highway projects such that transit can be accommodated on the highway and pedestrian and bicyclists connectivity is enhanced for access over the highway.	RTPAs; Caltrans; transit agencies; local jurisdictions
Increase rural and low income minority communities' transportation mobility by supporting greater coordination of rural transportation services, providing solutions to bridge the distance between trip origins or destinations and transit, as well as developing cost-effective programs that attract more riders, including expanded rural vanpools and increased local transit service.	AMBAG; RTPAs; transit agencies

Table 4-3: Implementation Strategies (continued)

Strategy	Responsible Party
Transportation	
Support projects that improve mobility and accessibility for seniors and people with disabilities.	AMBAG; RTPAs; transit agencies
Encourage the use of traffic operational strategies and intelligent transportation systems to improve traffic flow that will provide lower-cost alternatives to road expansion.	AMBAG; RTPAs; local jurisdictions
Work with local cities, as well as regional, state and national organizations to find alternative funding sources for improving access to open space including national parks in the region.	AMBAG; RTPAs; local jurisdictions
Work with the Regional Storm Water Program staff to learn more about new post-construction storm water management requirements and incorporate best practices for storm water management into project design and future regional planning efforts.	AMBAG; Regional Storm Water Management Program; RTPAs; local jurisdictions
Work with the Monterey Airport staff and partner agencies to secure funding to update the Airports Economic Impact Study.	AMBAG; RTPAs; local jurisdictions
Provide training opportunities for local jurisdictions on transportation system management strategies and collaborate with local jurisdictions to update the intelligent transportation systems architecture.	FHWA; AMBAG

5 Performance Measures

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Introduction

The investments identified in the 2040 MTP/SCS are expected to result in significant benefits to the region, not only with respect to transportation and mobility, but also economic activity, air quality, safety, and social equity. This chapter describes the benefits and outcomes projected to result from the implementation of the 2040 MTP/SCS with respect to the adopted regional performance measures. This chapter also describes how the 2040 MTP/SCS addresses the statutory requirements regarding SB 375 and social equity.

Performance Outcomes

This section summarizes how well the 2040 MTP/SCS performs. Table 5-1 lists the outcomes of performance measures forecasted using both the AMBAG Regional Travel Demand Model (RTDM) and Geographic Information Systems (GIS). While this chapter includes summaries of the performance improvements expected from the implementation of the 2040 MTP/SCS, more detail is provided in Appendix G.

In the discussion of performance and outcomes, three scenarios are referenced: Existing, No Build, and Plan. The 2015 Existing represents existing conditions and includes only existing transit service and the existing transportation network in 2015. The 2040 No Build assumes current land use trends and represents a future in which only committed programs and projects are implemented. Committed programs and projects are those which are programmed in the 2016 Metropolitan Transportation Improvement Program (MTIP) that have received environmental clearance. The Plan refers to future conditions in which the 2040 MTP/SCS land use patterns and transportation investments are realized. The specific projects associated with the Plan are identified in Appendix C.

Access and Mobility

Accessibility is used to capture how well the transportation system performs in providing people access to various destinations. Destinations can include anything from jobs, education, medical care, recreation, shopping, or another activity that is essential to one's daily needs or helps to improve quality of life. In the 2040 MTP/SCS, accessibility performance measures consider the distribution of trips by mode and travel time.

Work Trips Within 30 Minutes

Compared to existing, the percentage of transit work trips that can be made in 30 minutes improves in the 2040 MTP/SCS. Drive alone and carpool work trips maintain a high level of performance with more than 84 percent of the trips capable of being made within 30 minutes.

Table 5-1: Performance Measures

Regional Performance Measures	2015 Existing	2040 No Build	2040 MTP/SCS
Access and Mobility			
Work Trips Within 30 Minutes (percentage)			
Drive Alone	84.3%	83.9%	84.5%
Carpool	84.3%	83.9%	84.5%
Transit	13.0%	13.0%	15.8%
Commute Travel Time (minutes)	15.6	15.7	15.5
Economic Vitality			
Jobs Near High Quality Transit (percentage)	21.4%	20.6%	29.6%
Daily Truck Delay (hours)	2,799	7,778	7,432
Environment			
GHG Reductions (Percent reduction from 2005 baseline)[1]	N/A	N/A	-6.6%
Open Space Consumed (acres)[2,3]	N/A	0	11
Farmland Converted (acres)[2,3,4]	N/A	1,805	294
Healthy Communities			
Alternative Transportation Trips (percentage)	17.3%	18.1%	17.7%
Smog Forming Pollutants (TOG) (lbs/day) per capita	0.019	0.005	0.005
Peak Period Congested Vehicle Miles of Travel (miles)	499,064	1,259,191	1,118,524
Social Equity			
Distribution of MTP/SCS Investments (percentage)[5]			
Low income areas	N/A	N/A	95.8%
Non low income areas	N/A	N/A	4.2%
Minority areas	N/A	N/A	96.5%
Non minority areas	N/A	N/A	3.5%
Access to Transit within 1/2 mile (percentage)[6]			
Low income population	27.9%	27.9%	28.1%
Non low income population	11.2%	11.2%	11.2%
Minority population	32.1%	32.1%	32.3%
Non minority population	5.2%	5.2%	5.0%
System Preservation and Safety			
Maintain the Transportation System (percentage)	N/A	N/A	68.0%
Fatalities and Injuries per 1,000 VMT	0.09	0.07	0.07
Annual Projected Bike/Pedestrian Fatalities and Injuries per 1,000 VMT	0.02	0.02	0.02

[1]Greenhouses gas reductions in 2020 are -4.3 percent from 2005 levels.

[2]Rail projects are not reflected in the 2020, 2035 and 2040 MTP/SCS regionally significant project analysis, as rail lines are existing.

[3]2040 No Build scenario has increased open space due to farmland conversion per the 2040 MTP/SCS typology as identified by the city and county jurisdictions in SOI's.

[4]Farmland analyzed is Prime, Unique, or Farmland of Statewide Importance as defined by Dept. of Conservation FMMP.

[5]Calculated based upon criteria on total investment of all modelable projects within 1/2 mile of U.S. Census Bureau defined tracts.

[6]Tracts defined per U.S. Census Bureau. Calculated based per criteria on total acreage and percentage of population within a 1/2 mile of transit.

Source: AMBAG Regional Travel Demand Model and Geographic Information Systems. For more information on methodology see Appendix G.

Commute Travel Time

Compared to Existing and No Build, average commute travel time will remain nearly the same with the improvements included in the 2040 MTP/SCS despite an additional 120,000 people living in the region.

Economic Vitality

In order to measure the economic vitality of the region, performance measures related to proximity of jobs from transit as well as truck traffic were examined. By providing better access to jobs the region's economy can continue to grow. Additionally a measure looking at truck traffic was considered imperative given the importance of goods movement to the regional economy.

Jobs Near High Quality Transit

In 2040, 30 percent of the region's jobs are within one-half mile of a high quality transit stop, compared to only 21 percent in the base year.

Daily Truck Delay

This measure estimates the daily truck hours of delay. The 2040 MTP/SCS includes investments in a regional freight corridor and other improvements to facilitate goods movement. The Plan is estimated to reduce truck delay by more than four percent over No Build. However, the truck delay under the Plan will still be above existing levels.

Environment

There are many aspects of the 2040 MTP/SCS that are geared towards improving the environment. However, the performance measures categorized as environmental here are those that have a major effect on the physical surroundings.

Greenhouse Gas Reductions

The targets agreed upon by AMBAG and the California Air Resources Board (CARB) for greenhouse gas reductions are a zero percent per capita increase from 2005 levels by 2020 and a five percent per capita reduction from 2005 levels by 2035. The Plan exceeds the target in both years achieving more than four percent reduction in 2020 and a nearly seven percent reduction in 2035.

Open Space Conservation

This performance measure shows the total acreage of open space consumed by development. In that regard it considers impacts to sensitive habitat only as it pertains to destruction of that habitat for development. The performance measures do not include a separate analysis for sensitive habitat, however a detailed discussion of the impacts to sensitive habitat can be found in the Environmental Impact Report. The Plan assumes the amount of open space that would be consumed due to land use development and transportation investments is 73 acres.

Farmland Preservation

This performance measure shows the total acreage of farmland consumed by development. The 2040 MTP/SCS shows that 2,099 acres of farmland would be consumed. All of the farmland being consumed in the Plan is within existing spheres of influence or is within Community Plan Areas as designated by the General Plans in the region.

Healthy Communities

More and more government organizations are adopting a health in all policies approach to policy and planning. The transportation system and land use patterns in this region have the potential to substantially impact the health and wellbeing of its residents. Specifically, alternative transportation trips have the potential to: increase a person's daily

physical activity therefore having a lasting positive effect on health; improve air quality which directly effects people's lungs and physical wellbeing; and reduce congestion which can decrease the amount of exposure to poor air and noise pollution.

Alternative Transportation Trips

This performance measure evaluates the percent of trips made using transit, shared ride, bicycle or pedestrian modes. The Plan shows a slight increase in the total percent of trips taken using an alternative mode. However, it is difficult to capture the full benefits of active transportation investments in current travel demand models as available data on these types of modes is more limited than data on vehicle trips. The benefit of investing in alternative transportation modes is likely far greater than models are able to capture.

Air Pollution

The air quality performance measure evaluates smog forming total organic gases in daily short tons. The Plan improves the air quality throughout the region over the 2015 existing measures of smog forming pollutants.

Congested Vehicle Miles of Travel

The congested vehicle miles traveled in the region is improved in the Plan over the No Build scenario, however it still increases over 2015 existing levels. As population increases so will congested VMT increase. The Plan does improve the projected congested VMT over a scenario in which the region does nothing to address transportation needs.

Social Equity

In this document social equity refers to the equitable distribution of transportation impacts (benefits, disadvantages and costs) regardless of income status or race and ethnicity. Social equity performance measures compare low income and minority populations against non-low income and minority populations to ensure that there is an equitable distribution of benefits and not a disproportionate share of burdens. The low income and minority areas are shown in Figure 5-1. For more information on identification of these

populations refer to Appendix G.

- *Low Income Populations:* any Census tract in which 65 percent or more of families are low income, and/or 20 percent or more of the families are living at or below the poverty income threshold.
- *Minority Populations:* any Census tract in which 65 percent or more of the population is non-White.

Distribution of Transportation Investments

The 2040 MTP/SCS includes regional investments in the transportation system across the three counties. The distribution of transportation investments are greater in low income and minority areas compared to other areas.

The analysis for low income populations shows that the 2040 MTP/SCS will result in higher increases in transportation investments for low income populations: 96 percent in low income areas compared to four percent in non-low income areas.

The analysis also shows that the 2040 MTP/SCS will result in higher investments for minority populations as compared to non-minority populations.

Equitable Transit Access

This performance measure evaluates the percent of low income and minority populations that are located within one-half mile of a transit stop. With the 2040 MTP/SCS, access to transit would increase to 28.1 percent for low income and 32.3 percent for minority populations. Figure 5-2 highlights transit accessibility of the region.

System Preservation and Safety

One of the ongoing struggles with the region's transportation system is finding the funding needed for preventative maintenance. The cost to maintain the existing transportation system is accelerating as the cost to fix roadways increases exponentially the longer it is deferred. The cost for roadway rehabilitation is six to ten times more expensive than ongoing preventative maintenance. Maintenance is required for the system not only for quality of life for existing users, but also for the safety of those users.

Vehicle Miles Traveled

The number of vehicle miles traveled (VMT) is an indicator of the travel levels on the roadway system by motor vehicles. VMT is estimated for a given time period. This estimate is based upon traffic volume counts and roadway length and is used to give planners an understanding of the level of usage of the roadway network. VMT is also used to estimate greenhouse gas emissions. However, when examining VMT to understand potential GHGs one must take into account various speeds at which cars travel. A vehicle traveling at slow or very high speeds on a highway emits more greenhouse gas emissions than one traveling at 45 to 55 miles per hour. For this reason planners often look to congested VMT rather than total VMT to gain a better understanding of impact on emissions.

As the region's population continues to grow, VMT will also continue to grow. However, the growth in population is not the only factor fueling the rise in travel. Other factors include economic growth, relatively affordable auto travel costs, tourism, low levels of public transit, and other related factors. As the amount of auto travel increases, the time wasted on congested roadways, the energy used by vehicles and total costs of auto travel increase accordingly.
The 2040 MTP/SCS aims to reduce this congested VMT, by providing a host of transportation options such that people do not have to drive everywhere but have alternative
options available to them, particularly for shorter distance trips.

Maintain the Transportation System

The 2040 MTP/SCS dedicates two-thirds of the total funding available for maintenance and rehabilitation projects.

Fatalities and Injuries

This performance measure evaluates the safety of the transportation system by using data on injuries and fatalities to calculate a per capita rate of injury or fatality. Fatalities and injuries are relatively unchanged between 2015 and 2040 staying at a rate of 0.7 in 1,000 of injury or fatality per capita. This is a particularly difficult measure to project because it assumes that fatalities and injuries are held constant for every vehicle mile traveled. However, by establishing it as a performance measure in the 2040 MTP/SCS this opens the door for AMBAG to monitor past injuries and fatalities and therefore monitor the effects of the Plan as it is implemented over the course of time.

Environmental Justice and Title VI

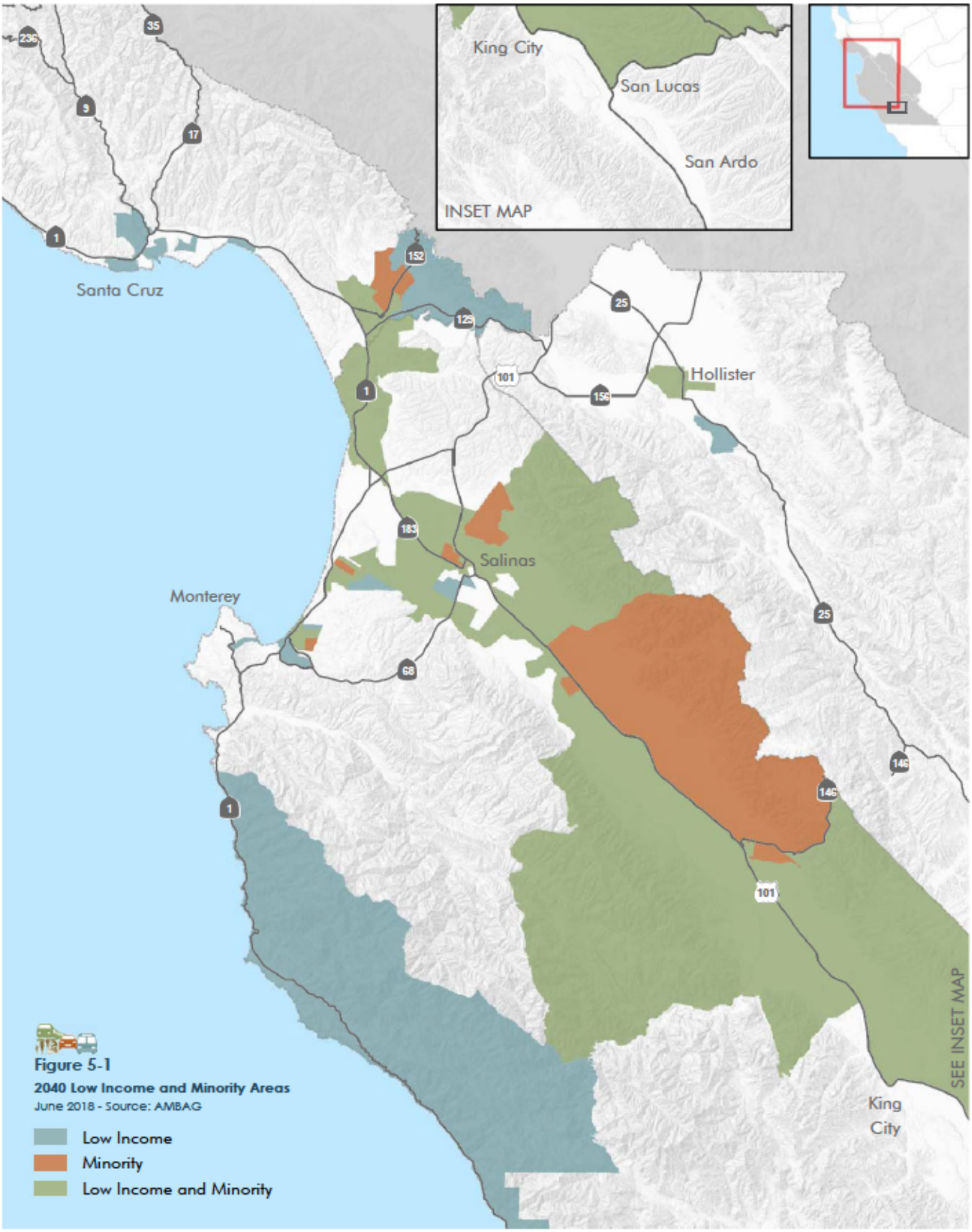
The Monterey Bay Area is a diverse area with both low and high cost areas. However, in California even "low cost" areas are expensive compared to national averages. According to the H+T index developed by Center for Neighborhood Technology over half of the households in this region spend more than 45 percent of their income on transportation and housing costs combined. If just housing costs are considered without transportation costs, then half of the residents in this region spend over 30 percent of their income on housing costs. The high cost of housing as well as daily goods and services means that many households which are above the federal poverty standards will still struggle to live in this region. In addition, the Plan looks at the effect of these investments on the minority population, which increasingly is the majority of the people living in the region.

Environmental Justice Background

The concept of environmental justice is about equal and fair access to a healthy environment, with the goal of protecting underrepresented and low income communities from incurring disproportionate negative environmental impacts. Consideration of environmental justice in the transportation planning process stems from Title VI of the Civil Rights Act of 1964 (Title VI). Title VI establishes the need for transportation agencies to disclose to the public the benefits and burdens of proposed projects on minority populations. The understanding of civil rights has expanded to include low income communities, as further described below. Title VI states that "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." Additionally, Title VI not only bars intentional discrimination, but also unjustified disparate impact discrimination. Disparate impacts result from policies and practices that are neutral on their face (i.e., there is no evidence of intentional discrimination), but have the effect of discrimination on protected groups.

A 1994 Presidential Order (Executive Order 12898) directed every federal agency to make Environmental Justice part of its mission by identifying and addressing the effects of all programs, policies and activities on underrepresented groups and low income populations. Reinforcing Title VI, this Presidential Order ensures that every federally funded project nationwide considers the human environment when undertaking the planning and decision making process. The Presidential memorandum accompanying E.O. 12898 identified Title VI as one of several federal laws that should be applied "to prevent minority communities and low income communities from being subject to disproportionately high and adverse environmental effects." Given the overlap in Title VI and environmental justice policies, the term "environmental justice" is used as an inclusive term to mean minority and low income populations. In addition to federal requirements, AMBAG must comply with California Government Code Section 11135, which states that "no person in the State

Figure 5-1: Low Income Minority Areas



of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state."

AMBAG's Title VI/Environmental Justice Policy and Program

As a government agency that receives federal funding, AMBAG is required to conduct an environmental justice analysis for its MTP. AMBAG's environmental justice program includes two main elements: technical analysis and public outreach. Specifically, it is AMBAG's role to ensure that when transportation decisions are made, low income and minority communities have ample opportunity to participate in the decision making process and that they receive an equitable distribution of benefits and not a disproportionate share of burdens. AMBAG adheres to all directives on Environmental Justice.

Under federal policy, all federal agencies must make environmental justice part of their mission and adhere to three fundamental Title VI/environmental justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low income populations.

AMBAG complies with the framework provided to integrate the principles of environmental justice into the decision making processes.

Technical Analysis

As with the other performance measures presented in this chapter, the comparison of the Plan versus Existing and the No Build is the primary focus of the environmental justice analysis for the 2040 MTP/SCS. The Plan represents the selected strategy to guide the region's transportation planning over the next two decades, while the No Build represents "business as usual" and assumes current land use trends and the completion of projects programmed in the 2016 MTIP that have received environmental clearance. The data for the analysis is based on the AMBAG RTDM and GIS analysis results. Based on the analysis conducted, the Plan increases transportation investment in low income and minority populations as well as improves access to transit and therefore destination opportunities. Additional information on the performance measures is included in Appendix G.

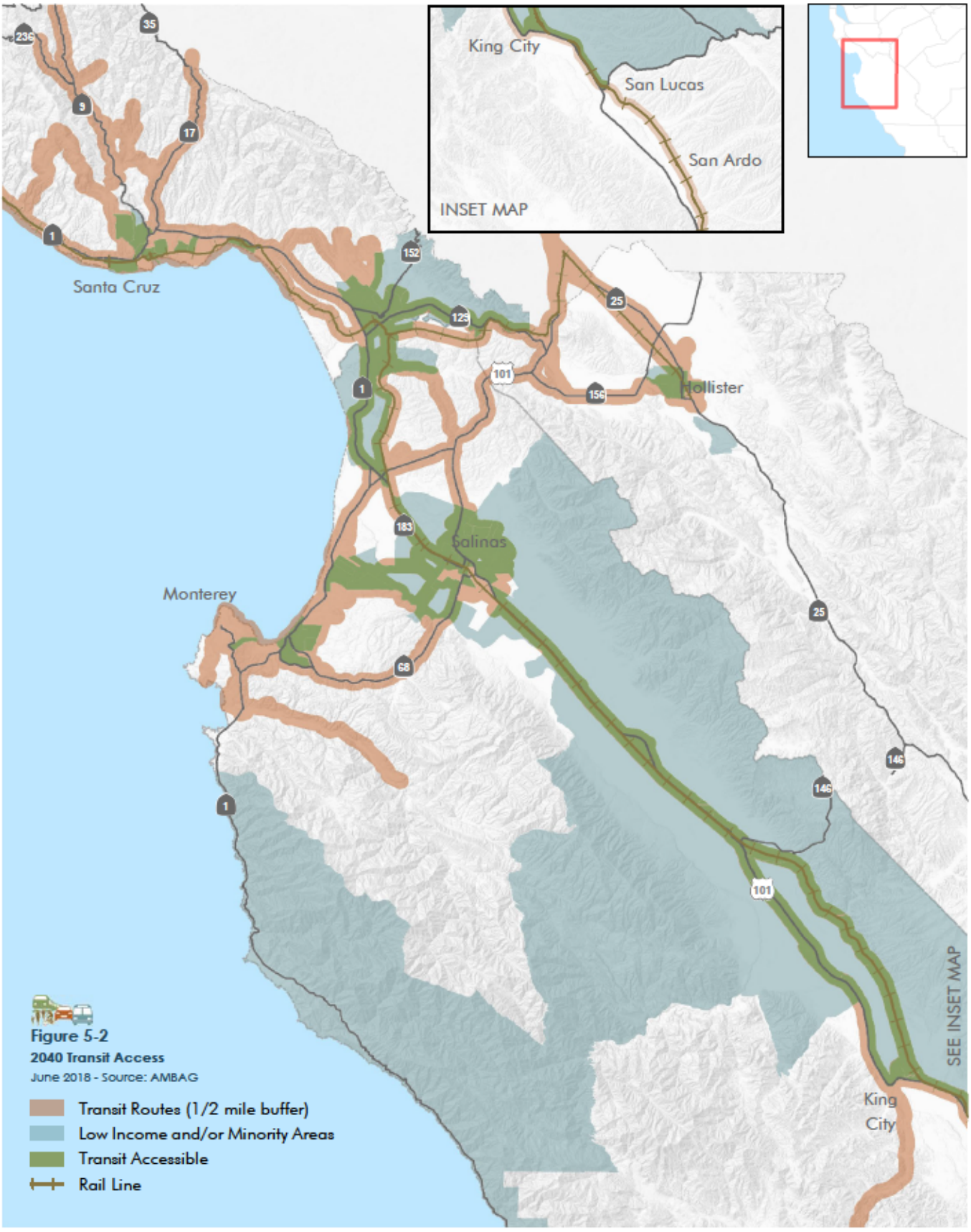
AMBAG's Title VI and Environmental Justice Outreach

A key component of the 2040 MTP/SCS development process is seeking public participation. Public input from partner agencies and key stakeholders helped AMBAG prioritize and address needs in the region. As part of the outreach effort, AMBAG compiled a list of key stakeholders to be contacted regarding 2040 MTP/SCS programs and policies. This list is comprised of a large variety of individuals and organizations ranging from community groups, interest groups, environmental groups, etc. AMBAG maintains this list regularly and allows interested persons to sign up online for the mailing list. The outreach conducted for the SCS to low income and minority groups resulted in the inclusion of increased transit funding in currently underserved areas, the prioritization of vanpooling as a transportation demand management strategy and the emphasis on economic development within the SCS itself.

Transportation Performance Management

The federal government's Moving Ahead for Progress in the 21st Century Act (MAP-21)

Figure 5-2: Transit Access



established a performance- and outcome-based transportation program. The objective of this program is for states and regions to invest resources in projects that collectively will make progress toward the achievement of the national goals to improve the transportation system. The national goals include safety, infrastructure condition or state of good repair, congestion reduction, transportation system reliability, freight movement and economic vitality, environmental sustainability and reduced project delivery delays.

MAP-21 and the Fixing America's Surface Transportation (FAST) Act require the U.S. Department of Transportation (DOT), in consultation with states, metropolitan planning organizations (MPOs) and other stakeholders, to establish performance measures in the following areas:

- Fatalities and serious injuries on all public roads including rate of fatalities and serious injuries
- Pavement and bridge condition on the Interstate Highway System and remainder of the National Highway System.
- Travel time reliability, freight travel time reliability, congestion and on-roadmobile emissions.

The U.S. DOT issued Final Rules for these performance areas. AMBAG submitted comments on these performance measure rules during the rulemaking process. As the MPO for the Monterey Bay Area region, AMBAG is required to establish performance targets within six months of the establishment of statewide targets. In consultation with our regional transportation planning partners, AMBAG will support the Caltrans state targets or set its own in 2018. AMBAG also has created a new work element in its Overall Work Program for Transportation Performance Management. The following describes each national performance management measure in detail.

Performance Measure Rule 1 (PM 1): Safety Targets

The FHWA's Safety Performance Management Measure rule establishes five performance measures to carry out the Highway Safety Improvement Program (HSIP) and requires data reporting of the five-year rolling averages for: (1) number of fatalities, (2) rate of fatalities per 100 million vehicle miles traveled (VMT), (3) number of serious injuries, (4) rate of serious injuries per 100 million VMT and (5) number of non-motorized fatalities and non-motorized serious injuries. Safety performance measures data is currently collected and reported on by state and local law enforcement agencies and is maintained in centralized state and national databases.

Federal regulations require states to set performance targets for improving the transportation system in cooperation with MPOs. Caltrans coordinated with MPOs on the establishment of the state targets for over a year. On June 22, 2017 Caltrans proposed state safety targets which call for a reduction in fatalities and serious injuries that reflect aspirational goals of "toward zero deaths." The Safety Performance Management final rule became effective on April 14, 2016. Final statewide safety targets were established on August 31, 2017 and will be updated annually as needed. In 2018, AMBAG and our RTPA partners reviewed the statewide targets and agreed to support these targets. On February

Table 5-2: Performance Measures

Measure	Data Source	5- Yr. Rolling Average (2018)	Percent Reduction (2018)
Number of Fatalities	FARS	3590.8	-7.69%
Rate of Fatalities (per 100M VMT)	FARS & HPMS	1.029	-7.69%
Number of Serious Injuries	SWITRS	12823.4	-1.50%
Rate of Serious Injuries (per 100M VMT)	SWITRS & HPMS	3.831	-1.50%
Number of Non-Motorized Fatalities and Severe Injuries	FARS & SWITRS	4271.1	-10.00%

14, 2018, the AMBAG Board approved supporting Caltrans statewide safety targets. See Table 5-2 for Safety performance measures and targets as of June 2018. While these targets are to be met at a Statewide level, local projects should strive to incrementally contribute towards the achievement of these goals to the extent practicable.

See Appendix G for a regional system performance report on PM 1 safety measures.

Caltrans safety targets were accepted by AMBAG in February 2018, less than four months before the completion of the multi-year MTP/SCS planning process. There was an insufficient implementation period to evaluate progress towards this new target in this MTP/SCS. A full evaluation of progress towards this target will be provided in the next MTP/SCS once implementation projects have begun and sufficient data has been collected. Numerous upcoming operational and management strategies to improve safety are found in Chapter 4 and a number of safety related projects are found in Appendix C. These strategies and projects are expected to contribute to the improvement of transportation safety throughout the region.

Table 5-3: Performance Measures

Measure
Percentage of interstate pavement in "good" condition
Percentage of interstate pavement in "poor" condition
Percentage of National Highway System pavement in "good" condition
Percentage of National Highway System pavement in "poor" condition
Percentage of National Highway System bridges in "good" condition
Percentage of National Highway System bridges in "poor" condition

Performance Measure Rule 2 (PM 2): Bridge and Pavement Performance Targets

The Bridge and Pavement Performance Rule requires the State to collaborate with MPOs to develop performance targets for two areas: (1) pavement condition on the Interstate System and (2) on the non-Interstate National Highway System (NHS) and bridge condition on the NHS. See Table 5-3 for a list of these measures. While the state has established performance targets for this management rule, as of the writing of this report targets are being evaluated by AMBAG and our RTPA partners and have not been accepted by the AMBAG Board. MPOs have the option to either support statewide targets or develop quantifiable regional targets by November 20, 2018. A full description, system performance analysis and investment impacts related to these targets and measures will be performed in the next MTP/SCS report once targets have been adopted by AMBAG.

Performance Measure Rule 3 (PM 3): Bridge and Pavement Performance Targets

The System Performance, Freight System, and Congestion Mitigation and Air Quality Improvement Program Rule requires the State work in cooperation with MPOs to develop performance targets which measure travel reliability for persons and freight, congestion, non-single occupant vehicle travel and emissions reductions. See Table 5-4 for a list of these measures. While the state has established performance targets for this management rule, as of the writing of this report targets are being evaluated by AMBAG and our RTPA partners and have not been accepted by the AMBAG Board. MPOs have the option to either support statewide targets or develop quantifiable regional targets by November 20, 2018. A full description, system performance analysis, and investment impacts related to these targets and measures will be performed in the next MTP/SCS report once targets have been adopted by

Table 5-4: Performance Measures

Measure
Percentage of reliable person-miles traveled on the Interstate
Percentage of reliable person-miles traveled on the non-interstate National Highway System
Truck travel time reliability on the Interstate
Annual hours of peak-hour excessive delay per capita
Percent of non-single occupant vehicle travel
Total emissions reduction

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6 Public Participation

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Introduction

AMBAG values public participation in the development of the 2040 MTP/SCS. Public involvement is essential to ensure that stakeholders gain a clear understanding of AMBAG, its role as a metropolitan planning organization (MPO), critical elements of the 2040 MTP/SCS, and its development process. Furthermore, public involvement helps AMBAG policymakers and staff better understand the needs and concerns of stakeholders, leading to more meaningful planning.

A critical component in preparing the 2040 MTP/SCS was to provide guidance in the structuring of regional transportation planning processes to ensure that, to the greatest extent possible, interagency consultation and public participation were an integral and continuing part of the regional transportation decision making process. The participation policies and procedures were structured to enable all participants the ability to express their values and interests in the shaping and implementation of regional policies and decisions regarding the transportation system.

Development of the 2040 MTP/SCS has been a multi-year effort that began in 2015. A comprehensive program of public involvement activities was a key part of the process. Extensive outreach with local government officials was conducted, as well as numerous community workshops and meetings, in addition to telephone and online surveys. A detailed description of the outreach activities is included in Appendix D.

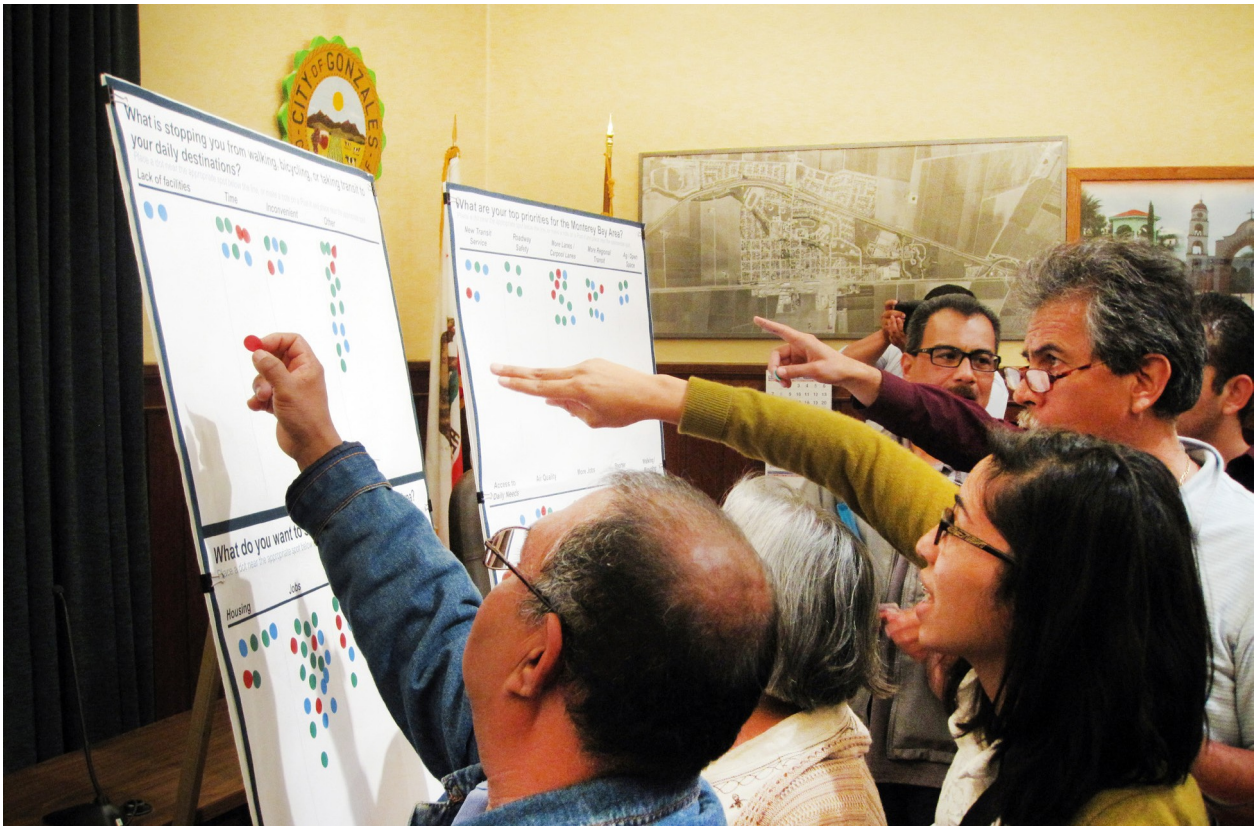
Public Participation Plan

In compliance with federal and state requirements and to guide effective public involvement, AMBAG utilizes its Public Participation Plan. The Public Participation Plan provides direction for public participation activities, outlining the processes and strategies AMBAG uses to reach out to a broad range of stakeholders to gain input. AMBAG's Public Participation Plan was updated to incorporate requirements of SB 375. Detailed documentation of the public outreach conducted for the 2040 MTP/SCS is included in Appendix D.

Engaging the Community

AMBAG engaged the community throughout the development of the 2040 MTP/SCS. These activities include:

- Seven community workshops
- A project website (www.ambag.org)
- Preparation of handout materials, flyers, information sheets, frequently asked questions (FAQs), etc.


What is stopping you from walking, bicycling, or taking transit to your daily destinations?
Lack of facilities
Time
Inconvenient
Other
What are your top priorities for the Monterey Bay Area?
What do you want to
Housing


Take a survey!

Each of these activities is described in further detail in subsequent sections of this chapter.

Workshops

Two series of workshops each were held throughout the tri-county region at key milestones. The workshops were designed in an open house format with a variety of stations to provide one-on-one discussion and to create a more comfortable and meaningful environment for participants.

Materials were provided in both English and Spanish and translation services were available at most of the workshops. Each workshop had a series of interactive stations where participants were asked to engage with planners by drawing on maps, asking questions and stating preferences.

The first workshop series was held in January 2016 and designed to inform participants of regional issues, explain the purpose of this project, and to solicit input on their preferences and priorities, which would help shape the initial set of scenarios. The second workshop series was held in April 2017 and was set up to explain the purpose of the 2040 MTP/SCS and to solicit input on the initial SCS.

Digital Media

In addition to print media AMBAG provided information in a few different digital formats. Data that was collected for the purposes of this project was compiled in the *AMBAG LiveMaps* system.

AMBAG LiveMaps

AMBAG has collected GIS data from the various jurisdictions over the years and has stored the data on an internal server. As part of this project and to better foster regional coordination, the data was organized into a central database and hosted on a public website and branded as *AMBAG LiveMaps*.

This interactive tool is available to anyone with an internet connection. It is the intent that the data will be regularly updated and new features will be added to enhance the user experience and address comments from jurisdiction staff and other users.

The *AMBAG LiveMaps* tool is organized by Land Use and Planning (city limits, airports, land use, etc.), Natural Features (fault lines, fire hazards, waterbodies, etc.), and Transportation (bus routes, bikeways, trails, etc.). These categories will be expanded and new data added as it is made available and organized.

Project Website

The project website (www.ambag.org) is the central portal for information about the project and upcoming events. The website address was provided on all outreach materials and has been updated regularly to maintain current content.

From the homepage, visitors of the website could access upcoming events, recent news, email sign-up and the AMBAG Facebook page.

Engaging Local Jurisdictions

A variety of committees and boards were consulted throughout the planning process and at key milestones to solicit feedback, provide project updates, and relay community input from the workshops and surveys. These committees and boards are made up of elected officials, staff from local jurisdictions and agencies, local leaders and organizers, and members of the general public.

AMBAG Board of Directors

The AMBAG Board of Directors consists of local elected officials that have been appointed by their respective city council or board of supervisors. Each member city has one representative on the AMBAG Board and each member county has two. There are seven ex-officio members representing each of the three Regional Transportation Planning Agencies, Monterey-Salinas Transit, Santa Cruz Metropolitan Transit District and the Monterey Bay Air Resources District.

The AMBAG Board meets monthly and sets policy. Day-to-day oversight is provided by the Executive Director, who is appointed by and serves at the pleasure of the Board of Directors.

The AMBAG Board met once a month throughout

Public Participation Plan

Providing public access to and participation in the planning processes of the Monterey Bay region is a responsibility shared between Caltrans, AMBAG, the Council of San Benito County Governments, the Santa Cruz County Regional Transportation Commission, the Transportation Agency for Monterey County, Monterey-Salinas Transit, San Benito County Local Transportation Authority, and Santa Cruz Metropolitan Transit District.
Each partner agency solicits public input from its planning, policy, and programming processes. Various methods are used to engage stakeholders, and provide affected agencies and interested parties with timely information and opportunities to participate in the transportation planning process.

Each federally funded transportation program or project conducted by a partner agency must have a specified public participation process that defines the avenues for reasonable involvement in the metropolitan transportation planning process.
AMBAG's process is outlined in the 2015 Public Participation Plan.

The Monterey Bay Area Public Participation Plan was adopted in 2011 and updated in 2015. The passage of Senate Bill 375 in 2008 resulted in changes in Government Code §65080, which required an update to the Monterey Bay Area Public Participation Plan. The 2015 update is responsive to the Senate Bill 375 requirement.

the planning process to receive project updates, provide policy direction and select the preferred scenario for the 2040 MTP/SCS.

Planning Directors Forum

The Planning Directors Forum consists of planning directors and staff from the 18 cities, three counties, three regional transportation planning agencies, and AMBAG. The Planning Directors Forum meets regularly to address regional land use and transportation planning issues. The Planning Directors Forum met ten times throughout the planning process and at key milestones to identify priorities, review growth projections, help establish initial scenario development, review draft workshop materials and to receive project updates.

Technical Advisory Committees

The Technical Advisory Committees for each county are made up of staff from local jurisdictions and agencies, including local transit service providers and are managed by staff from the RTPAs. The Technical Advisory Committees review and provide technical guidance and advice on transportation projects and programs within each county, and makes recommendations to the RTPA Boards of Directors. AMBAG staff met with the Technical Advisory Committees frequently, particularly at key milestones throughout the planning process to confirm transportation priorities, projects, and funding sources.

One-on-One Meetings

In addition to coordinating workshops and large meetings to discuss and inform the planning process, AMBAG held more than 100 one-on-one meetings with senior staff from local jurisdictions. Many of these meetings were to discuss the Regional Growth Forecast. However, these meetings were critical to engaging local planners in the overall 2040 MTP/SCS development process as well as for incorporating ongoing local infill development strategies and other land use plans into the regional planning process.

Coordinating with Partner Agencies

The Regional Transportation Planning Agencies - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito County Council of Governments - are important partners in the planning process for the 2040 MTP/SCS. Each RTPA develops a separate Regional Transportation Plan for each county in the region that has county specific details for transportation projects. AMBAG works with the RTPAs to develop project lists, financial assumptions and revenue constrained scenarios during the planning process. AMBAG staff met with the three RTPAs' staff twice a month as part of a working group in order to coordinate development of each of the Regional Transportation Plans with the 2040 MTP/SCS.

AMBAG worked very closely with the RTPAs in the planning process. The RTPAs held hundreds of meetings beginning in 2015 to obtain input on transportation projects and local community priorities which feed into the development of the 2040 MTP/SCS.

These meetings included presentations to a broad range of community groups, business organizations, chambers of commerce's, city councils, school superintendents, service clubs, trade & professional organizations, educational & medical institutions, taxpayer associations, etc. Additionally, the RTPAs sought public input via surveys, comments, focus groups, stakeholders interviews, websites and social media.

Consultation with Interested Parties

Consultation and Coordination with Resource Agencies

MAP-21 requires that the MTP/SCS environmental mitigation program be developed in consultation with federal, state and tribal land management, wildlife, and regulatory agencies (Title 23 CFR

Part 450.322(f)(7)), as well as with state and local agencies responsible for land use, natural resources, environmental protection, conservation and historic preservation (Title 23 CFR Part 450.322(g)). Further, in accordance with Title 23 CFR Part 450.322, the MTP/SCS must provide a discussion of potential environmental mitigation activities and areas, including those mitigation activities that might maintain or restore the environment that is being affected by the plan. This mitigation discussion must happen in consultation with federal, state and tribal land management, wildlife and regulatory agencies. During the development of the Plan, AMBAG consulted with various land management agencies to refine potential approaches to support the conservation of natural lands and farmlands consistent with State conservation planning initiatives. This consultation ensured policies when combined with land use strategies and transportation investments included in the 2040 MTP/SCS, enable the region to work toward consistency with State conservation planning initiatives. AMBAG's compliance with the California Environmental Quality Act (CEQA) serves as another opportunity to consult with federal, state and local resource agencies and sovereign tribal nations responsible for land use management, natural resources, environmental protection, conservation and historic preservation in the development of the MTP/SCS. This consultation includes other agencies and officials responsible for planning activities in the AMBAG region that are affected by transportation.

As required by CEQA, the Notice of Preparation (NOP) stating that AMBAG as the lead agency would prepare a program-level Environmental Impact Report (EIR) for the 2040 MTP/SCS was the first step in the environmental review process. The NOP gave federal, state and local agencies and the public an early opportunity to identify areas of concern to be addressed in the EIR and to submit them in writing to AMBAG. AMBAG held public scoping workshops in January 2016 to explain the environmental review process and solicit early input on areas of concern. While the MTP is not subject to the federal National Environmental Policy Act (NEPA), AMBAG consulted with federal agencies as appropriate during the preparation of the CEQA environmental document.

Consultation with Native American and Tribal Governments

State and federal regulations require AMBAG to conduct government-to-government consultation regarding MTC's planning and programming activities with tribal governments of federally- recognized Native American tribes. Additionally, effective July 1, 2015, Assembly Bill 52 (Gatto, 2014) began requiring that state and local agencies analyze the impacts to Native American cultural resources under the California Environmental Quality Act (CEQA). The law introduced new state requirements for consultation with Native American tribal governments. As such, lead agencies under CEQA must work with tribal governments to avoid or mitigate the impacts to cultural resources.

AMBAG submitted formal notification of a project and consultation opportunity under AB 52 (Gatto, 2014), pursuant to Public Resources Code § 21080.3.1 to all interested parties in the AMBAG region. The AMBAG region does not have any tribal nations or tribal owned land, however, there are tribal cultural sites in the region.

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7 Glossary

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Glossary

AASHTO
American Association of State Highway and Transportation Officials – A nonprofit, non-partisan association representing highway and transportation departments in the 50 states, the District of Columbia and Puerto Rico.

AB 32
Assembly Bill 32: Signed into law on September 26, 2006, it requires that the state's global warming emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on global warming emissions that will be phased in starting in 2012. In order to effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming emissions levels.

ADA
Americans with Disabilities Act: The federal civil rights legislation for disabled people that was passed in 1990; it requires public transportation systems to be more fully accessible; includes the provision of paratransit service.

Active Transportation
Active Transportation includes any method of travel that is human-powered, but most commonly refers to walking and bicycling.

ADT
Average Daily Traffic: The average number of vehicles that travel on a given roadway in a 24-hour period on a weekday.

Air Cargo
Revenue producing items in domestic or international air commerce, composed of freight, express, and mail, but excluding passenger baggage.

Air Carrier
An aviation operator that provides regular round-trips per week between two or more points, and publishes flight schedules that specify the times, days of the week, and places between which such flights are performed; or that transports mail by air pursuant to a contract with the U.S. Postal Service.

Alternative Transportation Fuels
Low polluting fuels that are used to propel a vehicle, in place of petroleum-based gasoline or diesel fuels. Examples include biodiesel, electricity, ethanol, propane, compressed natural gas and liquid natural gas.

AMBAG
Association of Monterey Bay Area Governments: AMBAG is responsible for long-range transportation planning and programming under federal and state law.

Amtrak
The National Railroad Passenger Corporation, or Amtrak, is the nation's intercity passenger rail provider. Amtrak operates trains in partnership with 15 states and four commuter rail agencies.

Annual Service Miles
The number of miles that all transit vehicles travel each year in scheduled transit service operations, or when carrying passengers in door-to-door transit service.

Apportionment
A federal budgetary term that refers to a statutorily prescribed division of assigned funds. It is based on formulas prescribed by law.

APS
Alternative Planning Strategy: Senate Bill 375 (SB 375) provides that if the sustainable communities strategy falls short of meeting the regional greenhouse gas reduction targets from passenger vehicles, the region must prepare an "alternative planning strategy" that, if implemented, would meet the targets.

ArcInfo
A geographic information system (GIS) that can be used to maintain, manipulate, and display transportation, land use and demographic data.

Arterial
Streets with traffic lights that serve primarily to carry traffic through an area as quickly and efficiently as possible.

Arterial Management System
A hardware and software system that enables local agencies to coordinate the timing of traffic signals across jurisdictional boundaries; optimize the flow of traffic on regionally significant arterials; manage traffic caused by special events and major accidents; and coordinate arterial signals with freeway ramps, transit service and rail grade-crossings.

ATIS
Advanced Traveler Information Systems: Technology used to provide travelers with information, both pre-trip and in-vehicle, so they can better utilize the transportation system.

ATMS
Advanced Transportation Management Systems: Technology used to improve the operations of the transportation network.

Autonomous Vehicles
Autonomous vehicles (also known as a driverless cars, autos, self-driving cars, robotic cars) are vehicles that are capable of sensing their environment to navigate and operate without human input.

Auxiliary Lane
An additional freeway lane between adjacent interchanges that improves the weaving conflicts between exiting and entering vehicles.

AVL
Automated Vehicle Location: A transportation device that uses the coordinates from earth-orbit satellites to determine the precise location of a vehicle on the earth's surface. AVL is used to manage taxi, bus and commercial vehicle fleet operations.

AVO
Average Vehicle Occupancy: Calculated by dividing the total number of travelers by the total number of vehicles.

Base Year
The year 2010, used in the MTP performance analysis as a reference point for current conditions.

Baseline
Future scenario which includes only those projects that are existing, undergoing right-of-way acquisition or construction, come from the first year of the previous MTP or MTIP, or have completed the NEPA process. The Baseline is based upon the adopted 2016 MTIP.

Bikeway Classifications

As defined by the Manual on Uniform Traffic Control Devices:

- Class I Bike Path: A paved shared-use path within an exclusive right of way
- Class II Bike Lane: Signed and striped lanes within a street right of way
- Class III Bike Route: Preferred routes on existing streets identified by signs
- Shared Lane Marking or "Sharrow:" Provides positional guidance to bicyclists on roadways that are too narrow to be striped with bicycle lanes and to alert motorists of the location a cyclist may occupy in the roadway

BRT
Bus Rapid Transit: Corridor-level services providing fast and frequent transit services that are designed to take advantage of priority treatments in order to serve longer distance regional trip making.

BTA
Bicycle Transportation Account: Provides state funds for city and county projects that improve safety and convenience for bicycle commuters.

CAA
Clean Air Act: Federal legislation that sets national air quality standards and requires each state with areas that have not met federal air quality standards to prepare a State Implementation Plan, or SIP. The 1990 amendments to the CAA, often referred to as the CAAA, established new air quality requirements for the development of metropolitan transportation plans and programs. The California Clean Air Act (CCAA) sets more stringent standards for state air quality.

CAAA
Clean Air Act Amendments of 1990: Federal legislation that established criteria for attaining and maintaining federal air quality standards for allowable concentrations and exposure limits for various

air pollutants. The legislation also provides emissions standards for specific vehicles and fuels.

CAFR
Comprehensive Annual Financial Report: Official annual financial report that encompasses all funds and financial components associated with any given organization.

California Transportation Plan 2040
The California Transportation Plan (CTP 2040) provides a long-range policy framework to meet future mobility needs and reduce greenhouse gas emissions. The CTP 2040 defines goals, performance-based policies and strategies to achieve a collective vision for California's future statewide, integrated, multimodal transportation system. The plan envisions a sustainable system that improves mobility and enhances our quality of life.

Caltrans
California Department of Transportation: The state agency responsible for the design, construction, operation, and maintenance of the state highway system. The State system includes interstate freeways and state highways.

CARB
California Air Resources Board: The state agency responsible for adopting state air quality standards, establishing emission standards for new cars sold in the state, overseeing activities of regional and local air pollution control agencies, and setting regional targets for reducing greenhouse gas emissions from passenger vehicles.

Carpool
An arrangement in which two or more people share the use of a privately-owned automobile to travel together to and from pre-arranged destinations — typically between home and work or home and school.

Carsharing
Organized short-term auto rental, often located in downtown areas near public transit stops as well as near residential communities and employment centers. Carsharing organizations operate fleets of rental vehicles that are available for short trips by members who pay a subscription fee, plus a per trip charge.

CCI
Construction Cost Index: A measurement of the inflation rate in the cost of major construction projects.

CEQA
California Environmental Quality Act: State law providing certain environmental protections that apply to all transportation projects funded with state funds.

CFR
Code of Federal Regulations: The codification of the general and permanent rules and regulations (sometimes called administrative law) published in the Federal Register by the executive departments and agencies of the federal government of the United States.

CHP
California Highway Patrol: The state law enforcement agency responsible for highway safety.

CHSRA
California High Speed Rail Authority: It was created by the California Legislature in 1996 to develop a plan for the construction, operation, and financing of a statewide, intercity high speed passenger rail system.

CIP
Capital Improvement Program: Long-range strategic plan that identifies capital projects; provides a planning schedule and financing options.

Climate Adaptation
Strategic response to global warming and climate change, that seeks to reduce the vulnerability of social and biological systems to relatively sudden change and thus offset the effects of global warming. In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry and Transportation and Energy.

CMP
Congestion Management Program: Required of every county in California with a population of 50,000 or more to qualify for certain state and federal funds. CMPs set performance standards for roads and public transit, and show how local agencies will attempt to meet those standards. The CMP is required to be adopted by the Congestion Management Agency, and it must be consistent with the adopted Metropolitan Transportation Plan (MTP).

CNG
Compressed Natural Gas: A clean-burning alternative fuel for vehicles.

COG
Council of Governments: A voluntary organization of local governments that strives for comprehensive regional planning. AMBAG is the COG for Monterey and Santa Cruz counties. SBtCOG is the COG for San Benito County.

Community Plan
More specific versions of General Plans, generally dealing with smaller geographical areas, but having the same force of law. See General Plan.

Commuter
A person who travels regularly between home and work or school.

Commuter Rail
Conventional rail passenger service within a metropolitan area. Service primarily is in the morning (home-to-work) and afternoon (work-to-home) travel periods.

Complete Streets
A complete street is a transportation facility that is planned, designed, operated, and maintained

to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists, appropriate to the function and context of the facility.

Constant Dollars
Dollars expended/received in a specific year adjusted for inflation/deflation relative to another time period.

Conformity
A demonstration of whether a federally-supported activity is consistent with the SIP — per Section 176 (c) of the Clean Air Act. Transportation conformity applies to plans, programs, and projects approved or funded by the Federal Highway Administration or the Federal Transit Administration.

Congestion
Congestion is usually defined as travel time or delay in excess of what is normally experienced under free flow traffic conditions. Congestion is typically accompanied by lower speeds, stop-and-go travel conditions, or queuing, such as behind ramp meters or heavily-used intersections.

Corridor
A broad geographical band that follows a general directional flow connecting major trip origins and destinations. A corridor may contain a number of streets, highways, and transit route alignments.

CPI
Consumer Price Index: Developed by the Bureau of Labor Statistics of the U.S. Department of Labor to provide a measurement of the inflation rate in the general economy of a given metropolitan area.

CTC
California Transportation Commission: A state agency that sets state spending priorities for many state and federally funded highway and transit projects and allocates funds to those projects. An eleven member commission, nine members are appointed by the Governor, one by the pro tem of the Senate and one by the Speaker of the Assembly.

CTP
California Transportation Plan: A statewide, long-range transportation policy plan that provides for the movement of people, goods, services, and information. The CTP offers a blueprint to guide future transportation decisions and investments that will ensure California's ability to compete globally, provide safe and effective mobility for all persons, better link transportation and land-use decisions, improve air quality, and reduce petroleum energy consumption.

CVO
Commercial Vehicle Operations: Management of commercial vehicle activities through ITS.

Deficiency Plan
Set of provisions contained in a Congestion Management Plan to address congestion when unacceptable levels of congestion occur. Projects implemented through the Deficiency Plan must, by statute, have both mobility and air quality benefits.

Demand Responsive Service
Transit service that is provided in response to a pre-ordered or telephone reservation.

Development Impact Fee
A fee charged to private developers, usually on a per-dwelling-unit or per-square-foot basis, to help pay for infrastructure improvements necessitated as a result of the development.

DOT
Department of Transportation: At the federal level, the cabinet agency headed by the Secretary of Transportation that is responsible for highways, transit, aviation, and ports. The DOT includes the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Federal Aviation Administration (FAA) and other agencies. The state DOT is Caltrans.

Drive Alone
See SOV.

EIR
Environmental Impact Report: An informational document, required under CEQA, which will inform public agency decision-makers and the public generally of the significant environmental effects of a project, possible ways to minimize significant effects and reasonable alternatives to the project.

EIS
Environmental Impact Statement (federal): National Environmental Policy Act (NEPA) requirement for assessing the environmental impacts of federal actions that may have a significant impact on the human environment.

EMFAC
An Emission Factor Model that estimates on-road motor vehicle emission rates for current year as well as backcasted and forecasted inventories.

Environmental Justice
The fair treatment of people of all races, cultures, and incomes during the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

EPA
Environmental Protection Agency: Federal agency established to develop and enforce regulations that implement environmental laws enacted by Congress to protect human health and safeguard the natural environment.

E-work
See Telework.

Expressway
Similar to a freeway, but with some signal-controlled intersections.

FAA
Federal Aviation Administration: The federal agency that regulates the use of airspace and is responsible for evaluating and disseminating information about hazards and obstructions to aviation. FAA is a component of the federal DOT.

Farebox Recovery Ratio
The proportion of operating expenses covered by passenger fares. The ratio divides the farebox revenue by the total operating expenses.

Farebox Revenue
The value of cash, tickets, and pass receipts given by passengers for payment for rides on public transit.

Fare Structure
The varying fees charged to use transit, normally differing by the age of the transit rider, single versus multiple transit trips, the type of service (Trolley, express bus, etc.), and, for some types of services, the length of the trip.

FAST Act
Fixing America's Surface Transportation: On December 4, 2015 President Obama signed into law a new five-year transportation authorization bill, the FAST Act. The FAST Act authorizes $305 billion over fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail and research, technology, and statistics programs. The FAST Act maintains our focus on safety, keeps intact the established structure of the various highway-related programs we manage, continues efforts to streamline project delivery and, for the first time, provides a dedicated source of federal dollars for freight projects.

Financially Constrained
Expenditures are said to be financially constrained if they are within limits of anticipated revenues.

Fiscal Year
The 12-month period established for budgeting purposes. In California, the commonly accepted fiscal year for governmental purposes begins on July 1 and ends on June 30.

Fixed Route Service
Service provided on a regular, fixed-schedule basis along a specific route, with vehicles stopping to pick up and deliver passengers to specific locations.

FRA
Federal Railroad Administration: Federal agency created to promulgate and enforce rail safety regulations, administer railroad assistance programs, conduct research and development in support of improved railroad safety and national rail transportation policy, and consolidate government support of rail transportation activities.

Freeway
A divided highway with limited access and grade-separated junctions, and without traffic lights or stop signs.

FSP
Freeway Service Patrol: An ongoing program to provide a roving tow and motorist aid service, with technicians who assist or remove stranded and disabled vehicles on designated urban freeways and state roadways during peak period commuting hours. It is operated by the RTPAs in cooperation with Caltrans and the California Highway Patrol.

FTA
Federal Transit Administration: The federal agency responsible for administering federal transit funds and assisting in the planning and establishment of areawide urban mass transportation systems. As opposed to FHWA funding, most FTA funds are allocated directly to local agencies, rather than to Caltrans.

Gas Tax
The tax applied to each gallon of fuel sold. Currently, the federal government has imposed a per- gallon tax of 18.4 cents, and the state has imposed a per-gallon excise tax of 35.3 cents per gallon which under SB 1 increases to 47.3 cents per gallon beginning November 1, 2017.

General Plan
A policy document required of California cities and counties by state law that describes a jurisdiction's future development in general terms. All land use decisions must be derived from the document, which includes text, maps, and other information. The General Plan contains a set of broad policy statements about the goals for the jurisdiction, and it also must contain nine mandatory elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, Safety, Environmental Justice and Air Quality.

GHG Emissions
Greenhouse Gas Emissions: Gases that influence global climate change. They include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

GIS
Geographic Information System: Mapping software that links information about where things are with information about what things are like. GIS allows users to examine relationships between features distributed unevenly over space, seeking patterns that may not be apparent without using advanced techniques of query, selection, analysis, and display.

GNP
Gross National Product: An estimate of the total value of goods and services produced in any specified country in a given year. GNP can be measured as a total amount or an amount per capita.

Grade Crossing
A crossing or intersection of highways, railroad tracks, other guideways, or pedestrian walks, or combinations of these at the same level or grade.

Greenfield
Also known as "raw land," land that is privately owned, lacks urban services, has not been previously developed, and is located at the fringe of existing urban areas.

HCD
State Department of Housing and Community Development: The state agency responsible for, among other things, overseeing the development of the Regional Housing Needs Allocation (RHNA) and the General Plan Housing Elements for all the local jurisdictions in the region.

HCM
Highway Capacity Manual: A resource for generating technical information that is used by

transportation planners, designers, and operators. The materials contained in the HCM represent a collection of state of the art techniques for estimating level of service for many transportation facilities and modes.

HCP
Habitat Conservation Plan: Established under Section 10 of the Endangered Species Act to allow development to proceed while protecting endangered species.

HDT
Heavy Duty Truck: Truck with a gross vehicle weight of 8,500 pounds or more.

Heavy Rail
Railroad services that operate in a mixed-user environment on conventional railroad tracks. Heavy rail services include freight trains, Amtrak, Commuter Rail and most conventional rail transit systems.

Highway
A general term usually referring to a state or federally-designated urban or rural route, designed to accommodate longer trips in the region.

Household
All people living in a housing unit, regardless of whether they are related to one another. Housing units include houses, condominiums, apartments, and mobile homes.

HOV
High Occupancy Vehicle: A vehicle that carries more than one occupant. Examples include carpools, vanpools, shuttles, and buses.

HOV Lane
High Occupancy Vehicle Lane: An exclusive road or traffic lane that typically has a higher operating speed and lower traffic volumes than a general purpose or mixed-flow lane. In California, vehicles that typically can use HOV lanes include carpools, vanpools, buses, other multi-passenger vehicles, motorcycles and emergency vehicles.

HPMS
Highway Performance Monitoring System: A federally mandated program designed by FHWA to assess the performance of the nation's highway system.

HSR
High Speed Rail: Railroad passenger service that, as defined by California state law, operates at maximum speeds of more than 200 miles per hour. Because of the speed, high speed rail normally operates on intercity (longer) routes.

HUD
U.S. Department of Housing and Urban Development: Federal agency charged with increasing homeownership, supporting community development, and increasing access to affordable housing free from discrimination.

ICM
Integrated Corridor Management: A collaborative, cooperative, and coordinated system in which corridor partners work together to improve mobility and safety across modes and networks for people and goods.

IGR
Intergovernmental Review Process: The review of documents by several governmental agencies to ensure consistency of regionally significant local plans, projects, and programs with AMBAG's adopted regional plans.

Incident
An incident may be a traffic collision, stalled vehicle, load spillage, or other event that affects one or more lanes of traffic.

Integrated Performance Management Systems Network
This network will connect the region's local transportation management centers, and will enable agencies to cooperatively manage the overall performance of the local and regional transportation systems.

Intercity Rail
Railroad passenger service that primarily serves longer trips, such as those between major cities or regions.

Intermodal
Passenger or freight transportation services which involve or use more than one type of transportation facility (or mode). Aviation, automobile, rail and transit are travel modes.

ITS
Intelligent Transportation Systems: A general classification of transportation technologies, management tools, and services made possible through advances in computer and communication technologies. ITS is used to make transportation systems safer and more efficient.

JPA
Joint Powers Authority: Two or more agencies that enter into a cooperative agreement to jointly wield powers that are common to them. JPAs are a vehicle for the cooperative use of existing governmental powers to finance and provide infrastructure and/or services in a cost-efficient manner.

LEP
Limited English Proficiency

Light Rail
A passenger transportation system of self-propelled vehicles that operate over steel rails located in the street, on an aerial structure, or on a separated right of way.

LIM
Low Income and Minority communities

LNG
Liquefied Natural Gas: An alternative liquid fuel derived from a natural gas that is cooled to below its boiling point so it becomes a liquid.

LOS
Level of Service: A qualitative measure describing operational conditions within a traffic stream and motorists' perceptions of those conditions. LOS ratings typically range from LOS A, which represents free-flow conditions, to LOS F, which is characterized by heavy congestion, stop-and-go traffic, and long queues forming behind breakdown points.

Low Income Community of Concern
A Low Income Community of Concern is any community in which 33 percent or more of households are low income, and/or 10 percent or more of the households are severely overcrowded, and/or 25 percent or more of the population is in poverty.

LRT
Light Rail Transit: A type of transit vehicle and service that uses steel wheels and operates over railroad tracks. LRT systems generally serve stations averaging one-mile apart, are not remotely controlled, and can operate in a separated right of way or on public streets.

MAP-21
Moving Ahead for Progress in the 21st Century: On July 6, 2012 President Obama signed into law a new two-year transportation authorization, MAP-21. The first long-term highway authorization enacted since 2005, MAP-21 creates a streamlined, performance-based and multimodal program to address the challenges facing the U.S. transportation system.

MBARD
Monterey Bay Air Resources District: MBARD is a government agency that regulates sources of air pollution within the tri-county region.

Minority Community of Concern
A Minority Community of Concern is any community in which 65 percent or more of the population is non-White.

Mixed Flow
Traffic movement having autos, trucks, buses and motorcycles sharing traffic lanes.

Mixed Use
The combining of commercial, office and residential land uses to provide easy pedestrian access and reduce the public's dependence on driving. It can be implemented in multi-story buildings containing businesses and retail stores on the lower floors and homes on the upper floors.

Mode
A particular form of travel (e.g., walking, bicycling, traveling by automobile, traveling by bus, or traveling by train).

Mode Split or Mode Share
The percentage of trips that use each of the various travel modes.

Model
A mathematical description of a real-life situation that uses data on past and present conditions to make a projection.

MPO
Metropolitan Planning Organization: A federally-designated agency that is responsible for regional transportation planning in each metropolitan area. AMBAG is the MPO for the Monterey Bay Area.

MTIP
Metropolitan Transportation Improvement Program (MTIP): A five-year listing of major highway, transit, and active transportation projects including project costs, funding sources and development schedules. Compiled from priority lists submitted by local jurisdictions and transportation agencies.

MTP
Metropolitan Transportation Plan: A minimum 20-year plan that is required by state and federal law to guide the development of the region's transportation system.

NCCP
Natural Communities Conservation Plan: Program under the State Department of Fish and Game that uses a broad-based ecosystem approach toward planning for the protection of plants, animals and their habitats, while allowing compatible and appropriate economic activity.

Nominal Dollars
Actual dollars expended/received in a specific year without adjustments for inflation/deflation.

NTD
National Transit Database: The Federal Transit Administration's (FTA) national database for transit statistics.

O&M
Operations and Maintenance: The range of activities and services provided by the transportation system and for the upkeep and preservation of the existing system.

Off-Peak Period
The time of day when the lowest concentration of vehicles or transit riders are on the road or on another transit facility. These times are generally before 6 A.M., between 9 A.M. and 3 P.M., and after 7 P.M.

Open Space
Generally understood as any area of land or water which, for whatever reason, is not developed for urbanized uses and which therefore enhances residents' quality of life. However, note that each county and city in California must adopt an open space element as part of its general plan. The element is a statement of local planning policies focusing on the use of unimproved land or water for: 1) the preservation or managed production of natural resources, 2) outdoor recreation, and 3) the promotion of public health and safety. Therefore, open space will be defined by each jurisdiction based on their own unique resources and environment.

Opportunity Areas
Opportunity Areas are places in the region with the highest chance for successful sustainable growth in the future; they are generally located where Transit Priority Areas (TPAs) and Economic Development Areas (EDAs) overlap.

OWP
Overall Work Program: AMBAG develops an OWP annually, describing proposed transportation planning activities for the upcoming fiscal year, including those required by federal and state law.

Paratransit
A specialized, door-to-door transport service for people with disabilities who are unable to use standard bus or commuter rail services.

Park-and-Ride
A travel option in which commuters park their personal vehicles in a public lot or other location and continue their trip via carpool, vanpool, or transit.

Park-and-Ride Lot
A facility where individuals can meet to utilize carpools, vanpools, and public transit to continue traveling to their destinations.

Passenger Miles
The total number of passengers carried by a transit system, multiplied by the number of miles each passenger travels. Passenger miles are normally measured on a daily or annual basis.

Peak Period
The time of day when the highest concentrations of vehicles or transit riders are on the road or on another transit facility. The morning peak period is generally considered to be from 6 A.M. to 9 A.M.; the afternoon peak period is from 4 P.M. to 7 P.M.

PEIR
Program Environmental Impact Report: Environmental review process used to evaluate the potential environmental effects of large-scale plans or programs.

PeMS
Performance Monitoring System: The PeMS program uses urban freeway data collected through freeway loop detectors to provide current, ongoing data on freeway volumes and speeds that can be displayed graphically and exported to other monitoring applications.

Performance Measures
Objective, quantifiable measures used to evaluate the performance of the transportation system, and to determine how well planned improvements to the system are achieving established objectives.

Person Trip
Any person's one-way travel to any destination for any purpose. More specifically, a trip is the one- way movement from an origin to a destination, whereby each trip has two trip ends.

Place Types
A set of land use designations common to general plans for the three counties and 18 cities in the AMBAG region. These place type categories are meant to act as a common "language" so that the diverse general and specific plans across the Monterey Bay Area may be compared in a consistent and standard manner.

PSR
Project Study Report: A preliminary engineering report that documents agreements on the scope, a set of reasonable and feasible alternatives, the schedule, and the estimated cost of a project so that the project can be included in a future State Transportation Improvement Program (STIP).

PTA
Public Transportation Account: Provides funding for local transit, as outlined in the Transportation Development Act. The sole source of revenue for this Account is from the state sales tax on diesel fuel.

Public Transit
See Public Transportation.

Public Transportation
Travel by bus, rail, or other vehicle, either publicly or privately owned, that provides general or specialized service on a regular or continuing basis.

Ramp Metering
Electronic traffic control devices located at freeway access points to meter the entry of vehicles onto the freeway. The goal is to help optimize the movement of persons and vehicles.

Reverse Commute
Travel in the direction opposite to the main flow of peak period commute traffic.

RHNA
Regional Housing Needs Allocation: Quantifies the need for housing within each jurisdiction of the AMBAG region based on population and job growth projections. Communities then address this need through the process of completing the housing elements of their General Plans.

Ridership
The number of transit users, usually reported as a yearly total or as the average for a normal workday.

Ridesharing
A mode of travel in which at least two individuals share the same vehicle to get to their destination. Rideshare vehicles include private automobiles, privately owned and operated vans and buses, as well as public transportation.

Route Miles
The length of a transit route or service, multiplied by the number of trips made by transit vehicles or trains each day.

ROW
Right of Way: The land required for the construction and/or operation of transportation infrastructure.

RTIP
Regional Transportation Improvement Program: The state required multiyear capital improvement program for transportation projects using state and federal funds.

State Highway
A state-designated roadway. May be urban or rural.

Safe Routes to School
A state and federal program that funds education, encouragement campaigns, and infrastructure improvements to help decrease traffic congestion around schools and to make the journey to school on foot or bike more feasible and safer for children.

Safe Routes to Transit
A program that funds strategies to address the challenges of getting to and from a transit stop or station. These strategies include first-mile/last-mile solutions such as enhanced pedestrian crosswalks near transit stations, bicycle lanes that connect to transit and bike parking at transit stations, feeder-distributor bus/shuttle routes, car sharing/station cars and ridesharing.

SAFETEA-LU
Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users: Federal legislation signed into law on August 10, 2005 authorizing $244.1 billion for Federal surface transportation programs for highways, highway safety, and transit for the five-year period between 2005 and 2009. At the time of this writing, Congress had not yet passed a re-authorization of a multi-year transportation bill. In its place, Congress has approved a series of extensions, known as Continuing Resolutions, to keep federal funds flowing at the last approved annual funding level to SAFETEA-LU formula programs.

SB 1
Senate Bill 1 (Chapter 5, Beall, 2017): known as The Road Repair and Accountability Act of 2017 provides the first significant, stable and ongoing increase in state transportation funding totaling an estimated $5.2 billion annually. SB 1 created the Road Maintenance and Rehabilitation Account, and the Road Maintenance and Rehabilitation Program. Programs funded from this account include the Local Partnership Program, the Active Transportation Program, the State Highway Operation and Protection Program (SHOPP) and local streets and roads apportionments. Other programs funded in SB 1 include: increases in State Transit Assistance (STA), Solutions for Congested Corridors Programs, Trade Corridors Enhancement Account and State Transportation Improvement Program (STIP) stabilization.

SB 32
Senate Bill 32 (Chapter 249, Pavley, 2016): The California Global Warming Solutions Act of 2006 (known as AB 32) designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to adopt rules and regulations in an open

public process to achieve the maximum, technologically feasible, and cost-effective greenhouse gas emissions reductions.SB 32 is an extension of AB 32 to require the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.

SB 45

Senate Bill 45 (Chapter 622, Statutes of 1997, Kopp): Established the current STIP process and shifted control of decision-making from the state to the regional level.

SB 375

Senate Bill 375 (Chapter 728, Steinberg): Established to implement the state's greenhouse gas (GHG) emission-reduction goals, as set forth by AB 32, in the sector of cars and light trucks. This mandate requires the California Air Resources Board to determine per capita GHG emission- reduction targets for each metropolitan planning organization (MPO) in the state at two points in the future—2020 and 2035. In turn, each MPO must prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG reduction target through integrated land use, housing and transportation planning.

SCS

Sustainable Communities Strategy: A new element of the MTP, as required by SB 375, that demonstrates how development patterns and the transportation network, policies, and programs can work together to achieve the state's targets for reducing regional greenhouse gas (GHG) emissions from cars and light trucks in a region.

Self Employed

Self Employed workers are those who work for themselves, rather than for an employer (i.e. even if engaged in contract work for another company, a self-employed worker is, for reporting purposes, his or her own employer). Self Employed workers may work in any industry or occupation, and the same occupation may be classified differently depending on the compensation arrangement. For example a hair stylist who is on the payroll at a salon would be counted among industry employment while one who works independently and rents space at a salon would be counted as self-employed. Examples include freelance writers, housekeepers, day laborers, babysitters, consultants, and others.

SHOPP

State Highway Operation and Protection Program: Caltrans' three-year program to addresstraffic safety, roadway rehabilitation, roadside rehabilitation, or operations needs on the state highway system.

Smart Growth

A compact, efficient, and environmentally-sensitive pattern of development that provides people with additional travel, housing, and employment choices by focusing future growth away from rural areas and closer to existing and planned job centers and public facilities, while preserving open space and natural resources.

Social Equity

Social Equity means ensuring that all people are treated fairly and are given equal opportunity to participate in the planning and decision-making process, with an emphasis on ensuring that traditionally disadvantaged groups are not left behind.

SOV
Single Occupant Vehicle: Privately operated vehicle that contains only one driver or occupant.

STIP
State Transportation Improvement Program: A multi-year program of major transportation projects to be funded by the state. The CTC adopts the STIP every two years, based on projects proposed in RTIPs and from Caltrans.

STA
State Transit Assistance: State funding program for mass transit operations and capital projects. Current law requires that STA receive 50 percent of PTA revenues.

STBG
Surface Transportation Block Grant: Provides flexible funding that may be used by states and localities for projects on any federal-aid highway, bridge projects on any public road, transit capital projects and intracity and intercity bus terminals and facilities. A portion of funds reserved for rural areas may be spent on rural minor collectors.

TAZ
Traffic Analysis Zone: a geographic unit used for transportation modeling. A TAZ is smaller than a census tract and a Trip Distribution Zone (TDZ).

TDA
Transportation Development Act: State law enacted in 1971 that provided a 0.25 percent sales tax on all retail sales in each county for transit, bicycle, and pedestrian purposes. In non-urban areas, funds may be used for streets and roads under certain conditions.

TCRP
Transportation Congestion Relief Program.

TDM
Transportation Demand Management: Programs to reduce demand by automobiles on the transportation system, by promoting telecommuting, flex-time, bicycling, walking, transit use, staggered work hours, and ridesharing.

Telework
Teleworkers or e-workers are employees who conduct some or all of their daily work activities from their home or from a remote site other than the normal work site, in order to avoid commuting during peak periods.

Title VI of the Civil Rights Act
Title VI of the Civil Rights Act states that “no person in the United States, shall, on the grounds of race, color or national origin be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance.”

TPP
Transit Priority Project: Under SB 375, a project is exempt from CEQA if it (1) qualifies as a “transit priority project” and (2) meets the “sustainable communities project” requirements as declared by the legislative body of the local jurisdiction.

TransCAD
A computer model that simulates travel demand and its distribution to facilities within a geographic area.

Transportation Network Companies
Transportation Network Companies (TNCs) are organizations that provide pre-arranged transportation services for compensation using an online-enabled platform, usually via mobile apps, to connect passengers with drivers using the driver's personal vehicle. TNCs include companies such as Lyft, Uber and Sidecar.

Transit
See Public Transportation.

Transit Management System
A field operations management system that enables improved transit route planning, scheduling, and performance monitoring.

Transit Oriented Development
Residential and employment growth that occurs near existing and planned public transit facilities.

Trip
See Person Trip and/or Vehicle Trip.

TSM
Transportation Systems Management: Strategies that allow transportation systems to operate in a way that maximizes the number of people traveling in a corridor or facility. These strategies include traffic flow improvements, ramp metering, tracking public transit vehicles; and keeping travelers informed.

U.S. DOT
United States Department of Transportation: The federal cabinet-level agency with responsibility for highways, mass transit, aviation, and ports and headed by the Secretary of Transportation. The DOT includes the Federal Highway Administration and the Federal Transit Administration, among other agencies.

U.S. EPA
U.S. Environmental Protection Agency: The federal agency charged with setting policy and guidelines, and carrying out legal mandates, for the protection of national interests in environmental resources.

Vanpool
A vehicle operating as a ridesharing arrangement, providing transportation to a group of individuals typically traveling directly between their homes and employment locations within the same geographic area.

V/C Ratio
Volume to Capacity Ratio: The volume of traffic divided by the capacity of a transportation facility. Traffic volume is defined as the number of vehicles passing (or projected to pass) a point or section of roadway in a given time interval. Capacity is defined as the maximum number of vehicles that

reasonably can be expected to traverse that point or section of roadway during the same time period under prevailing roadway, traffic, and control conditions.

Vehicle Trip

A single vehicle movement from the beginning of travel to its destination, in a vehicle that is motor-driven (e.g., automobiles, motorcycles, trucks, buses and vans).

VMT

Vehicle Miles Traveled: On highways, a measurement of the total miles traveled by all vehicles in the area for a specified time period. It is calculated by the number of vehicles times the miles traveled in a given area or on a given highway during the time period. In transit, the number of vehicle miles operated on a given route or line or network during a specified time period.

Work Trip

Any “person” or “vehicle” trip whose purpose (on at least one trip end) involves work or work-related business.

Monterey Bay 2040

Moving Forward

Sustainability.
Mobility.
Accessibility.
Economy.
Social Equity.