EMPOWERING I-80 COMMUNITIES
TODAY AND TOMORROW

A2. I-80 Corridor System Master Plan

Economic Analysis

Appendix A.2

I-80 Corridor System Master Plan: Economic Analysis

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I-80 CSMP Economic Analysis – Introduction

Interstate 80 serves as a vital east-west trade corridor and major commuter freeway through the western United States. The portion of the I-80 corridor under review stretches from the San Francisco Bay Area through Cheyenne, Wyoming.

The economic down turn that occurred last decade changed the way policy makers view potential growth and the infrastructure modifications that may be necessary to manage that growth. New emphasis on linking land use and transportation planning combined with diminishing transportation funding requires a better understanding of how local community economies are linked to and dependent on regional economies, and vice versa.

The first order of business in developing an I80 corridor system master plan was to gain an understanding of the local and regional economies of all communities along the corridor. RCG consulting, led by Principal Researcher/Analyst John Restrepo, traveled the corridor in the spring of 2012 and conducted interviews with community experts in economic development to develop a comprehensive accounting of historical trends along with future plans and potential. The final report combined the results of those interviews with detailed analysis to create a final report that was used throughout the study to inform conversations across a wide range of topics.

This economic analysis report was intended to outline the I-80 corridor's role in the fiscal health of the western region. Glimpses into past regional economic strategies and how the I-80 corridor supported them are designed to provide guidance to future policy-makers.

An executive summary and the entire report are included in this appendix. An executive summary that explains how the report was used in the evaluation of the 2002 Washoe freeway corridor study evaluation is included in the appendix as well.

I-80 Corridor System Master Plan Economic Assessment
Executive Summary

Interstate 80 (I-80) serves as a vital east-west trade corridor and major commuter freeway through the western United States. The portion of the I-80 corridor under review stretches from the San Francisco Bay Area through Cheyenne, Wyoming.

Communities along this stretch are diverse and the demographics drastically change, however, there is one consistency: They all view I-80 as an essential freeway whether it be for tourism or commercial trade purposes.

The San Francisco Bay Area on the western tip of I-80 encapsulates these roles. **San Francisco** is a tourism destination with shallow-water ports that support cruise ships and commuter ferries. Across the Bay, **Oakland's** deep-water ports are vital to the trade industry, connecting with inland hubs along rail lines.

I-80 is the artery that flows east, serving several cities and hamlets on the path to Cheyenne, Wyo. In the past two decades, the population in urban and rural communities along this corridor exploded, sparking tremendous economic growth and changing industry landscapes – trends that are expected to successfully continue as the I-80 Corridor Master Plan is reviewed and revised.

This report is intended to outline the I-80 corridor's role in the fiscal health of the western region. Glimpses into past regional economic strategies and how the I-80 corridor supported them are designed to provide guidance to future policy-makers.

Strengths, weaknesses, opportunities and challenges facing major communities along the corridor are outlined in this report and are summarized in Table ES-1 on page 6 of this document.

The California cities are part of the "Northern California Mega Region" – meaning each community has boundaries but they are all reliant on each other when it comes to a healthy economy and workforce in Northern California. For example, San Francisco's population is 800,000, but it is in the center of the 9-million-person Mega region, which is expected to grow to 15 million in the next two decades.

Some of that growth will derive from organic communities planned on Treasure Island – which dissects the I-80 San Francisco Bay Bridge – and a mixed-use neighborhood at Hunter's Point.

Across the Bay in Oakland, there are concerns about a lack of housing because the cost of living is less expensive than in San Francisco and Silicon Valley. The workforce generally lives and works in the same area, putting major demands on I-80 during peak hours.

I-80 is the aorta of east-west travel through the Bay Area. High-density developments that flank I-80 pose challenges for major upgrades to the freeway, leading some to believe an alternative freeway should be built in the future.

Equidistant between the capital and the Bay Area is the city of **Vallejo**, **Calif**., which is home to two prisons and Travis Air Force Base. Vallejo is a one-hour drive to each of these cities along I-80. Vallejo is also the point of confluence for other major freeways, including Highway 29, which leads to Napa Valley, and Interstate 780 – a highway that also leads to the Bay Area.

The city is working on attracting newer industries because land is cheaper when compared to the Bay Area and Sacramento regions. Specifically, Vallejo is targeting health care providers, data centers, back-office operations, and specialized manufacturing businesses.

When it comes to growth, one of the greater challenges the town faces is water. There has been a battle brewing between Northern and Southern California over the Sacramento River's water supply.

Sacramento sits in the crosshairs of I-80 and Interstate 5, which is the western U.S. region's primary north-south corridor. Sacramento is home to one of the most concentrated markets in the nation and it is only expected to expand.

Several primary developments could add to the capacity of I-80 in future years. Multi-million-dollar improvements are underway at Sacramento International Airport. Because the airport services major cities across the United States, it has the potential to become an inland hub. Sacramento also has deep-water ports and the river connects to the San Francisco Bay Area. There have been discussions about barge container traffic flowing between Oakland's ports and Sacramento. It is also anticipated that large office complexes and developments will continue to line I-80.

Both the Union Pacific (UP) and the Burlington Northern Santa Fe (BNSF) rail lines are increasing capacity in nearby Stockton, which could have an effect on cargo shipments from the airport and the ports along the Sacramento River.

These potential developments in Sacramento threaten to overburden I-80. The expansion of the UP and BNSF railroads will undoubtedly affect the **Reno/Sparks** region, which both companies already serve. The population of the region has increased two-fold since 1990; between the two cities, the population is 309,000. The area quickly transformed into a logistics hub; 22 percent of its workforce is involved in the trade, transportation, and utilities sector. That industry is likely to grow – Reno-Sparks currently serves 11 western states with a total population of 73 million.

Although the terrain and existing developments limit the amount of growth, the Reno-Tahoe International Airport is a designated alternative airport for Air China cargo shipments.

Also, the Tahoe-Reno Industrial Center along I-80 consists of 30,000 acres of entitled sites pre-approved for manufacturing and distribution uses.

The logistics industry is likely to be the push behind Reno-Sparks growth. Because of that, major infrastructure improvements will be needed between the region and Southern California. In addition to the logistics hub, Apple announced in 2012 its plans to build a $1 billion data center just north of I-80 and the Industrial Center.

One of the most pressing challenges facing the Reno-Sparks region is the planning, design, and construction of a business bypass that will provide smoother access to the north of Reno's urban core. One reason for this alternative is the limited space for widening or improving I-80 through the heart of this booming region.

The growing industries have the potential to congest I-80 to the point that it interferes with east-west movements to the Bay Area ports and markets. Telecommunication and fiber optics services will also need to be upgraded in the near future.

Nearby **Fernley**, **Nev**., has strong potential for growth, with ample land for large-scale residential and commercial development. Fernley, considered a bedroom community to Reno, also relies heavily on the logistics industry and is home to the Crosswords Commerce Center, a 5,000-acre master-planned industrial park that is served by rail lines. Future tenants to the park could be drawn by a new I-80 interchange that provides better access to the park.

Fifteen years ago, Amazon opened a 750,000-square-foot warehouse in Fernley. The city relies heavily on trucking and rail service for its economic development strategies. City officials view the extension of the Nevada Pacific Parkway – which links I-80 to Highway 50 – as a vital access improvement to the south. That critical stretch of roadway will help the labor force better access employment centers.

Gold mining is the heart of **Elko**, **Nev.'s** economy and it is critical for seamless exportation of the gold and import of equipment to keep the mines operating efficiently. Officials recently identified a gold reserve between Wells and Wendover that is estimated to contain a 30-year reserve, meaning mining will continue to dominate the town's economy for decades to come. As an outcome to this finding, Elko will become the administrative and logistic center for future mines.

The city's strategy is to identify manufacturing components and chain companies to support the mining industry. Two industrial parks have been classified as such – a 180-acre site on the east side of town and a 1,500-acre location on the west side of town. The eastside location is in need of an I-80 interchange; the larger site has an interchange that is considered inadequate as it cannot carry the volumes and loads.

Trucks working from an east side "rail port" must make their way into town on an old highway to reach I-80 because the interchange does not meet weight specifications.

Elko sits in the economic sphere of **Salt Lake City**, which is located at the crossroads of I-80 and I-15. Salt Lake City adopted an economic development strategy through the Governor's Office of Economic Development, which was created in the early 2000s. The strategy likely helped the state weather the economic storm.

Salt Lake City is not only a recreation haven, but it has significant plans for massive master-planned communities. The most recent proposal is for a 2,000-acre community adjacent to the I-80 corridor. There are also 10,000 acres of agricultural land to the north that is being considered for a higher-density community.

Light manufacturing and logistics is the focus of the future of Salt Lake City's economy. The Union Pacific Railroad has three Class I lines converging in Salt Lake City with direct connections to all the deep-water seaports in Southern and Northern California and the Seattle-Tacoma area. The Railroad operates a $90 million multi-modal container yard on 240 acres in the northeast quadrant of I-80 and I-15.

Logistics employment prevails along the I-80 corridor, supporting 70 million square feet of distribution facilities.

Outdoor recreation is another major economic activity in Salt Lake. The ski resorts provide a huge boost to the local economy in the winter months, but it also takes its toll on I-80. While regional rail is being planned to alleviate traffic in all directions from the city's core, I-80 will probably take the brunt of traffic from all the new areas of Salt Lake City.

Rock Springs, Wyo. is also in the economic sphere of Salt Lake City and, like Fernley, mining is the primary revenue-generating industry. In fact, about 80 percent of all employment is related to the coal mining/extraction sector.

About 72 unit trains move along the UP mainline each day.

Rock Springs provides access via I-80 and U.S. Highway 191 to Flaming Gorge National Recreation Area south of town and Yellow Stone Park to the north. The community is becoming more of a recreation destination, making signage along I-80 critical to this new source of revenue.

I-80 is the transportation life-blood of **Laramie, Wyo**., whose primary employer is the University of Wyoming. The stretch of freeway that traverses through the college town will likely take the brunt of future development because it is the primary freeway.

A business incubator is associated with the university and it is estimated that as many as 60 technology-based companies operate in the town. A portion of land has been identified as a technology park with data centers as the primary target market. Verizon communications is planning its 990,000-squre-foot Western Mega Data Center on 180 acres within the technology park.

Cheyenne, Wyo. is situated at I-80 and Interstate 25 and is also well served by UP and BNSF railroads. It is considered part of the "Front Range" economic corridor, which includes more expensive cities such as Denver, Colo.

Cheyenne has two significant industrial parks of 917 acres and 620 acres. Past economic efforts focused mainly on logistics, which resulted in a 1 million-square-foot Wal-Mart high-velocity distribution center.

Seven universities are within an hour's drive of Cheyenne, the medical industry is increasingly affecting the economy, and Ecostar recently opened an uplink facility to their own satellites. In addition, a $17 million National Center for the Atmospheric Research supercomputer center is becoming operational, Microsoft is developing a data center and Swan Ranch – a 4,000-acre rail-served industrial park at I-80 and I-25 – is in the preliminary stages of development. That industrial park is viewed as the driving force behind Cheyenne's economy as manufacturing companies wishing to serve the entire nation will be sought out for park space.

Table ES-1. Strengths, Weaknesses, Opportunities and Threats Summary

	Strengths	Weaknesses	Opportunities	Threats
San Francisco Area	• Diversity of industry • Existing knowledge base • Educated workforce • Research capacity • Venture capital • High incomes	• Poor job growth • Costly office rent • Costly housing • Punitive tax structure • Burdensome regulatory environment	• Improved cost of living: more attractive for talented workers • High university enrollment rate: continuation of a highly skilled workforce • Trade with Asia, whose purchasing power is expected to significantly increase • Entrepreneur support system and sharing services: solid local business outlook	• Underperforming public schools • Funding restrictions for higher education • Lack of funding for infrastructure improvements • Prospect of higher tax rates
Sacramento, CA	• CA's most affordable metro area • Stable government-related employment • Growth of clean energy industry • Top research universities • Above average workforce education • Food process manufacturing	• High unemployment • Lower wages than other CA cities • Burdensome tax and regulatory structure	• Low rent & labor costs: growth opportunity for manufacturing • Seismic stability: attractive for IT-related operations • Biotechnology: upcoming economic growth • Transportation infrastructure: ideal for distribution • Former military installations: office and industrial space	• Underperformance of K-12 education system • Declining public support for higher education • Uncertain tax environment

	Strengths	Weaknesses	Opportunities	Threats
Reno, NV	• Economic development strategy • Proximity to CA and other western markets • Low-tax climate • Affordable housing • Affordable office space • Research capacity • Natural beauty	• High unemployment • Under-developed clusters other than leisure and hospitality • Lack of entrepreneur support system • Reliance on consumer spending for government operations • Limited venture capital availability • Underperforming K-12 education system	• Numerous entrepreneurs: sign of future growth • Commercializing research: strong innovation capacity • Downtown living: economic diversification and transit-oriented development • Potential for an inland port: multimodal distribution • Targeted growth sectors: diversification	• Strain on public resources and education • Overly dependent upon consumption industries • Gaming vulnerable to outside competition • College graduates leaving • Limited support for higher education
Salt Lake City, UT	• Low unemployment rate • Resilient economy • University of Utah • College graduate retention rate • High-performing K-12 education system • Multi-lingual workforce • Low energy costs • Light rail • Good business tax climate	• Low income per capita • Higher office rent rates than peer cities • Distance from other major metro areas	• Projected growth: strong expected recovery from economic downturns • College of Applied Technology: excellent workforce training • Centers of Excellence: new technology facilitation • Distribution hub: great home for trucking companies • Angel network: ongoing source of venture capital • Wayne Brown Institute • Cluster initiative: diversification	• Low financial commitment to K-12 education
Cheyenne, WY	• Low unemployment rate • Strong economic recovery • Low energy costs • Good business tax climate • Affordable office rent • Top K-12 performance • University of Wyoming	• Low wages • Highly dependent on consumption for government revenue	• Oil severance and consumption-based taxes: sustained government revenues • Mixed-use development and smart growth: quality of life • Entrepreneurial assistance and workforce/professional development: business growth	• College graduates leaving region • Restrictive land-use regulations

In conclusion, cities along the I-80 corridor are in various stages of rebounding from the recession, but the logistics industry plays a significant role in each community. While rail lines and cargo ships move goods, it is clear that I-80 remains the key freeway for the trucking industry. Without improvements in some areas, the economy could be adversely affected.

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Gaming & Hospitality
Public Policy Research
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I-80 Corridor System Master Plan

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Section 1: Introduction and Overview of Study Area

1.1 Introduction, Purpose and Organization

The Western I-80 Corridor ("the Corridor") is that portion of I-80 extending more than 1,100 miles through the states of California, Nevada, Utah and Wyoming. It links together major population centers, along with a variety of other smaller urban and rural communities.

RCG Economics ("RCG') was retained by Atkins Global ("AG") to assist with analyzing the "Economic Development" component of the Master Plan, which at its core is a Socio-Economic Analysis. RCG will analyze potential economic benefits of the identified economic development strategies and activities along the Corridor. RCG will further analyze potential socioeconomic conditions and trends resulting from economic development activity and strategies along the Corridor, in addition to market conditions and potential development opportunities. RCG's analyses will include evaluations of existing development patterns.

RCG's work can be defined as a socioeconomic and economic development assessment ("The Study") that evaluates the Corridor's existing and future socioeconomic patterns and trends between Cheyenne, Wyoming in the east to San Francisco, California in the west. These patterns and trends potentially exert a major influence on future travel demands in the Corridor.

The Study combines regional economic research, field work, and discussions with key stakeholders to get a more full understanding of how the region has changed in recent years and the economic development strategies currently being pursued by the region's communities. Based on our findings, an overview of the Western I-80 Corridor's economic position was prepared by indentifying its strengths, weaknesses, opportunities, and challenges.

The remainder of the report is organized into the following three sections:

- Section 2: Socioeconomic Drivers, Growth Patterns and Trends
- Section 3: Real Estate and Economic Development Dynamics
- Section 4: Study Area SWOT Analysis

1.2 Overview of Study Area

The focus of the Study regarding the Western I-80 Corridor was on the five major urban centers - San Francisco, Sacramento, Reno, Salt Lake City and Cheyenne. For the purposes of this assessment, all statistics are specific to each Metropolitan Statistical Area ("MSA"), as defined by the White House Office of Management and Budget.[1]

The Study Area is comprised of the following five specific MSAs:

1. San Francisco-Oakland-Fremont, California ("San Francisco Area")
2. Sacramento-Arden-Arcade-Roseville, California ("Sacramento Area")
3. Reno-Sparks, Nevada ("Reno Area")
4. Salt Lake City, Utah ("Salt Lake City Area")
5. Cheyenne, Wyoming ("Cheyenne Area")

While the Study Area does not account for every community in the Western I-80 Corridor, an MSA is characterized as having high population densities at its core and including surrounding areas that have a high degree of social and economic integration with its core.[2] As such, the Study Area will account for a significant part of the larger Western I-80 Corridor.

Section 2: Socioeconomic Drivers, Growth Patterns and Trends

The drivers for prospective socioeconomic changes along the Western I-80 Corridor include demographic and employment characteristics. In this section, the Study Area's socioeconomic characteristics are examined to establish an understanding of the general outlook for the Western I-80 Corridor.

The major metropolitan areas along the Corridor are diverse in terms of population size and characteristics, income levels, housing prices and availability, workforce quality and education, ethnic composition, economic character and a number of other factors relevant to changing land use patterns and trends. This section will proceed by examining these important factors for each metro region in the Study Area.

2.1 Demographic Analysis

The demographic analysis of the Corridor's metro areas includes a profile of the size and composition of their populations, households and housing units, housing affordability; as well as population trends and forecasts.

Demographic Profiles

The metro area profiles presented in Exhibit 2.1 below provide select information on the socioeconomic characteristics for each of the subject regions using U.S. Census 2010 data.

Exhibit 2.1 Summary of Demographic Profiles: 2010

	San Francisco Area		Sacramento Area		Reno Area		Salt Lake City Area		Cheyenne Area	
	#	%	#	%	#	%	#	%	#	%
Population	**4,244,890**		**2,107,090**		**416,860**		**1,090,850**		**89,220**	
Less than 18 years	912,670	21.5%	533,490	25.3%	99,660	23.9%	321,520	29.5%	21,940	24.6%
18 years & over	3,332,220	78.5%	1,573,600	74.7%	317,200	76.1%	769,330	70.5%	67,280	75.4%
65 years & over	523,810	12.3%	245,540	11.7%	48,100	11.5%	91,150	8.4%	10,780	12.1%
Median age	38.0		35.7		36.7		30.5		36.8	
Male	2,093,530	49.3%	1,033,670	49.1%	210,680	50.5%	549,340	50.4%	44,440	49.8%
Female	2,151,360	50.7%	1,073,420	50.9%	206,180	49.5%	541,510	49.6%	44,780	50.2%
White	1,850,700	43.6%	1,199,240	56.9%	280,030	67.2%	829,770	76.1%	72,580	81.3%
Black/African American	348,210	8.2%	148,960	7.1%	9,430	2.3%	14,140	1.3%	2,110	2.4%
American Indian/Alaskan	10,590	0.2%	13,340	0.6%	5,980	1.4%	7,280	0.7%	710	0.8%
Asian	971,260	22.9%	246,440	11.7%	20,600	4.9%	33,160	3.0%	840	0.9%
Hawaiian/Pacific Islander	30,370	0.7%	15,240	0.7%	2,300	0.6%	15,600	1.4%	100	0.1%
Other	17,190	0.4%	6,230	0.3%	530	0.1%	1,130	0.1%	10	0.0%
Two or More Races	129,370	3.0%	68,190	3.2%	9,070	2.2%	17,320	1.6%	1,600	1.8%
Hispanic	887,200	20.9%	409,450	19.4%	88,930	21.3%	172,460	15.8%	11,280	12.6%
Households	**1,594,550**		**775,430**		**162,620**		**366,390**		**35,790**	
Family households	984,780	61.8%	517,460	66.7%	103,010	63.3%	260,590	71.1%	23,770	66.4%
Average household size	2.6		2.7		2.5		2.9		2.4	
Average family size	3.3		3.2		3.1		3.5		3.0	
Housing units	**1,727,450**		**861,860**		**183,740**		**400,860**		**39,670**	
Occupied housing units	1,594,550	92.3%	775,430	90.0%	162,620	88.5%	366,390	91.4%	35,790	90.2%
Owner-occupied	896,980		486,540		98,500		253,150		24,690	
Renter-occupied	697,570		288,900		64,120		113,250		11,100	
Vacant housing units	132,900	19.1%	86,430	10.0%	21,110	11.5%	34,460	8.6%	3,880	9.8%

Source: U.S. Census, 2006 - 2010 American Community Survey.

San Francisco Area

Current Population

With over 4.2 million residents in 2010, the San Francisco Area is, by far, the largest of the communities along the Western I-80 Corridor, accounting for a majority of the region's overall population.

The metro area has a smaller proportion of youth—those aged less than 18 years—compared to other study areas in the Western I-80 Corridor. Youth comprised 21.5 percent of the population in 2010. The share in the other metros ranged between

23.9 percent in Reno and 29.5 percent in Salt Lake City. Conversely, a larger cohort of San Francisco's population was adults aged 18 years plus at 78.5 percent. The region's median age was 38.0 years; the highest among the Corridor's metros. The San Francisco Area also has a more ethnically diverse population compared to the other Corridor metros - non-White racial groups comprised 56.4 percent of the population.

Households and Housing Units

As a reflection of its relatively large population, the San Francisco Area also has a proportionally large share of the Western I-80 Corridor's total households. Of the nearly 1.6 million households in the metro area, 61.8 percent were family households in 2010. This is the lowest share of family units among the Corridor's metros, which ranged between 63.3 percent in the Reno Area and 71.1 percent in the Salt Lake City Area. The average household size for the San Francisco Area was 2.6 persons.

Over 92 percent of the San Francisco Area's 1.7 housing units were occupied in 2010, the highest rate among all areas in the Corridor. By tenure, there was a proportionally higher share of renter-occupied housing units at 43.7 percent (and conversely 56.3 percent owning homes). Renter-occupied rates in the other Western I-80 Corridor metros ranged between 30.9 percent in the Salt Lake City Area and 39.4 percent in the Reno Area.

Sacramento Area

Current Population

Less than 90 miles east of San Francisco lies the Western I-80 Corridor's second most populous metropolitan area—the Sacramento Area.

Over 25 percent of Sacramento's 2.1 million residents were adults aged 18 years and over in 2010. The remaining 74.7 percent were youths under 18 years. The

share of its population aged 65 years and over was 11.7 percent. The area's overall median age was 35.7 years. Similar to the San Francisco Area, Sacramento is also ethnically diverse with non-White racial groups comprising over 43.1 percent of its population.

Households and Housing Units

The Sacramento Area had a total of 787,700 households and the average household size was 2.7 persons in 2010. Nearly 67 percent of the households in the metro area were made up of families. Sacramento also has a relatively higher share of families when compared to the other areas in the Corridor.

Of the area's 775,430 total housing units, 90 percent were occupied. Among occupied units, 62.7 percent were by owned with the remaining 37.3 percent occupied by renters.

Reno Area

Current Population

Located 132 miles east of Sacramento along the Western I-80 Corridor is the Reno Area, the second-largest metropolitan area in Nevada after Las Vegas.

The Reno Area, with 416,860 residents, has the second smallest population among the five metros in the Study Area; Cheyenne is the smallest. In 2010, approximately 24 percent of its residents in Reno were less than 18 years old and the remaining 76 percent were adults. The median age in the Reno Area was 37.1 years. The racial/ethnic makeup of the Reno Area was 67.2 percent White, 21.3 percent Hispanic and the remaining 11.5 percent were in other race categories.

Households and Housing Units

The Reno Area had a total of 162,620 households in 2010, of which 63.3 percent were family households. The share of families is relatively lower in comparison with the other Corridor metros, and is the second lowest behind San Francisco's 61.8 percent. Average household size was 2.5 persons in the Reno Area.
At 88.5 percent, the share of occupied housing units in the Reno Area was the lowest among all areas in the Western Corridor. By tenure, 60.6 percent of the Reno Area's occupied units were owner-occupied and the remaining 39.4 percent were households renting their units.

Salt Lake City Area

Current Population

In the midst of the Rocky Mountains, past the Bonneville Salt Flats, Utah's capital city lies 518 miles east of Reno along the Western I-80 Corridor. The Salt Lake City Area had a population of over 1 million in 2010 and is the third largest population base after the San Francisco and Sacramento areas.

The demographics of the Salt Lake City Area are unique in that it has a higher proportion of youth compared to other study metros in the Western Corridor. Youths under 18 comprised 29.5 percent of its population. Also, the share of population 65 years and older was proportionally smaller for the Salt Lake City Area at 8.4 percent, compared to the 11.5 percent-12.3 percent range for the Western Corridor's other study metros. A related distinguishing trait is that the median age of the Salt Lake City Area's population was significantly lower at 30.5 years. The race/ethnicity makeup of the metro area was 76.1 percent White, 15.8 percent Hispanic and the remaining 8.1 percent were accounted for in other race categories.

Households and Housing Units

There were 366,390 total households in the Salt Lake City Area in 2010. Notably, the number of persons per household for the metro area is the highest at 2.9 compared to the other study metros. Utahans generally have relatively large families with many children—something which skews the age demographics downward. Over 71 percent of the area's households were families, with the average family size at 3.5 persons.

In the Salt Lake City Area, 91.4 percent of the 366,390 housing units were occupied in 2010. By tenure, the Salt Lake Area had the highest homeownership rate among the five study metros at 69.1 percent.

Cheyenne Area

Current Population

The Cheyenne Area is a small metro area located 440 miles east of Salt Lake City along the Western I-80 Corridor.

Although Cheyenne is the state capital and most populous city in Wyoming, the area was home to only 89,220 inhabitants in 2010. The metro area's youth made up 24.6 percent of the population and conversely, 75.4 percent for those 18 years and over. The share of its population aged 65 years and over was 12.1 percent, the second highest among the study metros, behind San Francisco Area's 12.3 percent share. The median age in the Cheyenne Area was 36.8 years. The racial/ethnic makeup of the Cheyenne Area was less diverse compared to the other Western Corridor areas. Over 81 percent of its population was White, 12.6 percent were Hispanic and the remaining 6 percent were from other races or from two or more races.

Households and Housing Units

The Cheyenne Area had a total of 35,790 households in 2010, of which 66.4 percent were family households. Average household size was 2.4 persons, the smallest among the other metros examined in the Study.

Over 90.2 percent of the area's 39,670 total housing units were occupied. The Cheyenne Area also had a high rate of homeownership—of the area's total occupied housing units, 69 percent were by owners.

Housing Affordability

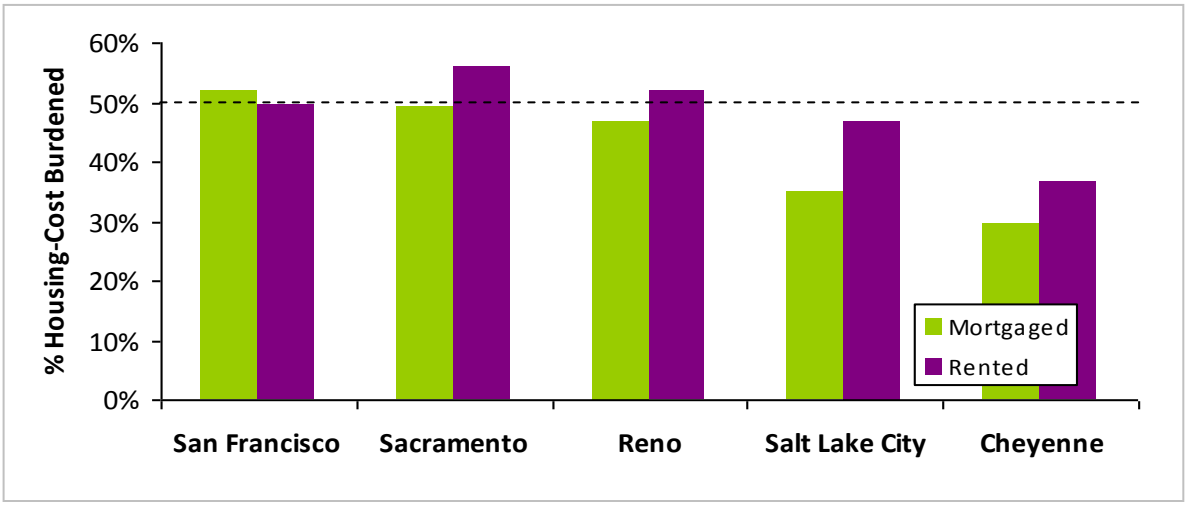
According to U.S. federal standards, the conventional indicator of housing affordability is the percent of income spent on housing. Housing has historically been viewed as affordable when households pay less than 30 percent of their gross income on housing costs. [1] Households that pay 30 percent or more of their income on housing costs are considered to be burdened.[2]

The Census Bureau's American Community Survey ("ACS") provides data on monthly housing costs as a percentage of income. For owner-occupied housing, select monthly owner costs include mortgages, second mortgages and/or home equity loans, real estate taxes, homeowners insurance, condo/mobile home fees (if applicable) and utilities (electricity, gas, water, sewer and others). For the rental market, gross rent costs include contract rent and utilities.

The following exhibits (2.2 and 2.3) show the housing affordability characteristics of occupied housing units in 2010 for the for-sale housing market (distinguished between those owned with a mortgage and owned free of a mortgage) and the rental housing market for each of the Western I-80 Corridor's five metro areas.

[1] *http://www.census.gov/housing/census/publications/who-can-afford.pdf.*
[2] *Ibid.*

Exhibit 2.2 Housing-Cost Burden for Owner-Occupied and Renter Occupied Housing Units: 2010



As shown in Exhibit 2.2, renters had the highest share of housing cost burden in all areas except for the San Francisco Area. As illustrated in Exhibit 2.3 below, overall, housing units with a mortgage comprised the highest share among the three categories of occupied housing units examined.

Exhibit 2.3 Summary of Housing Affordability: 2010

For-Sale Housing

Selected Monthly Owner Costs as a % of Household Income (SMOCAPI)	San Francisco Area		Sacramento Area		Reno Area		Salt Lake City Area		Cheyenne Area	
	#	%	#	%	#	%	#	%	#	%
Housing units w/ a mortgage (where SMOCAPI can be computed)	**682,520**		**373,580**		**74,990**		**194,170**		**16,950**	
Less than 30%	329,560	48.3%	190,000	50.9%	40,010	53.3%	126,650	65.2%	11,970	70.6%
30% or more	352,960	51.7%	183,580	49.1%	34,980	46.7%	67,520	34.8%	4,980	29.4%
Median cost	$2,900		$2,140		$1,870		$1,520		$1,340	
Housing units w/out a mortgage (where SMOCAPI can be computed)	**209,820**		**110,880**		**23,060**		**57,860**		**7,580**	
Less than 30%	180,460	86.0%	96,490	87.0%	19,150	83.0%	51,650	89.3%	7,030	92.8%
30% or more	29,370	14.0%	14,380	13.0%	3,910	17.0%	6,210	10.7%	550	7.2%
Median cost	$510		$450		$500		$390		$380	$510
Total housing units (where SMOCAPI can be computed)	**892,340**		**484,460**		**98,050**		**252,020**		**24,530**	
Less than 30%	510,010	57.2%	286,490	59.1%	59,150	60.3%	178,300	70.7%	19,000	77.5%
30% or more	382,330	42.8%	197,970	40.9%	38,890	39.7%	73,730	29.3%	5,530	29.1%

Rental Housing										
Gross Rent as a % of Household Income (GRPHI)	San Francisco Area		Sacramento Area		Reno Area		Salt Lake City Area		Cheyenne Area	
	#	%	#	%	#	%	#	%	#	%
Occupied units paying rent	**666,970**		**277,060**		**61,250**		**107,510**		**9,600**	
Less than 30%	336,270	50.4%	122,320	44.1%	29,550	48.2%	57,170	53.2%	6,070	63.3%
30% or more	330,700	49.6%	154,740	55.9%	31,700	51.8%	50,340	46.8%	3,530	36.7%
Median cost	$1,290		$1,010		$910		$820		$670	

Source: U.S. Census, 2006 - 2010 American Community Survey.

The San Francisco Area was also the least affordable housing market among the Corridor's five metros during 2010, with nearly 52 percent of its mortgage-occupied households and 50 percent of its renter-occupied households considered cost-burdened. The median monthly cost was $2,900 for mortgage-owners and $1,290 for renters.

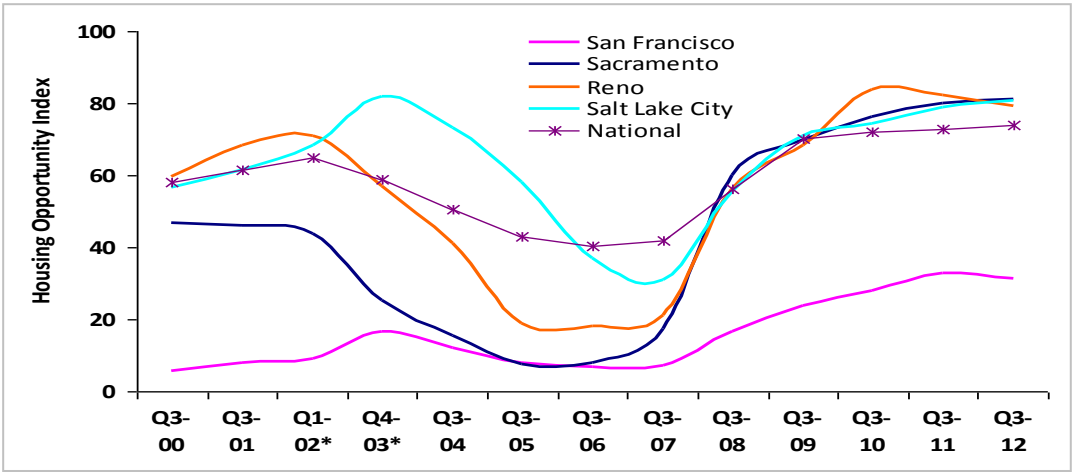
The second least affordable metro was the Sacramento Area, where 49.1 percent of households with mortgages and 55.9 percent of renter households had housing costs that exceeded 30 percent of income levels. Compared to the other rental markets, Sacramento had the highest share of cost-burdened renter households. Mortgaged households had a median monthly cost of $2,140 and median monthly rental costs were $1,010.

Nearly 47 percent of the Reno Area's mortgaged housing units and 51.8 percent of rented housing units were cost-burdened in 2010. Median monthly cost for a mortgaged housing unit was $1,870 and median monthly gross rent was $910.

The Salt Lake City and Cheyenne metro areas were relatively more affordable than the other three areas previously noted, with the majority (over half) of housing units considered affordable for both mortgaged homes and rented homes overall. On a median monthly basis, mortgaged housing costs were $1,520 for the Salt Lake City Area and $1,340 for the Cheyenne Area in 2010. Median monthly rent was $820 and $670 for Salt Lake City and Cheyenne, respectively.

Data from the National Association of Home Builders ("NAHB") provides historical trends of for-sale housing affordability by comparing median incomes with median home prices for nearly two hundred metropolitan areas each quarter. The "housing opportunity index" ("HOI") presented in Exhibit 2.4 is the percentage of homes sold that is affordable to a family earning the local median income in each metropolitan area. NAHB considers a home affordable if a family can afford to spend 28 percent of its gross income on housing.

Exhibit 2.4 NAHB Housing Opportunity Index Trends
Q3, 2000- Q3, 2012*



** NAHB did not publish quarter 3 values for years 2002 and 2003. Data is available for quarter 1 in 2003 and quarter 4 in 2003 data and are used herein instead.*
Source: National Association of Home Builders.

Median housing prices have fallen throughout the Western Corridor during the Great Recession (2008-2009) positively impacting affordability of for-sale housing during the past four years. Housing affordability for the Sacramento, Reno and Salt Lake Areas are more in line with the national level with the exception of the San Francisco Area, where costs for residential space are significantly higher than surrounding regions.

In fact, the San Francisco Area was the second least affordable metro area in the nation behind the HOI's New York-White Plains-Wayne, NY-NJ MSA in the third quarter of 2012. HOI data was not published for the Cheyenne MSA. However, statistics from the 2010 Census show that this MSA was the most affordable metro

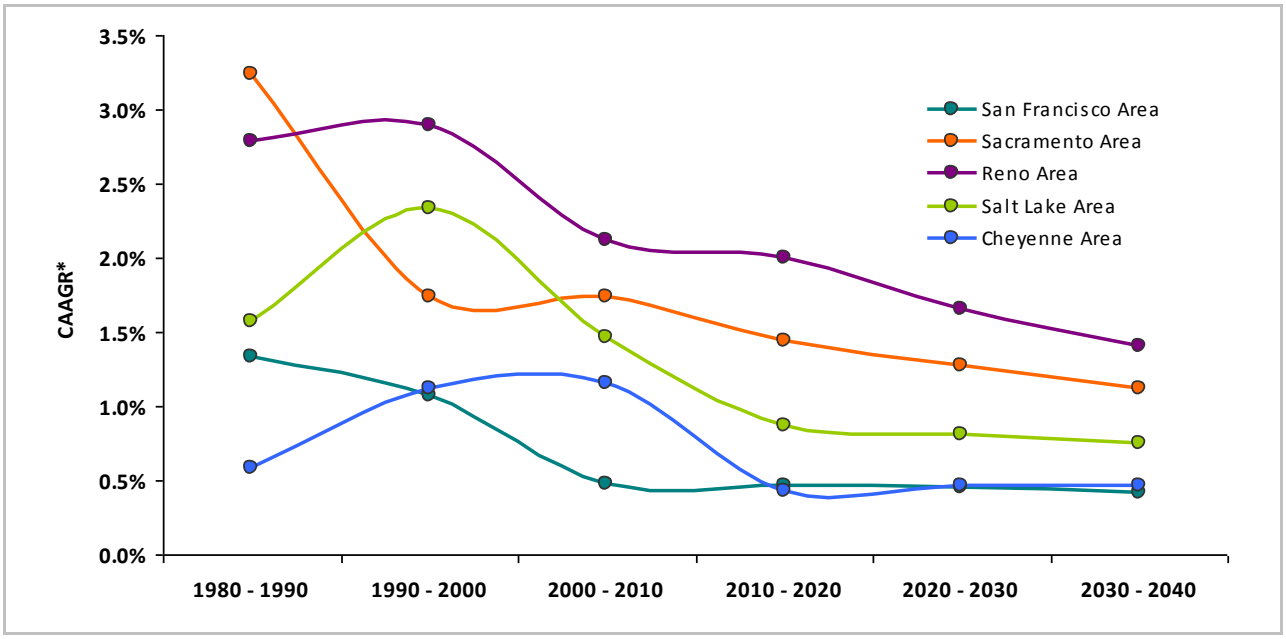
in the Western I-80 Corridor Study Area. Additionally, Cheyenne saw modest population growth since 2000, causing its housing market to remain relatively affordable and stable.

Population Trends and Forecasts

The historical and forecast demographic data presented in Exhibit 2.5 were obtained from Woods & Poole Economics, Inc ("W&P"). W&P is an independent firm specializing in long-term county economic and demographic projections. The historical population data W&P reports for the years 1980 to 2010 is from the U.S. Bureau's decennial census. Forecasts for 2020 to 2040 were projected by W&P.

Exhibit 2.5 Population Trends (1980 – 2010) and Forecasts (2010 – 2040)

		Trends			Forecasts		
Population Counts	**1980**	**1990**	**2000**	**2010**	**2020**	**2030**	**2040**
San Francisco Area	3,257,500	3,719,700	4,135,900	4,335,400	4,542,800	4,752,800	4,955,200
Sacramento Area	1,106,800	1,521,500	1,807,900	2,149,100	2,480,100	2,815,000	3,148,000
Reno Area	196,900	259,200	344,800	425,400	518,600	611,200	702,700
Salt Lake Area	660,800	772,400	972,500	1,124,200	1,225,600	1,328,500	1,431,500
Cheyenne Area	69,000	73,200	81,800	91,700	95,700	100,300	105,000
National	**227,225,600**	**249,622,800**	**282,162,400**	**309,349,700**	**341,069,500**	**373,924,300**	**406,416,600**
		Trends			**Forecasts**		
10-year CAAGR*		**1980 - 1990**	**1990 - 2000**	**2000 - 2010**	**2010 - 2020**	**2020 - 2030**	**2030 - 2040**
San Francisco Area		1.3%	1.1%	0.5%	0.5%	0.5%	0.4%
Sacramento Area		3.2%	1.7%	1.7%	**1.4%**	**1.3%**	**1.1%**
Reno Area		2.8%	2.9%	2.1%	**2.0%**	**1.7%**	**1.4%**
Salt Lake Area		1.6%	2.3%	1.5%	0.9%	0.8%	0.7%
Cheyenne Area		0.6%	1.1%	1.2%	0.4%	0.5%	0.5%
National		**0.9%**	**1.2%**	**0.9%**	**1.0%**	**0.9%**	**0.8%**



** Growth rates shown are in terms of compound average annual growth rate (CAAGR), in percentage change.*
Sources: U.S. Census Bureau; U.S. Bureau of Economic Analysis; Woods & Poole.

Forecasts of future population by W&P suggest that the Western I-80 Corridor will continue to see positive growth through 2040, with the Reno and Sacramento areas expected to lead the way with projected compounded annual growth rates of over one percent during each 10—year forecast period (i.e., 2010 to 2020, 2020 to 2030 and 2030 to 2040). Population in the Salt Lake City Area is projected to see annual growth rates ranging between 0.7 percent and 0.9 percent over the same periods. The Cheyenne and San Francisco Areas are expected to see more modest growth at projected 0.4 percent-0.5 percent annual rates.

2.2 Economic Analysis

Overview

The 2008-09 recession continues to have a persistent effect on the Western I-80 Corridor economies after three years into the recovery (economists say that the Great Recession officially ended in June 2009). While economic indicators have begun to modestly improve in some industry sectors, overall employment growth has remained sluggish.

The Western Corridor's economy is discussed herein in terms of its employment characteristics and trends. This section presents data and analysis on each of the metro areas in the Corridor, with a focus on labor force employment profiles and commuting patterns. The industries that make up each area's employment-base are also examined since they can reveal economic competitiveness and market positions within the regions.

When using employment statistics, it is important to distinguish between labor force employment and establishment-based employment. Labor force employment is a count of persons employed, estimated by place of residence; while establishment-based employment (or employment base) is a count of jobs estimated by place of work. There can be a sizeable difference between these two data sets. For example, since establishment-based employment is a count of jobs, multiple job holders are counted twice. Also, a job in the Sacramento Area is counted in the Sacramento Area regardless of where the worker lives; thus, an MSA may have more jobs than there are employed persons, with workers commuting from outside the area.

Unemployment

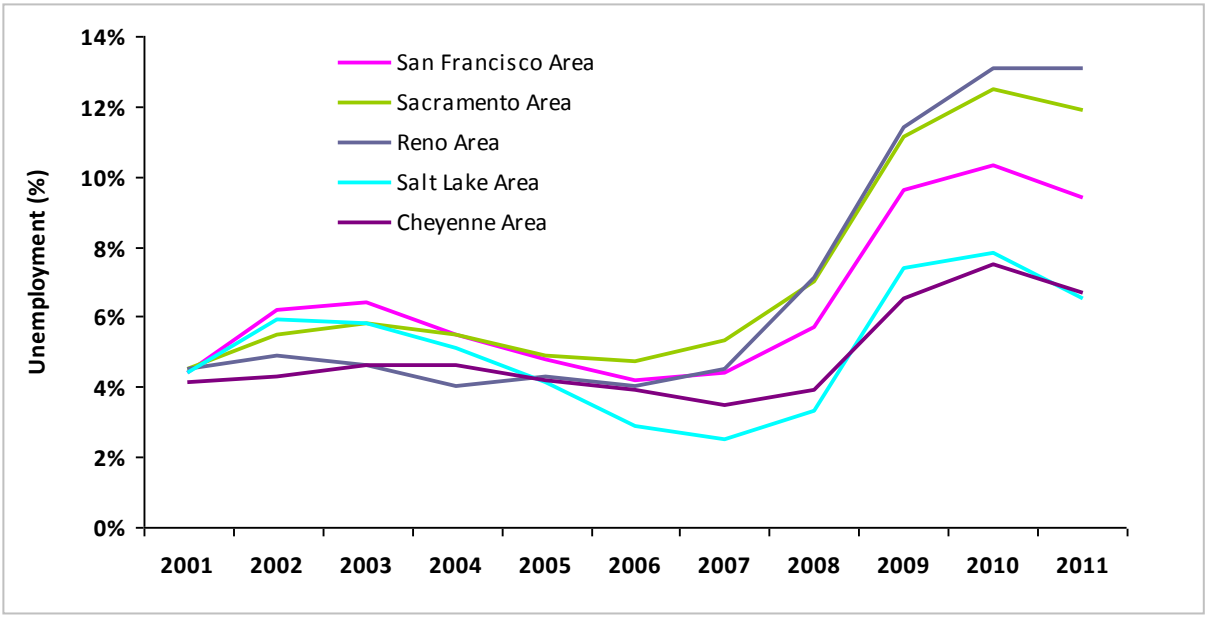
Unemployment statistics herein are from the U.S. Bureau of Labor Statistics ("BLS"). Unemployment for the West Corridor's labor force follows similar trends, with all five metro areas having a rate of just over four percent in 2001, while having relatively low rates until the 2006-2007 period. Unemployment began to see a significant rise beginning 2008 and, after having reached a peak in 2010, unemployment finally saw a decline in 2011 in the five Corridor metros.

As shown in Exhibit 2.6, The Salt Lake City and the Cheyenne Area economies have been the most resilient during the Great Recession. They ended 2011 with seasonally adjusted annual unemployment rates of 6.5 percent and 6.7 percent, respectively. As a point of reference, unemployment is inevitable even in healthy economic times due to frictional reasons, such as the time needed to find the right

employee-employer match, with the current "natural" rate of unemployment considered to be around 6 percent.[3]

Unemployment has been above nine percent since 2009 in the San Francisco, Sacramento and Reno Areas. The Reno Area was affected the most and maintained a high rate of 13.1 percent at the end of 2011, followed by Sacramento's 11.9 percent. San Francisco's rate was 9.4 percent. Preliminary data for year-end 2012 shows unemployment rates have remained high, even as discouraged workers have dropped out of the labor market.

Exhibit 2.6: Unemployment Rate Trends: 2001-2011



Source: U.S. BLS, Local Area Unemployment Statistics.

Employment and Commuting Profiles

Employment and commuting data for each metro area in the Western I-80 Corridor were obtained from the U.S. Census Bureau's Local Employment Dynamics ("LED") program. The data is from 2010. The LED program's employment statistics distinguishes workers by those living in the area from the workers employed in the

[3] *Federal Reserve Bank of San Francisco, A Rising Natural Rate of Unemployment: Transitory or Permanent? <http://www.frbsf.org/publications/economics/papers/2011/wp11-05bk.pdf>*

area. Also, the commuting patterns of these residents and workers within an area reveal its connections within the metropolitan regions.

Employment

Exhibit 2.4 below illustrates the Labor Market Employment and Inflow/Outflow Commuting Profiles for the five study area metros. As a reflection of the demographic characteristics covered previously, the San Francisco Area has a relatively older resident-based workforce, with 20.4 percent of its working residents aged 29 years or younger. Conversely, the Salt Lake City Area has a notably younger labor force compared to other areas along the Corridor, with over 29 percent of its workforce aged less than 30 years.

Approximately 53 percent of San Francisco's workers make an excess of $3,333 per month, more than workers in the other four metro areas. This was followed by Sacramento, where 44 percent make over $3,333 each month. Despite these relatively higher incomes, the higher cost of housing in these two metros effectively resulted in a higher cost-burden. In the Reno, Salt Lake City and Cheyenne Areas, the share of workers that make more than $3,333 each month range between 34 and 37 percent.

The San Francisco Area has a higher concentration of educated residents compared to other communities along the Corridor. While its high school completion rates are similar to the other four metros, the share of its labor force that completed college is far higher. The educational attainment level is similar in the Sacramento, Reno Area and Salt Lake Areas, except that the Reno Area's university completion rates are slightly lower and the Salt Lake City Area has slightly higher high school completion rates. The Cheyenne Area boasts the best high school completion rates of the five metro areas, with 94 percent of its labor force holding a high school diploma or equivalent. However, fewer hold four-year or graduate degrees in Cheyenne than elsewhere along the Western Corridor.

Exhibit 2.7 Labor Market Employment and Inflow/Outflow Commuting Profiles: 2010

Employment Profile	San Francisco Area		Sacramento Area		Reno Area		Salt Lake Area		Cheyenne Area	
	#	%	#	%	#	%	#	%	#	%
Labor Market Total Jobs	**1,852,680**		**837,980**		**179,690**		**498,210**		**40,180**	
Age 29 or younger	377,600	20.4%	194,400	23.2%	42,240	23.5%	145,310	29.2%	9,970	24.8%
Age 30 to 54	1,108,800	59.8%	490,150	58.5%	100,930	56.2%	272,630	54.7%	22,270	55.4%
Age 55 or older	366,270	19.8%	153,430	18.3%	36,520	20.3%	80,270	16.1%	7,940	19.8%
$1,250/month or less	371,880	20.1%	195,960	23.4%	41,930	23.3%	137,810	27.7%	10,500	26.1%
$1,251 - $3,333/month	503,530	27.2%	195,960	23.4%	71,990	40.1%	189,780	38.1%	15,250	37.9%
More than $3,333/month	977,270	52.7%	368,300	44.0%	65,770	36.6%	170,630	34.2%	14,440	35.9%
Less than high school	167,220	9.0%	73,640	8.8%	17,670	9.8%	32,360	6.5%	2,840	7.1%
HS or equivalent, no college	239,190	12.9%	133,260	15.9%	30,420	16.9%	78,210	15.7%	9,160	22.8%
Some college/Assoc. degree	423,580	22.9%	213,960	25.5%	45,220	25.2%	114,640	23.0%	10,650	26.5%
Bachelor's/Advanced degree	645,090	34.8%	222,720	26.6%	44,140	24.6%	127,690	25.6%	7,560	18.8%
Educ. attainment n/a	377,600	20.4%	194,400	23.2%	42,240	23.5%	145,310	29.2%	9,970	24.8%

Inflow/Outflow Commuting Profile	San Francisco Area	Sacramento Area	Reno Area	Salt Lake Area	Cheyenne Area
Living in the Area	**1,852,680**	**837,980**	**179,690**	**498,210**	**40,180**
Employed in the Area	**1,953,830**	**840,310**	**189,810**	**592,560**	**43,400**
Net job inflow (+) or outflow (-)	+101,150	+2,340	+10,120	+94,350	+3,230
In-Area labor force efficiency					
Living and employed in the Area	1,434,480	623,060	153,580	433,170	33,710
% Living and employed in the Area	***77.4%***	***74.4%***	***85.5%***	***86.9%***	***83.9%***
Living in the Area, employed outside	418,200	214,920	26,110	65,040	6,470
% Living in the Area, employed outside	***22.6%***	***25.6%***	***14.5%***	***13.1%***	***16.1%***
Outflow					
External jobs filled by residents	418,200	214,920	26,110	65,040	6,470
Inflow					
Internal jobs filled by outside workers	519,350	217,250	36,230	159,390	9,700
Internal flow					
Internal jobs filled by residents	1,434,480	623,060	153,580	433,170	33,710

Source: U.S. Census Bureau, 2010 Local Employment Dynamics.

Commuting

Of the over 1.85 million working residents living in the San Francisco Area, 1.43 million were employed within the metro area, resulting in a relatively low "in-area labor force efficiency" (the percent of its workers both living and employed in the area) of 77.4 percent. Also, San Francisco had an outflow of 418,200 workers (residents commuting outside the area) and an inflow of 519,300 workers (non-residents commuting to the area), resulting in a positive net job flow of 101,150

workers. In fact, all areas along the Western Corridor saw positive inflows of workers coming in from elsewhere, which is expected given the five regions' designations as "metropolitan statistical areas or MSAs".

The two California metro areas (San Francisco and Sacramento) are well-linked to other densely-populated areas outside their boundaries. Accordingly, as noted above, the San Francisco Area has relatively low in-area labor efficiencies, at 77.4 percent, while Sacramento has an efficiency of 74.4 percent. The Reno, Salt Lake City and Cheyenne Areas have higher inter-area commute flows, with in-area labor force efficiencies hovering near 84 percent to 87 percent.

Economic-Base Profile

A region's economic-base can be defined as the group of industries that comprises the greatest amount of employment in excess of the needs of the region.

An economic-base analysis classifies an industry within a local economy according to its trade activities. The economic output of a region can be divided into two components: exports and imports. The distinguishing feature is whether an industry's goods and services are consumed locally (imports) or consumed outside the region (exports). Export activities of a regional economy are important to identify because they drive out-of-region sources of revenue, rather than circulating revenue that is already in the region.

A Location Quotient ("LQ") is one of the most common economic-base analysis techniques and provides an indirect approach to identifying a local economy's relative specialization and concentration of an industry. A LQ is an index value for each industrial group in a region, calculated by dividing a region's ratio of employment in a given industry by the nation's ratio of employment in the same industry for the same time period.

Assuming a city, metro area, or other region has the same demand for goods and services as those at the national level, a given industry's share of the local economy is equal to the share of that industry in the national economy. This results in an index value of 1.0. If a given industry's share of the local economy is less, the index will be less than 1.0. If it is more, the index will be greater than 1.0 and is therefore assumed to exceed local demand with any excess production being exported outside the region. Industries with high LQ are typically, though not always, export-oriented industries.

The LQs herein were calculated for the standard 10 private industry sectors using the BLS Location Quotient Calculator for the 10-year period between 2001 and 2011; the latest year the LQs are available. LQ analysis can also be applied to other economic variables (e.g., wages and occupations); however only employment data is applied in this study.

This analysis uses the nation as a base for each of the Western I-80's five metros to help understand what industry sectors are driving each local economy. For the purposes of this analysis, all regions are specific to the MSA surrounding the major cities, as defined by the White House Office of Management and Budget.

In this study, the LQs are considered together with two other pieces of information: 1) the size of the industry in terms of jobs, and 2) the percent change in LQ over a given time period. This is important since a small industry with a high LQ may be considered an export-oriented industry, but may not be vital to the region's economy. However, a large, high-LQ industry with declining LQ over time may negatively impact the regional economy.

The Y-axis — "LQ (2011)" - in the graph shows the location quotient of various industries in a Corridor metro relative to the nation in 2011. The higher the value, the higher concentrations of a particular industry in a metro relative to the national economy.

The X-axis — "percent Change in LQ (2001 to 2011)" — represents the change in an industry's concentration from 2001 through 2011. Positive change indicates that the area saw increasing specialization for that industry sector over time.

When graphed together, the industry sectors fall into one of four quadrants:

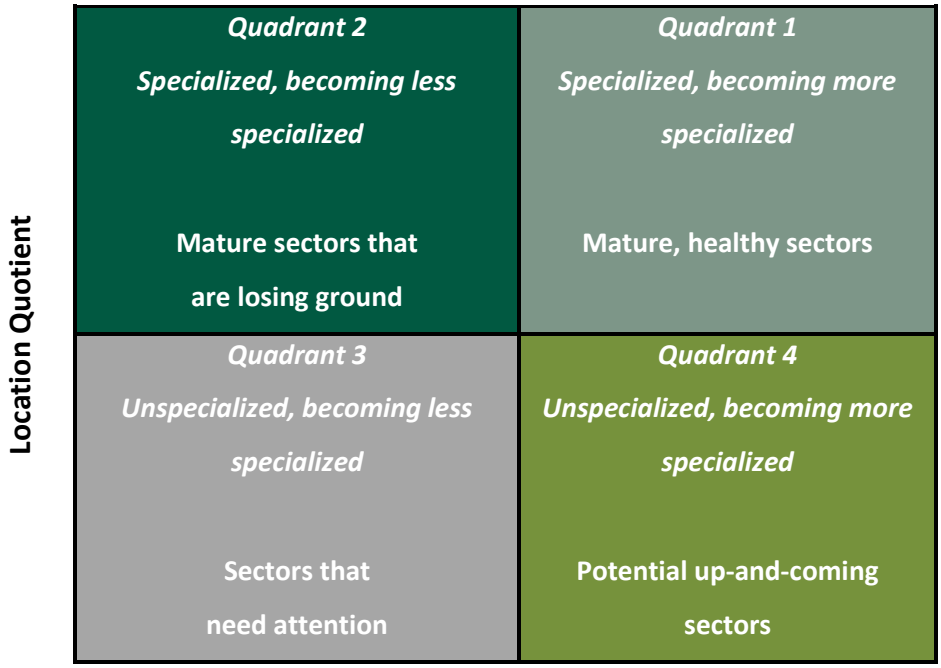
- **Quadrant 1**: the LQ in 2011 is above the national average (specialized) and the change in LQ is positive (growing), indicating an industry sector that is relatively mature and growing.

- **Quadrant 2**: the LQ in 2011 is above average (specialized), but the change in LQ is negative (declining), indicating a large industry that is losing ground.

- **Quadrant 3**: the LQ in 2011 is below average (unspecialized) and change in the LQ is negative (declining), indicating an industry that may need attention and to attract more businesses in order to maintain a balanced economy.

- **Quadrant 4**: the LQ in 2011 is below average (unspecialized) but change in the LQ is positive (growing), indicating an industry that may present up-and-coming economic opportunity.

Exhibit 2.8 Reading Location Quotient Charts



The results of the LQ analysis for the metro areas along the Western I-80 are presented in the following exhibits to show specializations for each area in the given employment industry sectors. The first value for each industry sector is the LQ for that industry; the second value is the number of employees in that industry in 2011.

San Francisco Area

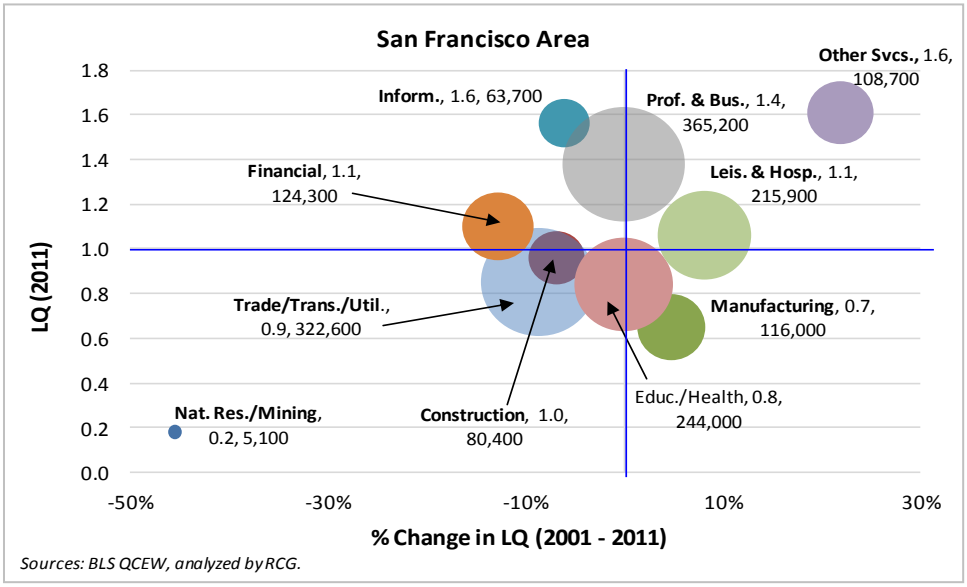
As shown in Exhibit 2.9, there were five industries that were more concentrated in the San Francisco region than average, as shown with the higher LQ values: Other services, information, professional and business, financial activities, and leisure and hospitality.

Two of these industries had increasing LQs from 2001 through 2011, meaning they are becoming even more specialized over time: leisure & and hospitality, and other services.

Financial activities and information saw their LQs decrease, reflecting a higher than average concentration of employment, but whose concentration is declining. Concentration in the high-performing professional and business sector, which is an especially large in terms of jobs, was unchanged during this 10-year period.

Four industries had relatively lower LQs: construction, trade, transportation and utilities, education, and health and manufacturing. Of these sectors, only manufacturing showed increased specialization during this period and education and health was unchanged. Construction, trade, transportation and utilities, and natural resources and mining saw declines. Natural resources and mining in particular, has shown to be less specialized in the San Francisco area and is unlikely to become specialized in the future.

Exhibit 2.9 San Francisco Area
Industry Size, Location Quotients and Percent Change in LQ: 2001 – 2011



Sources: BLS QCEW, analyzed by RCG.

Sacramento Area

As illustrated in Exhibit 2.10, Sacramento's employment in the other services, leisure and hospitality, professional and business, financial and construction industries were higher than the national average, shown as LQs greater than 1. Of these five sectors, the leisure and hospitality and other services industries are

becoming more specialized. The education and health industry has become more specialized over the past ten years and is balanced with the national average, reflected in a LQ of 1.

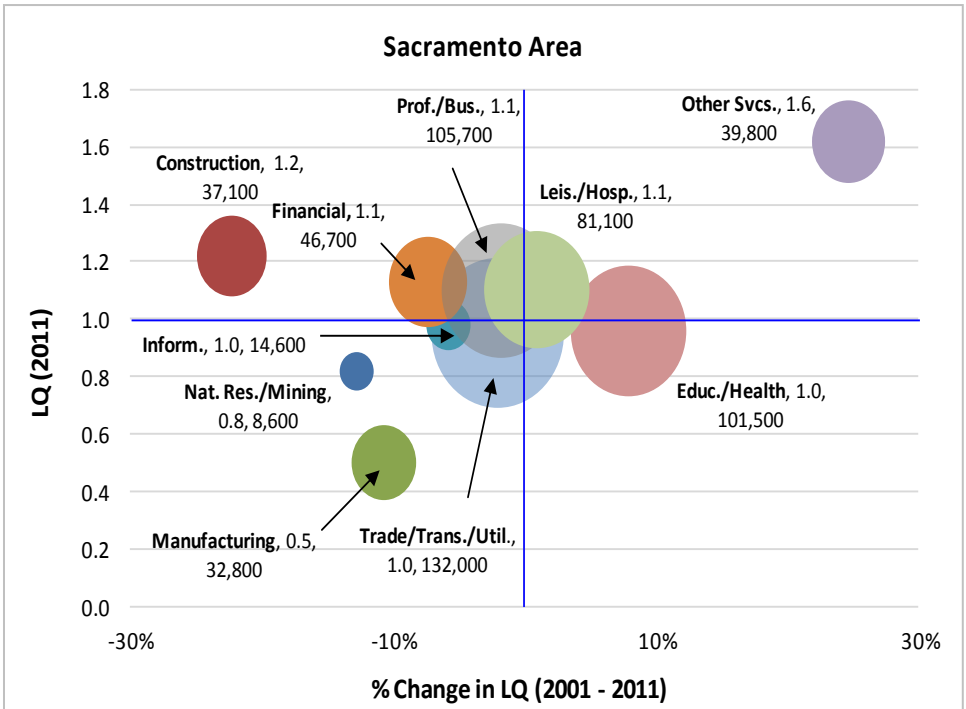
Specialization in professional and business — whose services make up a large part of the local economy — along with financial, have seen moderate decreases over the past 10 years. Also, construction has a relatively higher concentration than the national average despite decreasing at a much more severe rate (shedding 38 percent of its jobs).

Concentration in trade, transportation and utilities, and information is in line with the nation overall, but has seen a slight decline. The trade, transportation and utilities industry makes up among Sacramento's largest employment base. As such, it is important to continue to form planning and investment priorities to support the health of its local economy.

Natural resources and mining and manufacturing are relatively unspecialized sectors and have continued in that direction. Natural resources and mining in particular, has shown to be less specialized in this region and is unlikely to become specialized in the future.

There were no industries shown to be "emerging" in the Sacramento Area — or whose employment in industries were less specialized but has become more concentrated.

Exhibit 2.10 Sacramento Area
Industry Size, Location Quotients and Percent Change in LQ, 2001 – 2011



Sources: BLS QCEW, analyzed by RCG.

Reno Area[4]

As shown in Exhibit 2.11, The Reno area had three industry sectors that had higher employment concentrations than the national average, including leisure and hospitality, trade, transportation and utilities, and construction.

The trade, transportation and utilities industry makes up the largest of the region's share of employment and is increasing in specialization; this reflects the influence this industry has on the local economy.

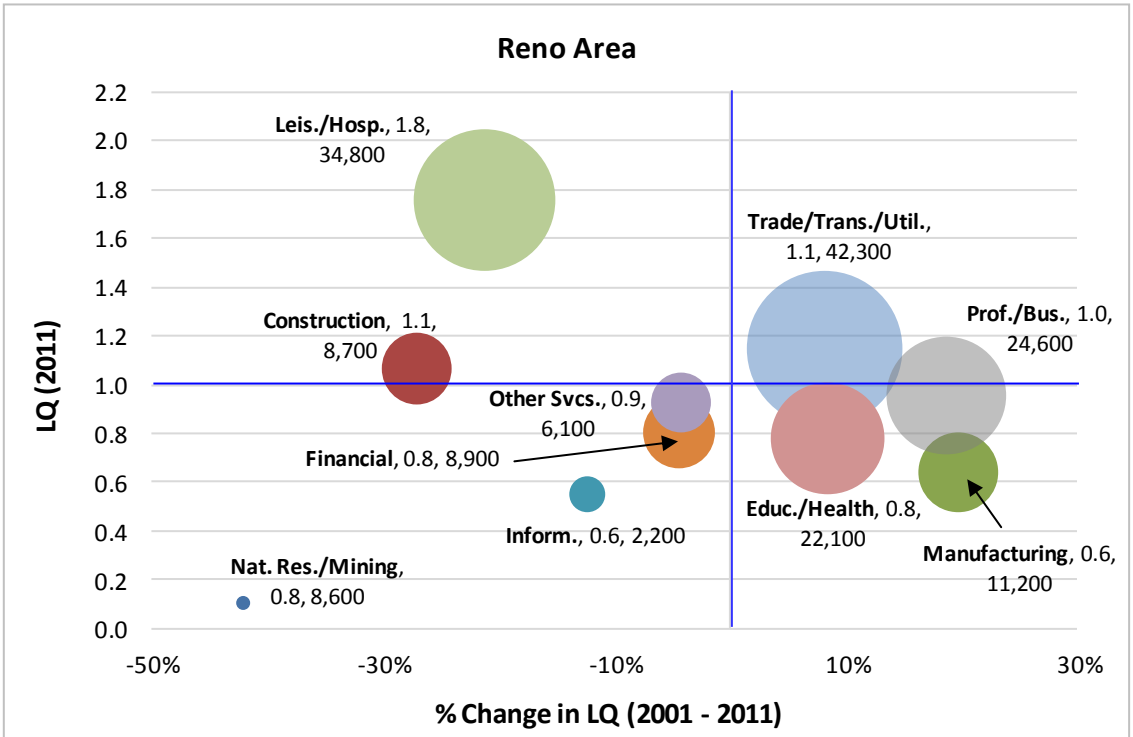
Conversely, leisure and hospitality has decreased over the past decade, and as the second largest employment industry in the region, is troubling for the local economy. Construction was also hard hit, posting a significant decline in concentration after dropping nearly 45 percent over the past decade.

[4] *Due to missing information deemed not disclosable by the BLS's QCEW for the Reno Area, RCG calculated LQs using the BLS's CES data.*

Natural resources and mining, information, financial and other services are considered relatively unspecialized compared to the national average. These four industries have become even less specialized over time and also make up the smallest number of jobs within the Reno area.

Professional and business has become more specialized and is now at the national level. Education and health and manufacturing have also shown growth, though they remain below the nationwide average.

Exhibit 2.11 Reno Area
Industry Size, Location Quotients and Percent Change in LQ, 2001 – 2011



Sources: BLS CES, analyzed by RCG.

Salt Lake City Area

As illustrated in Exhibit 2.12, financial, construction, information, professional and business and trade/transportation/ and utilities are considered specialized industries in the Salt Lake City area when compared to the national average.

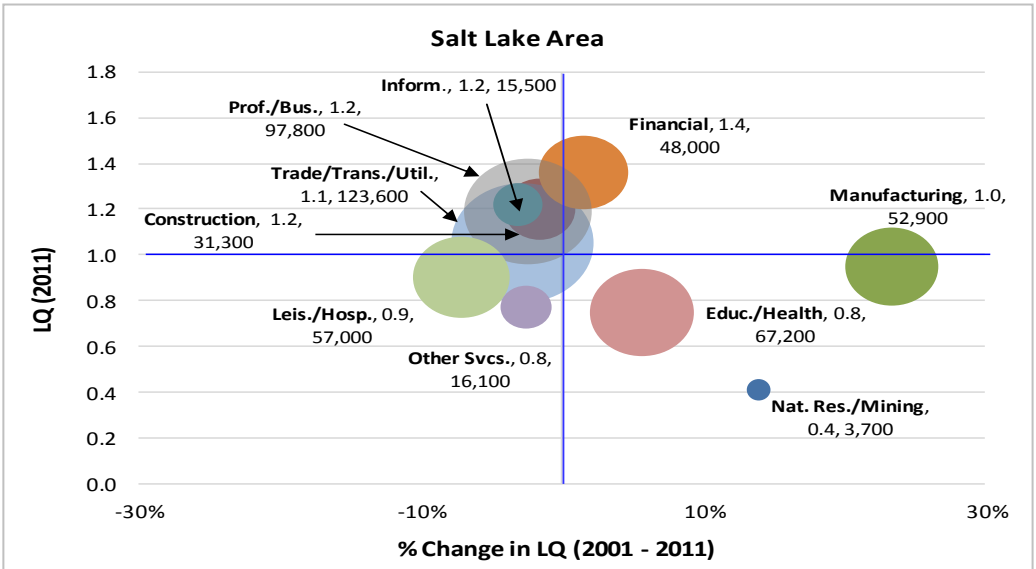
The Financial industry has increased in concentration and performed well in recent years. Trade/transportation/ an utilities, and professional / and business—the area's two largest employment industries—are seeing a slight decline in specialization. This is also the case for construction and information.

Specialization in manufacturing has grown significantly and is now considered in-line with the national average.

The leisure and hospitality and other services industries have lower concentrations than average and are becoming even less specialized over time within the Salt Lake area.

The LQ for education and health is below the national average, but is shown to be an "up and comer", growing in specialization and comprising a fairly large presence in the region. The share of employment in natural resources and mining is small and is below the average, but is becoming more specialized as well.

Exhibit 2.12 Salt Lake City Area
Industry Size, Location Quotients and Percent Change in LQ, 2001 – 2011



Sources: BLS QCEW, analyzed by RCG.

Cheyenne Area

As shown in Exhibit 2.13, The LQs for construction, information, trade, transportation and utilities, leisure and hospitality, financial and other services indicate that, on average, the Cheyenne area has a relatively higher concentration of employment in these industries, compared to the nation.

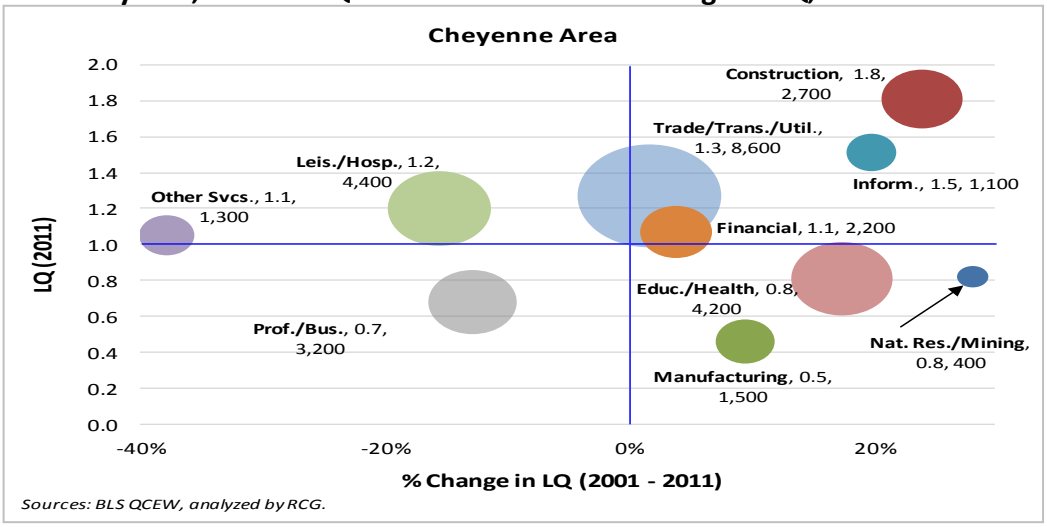
Of these six specialized industries, construction, information, trade, transportation and utilities and financial are seeing an increase in concentration. This bodes well particularly for trade, transportation and utilities, the region's largest industry in terms of jobs.

Conversely, its leisure and hospitality and other services industries have become less specialized over time.

Professional and business is relatively unspecialized and is losing ground, as its LQ has decreased in growth.

Education and health — the region's second largest employment industry — along with manufacturing and natural resources and mining, are considered to be emerging, as they have LQs below 1 but the change in LQs are positive.

Exhibit 2.13 Cheyenne Area
Industry Size, Location Quotients and Percent Change in LQ, 2001 – 2011



Sources: BLS QCEW, analyzed by RCG.

Employment Trends and Forecasts

Employment estimates and forecasts herein were also obtained from the latest W&P model. Historical estimates reported by W&P from 1980 to 2000 are from the U.S. Department of Commerce's Bureau of Economic Analysis ("BEA"). Forecasts for 2010 to 2040 are from W&P. According to W&P, its forecast accounts for the lingering impact of the 2008-09 recession by using preliminary employment data for 2010 and 2011 from the BLS.

Employment data presented in Exhibit 2.14 below is more encompassing than the data used in the LQ analysis above. Specifically, it includes establishment-based wage and salary workers; thus, jobs are counted by place of work and not by residence of the worker. In addition to wage and salary workers, employment data includes proprietors, private household employees (e.g., babysitters, housekeepers, gardeners and butlers) and miscellaneous workers (e.g., judges and all elected officials, persons working only on commission, students employed by the colleges or universities in which they are enrolled, and subcontractors in sectors such as construction).[5]

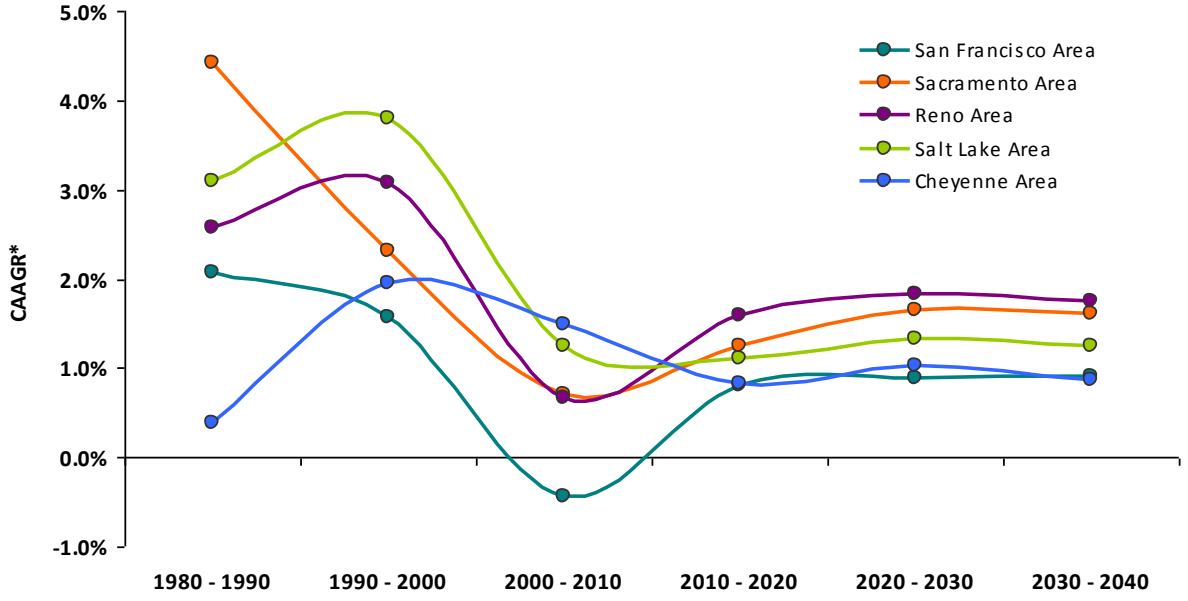
It must be noted that employment is defined differently for the BEA, and for W&P, than the other two government sources for employment data reported previously in the Study: the BLS and the Census. The W&P estimates are higher than the other sources, because a broader inclusion of employment applies. Specifically, data from the Census are based on employment by place of residence, whereas the W&P employment data is based on place of work.

Since Census data are based on a household survey, persons holding two jobs would be counted only once, and, therefore, the data would be lower than W&P. Also, the BLS establishment data do not account for agricultural workers, the military, proprietors, households and miscellaneous employment, so the exclusion of proprietors from the BLS data is the most significant difference.

[5] 2012 MSA Profile Technical Documentation, Woods & Poole.

Exhibit 2.14 Employment Trends (1980 – 2010) and Forecasts (2010 – 2040)

	Trends			Forecasts			
Employment	**1980**	**1990**	**2000**	**2010**	**2020**	**2030**	**2040**
San Francisco Area	1,955,760	2,399,260	2,804,050	2,685,130	2,907,190	3,176,180	3,475,470
Sacramento Area	544,040	837,600	1,053,520	1,130,050	1,280,070	1,507,700	1,767,830
Reno Area	136,000	175,220	237,090	253,390	296,540	355,610	423,180
Salt Lake Area	355,760	482,350	700,260	792,900	885,090	1,009,030	1,141,120
Cheyenne Area	42,590	44,260	53,660	62,230	67,610	74,890	81,680
National	113,983,320	138,331,110	165,370,940	172,936,010	195,598,090	223,610,090	255,633,490
	Trends			**Forecasts**			
10-year CAAGR*		**1980 - 1990**	**1990 - 2000**	**2000 - 2010**	**2010 - 2020**	**2020 - 2030**	**2030 - 2040**
San Francisco Area		2.1%	1.6%	-0.4%	0.8%	0.9%	0.9%
Sacramento Area		4.4%	2.3%	0.7%	1.3%	1.7%	1.6%
Reno Area		2.6%	3.1%	0.7%	1.6%	1.8%	1.8%
Salt Lake Area		3.1%	3.8%	1.3%	1.1%	1.3%	1.2%
Cheyenne Area		0.4%	1.9%	1.5%	0.8%	1.0%	0.9%
National		2.0%	1.8%	0.4%	1.2%	1.3%	1.3%



** Growth rates shown are in terms of compound average annual growth rate (CAAGR), in percentage change.*
Sources: U.S. Census Bureau; U.S. Bureau of Economic Analysis; Woods & Poole.

According to W&P's employment forecasts, the San Francisco Area is the only Western Corridor covered in this report that saw its employment drop over the 10-year period ending in 2010, posting an annual average growth rate of -0.4 percent. During the same period, projected annual employment growth is highest in Cheyenne at 1.3 percent. In absolute terms, however, Cheyenne added

approximately just 8,600 new jobs—nearly nine times less than the 76,500 new jobs added in Sacramento, which grew at a slower 0.7 percent rate.
As shown below, from 2010 to 2040, employment in the five metro areas is projected to see modest growth. The Sacramento and Reno Areas are expected to grow at rates higher than the national average.

Employment	2010	2020	2030	2040
San Francisco Area	2,685,130	2,907,190	3,176,180	3,475,470
Sacramento Area	**1,130,050**	**1,280,070**	**1,507,700**	**1,767,830**
Reno Area	**253,390**	**296,540**	**355,610**	**423,180**
Salt Lake Area	792,900	885,090	1,009,030	1,141,120
Cheyenne Area	62,230	67,610	74,890	81,680
National	172,936,010	195,598,090	223,610,090	255,633,490

10-year CAAGR*	2010 - 2020	2020 - 2030	2030 - 2040
San Francisco Area	0.8%	0.9%	0.9%
Sacramento Area	**1.3%**	**1.7%**	**1.6%**
Reno Area	**1.6%**	**1.8%**	**1.8%**
Salt Lake Area	1.1%	1.3%	1.2%
Cheyenne Area	0.8%	1.0%	0.9%
National	**1.2%**	**1.3%**	**1.3%**

*Compound Average Annual Growth Rate.

Section 3: Regional Economic Development Dynamics

3.1 Regional Economic Factors

The purpose of this section is to provide a snapshot of the existing economic factors influencing the Western I-80 Corridor, as well as to identify future economic development strategies that may have an impact on the infrastructure along the Corridor. While the focus of the Study is on I-80; rail, air and telecommunication transportation systems, as well as power grid infrastructure were also taken into consideration. The I-80 Corridor has seen some of the highest population and economic growth in the United States over the past 20 years. This, along with harsh winter conditions over long stretches of this section of I-80 necessitates that roadway construction and maintenance activities are an ongoing process. Significant modifications and improvements to the I-80 Corridor will, to a large

extent, be in response to, or in support of the economic activity taking place in the communities dependent on the interstate.

It is important to understand the economic forces that will dictate the extent and the manner in which the I-80 Corridor will be utilized. This market demand, in turn, will provide some direction as to the improvements and modifications required within the Corridor to ensure it continues to function as a vital component of, and an asset to, our nation's commerce.

The centerpiece of this discussion is the conduct of an "outreach" process to those individuals and groups identified as having the primary responsibility of establishing and implementing economic development policies and programs within the Corridor's five MSAs. It was determined that to fully comprehend the level of economic activity taking place, and the issues surrounding the Western I-80's infrastructure, that an automobile field trip from Cheyenne, Wyoming, to San Francisco, California was required. This field trip was held between August 5-9 and August 13-14. The primary source of information was personal and telephone interviews with a variety of individuals and organizations along the Corridor. They are summarily listed below and in detail in Section 3.3:

San Francisco, California

Tamsen Drew, Project Manager
City of San Francisco Office of Economic and Workforce Development

Oakland, California

Scott Peterson, Deputy Director
East Bay Economic Development Alliance

Vallejo, California

Sandy Person, President
Solano Economic Development Corporation

Sacramento, California

Robert Burris, Senior Vice President
Sacramento Area Commerce and Trade Organization

Reno, Nevada

Mike Kazmierski, President/CEO
Economic Development Authority of Western Nevada

Fernley, Nevada

Daphne Hooper, Acting City Manager
City of Fernley

James Ball, Building Official
City of Fernley

Leslieann Hayden, Grants Administrator
City of Fernley
Paul Kinne, Vice-President, Marketing
Economic Development Authority of Western Nevada

Elko, Nevada

Pam Borda, Executive Director
Elko County Economic Development Diversification Authority

Tom Harris, Professor, Director
University Center for Economic Development, University of Nevada, Reno
775-784-1931

Salt Lake City, Utah

Robert Farrington, Economic Development Director
Salt Lake City Corporation

Rock Springs, Wyoming
Dave Hanks, CEO
Rock Springs Chamber of Commerce

Laramie, Wyoming
Gaye Stockman, President and CEO
Laramie Economic Development Corp.

Cheyenne, Wyoming
Randy Burns, Chief Executive Officer
Cheyenne LEADS

Specifically, the majority of these interviews were conducted in person. Telephone interviews were conducted with those individuals whose schedule did not allow for a face-to-face interview. This was necessary in only two instances: Fairfield/Vallejo and the City of San Francisco.

Every effort was made to conduct these interviews with the individuals responsible for the economic development oversight within the identified area, although a statistical sampling technique was not utilized in this process. Consequently, the information obtained was of a qualitative nature, but extremely insightful, and very practical in helping to understand the variables and components that comprise the MSA economies along the I-80 Corridor. The information garnered from the interviews also proved useful when combined with the secondary research included in the Study.

3.2 Corridor Economic Development Patterns: Selected Metro Areas

Approach

The methodologies utilized in selecting which communities would be included in the interview process, and then identifying the organizations in the communities with whom to conduct the interviews, took place in two stages.

The major objective in the first stage was to identify communities, which would have an economic dominance over a trade area, or labor shed, in a region beyond the community itself. Population size was the metric utilized for this identification.

"Central Cities" within the MSAs, through which the Western I-80 runs, were the first urban centers selected. Central Cities customarily have the largest populations within a MSA. For the more rural areas along the I-80 Corridor, communities with populations over 15,000 people were also selected.

This approach yielded the following communities: Cheyenne, Wyoming; Laramie, Wyoming; Rock Springs, Wyoming; Salt Lake City, Utah; Elko, Nevada; Fernley, Nevada; Reno, Nevada; Sacramento, California; Vallejo, California; Oakland, California; and San Francisco, California.

The primary objective of the second stage of this part of RCG's research was to ensure that a "big picture" of the economic activities over as wide of an area as possible was established. To accomplish this, every effort was made to identify and interview those organizations which had responsibilities over multi-jurisdictional areas. Should such an organization not exist in the selected communities, then the local government department with which these economic development responsibilities lay, or the local chamber of commerce, were contacted. Regional or county wide organizations were interviewed in:

- Cheyenne
- Laramie
- Elko
- Reno
- Sacramento
- Fairfield and Oakland

City officials were interviewed in:

- Salt Lake City
- Fernley
- San Francisco

In Rock Springs, the director of the local Chamber of Commerce was interviewed.

Historical Patterns

The economies located within the Corridor are very interesting, as is the Corridor itself. Historically speaking, I-80 has its roots in, and is the result of, "Manifest Destiny". Our early nation's obsession with a country extending from the Atlantic Ocean to the Pacific Ocean necessitated a land route to connect these two bodies of water. One of the first of these routes was the California Trail, which was used extensively in the 1840s by those migrants making their way to the gold fields of Northern California. With little deviation, Western I-80 follows the route of the California Trail.

The Industrial Age brought its own requirement to link the developing cities of Northern California with the emerging manufacturing centers of the Midwest. This need brought about the development of the first transcontinental railroad, constructed by the Union Pacific and Central Pacific Railroads, following a route that, again, closely approximates the location of today's I-80 Corridor. The Union Pacific Railroad continues to operate today along much of the same original

transcontinental route and provides an essential service to the economies within the I-80 Corridor.

In today's global economy, transportation can no longer be thought of as only the movement of goods and people, but must also be thought of as the movement of information and ideas. The location of the transcontinental fiber optic system within the Corridor addresses this idea, and is a vital component of the infrastructure that supports the future growth of the local economies along the interstate. It should be noted that this transportation of information along Western I-80 is also rooted in history in that the Pony Express, and first transcontinental telegraph route approximates the Corridor as well.

All of the economies in I-80 study area, with the exception of Salt Lake City, historically owe their beginnings to the mining industry. Even the San Francisco Bay Area's and the Sacramento area's early economic focus was service and supply to the gold and silver fields of California and Nevada. San Francisco's rise to prominence as a financial center is an example of this service to the mining industry. And, the admission of Nevada into the union as the first intermountain state was primarily, if not solely, due to its silver and gold production.

Today the mining and extraction industry plays a very significant role in the economies from Cheyenne to Reno. Even Salt Lake City is the recipient of much of the gold ore coming from the mines in Northern Nevada. With the exception of Laramie, mining and extraction dominate the economies of the rural areas along the study route.

Another interesting observation about the economies and communities along the Western I-80 is how well they are organized in conforming to the spatial distribution of urban development outlined in "Central Place Theory". The geographic service areas and spheres of economic influence can be easily observed along the Corridor. Along this same idea, it is also important to note for the purposes of the Study, that state boundaries, while meaningful for infrastructure

construction and maintenance budgeting, have little or no impact on the geographic economic spheres of influence.

Laramie is influenced by Cheyenne, as would be similar sized communities in Nebraska, such as Kimball (though no communities east of Cheyenne were included in this portion of the study). And Cheyenne is firmly influenced by the economic/geography dominance of Denver. Salt Lake City's economic sphere extends to Rock Springs, and Elko, while those communities' economic influence includes smaller towns like Green River, Wyoming and Battle Mountain, Nevada, respectively. Fernley, is closely aligned to Reno, which is a MSA of over 400,000 people. And Reno, in turn, is within the economic sphere of the San Francisco Bay Area.

Finally, another testament to the influence that transportation infrastructure has on local economies and their prospects for future growth, is the existence of a north/south interstate system which provides easy access to both Canada and Mexico.

The communities, which seemed to have the most varied opportunities for future economic growth, as gleaned from the interviews, were Cheyenne, Salt Lake City, and Sacramento. I-25 through Cheyenne connects to I-90 and I-15 providing access to Canada, as well as Mexico via I-10 from Las Cruces, New Mexico. I-15, through Salt Lake City, provides direct access to Canada, as well as Mexico, via US Highway 93, I-10 and I-19. Sacramento is located at the crossroads of I-80 and I-5, the latter providing direct interstate connections to Vancouver, Canada and Tijuana, Mexico. These three north/south interstate systems are officially designated North American Free Trade Agreement ("NAFTA") corridors and are named Camino Real, CANAMEX and Interstate 5, respectively.

3.3 Interviews

Interview Process

The interview process was designed to elicit open and free-flowing dialogue without pre-determined outcomes. This was accomplished through open-ended questions on the current state of each local economy and infrastructure network, as well as on future economic development efforts and potential geographic growth patterns.

This resulted in the interviews focusing on the priorities of the individual respondents and responses that were influenced by those priorities. However, this also resulted in discussions that allowed for comments and ideas to be introduced by the respondents that gave further insights into the local economic situation. Our approach also allowed for the flexibility to delve into details that provided a better understanding of future growth patterns.

At the outset of each interview, the respondents were informed that no direct quotes would be used in the narratives. This allowed for the discussions to take place in a quick paced, unguarded manner. Consequently, the majority of the information provided within the local narratives of this portion of the report, while being combined for brevity and to avoid redundancy, are submitted in the words of the respondents to the greatest extent possible. However, it must be noted that the information from the narratives are the opinions of the respondents.

The respondents were further informed at the outset of each interview that they would be the initial conduit through which further information and correspondence would flow regarding the I-80 Corridor Master Plan Study. And, that they, in turn, could forward the information to whomever they believed appropriate to have the most significant contribution to the successful outcome of the study.

Interview Responses

The following interview responses are provided in a concise bullet format for easy reading and have all been arranged under the same headings of "Physical Situation", "Economic Situation" and "Recent and Future Economic Activities", in an effort to provide some consistency. The Physical Situations section presents the primary transportation infrastructure of the area, as well as the geographic landscape. Economic Situation provides information on population, employment and market influence. It also offers some detail as to the economic activities that have had significant impacts on the local economy. Recent and Future Economic Activities explore the planned economic development efforts as well as any transportation infrastructure issues needing to be addressed.

While the responses obtained during the interview process from the respondents were as varied as the communities and economies represented, a few trends can be identified. As stated earlier, population and economic growth in the I-80 Corridor between Cheyenne and San Francisco has experienced some of the highest growth rates in the United States over the past 20 years. And whether it will be attributed to economic activities, such as mining and extraction, logistics, information technology or cutting edge research and development in a variety of fields, this rapid growth should continue into the foreseeable future. One thing is certain: **as Corridor economies continue to grow, more pressure and demands will be placed on the transportation infrastructure.**

The cost and timelines of the I-80 highway maintenance was a significant concern for stakeholders between Cheyenne and Sacramento, and a major, if not the primary concern, for the rural areas along this segment. Harsh winter conditions is the foremost reason for required maintenance, but in the rural economies dependent on mining and extraction industries, heavy truck loads are also a contributing factor. In the urban economies, commuter traffic is the primary culprit for wear and tear of the highway.

Traffic congestion was the leading issue for interviewees from the urban areas along the route. While Salt Lake City's congestion was concentrated during peak commuter periods in the morning and evening, the urban areas from Reno to San Francisco experience full capacity and time delays at multiple periods during the day. In many instances this congestion cannot be alleviated with a widening of the existing roadway. The density of urbanization between Sacramento and San Francisco suggests that alternative routes for new freeways be explored.

The exploration of an alternative route to I-80 also holds true for Reno, but in Reno's case, it should be for a truck route. Of all the major cities along the Corridor, I-80 lays closest to Reno's central business district ("CBD"), and runs through this area as well. Additionally, all large land parcels available for future economic development lay to the east of the CBD with the majority of that new truck traffic traveling west to California. Without alleviating this congestion, downtown Reno could prove a bottleneck for all traveling the I-80 Corridor.

Because telecommunication connectivity will prove vital for any emerging or growing economy, many of the respondents felt that the availability and future capacity of fiber optics and broadband width should be addressed within the Master Plan Study. It was felt that there is not one industry cluster, including mining, that will not be reliant on connectivity in the future.

Finally, virtually all of the economies from Cheyenne to Reno are, or will be, targeting outdoor and recreational activities as a component of their future economic development strategies. Consequently, almost all of the respondents within that segment of the I-80 Corridor suggested that an immediate action that could take place along the highway is the installation of additional signage, directing travelers to various recreational opportunities.

San Francisco, California

Interview Contact

Tamsen Drew, Project Manager
City of San Francisco Office of Economic and Workforce Development
415-554-6297 Tamsen.drew@sfgov.org

Physical Situation

- I-80 officially ends when it crosses the Oakland Bay Bridge into San Francisco, providing the City with its east highway link. I-280 provides a southern link and US Highway 101, a controlled access interstate-type facility into the Bay Area, provides north/south access.

- Rail access is only from the southern portion of the San Francisco peninsula; with limited freight except to those industrial areas in the southern portions of the City.

- There are a considerable number of docks within the City, but these are utilized by passenger cruise ships, tour boats and naval vessels. There are no cargo ship facilities within the City, but passenger and Navy ships do take on extensive provisions at the docks. There are also a few ship repair facilities along the waterfront.

- San Francisco International Airport is the 10th busiest airport in the United States, and 20th busiest in the world. The airport acts as a hub for United Airlines and provides direct flights to every continent in the world, with the exception of Antarctica.

- Telecommunication systems are very good in the San Francisco area with dark fiber available throughout the City, which can be utilized by the private sector.

- The landscape is characterized by a flat plain from the water's edge a short distance into the City, and rolling hills.

Economic Situation

- San Francisco's population is just over 800,000, but is the economic center of the 9 million person Northern California Mega region which is projected to reach 15 million people by 2035.

- San Francisco's employment is dominated by the professional and business services sector, which comprises 22 percent of the workforce, followed by the trade, transportation and utilities, and leisure and hospitality sectors at 15 percent and 14 percent, respectively. San Francisco is the only city surveyed along the entire length of the I-80 study Corridor in which government did not compromise one of the top three workforce sectors, which came in fourth at 13 percent. Over 50 percent of the population has attained at least a bachelor's degree, which is second highest in the United States.

- Due to some of the highest land values in the United States, traditional manufacturing and distribution have been in steady decline, with only specialized "boutique" manufacturing having any real presence in the City. However, the City has instituted protected land use controls for uses labeled "Production, Distribution and Repair", which conform to M1 and M2 zoning found in most other urban areas within the United States. These controls are in the southern neighborhoods of the City which historically supported traditional manufacturing, and were put in place to provide opportunities for the labor force that live in those areas and typically do not possess a 4-year college degree, since this type of economic activity largely requires skilled trade occupations.

- The industry clusters having the biggest impact on the San Francisco economy have been financial, which is referred to as the "traditional" sector, a very broad spectrum of technology and research activities, and hospitality.

Recent and Future Economic Activities

- Future industry-specific economic development strategies are divided into three categories: "Creative Industries" that include technology and research, consulting, and information technologies; "Experience Industries", which refers to hotels and the hospitality sectors; and "Traditional Industries" that include financial and professional services. The City is also providing assistance to "local serving industries", which includes a very broad array of small businesses, as a cornerstone of their economic development initiative.

- In addition to protecting, via legislation, the traditional manufacturing areas in the some of the City's southern neighborhoods, redevelopment efforts take a center stage in promoting real estate development. Two of the more significant redevelopment projects are: Treasure Island and Hunters Point. Treasure Island is the small island between Oakland and San Francisco, upon which the Bay Bridge sits and plans for 100,000 sq. ft. of office, as well as retail and affordable housing units exist. Hunters Point is a decommissioned 500-acre military shipyard that has been environmentally cleaned by the military, with plans underway for a high-density, transport-oriented, mixed use development, consisting of office, housing and retail services.

- One of the biggest transportation issues on the I-80 route is the capacity of the Bay Bridge to Oakland.

Oakland, California

Interview Contact

Scott Peterson, Deputy Director
East Bay Economic Development Alliance
510-272-6843 scott@eastbayeda.org

Physical Situation

- Oakland is situated at the convergence of I-80, I-580, I-880 and California 24, a controlled-access interstate-type highway leading into Downtown Oakland. I-580 connects Oakland with the inland port area of Stockton.

- The Union Pacific and Burlington Northern Santa Fe Railroads have direct access through the City to the deep-water port of Oakland. This direct access also provides a rail link between the port of Oakland and both railroads' multi-modal facilities near Stockton, which were described in some detail in the Sacramento narrative.

- The port of Oakland is the 7th busiest container facility in the United States, handling almost 2.3 million Twenty Equivalent Units, (TEU), in 2011. The port can accommodate the new generation of "mega-vessel" which can hold in excess of 12,500 TEUs. The port also has a 50/50 export/import balance which provides for efficient use of its infrastructure. Interestingly, containers with consumer products bound for the Oakland market are first transported to the multi-modal yards near Stockton, and then the product is hauled back to Oakland.

- Oakland International Airport has direct service to many cities within the United States, as well as to cities in Canada, Mexico and Europe.

- Telecommunications are vital to the Oakland area economy, and are provided by numerous carriers and routes.

- The landscape is characterized by a flat plain rising from San Francisco Bay to the foothills of the East Bay Range.

Economic Situation

- Oakland has a population of almost 391,000, but comprises a two-county MSA of 2.5 million residents. It also is a part of the 9 million population Northern California region.

- Employment is well balanced, with the trade, transportation, and utilities atop the workforce composition at 18 percent, followed closely by government at 16 percent, professional and business services at 16 percent, and education and health services at 15 percent. There are 1 million people in the workforce, as well as the labor shed, resulting in a net zero balance of people commuting into and out of the area each day. This also has large implications on the highway system in that commuter traffic is heavy in both directions during peak periods.

- Economic diversification is one of the major strengths of the local economy, but so is the professional and scientific workforce. The three National Laboratories' of Lawrence Livermore, Berkley, and Sandia, as well as the Joint 6 GEO NOME Center, Bio-Energy Institute, and the proximity to San Francisco and Silicon Valley, contribute to the highly trained workforce.

- Food manufacturing and specialized ingredient manufacturing is a significant component of the local economy, due in large part to the transportation links that allow for fresh ingredients to be brought into the area from agricultural areas in California, and finished food products to be exported throughout North America and the world.

- There are also five major refineries in the East Bay.

Recent and Future Economic Activities

- The lower cost of living and commercial rents in the East Bay compared to San Francisco and Silicon Valley will continue to propel the local economy. However, paradoxically, one of the biggest constraints to future economic growth will be the lack of housing.

- Due to the highly skilled workforce, the medical device, bio-technology, and semi-conductor industries are currently being targeted in economic development strategies.

- The logistics sector will also be targeted due to the availability of a former army base located directly north of Port of Oakland, which will be developed into a multi-modal facility that will support the port.

Vallejo, California

Interview Contact

Sandy Person, President
Solano Economic Development Corporation
888-864-1855 sandy@solanoedc.org

Physical Situation

- Vallejo is situated at the confluence of I-80 and I-780, as well as California Highways 29 and 37, which provides good highway access to all points of the compass.

- Both the Union Pacific and Burlington Northern Santa Fe Railroads traverse the Fairfield/Vallejo MSA, but service is limited.

- There is only a general aviation airport in the MSA, but Sacramento, Oakland, and San Francisco International Airports are all within an hour's drive.

- Telecommunication and fiber optic connectivity is good in the MSA, but efforts are underway to improve its capabilities through the Alameda East Bay Broadband Consortium.

- The landscape is characterized by rolling hills and broad valleys associated with the California Coastal Ranges, which allows for large scale residential and commercial developments.

Economic Situation

- The Cities of Vallejo and Fairfield have a population of 116, 000 and 108,000, respectively, with almost 421,000 people living in Solano County. The MSA lays midpoint between Sacramento and the Bay Area, and therefore is a part of the Northern California Megaregion which currently contains 9 million people, but is projected to grow to 15 million residents by 2035. Within a one hour commute the area has access to a labor shed of 1.2 million workers.

- Employment is characterized by trade, transportation and utilities, and government, which contain 22 percent and 20 percent of the workforce respectively. These sectors are followed by education and health employing 16 percent of the workforce. Many in the government sector are accounted for by two prisons that employ 3600 people, and Travis AFB that employs another 15,000, in addition to contributing $1.5 billion in economic impacts annually.

- There is a lot of land available for development in the MSA, and because of its equidistant location between Sacramento and the Bay Area, has

historically been the "affordable" choice for residential and commercial development. All development in the MSA takes place within municipal boundaries, so growth has been orderly, and all the cities work well together.

- Energy, life science, and the food chain industries have the largest impacts on the economy, the latter owing much of its success to the Solano campus of the University of California, Davis.

Recent and Future Economic Activities

- The food chain industry, energy, and life sciences will continue to be part of the economic development strategy with a focus on the three main health care providers in the county. Due to the large amounts of affordable land, data centers, back-office operations and specialized manufacturing will also be targeted. Additionally, a federal grant is being pursued to conduct a formal study on the viability of attracting the logistics cluster to the area.

- An issue that will be closely monitored is the need of water in Southern California, and a proposal to obtain water from the Sacramento River, referred to locally as the "Delta Issue".

- Highway transportation is a very large issue in Solano County. All the municipalities work closely with the Solano Transportation Authority on many issues. The most prevailing issue identified is the burden placed on I-80 due to the merging of I-680 at a point within the City of Fairfield. Other issues include: the Jepson Parkway, the improvement of California Highway 12, linking I-80 and California Highway 29 -which is a primary access point to Napa California - and identifying alternate routes to I-80 that will be able to accommodate increased traffic flows in the future.

Sacramento, California

Interview Contact

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Physical Situation

- Sacramento is situated at the crossroads of I-80 and I-5, which affords it easy access to the Pacific Coast, one of the most concentrated markets in the United States. Additionally, US Highway 50, and California Highways 70 and 99 converge in the center of the City as well.

- Both the Union Pacific ("UP") and Burlington Northern Santa Fe Railroads ("BNSF") service the Sacramento area. Both railroads also operate intermodal facilities in nearby Stockton. While the BNSF facility is not large it has a capacity of 300,000 container lifts annually. The UP is making a significant investment to their facilities in Stockton: by 2013 the UP will have invested $122 million enabling a lift capacity of 400,000 containers annually; by 2020 this investment will increase to $248 million with a lift capacity of 730,000 containers annually.

- Good direct air service to many cities in the United States, and a few international destinations, is available through the Sacramento International Airport. The airport is undertaking a $1 billion multi-year improvement program which will allow for 10 million passengers annually.

- The telecommunication network is very strong in Sacramento, and though the economy utilizes the fiber optic transmission system within the I-80 Corridor, it is not dependent on it for its connectivity requirements.

- Sacramento is located at the confluence of the Sacramento and the American Rivers. This allows the City a deep water port connection directly to the San Francisco Bay, and there have been some discussions regarding the operation of barge container traffic from the Port of Oakland.

- The landscape is characterized by the broad central valley of California, with the Sierra Nevada Mountains directly to the east, and the rolling coastal hills to the west. There are significant amounts of land available for large-scale residential and commercial real estate developments.

Economic Situation

- Sacramento has a population of over 600,000 people, and is the center of a multi-MSA region within which live just over 2.4 million people. Its economy is closely related to, and by some considered a part of, the San Francisco Bay Area, which contains 9 million people.

- Employment, as one might expect in California's state capitol, is dominated by the government sector at 28 percent of the workforce, or approximately 250,000 employees. Trade, transportation, and utilities employ 16 percent of the workforce, with education and health services contributing 12 percent. Interestingly, economic diversification efforts have been successful in that 50 years ago government accounted for 45 percent of the workforce.

- Food production and processing as well as food safety and seed research is a strong industry cluster in Sacramento. The wine producing regions of Napa and Sonoma lie just to the west of the area, and the University of California, Davis, has one of the best agricultural and food related programs in the United States, providing excellent biotech research capabilities to the food industry.

- In addition to UC Davis with over 29,000 students, Sacramento State University has a student body of 28,000. And within the downtown area the University of San Francisco and Drexel University each operate campuses.

- Renewable energy has been an industry cluster pursued and encouraged for the past 30 years. Initiated in 1983, Sacramento had the first operational megawatt solar production installation in the United States.

Recent and Future Economic Activities

- The food industry will continue to be a strong component of the economy. A project called "Seed Central" will conduct research on the movement and distribution of seeds, and more wine producing areas are starting to emerge throughout the region.

- The medical cluster has seen strong and steady growth over the past 5 years with $2 billion invested in medical delivery systems and research taking place within the last three years.

- Information technologies have proved a strong component of the economy in recent years and will continue to grow. The 6,500-employee Intel research campus in Folsom is the largest of their facilities not located on the west coast. Raging Wire also has a large data center in the area, and it is estimated that in Rancho Cordova there is 12 million square feet of call center facilities.

- Manufacturing growth which has been confined to primarily the southern areas of town can now take advantage of three closed military bases, with one, the former Mather AFB, having an 11,000-foot operational runway, which can be used for large air cargo operations.

- The I-80 Corridor will continue to attract large scale office developments along its entire length, adding additional stain to the highway system.

Reno, Nevada

Interview Contacts

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Physical Situation

- Reno is situated at the crossroads of I-80 and US Highway 395, providing excellent east/west access, and good north/south access. Of all the cities visited along the I-80 Corridor study's focus, Reno and Sparks central business districts lie most near the interstate with limited room for further expansion.

- Both the UP and BNSF Railroads provide service to Reno via a class I main line. However, due to costs borne by the UP to upgrade rail access points through the Sierra Nevada Mountains, only the UP can provide double stacked container service to the area. There is a difference of opinion between the UP and Reno area officials and businesses as to whether adequate multi-modal services are provided to the area.

- The Reno-Tahoe International airport provides strong air connections, and is a designated alternative airport for Air China Cargo shipments.

- Telecommunication linkages are provided via the transcontinental fiber optic transmission system located within the I-80 Corridor which provides large amounts of broadband opportunities to the area.

- The landscape is characterized by basin and range geography with wide valleys between high mountains, allowing for large scale residential and commercial real estate development. Reno sits on the eastern slope of the Sierra Nevada mountain range.

Economic Situation

- Reno and Sparks have a combined population of almost 309,000 people, with almost 415,000 people living within Washoe County. Population growth has been quite rapid with an increase of over 54 percent since 1990. The area's economy is aligned with that of the San Francisco Bay Area.

- Twenty-two percent of the workforce is involved in the trade, transportation, and utilities sector, because the area has developed as a logistics hub serving the 11 western states with a population of 73 million people. Due to the gaming industry, 19 percent of the workforce is in the leisure and hospitality sector. Government, professional and business services, and education and health services represent 14 percent, 13 percent, and 12 percent of the workforce respectively.

- Though land within the city limits of Reno for large scale industrial use is very limited, the surrounding areas of Sparks and Storey County to the east, Stead Airport to the north, and Carson City to the south, provides tens of thousands of acres for industrial development. The Tahoe Reno Industrial Center, located 20 minutes east of downtown Reno via I-80, encompasses 30,000 acres of entitled sites pre-approved for manufacturing and distribution uses.

Recent and Future Economic Activities

- Logistics and manufacturing will continue to drive the area's economy in the future. A major infrastructure improvement that will be an important connection between the area's logistics hub and Southern California is the extension of I-580 along the US Highway 395 route.

- The Reno-Tahoe International Airport has developed a strategy to market itself as a future dedicated cargo hub for the western United States, in addition to its passenger service.

- While telecommunication and fiber services are adequate today, an upgrade to this infrastructure within the I-80 Corridor will be required in the future. Apple announced in June 2012 that it will be establishing a $1 billion data center, just north of I-80 of the Tahoe Reno Industrial Center.

- A major problem that will have to be addressed in the near future is the planning, design and construction of an interstate "business bypass" to the north of Reno's urban core. There are several factors that lead us to this conclusion, including: Limited space to widen I-80 through downtown Reno, ongoing industrial development outside the urban core and the airport's growth as an air cargo hub are all creating certain amount of gridlock along I-80 through the downtown area. Accordingly, our research indicates that a cost-benefit analysis of a potential bypass be considered to assess how to optimize and facilitate East-West movements to and from the Pacific Coast ports and markets.

Fernley, Nevada

Interview Contacts

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Physical Situation

- Fernley is situated on I-80 and US Highway Alt. 50, which provides access to Southern Nevada and California.

- Both the Union Pacific and Burlington Northern Santa Fe Railroads provide service, with several rail spurs existing in Fernley.

- Very good scheduled air service is accessible through the Reno-Tahoe International Airport, which is located 30 minutes to the west via I-80.

- Telecommunication linkages are provided via the transcontinental fiber optic transmission system located within the I-80 Corridor which provides large amounts of broadband opportunities to the area.

- The landscape is characterized by basin and range geography providing ample land for large scale residential and commercial development.

Economic Situation

- Fernley has a population of almost 19,000, with over 52,000 people living in Lyon County. Fernley's economy is closely aligned with that of the Reno-Sparks MSA, and considered by many as a bedroom community to Reno.

- Employment is characterized by government at 18 percent of the workforce, followed by construction at 15 percent and education, health and social services at 14 percent. Lyon County has one of the largest manufacturing sectors in the State of Nevada with over 12 percent of the workforce employed in this capacity, with some mining activities as well.

- There is a very good working relationship with Fallon, Nevada, in a variety of civic activities, especially those associated with the water supply for municipal and irrigation uses.

- The Crossroads Commerce Center, a 5,000-acre master-planned, rail-served industrial park, provides improved and fully entitled industrial sites. A new I-80 interchange was opened in June 2012 adjacent to the industrial park to better serve the industries already located there, and provide an incentive for future tenants.

- In 1999 Amazon opened a 750,000-square-foot fulfillment center in Fernley.

Recent and Future Economic Activities

- Both truck and rail service will remain crucial to Fernley's economic development strategies, with city officials believing the extension of the Nevada Pacific Parkway from I-80 to US Highway 50 essential not only to provide a quicker truck route to the south, but to also allow the labor shed access to the Fernley employment centers.

- Logistics and manufacturing will be target clusters for economic growth as well as the supply chain concept that binds them together.

- It is felt that tourism and outdoor recreation could be more pronounced in the future, and that better and additional directional signage along I-80 should be installed.

Elko, Nevada

Interview Contacts

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Physical Situation

- Elko is located on I-80 and Nevada Highway 225, which goes north to Idaho, as well as the east/west mainline rail served by both the Union Pacific and Burlington Northern Santa Fe Railroads.

- Skywest operates out of the Elko Regional Airport with service to Salt Lake City.

- Telecommunication linkages are provided via the transcontinental fiber optic transmission system located within the Corridor which provides large amounts of broadband opportunities to the area.

- The landscape is characterized by high desert basin and range, allowing for large scale real estate developments.

Economic Situation

- The City of Elko has a population of just over 18,300 people, with a total of over 32,000 people living in Elko County. Elko lies within the economic sphere of Salt Lake City.

- Employment is characterized by mining activities which consists of 24 percent of the workforce, followed by accommodations and food with 16 percent, and government at 15 percent. Within the mining industry, which has dominated the local economy for the past 50 years, gold is the primary commodity, with some lithium, as well as oil and gas exploration. Gold is also the primary economic driver in the adjacent counties of Lander and Humboldt. Barrick and Newmont mining companies both have their Nevada headquarters in Elko. Over the past few years the mines have been adding 1,500 new employees annually, and it is estimated that there are 500 companies located in Elko that exist solely to support the mines.

- Housing is the biggest issue in the Elko area, along with the water and sewer infrastructure to support the growth.

Recent and Future Economic Activities

- Mining will continue to dominate the economy, with a gold reserve estimated at a 30 year supply. Additionally, a new gold vein has been discovered to the east of Elko, between Wells, and Wendover, Nevada that is also estimated to contain a 30 year reserve. Though Wells and Wendover will see growth in the future from these new reserves, Elko will also benefit as the logistic and administrative center for these future mines.

- A "rail port", or trans-load facility has recently been constructed east of Elko which has already made an impact on the local economy by allowing large mining equipment to be transported by rail to the community. However, the closest I-80 interchange to the facility, (Osino exit 310), is not adequate to handle the necessary weight specifications, and trucks must first make their way into town on the old highway to access the interstate.

- Attracting manufacturing components and supply chain companies for the mining industry is a targeted economic development strategy. As an outcome from this strategy, two industrial parks have been identified: a 180-acre site on the east side of town, which is in need of an interchange; and a 1,500-acre site on the west side of town that has an interchange, but is considered inadequate to handle the projected volumes and loads.

- Geo-thermal energy production holds promise for the future with the new Barrick headquarters utilizing this power source.

- The mines operate their own power plants, and when the ore supply is depleted, it is anticipated that the infrastructure will stay in place and be adapted for other industries that require an isolated location.

- Telecommunications will be important in the future economy, as well as the development of tourism and recreational activities. It was felt that more recreational directional signs on I-80 are needed in the immediate future.

Salt Lake City, Utah

Interview Contact

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Physical Situation

- Salt Lake City ("SLC") is situated at the crossroads of I-80 and I-15, the latter of which is a designated NAFTA Trade Corridor that stretches directly into Canada, and down to Las Vegas, Nevada. I-15 is the only interstate along the I-80 Corridor between I-5, which is 649 miles to the west in Sacramento California, and I-29, which is 933 miles to the east in Omaha, NB, that directly connects I-80 to the Canadian border.

- The Union Pacific Railroad has three Class 1 main lines converging in SLC with direct connectivity to all the deep water seaports in Southern and Northern California, as well as the Seattle/Tacoma WA area, and operates a $90-million multi-modal container yard on 240 acres in the northwest quadrant of the I-80/I-15 intersection.

- Salt Lake City International Airport offers extensive service from every major US airline, with direct service to every continent except Antarctica. The airport is currently undergoing a $1.8-billion, multi-year redevelopment and expansion.

- Telecommunication linkages are provided via the transcontinental fiber optic transmission system located within the I-80 Corridor, and provides large amounts of broadband opportunities to the area.

- The landscape referred to as the "Wasatch Front" is on the western slope of the Rocky Mountains and is characterized by mountains with gently sloping broad valleys, allowing for a variety of large scale economic developments.

Economic Situation

- SLC has a population of almost 200,000, while the MSA contains approximately 1.2 million people. Within the contiguous MSAs of Logan, Ogden/Clearfield, SLC and Provo/Orem, live 2.4 million people.

- Employment is very balanced in the MSA with trade, transportation and utilities having the highest proportion at 19 percent, followed by government and professional and business services with 16 percent each. Central City employment is characterized by finance, government, and software, with the largest employer being the LDS Church, having a workforce estimated in the 1000s. The eastern portion of SLC is dominated by the University of Utah with a workforce of 30,000, and 35,000 students. The airport and defense-related companies occupy the western area of the City, with the airport employing over 30,000 people. Logistics employment prevails along the I-80 Corridor through southern SLC, which supports 70 million square feet of distribution facilities.

- The Life and Health Science industrial cluster is very strong in SLC, with the University of Utah providing the necessary research in these fields.

- Outdoor recreation is another major economic activity in SLC with the ski resorts to the north, east and south of the City providing huge impacts to the local economy in the winter months. Access to these resorts is via I-80 and I-15.

- While 200,000 people live in SLC, 360,000 work in the City. This very large inbound workforce puts stress on the roadway systems, especially the interstates, and must be addressed. The City believes that jobs created in the region, but outside the City, negatively impacts its budget, since the City must provide infrastructure, along with health and safety, and other services to these workers.

Recent and Future Economic Activities

- Light manufacturing and logistics will continue to be a focus for future economic development efforts. A subgroup target within this cluster will be outdoor recreation equipment and products.

- Heavy manufacturing also hold promise in the future through the defense industry, and the potential for Boeing to conduct manufacturing and assembly activities on the airport property.

- Research and development will also be taking place along the I-80 Corridor with health and life Science, and defense-related activities taking place on the eastern and western segments of the interstate respectively.

- West of the City, areas both north and south of I-80 hold the most potential for growth and the need for additional infrastructure. Day Break is a 2,000-acre master planned community south of I-80, while there are 10,000 acres of agricultural land to the north of the interstate that is being contemplated as a higher density, "new urban" community. While regional rail is being planned to alleviate traffic in all directions from the City's core, I-80 will probably take the brunt of traffic from these new areas.

- A comment was made that more directional signage along I-80 identifying recreational activities is needed immediately.

Rock Springs, Wyoming

Interview Contact

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Physical Situation

- Rock Springs is situated on I-80 and US Highway 191, which provides access to Flaming Gorge National Recreation Area south of town, and Yellowstone National Park to the north. The single largest issue regarding highway transportation is maintenance along I-80 due primarily to the harsh winter conditions. There is estimated to be $3 billion in maintenance deferments on I-80 through Wyoming. The Union Pacific Railroad provides service on an east/west axis.

- United and Delta provide air service to Denver and SLC from the Sweetwater County Airport.

- Telecommunication linkages are provided via the transcontinental fiber optic transmission system located within the I-80 Corridor which provide large amounts of broadband opportunities to the area.

- The landscape is characterized by mountains with intermittent valleys.

Economic Situation

- Rock Springs is a community of more than 24,000 people, with almost 44,000 living within Sweetwater County, and lies within the economic sphere of Salt Lake City.

- Mining/extraction is the single largest employment sector in the county with 6,051 workers, or about 20 percent of the workforce. It is estimated that 80 percent of all employment is related to the mining/extraction sector. Coal is the largest commodity exported outside the area, with up to 72 unit trains a day moving along the Union Pacific main line.

- Trona, a crystalline type of mineral used in making glass, is mined in the Rock Springs area, which is the largest producer of trona in the world. Much of the product is exported to China. Sweetwater County also boasts the largest helium plant in the world. Generally, in terms of world production, Wyoming is: #1 in coal; #2 in natural gas; # 5 in oil; # 1 in trona; and # 1 in uranium. Rock Springs also exports a lot of skilled workers and services to the North Dakota oil fields. Rock Springs has only a 4.3 percent unemployment rate.

Recent and Future Economic Activities

- Mining/extraction will continue to lead the economy.

- Tourism is beginning to become a more important component in the local economy, and more focus will be placed on this sector in the future. Therefore, there is an immediate need for more recreation signage to be placed along I-80.

Laramie, Wyoming

Interview Contact

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Physical Situation

- Laramie is situated on I-80, which provides the vast majority of highway connectivity. US Highway 287 also provides north/south roadway access to a limited market area. Laramie is served by the Union Pacific Railroad, which operates a trans-load facility in Laramie.

- While air service is limited in Cheyenne, Denver International Airport is just 40 minutes away by air.

- Telecommunication linkages are provided via the transcontinental fiber optic transmission system located within the I-80 Corridor, which provides a large amount of broadband opportunities to the area.

- The landscape is characterized by mountains with intermittent valleys.

Economic Situation

- Albany County, of which Laramie is the County Seat, has a population of almost 40,000, and lies within the economic sphere of Cheyenne, Wyoming, and Denver.

- Employment is dominated by the government sector, with the University of Wyoming employing over 5,300 people, accounting for more than 33 percent of the workforce. The medical services industry is also a significant portion of the workforce, and 52 percent of the workforce has a college degree.

- While Laramie does not have mining activities to the extent of the other major Wyoming communities along I-80, it does have a low sulfur coal base, a portion of which is exported to China.

- One of the largest private employers in Laramie is Mountain Cement, which produces cement for a regional market.

Recent and Future Economic Activities

- Economic development efforts center around the University, the high number of college graduates in the workforce, as well as abundant and redundant electric power.

- There is a business incubator associated with the University, and it is estimated that as many as 60 technology-based companies operate in Laramie.

- A portion of land has been identified as a technology park with data centers as the primary target market. The Minerals Trust Fund as well as a Business Ready Community Grant will be utilized to build the technology park. Currently, Verizon Communications is planning their 990,000-square-foot Western Mega Data Center on 180 acres within the technology park.

Cheyenne, Wyoming

Interview Contact

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Physical Situation

- Cheyenne is situated at the crossroads of I-80 and I-25, and is also served by a north/south/east/west mainline rail service provided by both the Union Pacific and Burlington Northern Santa Fe Railroads. This network of highway and rail allows easy access to the region and the United States as a whole.

- While air service is limited, Denver International Airport is less than 35 minutes away by air, and 90 minutes away by highway.

- Telecommunication linkages are provided via the transcontinental fiber optic transmission system located within the Corridor, which provide large amounts of broadband opportunities to the area.

- The landscape, referred to as the "Front Range", is characterized by large expanses of relatively flat lands with rolling hills, which allows for large-scale master planned industrial parks.

Economic Situation

- Cheyenne has a population of 60,000, with a total of 90,000 living in Laramie County, and lies within the economic sphere of Denver. Over 4 million people live within the "Front Range" economic corridor which follows I-25 from Pueblo, Colorado to Casper, Wyoming.

- Employment is characterized by mining and government. 30 percent of the workforce is employed by local, federal and state government. 47 percent of all State employees live in Cheyenne, and 4000 people work at Warren Air Force Base, which is home to the Division of Space Command, and a missile maintenance squadron. Unemployment currently hovers at six percent.

- Wyoming is a right-to-work state, with no corporate, personal, or inventory taxes, which makes it an attractive alternative to Denver in serving the "Front Range" market. Wyoming does impose a mining severance tax which is earmarked for economic diversification through the Minerals Trust Fund, the principal of which cannot be utilized by the political structure within the State.

- Economic development fundraising activities have been very successful with two separate capital fundraising efforts raising $7 million of private monies slated for infrastructure development and workforce development. These funds were utilized to develop two industrial parks consisting of 917 acres and 620 acres respectively.

- Past economic development efforts focused primarily on the logistics sector, resulting in much success, an example of which is a 1 million-square-foot

Wal-Mart high velocity distribution center, currently employing 750 people inside the facility, and 120 truckers.

Recent and Future Economic Activities

- I-25 is considered a technology corridor, with seven universities located an hour's drive from Cheyenne.

- The medical center is increasing its influence on the local economy.

- Ecostar has recently opened an up-link facility providing access to their own satellites, a $17-million National Center for Atmospheric Research supercomputer center is currently becoming operational, and Microsoft is developing a data center.

- Swan Ranch, a 4,000-acre rail-served industrial park, located adjacent to both I-80 and I-25, is currently in the preliminary stages of development and is foreseen as an economic driver for Cheyenne over the next 20 years. Manufacturing companies wishing to serve the entire United States will be the target market for Swan Ranch.

Section 4: Study Area SWOT Analysis

4.1 San Francisco Area

Strengths

Diversity of Industry

The Bay Area has long been lauded for its knowledge-based economic clusters. But the area's largest companies span a wide diversity of industries. In 2011, the Bay Area was host to 30 U.S. Fortune 500 companies—second only to New York. And

while the largest companies in New York or Houston, which ranked third, are clustered around a single major industry (finance and oil, respectively), the Bay Area's largest firms demonstrate the diversity of its regional economy.

That said, the Bay Area Council Economic Institute reports that innovation jobs represent a larger share of the job market in the Bay Area than anywhere else in the United States. These include jobs in clean energy, aerospace/defense, scientific or professional services, advanced manufacturing, life sciences, and information technology. Together, these positions account for 18.4 percent of total employment in the area.[3]

Indeed, the Bay Area enjoys many advantages that attract knowledge-based industries. Among these, are (1) an existing cluster of knowledge-based firms and expertise, (2) a highly educated workforce, (3) excellent research capacity and (4) the availability of venture capital.

Existing Knowledge-Based Cluster

In business, some of the best ideas are ideas that have been borrowed from others. Especially in knowledge-based industries, successful entrepreneurs are those who can absorb information from those around them, adapt the ideas, and innovate to create new products. This process of innovation is accelerated when entrepreneurs have steady access to a critical mass of fellow innovators in knowledge-based industries within the surrounding community. For this reason, aspiring entrepreneurs in these industries are continually attracted to the Bay Area, because of its standing as a global leader in knowledge-based fields.

Educated Workforce

A major difference between San Francisco and the other communities along the Western I-80 Corridor is the high concentration of college graduates in this region. While high school completion rates in San Francisco are similar to those of other

communities along the Corridor, the share of Bay Area residents who in enroll in and complete college is far higher.

As a corollary, the area boasts the nation's highest rated public university,[4] fifth-highest rated private university,[5] and boasts more top-10 graduate programs than any of its peers.[6]

Research Capacity

The area's major research institutions, including Stanford University and the University of California at Berkeley, along with the University of California at San Francisco medical campus, and leading research laboratories like Lawrence Livermore and the NASA Ames Research Center, contribute substantially to the nation's research and development (R&D) efforts. In 2009, UC San Francisco invested $948 million into R&D efforts, the fourth highest amount of any university nationwide. Likewise, Stanford University spent $704 million, ranking 14th, while UC Berkeley spent $652 million, ranking 17th.[7]

This R&D spending has been highly efficient, with new 16,364 patents being awarded in the Bay Area in 2010 alone. That accounted for 15.2 percent of all patents issued in the United States for that year.[8]

Venture Capital

The commercialization of these new technologies is facilitated by the presence of significant venture capital resources in the Bay Area. Venture capital investments in the Bay Area account for 40 percent of all venture capital investments nationwide and 16 percent of all worldwide investments.[9]

High Incomes

The high productivity of the Bay Area's regional economy has translated into high incomes for its residents. As shown in the attachment to this section, the area's annual average wage amounted to $61,370 in 2011—by far the highest along the Western I-80 Corridor. Management and legal occupations in the area earn an annual average wage of more than $130,000.[10]

For comparison, the average annual wage in the Sacramento area amounted to $51,550, while in the Reno, Salt Lake City and Cheyenne areas, it amounted to $43,390, $43,680, and $41,280, respectively.[11]

Weaknesses

While there is much reason to be encouraged about the Bay Area's economic prospects, it is also concerning that job growth in the area has been slow to recover since the recession of 2008-2009. The area's average annual unemployment rate improved only slightly in 2011 from the year before, moving from 10.27 percent to 9.42 percent.[12] Even this modest improvement, however, can largely be explained by a continuing decline in the labor market participation rate, which has fallen more than a percentage point since 2008.[13]

Poor Job Growth

This "jobless recovery" to the recent recession is most evident among blue-collar workers, who now comprise only 16 percent of Bay Area employment.[14] Further, job growth within the high-tech sectors that form the region's economic base has been weak and cannot be expected to offset the job losses from other industries. These sectors—advanced manufacturing, information systems, as well as professional and scientific services—are inherently more capital-intensive than labor-intensive, meaning they tend not to drive employment growth directly.[15]

Since 2009, positive job growth has primarily been limited to leisure and hospitality and health service industries. Computer and electronic manufacturing has seen double-digit output growth over the past five years, despite its declining employment.[16] At the least, this increase in productivity portends well for the future of consumption and services sectors, as the region's economic base activity is posting strong returns, even if it offers only limited employment opportunities.

If job growth is driven primarily by entrepreneurship, as research suggests,[17] then all of the factors which influence the ease or success of launching a business should be taken into consideration by economic development planners concerned with poor job growth. Unfortunately, for the San Francisco area, many of these factors, including commercial rent prices, tax structure, labor laws and regulatory issues are frequently cited by businesses as obstacles to recovery.

Office Rent

The San Francisco area is home to the nation's second-highest asking rent for office space—behind only New York City. Worse, it is the only community along the Western I-80 Corridor to be among the top 30 metropolitan areas for office space rental prices nationwide. This creates a competitive disadvantage for the area to attract new small or startup firms, since these firms can secure office space much more cheaply in neighboring regions. Office space can be attained in nearby Sacramento, for instance, at slightly more than half the cost of doing so in San Francisco.[18]

Housing is Costly

San Francisco's costly real estate market isn't limited to office space, however. Costs for residential space in the area are even higher, relative to surrounding regions. According to the National Association of Home Builders/Wells Fargo Housing Opportunity Index, the current median housing price in the area is $549,000—more than five times the median income level of $102,870. The index

ranks San Francisco as the least affordable housing market in the Western United States.[19]

The area's high housing costs make it difficult to attract talented workers to the area in spite of the potential for earning generous compensation. The area's high cost of living more than offsets its relatively high wages, resulting in lower real wages for workers.

Punitive Tax Structure

Another obvious obstacle to economic development in San Francisco, and in California generally, is the state's punitive tax structure. The Tax Foundation currently ranks California as possessing the nation's third-worst business tax climate, behind only New York and New Jersey. California's state corporate income tax rate is the highest in the Northwestern United States. For individual income taxes and sales taxes, California imposes the second-highest rates in the Northwest. Notably, although Oregon imposes a higher top individual income tax rate, the state imposes no sales tax. Likewise, although Washington imposes a higher sales tax rate, it imposes no individual income tax. California is the only state in the Northwest that ranks near the top of each of these lists.[20]

These tax rates burden both businesses and employees who reside in California. Unfortunately, given the state's fiscal position, it's likely not feasible to reduce these tax rates in the foreseeable future. However, it's conceivable that the tax burden could be shifted to improve the business environment without substantially affecting the state's revenue base.

Burdensome Regulatory Environment

In addition to direct taxation, businesses throughout California are subject to a rigorous regulatory environment that drives up the cost of doing business and can discourage entrepreneurship. In a 2011 survey by the National Federation of

Independent Businesses, a majority of California employers said they found the state's regulations regarding workers' compensation, land-use restrictions, wage and overtime laws, meal period laws and medical leave laws harmful to business.[21] In that survey, 84 percent of respondents indicated that they would not launch a new business in California due to the state's regulatory climate.

Similarly, the Small Business and Entrepreneurship Council ranks California 48th in "business friendliness," based largely on its regulatory environment.[22]

Opportunities

Although the San Francisco area faces many challenges in its recovery from the impact of economic recession, there are some positive developments that portend well for future success. As the mid-2000s real estate bubble has collapsed, housing prices have fallen significantly in the San Francisco area, making it a more attractive destination for talented workers.

The area boasts California's highest rate of university enrollment—an indication that a highly skilled workforce will continue to populate the area over the long term. The Bay Area also maintains strong trade relationships with Asian nations whose purchasing power is expected to increase significantly in coming decades. Finally, economic development authorities believe that policies are available to local governments that could improve the business climate and provide leadership for business growth.

Cost of Living is in Decline

Although high housing prices relative to income have historically been an impediment to attracting employees to the San Francisco area, this ratio is rapidly improving. While wages in the area have continued to increase, the median housing price in the area has fallen significantly in the wake of the 2008-2009 recession. This means that real wages in the area have improved significantly and workers can

now afford a greater lifestyle. After the area's median housing price peaked at more than nine times the median annual income level in 2007, it has now fallen to a ratio of 5.3 to 1.

University Enrollment

Students from the Bay Area enroll directly within the state's four-year public university systems at a far higher rate than students from the rest of California. Between 2006 and 2008, 27 percent of the area's first-time college students enrolled directly in the California State University system, while 24 percent enrolled directly in the University of California System and 48 percent enrolled in community colleges. In other regions of the state, more than 60 percent of students enrolled initially in community colleges.[23]

This is significant because the likelihood of a community college student to complete a four-year degree is extremely low—current graduation rates from California's Community College system are only 3.8 percent.[24] With more students attending schools that offer a higher likelihood of graduation, San Francisco is poised to retain the most skilled labor force in California.

Trade Relationship with Asia

San Francisco has strong trade relationships with some of the world's fastest growing economies. The largest export destinations from the Bay Area include Taiwan, Japan, Singapore, Hong Kong, South Korea and China. These economies are projected to grow rapidly in the near future, achieving average annual growth rates of 5.9 percent, 2.1 percent, 6.7 percent, 5.3 percent, 4.3 percent and 8.9 percent, respectively, by 2015.[25]

San Francisco's exports to these growing nations are some of the most significant in the United States—more than seven percent of all American exports to China originate from the San Francisco area. What's more, rapid growth in these nations

will translate into an increased buying power and demand for San Francisco's products.

Business Incubation

Although California does not fare well in most surveys of state business climates, it does perform well in those that consider the ease of incubation for startup enterprises. The Information Technology and Innovation Foundation's State New Economy Index, for instance, ranks California fourth among the states for fostering innovation and assisting entrepreneurs to launch their businesses.[26]

Sharing Services

Economic development officials believe that a consolidation of services by local governments in the San Francisco area could result in as much as $600 million in annual savings for government and public safety budgets. These savings could help to alleviate fiscal strain and, potentially, even allow for a reduced tax burden on businesses.[27]

In addition, officials have called on local governments in the Bay Area to lead in the economic development effort by hosting a forum designed to address the business community's most pressing concerns regarding land-use restrictions, infrastructure planning, and other issues of direct interest to the area businesses. Local governments have also been asked to tailor education and workforce training efforts to the specific needs of the area's fastest growing industries.[28]

Threats

While many of the fundamentals of San Francisco's regional economy are strong, current budget decisions at the state and local government levels, combined with an underperforming education system, threaten the area's ability to protect its market position in core, knowledge-based industries.

Underperforming Public Schools

California's public K-12 school system has dramatically underperformed those of other states in recent decades. On the National Assessment of Educational Progress—a uniform, nationwide test administered to fourth and eighth graders by the U.S. Department of Education—students in California score significantly below the national average in both math and reading. Only 21 percent of California's eight graders are proficient in reading while only 23 percent are proficient in math.[29] The performance of Bay Area students is in line with the rest of California in terms of test scores, as a well as student-to-teacher ratios and dropout rates.[30]

The fact that Bay Area students do not perform as well as their peers nationally is particularly worrisome, given that American students, as a whole, also underperform their peers internationally. According to tests administered by the Organization for Economic Cooperation and Development's Programme for International Student Assessment, students in the United States are among the lowest-achieving in the developed world. Chinese students are more than five times as likely to attain the highest levels of proficiency on these tests than American students.[31]

The fact that student performance in the Bay Area closely tracks student performance across California, and that California trails the nation and the world, means that the next generation of Californians will be ill-prepared to compete internationally and retain San Francisco's reputation as a global leader in knowledge-based industries.

Funding Reductions for Higher Education

Public institutions account for 90 percent of higher education enrollment in California. Yet, while enrollment in these public institutions has increased from 2.2 million to 2.8 million since 2002, state per-pupil support for these institutions has declined significantly. State appropriations to the University of California system,

per full-time equivalent student, fell from $17,705 in 2002 to $8,620 in 2009—a decline of 51 percent. Likewise, appropriations to the California State University system, per full-time equivalent student fell from $11,085 to $5,618 over the same time period—a decline of 49 percent.[32]

The difference has been made up by increases in student tuition, which now accounts for 40 percent of total university costs. In 2002, that proportion was only 25 percent. While this is still below the national average of 51 percent, there is increasing concern that rising tuition rates are pushing students from low- and middle-income families out of the higher education marketplace.

If higher education becomes less accessible to prospective college entrants in California, then the advantages of a highly skilled workforce that San Francisco's knowledge-based industries have previously enjoyed could become endangered in the very near future.

Lack of Funding for Needed Infrastructure Improvements

California's Metropolitan Transportation Commission projects a funding shortfall for needed transportation projects of nearly $50 billion by 2035. As the state and its metropolitan regions grow and expand, it will need to plan for this growth by offering an improved network of highways and public transit. However, the MTC already spends more than 80 percent of its budget just to maintain the existing transportation infrastructure.[33]

The strain currently placed on the San Francisco area's transportation system is evident by the 50 hours of annual travel delay per peak traveler—well above the national average of 34 hours. The cost of lost time due to traffic congestion is estimated at $1,019 annually per commuter.[34] Worse, without significant additional investments in public infrastructure, these costs will continue to climb over time.

Prospect of Higher Tax Rates

With continued funding shortfalls in nearly every expenditure category in Sacramento, there is an ever-present likelihood that policymakers will address these shortfalls by increasing business or personal income tax rates. Given that businesses and workers in California already face a disadvantageous taxing climate, any prospective new taxes would only accentuate this disadvantage.

4.2 Sacramento Area

Strengths

California's Most Affordable Metropolitan Area

The Sacramento area is a draw for businesses and employees because of its cost-competitiveness with regard to both housing and commercial and industrial rent rates.

With a current median-housing-price-to-median-income ratio of 2.3 to 1, the National Association of Home Builders/Wells Fargo Housing Opportunity Index ranks the Sacramento area as the 30th most affordable housing market in the Western United States, far above the ranking granted to other major California markets.[35]

Similarly, commercial and industrial rent rates, on a per-square-foot basis, are far cheaper in the Sacramento area than in other major California markets.

Relative Stability of Government and Related Employment

While the 2008-2009 recession has exerted a strong negative and prolonged impact on private-sector employment in the area, the large amount of government and government-related activities in Sacramento has brought a stabilizing force to the unemployment picture. Between 2002 and 2010, the area added nearly 100,000

government jobs.[36] Moreover, these jobs offer higher incomes, on average, than private sector employment in the area.[37]

Growth of Clean Energy Industry

Sacramento has played host to an emerging industry in clean energy technologies that has a recent explosion of growth and new business launches. The area now hosts over 200 clean energy companies, including many that are headquartered in the area.

Key research arms at the region's major universities, including UC-Davis and California State Univ., Sacramento have catalyzed growth in this emerging industry, as well as its proximity to the state capital, where critical decisions regarding the future of California's clean energy marketplace are made. Key clean energy programs hosted at UC-Davis include: the California Wind Energy Collaborative, the California Solar Collaborative, the California Geothermal Energy Collaborative, an Energy Efficiency Center, the California Lighting Technology Center, the Western Cooling Efficiency Center, the Institute for Transportation Studies, a Fuel Cell Partnership, and many life science programs that also relate to clean energy production. In addition, the California Smart Grid Center is hosted at nearby CSU-Sacramento, after being established by a $127 million grant from the U.S. Department of Energy.[38]

Top Research Universities

In UC-Davis, the Sacramento area hosts one of the nation's premier research universities, particularly relating to clean energy technologies and life sciences. UC-Davis consistently ranks among the top five universities in the number of doctoral and bachelor degrees awarded in the life sciences. UC-Davis also ranks 10th among public universities nationwide and 15th among public and private universities in terms of research funding, receiving $684 million in 2010-2011.[39]

Workforce Education is Above Average

The Sacramento area's labor force is highly educated when compared to California or the United States as a whole—even if not to level of the nearby San Francisco area. A key difference between the Sacramento and San Francisco area is the number of college graduates. Tied to lower graduation rates at Sacramento area universities, the area has a higher proportion of the workforce that has enrolled in college without ever completing a degree. It's important to note, however, that San Francisco is the outlier in this respect, with the labor forces of most metropolitan areas along the Western I-80 more closely resembling that of Sacramento.

Importance of Manufacturing

Sacramento's location at the northern end of California's Central Valley has made it an important hub of food process manufacturing. The Central Valley is the largest producer of agricultural products in the world and Sacramento's location within the valley and at the intersection of important transnational shipping routes—including the I-80 Corridor, I-5, and Highway 50—has traditionally given Sacramento a competitive advantage in food process manufacturing and distribution.[40]

Weaknesses

High Unemployment

Sacramento currently suffers from a higher unemployment rate than California and the United States as a whole. Average annual unemployment in the region topped 11 percent in 2009, 2010 and 2011. As with other locations, this has occurred even as workers have dropped out of the labor market.

Low Wages Compared to Other California Cities

The Sacramento area offers lower wage-earning opportunities than other major metropolitan areas in California, including the Los Angeles, Orange County, San Diego, San Francisco, and San Jose areas. However, among the communities along the Western I-80 Corridor, Sacramento offers the second-highest wage opportunities, as shown in attachment to this section. With average annual wages of $51,550, workers in Sacramento still earn around $8,000 more than workers in the Reno and Salt Lake City areas.[41]

Burdensome Tax and Regulatory Structure

Along with San Francisco and other California communities, the Sacramento area shares the burden of doing business in a state that is generally perceived as an unwelcoming business climate. As these troubles have already been outlined for San Francisco, they will not be repeated here.

Opportunities

Low Rents and Labor Costs

Low rents and labor costs have inspired growth and this trend is expected to continue. As unfriendly to business as California might be perceived, the Sacramento area offers a unique combination of low rents and labor costs, relative to other California communities that makes it a low-cost place to do business. Moreover, because the area boasts a skilled labor force and abundant, inexpensive industrial space, while being in close proximity to San Francisco's knowledge-based economic clusters, the area has an opportunity to expand its manufacturing base by commercializing and producing the technologies produced by San Francisco-based firms.[42]

Seismic Stability

Unlike coastal California locations, the Sacramento region has a very low risk of earthquake damage and, yet, remains close to the research hubs found on the coast. This makes the area ideal for attracting many IT-related operations, including data centers with mission critical systems.[43]

Growth of Biotechnology

Biotechnology and life science enterprises are beginning to play an increasingly important role in Sacramento's regional economy. This is due to expansion of firms from the higher-cost San Francisco area and to the attraction of the medical research facilities at UC-Davis. The UC-Davis Health System's Medical Technology Commercialization Clinic offers an important conduit for the development of new technologies to be translated into the growth of a viable economic cluster in the life sciences. Several biotechnology firms have already located to the Sacramento area and are employing hundreds of local workers.[44]

Transportation Infrastructure

Sacramento's transportation infrastructure makes its area ideal for distribution centers. Sacramento is poised to become a major hub of transnational shipping and distribution. Its multi-modal shipping capacity includes the Port of West Sacramento—a deep water channel sea port that connects Sacramento to the San Francisco Bay, and consequently, the Pacific Ocean—and a recent major land and airside terminal constructed at the Sacramento County Airport. Called the "Big Build" project, the airport's new multi-modal terminal replaces an outdated 216,000 passenger terminal with a state-of-the-art 680,000-square-foot facility. The project was completed in 2011.

In addition to the three major transnational highways that intersect the downtown area, this multi-modal capacity is expected to complement Sacramento's strategic

location as a gateway to the American West and a key exporter of agricultural products from California's Central Valley.

Former Military Installations

Three major privatized military installations surround the Sacramento region, including: McClellan Park, Mather Park, and Depot Business Park. McClellan and Mather Parks offer office and industrial space with runway access for cargo-related uses and federal business incentives because they are classified as Local Area Military Base Reuse Areas. Depot Business Park offers similar incentives because it is located in an Enterprise Zone and has rail access potential.[45]

Threats

The major threats to the future of economic development in the Sacramento area are related to the chronic underperformance of California's K-12 education system, declining public support for higher education, and an uncertain tax environment. Because the area shares these potential obstacles with San Francisco, they will not be recounted again here.

4.3 Reno Area

Strengths

Economic Development Strategy

In 2011, the State of Nevada passed legislation[46] to revamp its economic development structure, creating a cabinet-level state office for economic development and folding the efforts of regional economic development agencies under its auspices. Although economic development efforts had been lagging in Nevada prior to this change, the new law creates a coordinated framework for

economic development that is expected to lead to the creation of 50,000 new jobs statewide by 2014.[47]

As part of this effort, the new Governor's Office of Economic Development has created a state plan for economic development targeting seven sectors for growth and regional development agencies have been asked to outline their strategies for economic development in the near- and long-term.

Proximity to California and Other Western Markets

Reno's location near the Northern California border, as well as its connectedness, along the Western I-80 Corridor, with other important Western metropolitan regions, such as Salt Lake City, position the City well to draw from these markets for the region's important tourism base, and also provides the opportunity for distribution and transportation centers.

Low-Tax Climate

The Tax Foundation notes that Nevada is one of the best states in which to do business, ranking the state third in its 2012 ranking of State Business Tax Climates.[48] Of particular note is that the state imposes no personal nor corporate income taxes—a significant advantage over neighboring California.

Cost of Housing

In the wake of the real estate collapse following the 2008-2009 recession, Reno has become one of the most affordable housing markets in the Western United States, according to the National Association of Home Builders/Wells Fargo Housing Opportunity Index. With a current median-housing-price-to-median-income ratio of only 1.9 to 1, the Reno area is now the most affordable of the major housing markets along the Western I-80 Corridor.[49]

Cost of Office Space

Not only is housing more affordable in Reno than in other communities along the Western I-80 Corridor, but so is commercial office space. At an annual asking price of only $17.98 per square foot, Class A office space in Reno costs a fraction of comparable space in San Francisco ($40.76), Sacramento ($23.52), or Salt Lake City ($27.32). In Las Vegas—often a competitor with Reno for corporate investment—comparable space rents for $29.19 per square foot.[50]

Research Capacity

The University of Nevada, Reno is located in Reno, as are offices of the Desert Research Institute—an environmental research division of the Nevada System of Higher Education with a heavy focus on developing new, sustainable clean energy technologies. Reno receives 78 percent of all R&D spending in Nevada and is home to 75 percent of the state's laboratory space, by square foot.[51]

Between 2006-2009 the Reno area produced an average of 6.63 earned doctorates per 10,000 in population—slightly above the national average of 6.35 per 10,000 in population. In addition, the area contains a per capita concentration of science and engineering laboratory research space that is more than twice the national average.[52]

Natural Beauty

Like Sacramento, the Reno area has very little exposure to events of natural disaster, making it a safe destination for investments that are sensitive to these events. In addition, the Reno area is home to Lake Tahoe and some of the world's most scenic mountain ranges.

Weaknesses

High unemployment

As with other communities along the I-80 Corridor, employment in the Reno area suffered more dramatically than the nation from the recession of 2008-2009. Average annual unemployment in the area topped 13 percent in 2010 and 2011, even as the labor force has declined significantly.

Under-Developed Clusters

Outside of the leisure and hospitality industries, the economic clusters that inspire continued innovation and entrepreneurship within specialty fields are largely lacking in the Reno area.

Lack of Support System for Entrepreneurs

Economic development officials have noted that a lack of support structures for business incubation is a major obstacle in the Reno area.[53]

Over-Reliance on Consumer Spending to Fund Government Operations

The majority of state revenues, and a large share of local government revenues in Nevada are derived from taxes on consumer spending activities—namely, general and selective sales taxes and taxes on gaming. Because of this tax structure, when consumer spending declines—as in the wake of the 2008-2009 recession—government tax revenues quickly become strained. As a result, these governments' ability to provide critical infrastructure and other services is highly restricted during periods of slow economic growth.[54]

Limited Availability of Venture Capital

Between 2005 and 2010, the entire state of Nevada averaged only $38.8 million per year in venture capital investments, accounting for just 0.2 percent of venture capital investments nationwide. What's more, the bulk of this capital investment has taken place in the Las Vegas area—not the Reno area.[55]

Underperforming K-12 Education System

As in California, students in Nevada's K-12 educational system drastically underperform their peers around the United States and the world. According to statistics maintained by the U.S. Department of Education, Nevada's students score among the lowest on reading and math tests administered by the department and hold the nation's lowest high school graduation rate.[56] However, recently-departed Washoe County Schools District Superintendent Heath Morrison was named "Superintendent of the Year" in 2012 by the American Association of School Administrators for his efforts at improving the Reno-area school district.[57] This is a sign that educational performance in the region may be improving.

Opportunities

High Rate of Entrepreneurship

At 510 entrepreneurs for every 100,000 in population—a rate that is 50 percent higher than the national average—Nevada, as a whole, ranks first among the states in the 2010 Kauffman Index of Entrepreneurial Activity. Nevada has consistently ranked in the top 10 among states in the quarterly rate of new business starts over the past five years and much of this activity has been concentrated in the Reno area.[58] This rate of entrepreneurship portends well for future growth in the area.

Expand Angel Networks

While the Reno area has been a hotbed of entrepreneurial activity, the area fails to attract significant amounts of venture capital. One reason may be that the area's venture capital community has no organized means of reviewing and assessing entrepreneurial ventures. A statewide or regional angel network sponsored by state or local governments may help to facilitate this process.

Commercialize UNR and DRI Research

Innovation drives the growth of local industry clusters and Reno possesses a strong innovation capacity. Several components of Nevada's new economic development initiative will help to transfer technology created by the region's research centers to private industry. First, the law behind the initiative establishes a "Knowledge Fund" that will help to finance research into technologies with potential commercial applications. Second, the Governor's Office of Economic Development intends to hire a "Technology Commercialization Director" to help facilitate the process of technology transfer.[59]

Increase the Desirability of Downtown Living

Key to the Economic Development Authority of Western Nevada's strategy for promoting cluster growth and economic diversification in the Reno area, is to make downtown an attractive and functional setting for young professionals to live and work. Strategies for accomplishing this task include: providing Wi-Fi access across the downtown area, promoting transit-oriented development and increasing housing opportunities in the urban core.

Inland Port and/or Logistics

Because of its high-quality highway and rail freight infrastructure, and connectivity to other major Western markets, state policymakers in Nevada are examining the

potential for establishing an inland port. If ultimately proven viable, the inland port would serve as a multimodal distribution and trade processing center. Legislation was created in 2011 to authorize a new state inland port authority for this purpose.[60]

Targeted Sectors

While the creation of state and regional economic development plans is ongoing throughout Nevada, the Governor's Office of Economic Development has identified seven specific sectors that will be targeted as potential growth industries. These include: tourism, gaming and entertainment; health and medical services; business IT ecosystems; clean energy; mining, materials, and manufacturing; logistics and operations; and aerospace and defense.[61]

Threats

Strain on Public Resources and Impact on Education

State finances in Nevada have been acutely affected by the 2008-2009 recession. The state legislature has been called into special sessions to bridge funding gaps three times since 2008. The Center for Budget and Policy Priorities reports that Nevada was forced to close the largest funding gap in the nation in 2011—a gap of 36.2 percent.[62] The bulk of this gap was closed by reducing appropriations to core government services, including K-12 and higher education.

Overly Dependent on Consumption Industries

Because the leisure and hospitality industries play such a dominant role in the Reno economy, and are highly vulnerable to shifts in consumer spending patterns, both Reno-area employment and government and business revenues are especially volatile. When consumers and vacationers from Reno's major market—Northern California—are confident and have disposable income, Reno prospers. When

economic events shake this confidence or reduce the amount of disposable income, Reno suffers.

Gaming Industry Vulnerable to Increasing Outside Competition

The State of Nevada created a unique legal advantage for the casino gaming industry within its borders when it legalized this activity in 1931. In recent decades, however, the legal monopoly enjoyed by Nevada communities on gaming has begun to erode as other states (and the federal government, in the case of Indian gaming) have liberalized gaming laws.

In addition to increasing competition from brick-and-mortar casinos in other states, the emergence of online gaming also threatens to erode Nevada's market share and reduce the amount of tourism within the state as consumers find alternatives closer to home.

College Graduates Leaving the Region

Reno-area economic development officials have voiced concern over "brain drain" as the area's most skilled and accomplished workers leave for better opportunities elsewhere. This concern is why Reno's economic development strategy will include improvements to make the downtown area more attractive to young professionals.[63]

Limited Support for Higher Education

Between 2008 and 2010 state support for the University of Nevada, Reno and its various programs fell by more than $10 million. This drop in funding occurred even as the university's enrollment increased from 12,429 to 12,889.[64] Responding to this funding reduction, Nevada System of Higher Education Regents increased tuition fees by 13 percent for the 2012-2013 school year. There is concern that the

higher direct costs facing students will push many out of the higher education marketplace.[65]

4.4 Salt Lake City Area

Strengths

Low Unemployment Rate

With an annual average unemployment rate of 6.6 percent in 2011, the Salt Lake City area labor market has performed much better than those of other communities along the Western I-80 Corridor and the nation. Local area unemployment spiked in 2010 at 7.8 percent, but has shown rapid improvement in recent months. Labor market participation rates have dropped by more than three percentage points since 2008.

Ability to Rebound From Recessions

As the rebound in employment shows, the Salt Lake City regional economy has been resilient and has established a reputation for its ability to quickly restore growth following national recession.

University of Utah

SLC is home to a Carnegie-ranked Tier I Research University in the University of Utah. It is the oldest public university west of the Missouri River, having been founded in 1850. The "U," as it's called locally, has established a reputation as a leader in biotechnology research. Surgeons at the U were the first to complete a successful artificial heart transplant and the U is also credited with discovery of the first gene linked to breast cancer. The university medical campus maintains a strong partnership with the Huntsman Cancer Institute.

Retention Rate of College Graduates

Utah retains among the highest proportion of students graduating from its universities, with 62 percent of graduates choosing to remain within the state five years after graduation.[66]

Highly Performing K-12 Education System

Despite spending fewer financial resources on K-12 education than other states, Utah's educational system is one of the top performers in the West. The state consistently ranks last in per-pupil spending, according to figures from the U.S. Department of Education. Yet, students within the system boast some of the highest graduation rates and test scores on the National Assessment of Educational Progress in the West.[67]

Multi-Lingual Workforce

A unique facet of the SLC workforce is the wide array of languages spoken. Collectively, the workforce speaks 90 percent of the world's written languages and 33 percent of the workforce is fluent in at least one foreign language. Over 180 different languages are spoken by students at the University of Utah.[68]

This linguistic ability helps area businesses to build client relationships and market share across the world. To a large degree, it is a legacy of the LDS church, whose missionary program sends young men and women to live in one of 165 different countries for 18 to 24 months at a time.

Low Energy Costs

Powered mostly by coal and natural gas, but with significant renewable capacity on the way due to an aggressive state renewable portfolio standard, Utah offers some of the lowest electricity prices in the nation. According to figures from the U.S.

Department of Energy, the average commercial and industrial electricity prices in Utah are second- and fourth-lowest the country, at 6.95 cents per kWh and 5.02 cents per kWh, respectively.[69]

Light Rail

Three major commuter light rail lines exist in the Salt Lake City area, with all of them exceeding initial ridership expectations. The 15-mile TRAX line from SLC to Sandy and 4-mile TRAX line from the downtown area to the University of Utah transport an average of 55,000 travelers daily. An expansion line that will take travelers from the downtown area to Salt Lake International Airport is currently under construction.

In addition, a 44-mile FrontRunner commuter rail line, extending from north Salt Lake County to north Weber County, was completed in 2008 and carries 5,000 travelers daily.[70]

Business Tax Climate

The Tax Foundation ranks Utah as having the 10th best business tax climate overall.[71] In addition, Forbes Magazine ranks Utah as the best state for business.[72]

Weaknesses

Low Income Per Capita

With a per-capita income of $26,265, the Salt Lake City area is slightly below the national average of $28,713.[73] However, as the attachment shows, wages in the area, across a range of occupations, are comparable to those found in Reno and above those found in Cheyenne, but lower than those found in Sacramento or San Francisco. In fact, annual wages are comparable with national averages, but Utah's large households hold down the value of per-capita income.

High Office Rent Rates Compared to Peer Cities

Asking rates for existing Class A commercial office space in the downtown area are higher than in peer cities.

Distance from Other Major Metropolitan Areas

A potential issue for many companies that might otherwise consider relocation to the Salt Lake area is its distance from other potential urban markets. As mentioned, Salt Lake City is 518 miles from Reno. By road, it is also 340 miles from Boise, 535 miles to Denver, 654 miles to Phoenix and 621 miles to Albuquerque.

Opportunities

Strong Projected Growth

Not only has the Salt Lake area recovered quickly from the impact of recession, it is expected to continue growing at strong rates in the near future. By year-end 2012, total employment was expected to increase 2.7 percent for the year.[74]

New Office Construction

The area's relatively high commercial rent rates will likely recede a bit in the near future as 847,000 square feet of additional office space was expected to finish construction in 2012—a significant expansion of supply. This additional supply is expected to be absorbed quickly, however, as the expanding mass transit system creates additional demand along transit corridors.

College of Applied Technology

Excellent workforce training options are available through Utah's system of technical colleges, called the Utah College of Applied Technology ("UCAT"). UCAT

was created by state lawmakers in 2001 and offers a "custom fit" program that uses state resources to tailor training courses to the individual needs of private companies within sectors targeted for strategic cluster development.[75]

Centers of Excellence

Similar to the efforts of technology transfer being pursued in Nevada, the Utah Governor's Office of Economic Development—from which the Nevada corollary was modeled—has installed a Centers of Excellence program designed to facilitate the commercialization of new technologies with strategic value for the state. The program funds the use of innovative research conducted within eight of the state's major colleges and universities. To date, the program has funded 111 centers and created 126 spin-off companies that employ more than 2,000 workers—all with an average wage of $65,000.

The program has also led to the creation of 186 patents and 226 license agreements.[76]

Distribution Hub

The Salt Lake City area is already a major freight distribution hub. As noted previously, the City is at the cross-section of the I-80 and I-15 and is within a 1- to 2-day access to half the nation's population. In addition, it is a central distribution point along major Canada-to-Mexico freight shipping routes.

Utah's competitive advantage in the shipping industry is clearly evident when one considers that the state boasts the lowest shipping rate per mile among the western states, at $1.13.

For these reasons, more than 700 trucking companies already call Utah home.

In addition, Utah has multi-modal shipping capacity. The state contains 1,400 miles of railroad track that converge in the Salt Lake area. These lines link Salt Lake to major sea ports such as Los Angeles, Oakland, Portland and Seattle. The International Airport handles more than 550 million pounds of air cargo each year and this amount is increasing at an average annual rate of nine percent. The new Union Pacific Intermodal Hub in the downtown area offers a transfer point for multi-modal shipping of passengers and freight alike.[77]

Angel Network

Utah operates one of the few organized angel investment groups in the country. The Utah Angel Network has invested amounts ranging from $50,000 to $2 million in equity or convertible debt and also assists in securing next-stage financing from venture capital firms or other sources. Active in the Utah Angel Network is Grow Utah Ventures—a non-profit that assists start-up firms in obtaining financing and offers coaching services to help incubate start-ups into successful businesses.[78]

Wayne Brown Institute

Similar to the mentoring aspect performed by Grow Utah Ventures, the Wayne Brown Institute is a non-profit that offers entrepreneurial education and training programs to help incubate start-ups. Its mission however, focuses specifically on helping early-stage technology companies receive venture capital.

Cluster Initiative

As has been done in Nevada, the Utah Governor's Office of Economic Development has targeted specific economic sectors for strategic cluster development. These are in knowledge-based industries for which Utah is presumed to have a clear competitive advantage, including: life sciences, software development and information technology, defense and homeland security, aerospace, energy and natural resources, financial services, outdoor products and recreation, and

competitive accelerators (e.g. nanotechnology, advanced manufacturing, logistics and distribution centers, and networking infrastructure).

Threats

Low Financial Commitment to K-12 Education

As highlighted earlier, Utah makes the lowest financial commitment to supporting K-12 education of any state in the country. While the K-12 system has performed well to date, this low commitment may, over time, make the state less competitive in attracting and retaining the best educators and support staff. As a result, the state's educational attainment levels and, thus, ability to compete in key knowledge-based industries may erode if a greater commitment is not forthcoming.

4.5 Cheyenne Area

Strengths

Low Unemployment Rate

Cheyenne-area employment was not as adversely affected by the 2008-2009 recession as other communities along the Western I-80 Corridor or the nation as a whole. Average annual unemployment in the area peaked at 7.5 percent in 2010 and is now making a strong recovery. In 2011, the unemployment rate fell to 6.7 percent[79] and it is expected to continue improving as the volume of help wanted ads increased by 76 percent between the Q3 2009 and Q3 2011.[80]

Moreover, the recent drop in unemployment is not attributable to discouraged workers leaving the labor market. Instead, the unemployment rate has improved even as the labor market participation rate grew in 2011. Although the labor market participation rate fell by more than a percentage point between 2009 and

2010—still a modest drop compared to other locales—it recovered by 0.4 percent, or 550 workers, in 2011.

Strong Economic Recovery

Tied to the recovery, labor demand has seen an increase in general business activity since 2011. Between Q3 2009 and Q3 2011, total retail sales in the area grew from $244,257 to $277,072—a growth rate of 13.4 percent. The bankruptcy rate over this time period fell by 20.5 percent.[81]

Other indicators showed significant improvement as well. Auto registrations increased by 18.0 percent, while enplanements at the Cheyenne Airport increased by a considerable 101.8 percent.[82]

Low Energy Costs

According to data from the U.S. Department of Energy, Wyoming offers the fifth-lowest electricity prices across all sectors, at 7.05 cents per kWh. That's behind Idaho (6.60), Louisiana (6.82), Kentucky (6.85), and Washington (6.93).[83]

Because energy is a vital input into every productive process, this is a key advantage for economic development purposes.

Business Tax Climate

According to the Tax Foundation, Wyoming is home to the nation's best business tax climate. The state imposes no individual or corporate income tax and imposes a low average sales tax of 5.34 percent.[84]

Office Rent Rates

With average annual lease rates of only $13.02 per square foot, office space in the Cheyenne area is the most affordable of all the metropolitan areas along the Western I-80 Corridor and is among the most affordable in the country.[85]

K-12 Performance

Wyoming's public schools rank toward the top of all states in terms of student achievement. The state's students consistently rank in the top half of states on both the fourth- and eighth-grade reading and math portions of the National Assessment of Educational Progress.[86]

University of Wyoming

Located in Laramie, the University of Wyoming is a Carnegie-ranked Tier II Research University, with research expertise in natural resources and energy extraction. The university hosts the Enhanced Oil Recovery Institute, which is a repository of knowledge on advanced oil recovery techniques, as well as the School of Energy Resources.

Weaknesses

Low Wages

As shown in attachment to this section, annual wages in the Cheyenne area are, on average, more than $2,000 below wages in Reno or Salt Lake City, more than $10,000 below those in Sacramento, and more than $20,000 below those in San Francisco.

Highly Dependent on Consumption Activities for Government Revenue

Like Nevada, the bulk of state and local government revenue is derived through taxes on consumption activities—primarily general sales taxes in the case of Wyoming. This means that government revenues could be particularly vulnerable to changes in consumer spending patterns, although government revenues in the Cheyenne area have fared better than those of the Reno area in the wake of the 2008-2009 recession.

Opportunities

Construction Rebound

The Cheyenne area is poised to see a strong rebound in construction activity. This market was not strongly affected by the collapse of the real estate bubble and, after a lull in construction activity, home prices are on the rise again. The average City residential home price increased 9.7 percent between Q3 2009 and Q3 2011, moving from $172,091 to $188,768.[87]

Although the issuance of building permits for new home construction is down, building permits issued for commercial construction in 2011 were at their highest level since 2006. In 2011, the monthly average of permits issued was 144 per month, whereas the average was 150 per month in 2006.[88]

Strong Government Revenues

Government revenues have fared well in Wyoming, because an oil severance tax supplements sales tax revenues. As with the Cheyenne area's strong economic recovery, however, even consumption-based taxes have produced strong revenue growth in recent years. Between Q3 2009 and Q3 2011, sales and lodging tax

revenues increased 21.2 percent, while actual receipts to Laramie County entities increased 20.5 percent.[89]

Tourist Volume

Cheyenne's leisure and hospitality services industries are poised for growth as the tourist volume has spiked in recent years. The average occupancy rate of the area's hotels has increased nearly 10 percentage points in the past two years—moving from 69.9 percent to 79.4 percent. This has occurred even as the average room rate has increased from $81.63 to $86.72.[90]

Quality of Life Factors

Cheyenne's development strategy has focused on making the downtown area a desirable place to live and work by pursuing mixed-use development and other smart-growth strategies. In 2006, the metropolitan planning organization adopted Plan Cheyenne, a comprehensive land-use plan[91] designed to accomplish the following goals:[92]

- Grow as a "community of choice"
- Create livable "hometown" neighborhoods
- Foster vital employment and activity centers
- Develop a connected and diverse transportation system
- Celebrate the area's character and heritage
- Create a legacy of parks, open spaces, and trails
- Develop in a fiscally responsible way

The plan focuses more intently on land-use than economic development, per se, but it has been recognized with a Daniel Burnham Award from the American Planning Association.

Small Business Development Center

The University of Wyoming's Small Business Development Center offers mentoring services to aspiring entrepreneurs in the area, assisting these entrepreneurs develop a viable business plan, marketing strategy, and in obtaining financing.[93]

Workforce and Professional Development

Similar to the Utah Centers of Excellence program, the Laramie County Community College, a technical school, provides workforce development courses that can be tailored to the specific needs of any business in the region.[94]

Threats

College Graduates Leaving the Region

"Brain drain," or the departure of highly skilled workers from the area, is a major problem for Wyoming. Only 29 percent of the state's college graduates remain in the area five years after graduation—the second-lowest rate in the country.

Although the region is fortunate to have a high percentage of high school graduates, this "brain drain," combined with low college completion rates overall, limits the area's capacity to attract high-tech or knowledge-based industries.

Restrictive Land-Use Regulations

Although Plan Cheyenne is intended to make the area a more desirable place to live and work, its extensive land-use regulations may be a deterrent to some corporate investors who prefer greater freedom to choose the location, or use of particular facilities, or who place greater emphasis on fundamental factors such as production costs.

4.6 Conclusion

Although communities along the Western I-80 Corridor, from San Francisco to Reno, have suffered tremendously in the wake of the 2008-2009 recession, there is reason for optimism.

The San Francisco Bay Area is home to some of the world's best research facilities and a highly educated workforce that continues to be a world leader in patent creation and venture capital investment. Sacramento is finding a niche in marketing its lower-cost facilities for the commercialization and manufacture of the innovations created in nearby San Francisco. Reno, along with the State of Nevada, have embarked on an aggressive economic development campaign to identify the area's potential strengths and emerging economic clusters.

But none of these areas will be able to return to an era of stable job growth and sustainable prosperity if they do not confront the challenges before them. Each of them must identify the means to improve K-12 educational systems that have lagged the nation. The California cities must also confront the obstacles of doing business in that state. The Reno area must find the means to commercialize the research conducted within the region into viable knowledge-based industries and connect its vibrant entrepreneurial community with the capital resources it needs to be successful.

This report has also shown that communities on the eastern end of the Western I-80 Corridor have not been as adversely affected by recession. Both the Salt Lake City and Cheyenne metropolitan regions suffered much lower rates of unemployment in recent years and began to exhibit a strong economic recovery and positive job growth in 2011.

In the case of Salt Lake City, this success might illustrate the importance and effectiveness of having a comprehensive economic development strategy in place before a recession occurs. The State of Utah began in the early-2000s to implement

its economic development strategy through the creation of the Governor's Office of Economic Development and other initiatives. More recently, the State of Nevada has begun to emulate these policies.

At the other end of the spectrum, the Cheyenne area's ability to overcome the impact of recession demonstrates that, particularly in an area with a relatively low-skilled workforce, a successful strategy can be to keep production costs low. With a friendly business environment, including low taxes, low rents, low energy prices and low labor costs, the Cheyenne area was able to weather the storm of recession at least as well as the Salt Lake City area.

Each of these communities has employed a variety of strategies for economic development in the past, and each with varying degrees of success or failure. As the Western I-80 Corridor continues to grow and evolve in coming years, it is hoped that this report will offer some insight into which strategies might be deployed by future decision-makers, in the hopes that each of these communities will attain lasting prosperity.

Attachment: Occupation Average Annual Wage, by Area

Occupation	San Francisco Area			Sacramento Area			Reno Area			Salt Lake City Area			Cheyenne Area		
	Empl.	%	Avg. Wage	Empl.	%	Avg. Wage	Empl.	%	Avg. Wage	Empl.	%	Avg. Wage	Empl.	%	Avg. Wage
Management	128,830	6.7%	$134,720	43,100	5.4%	$112,490	10,150	5.4%	$95,730	30,130	5.0%	$97,430	1,930	4.6%	$80,870
Business & Financial Operations	135,970	7.1%	$86,700	56,120	7.0%	$69,030	7,660	4.1%	$63,070	31,400	5.2%	$61,970	2,200	5.2%	$55,750
Computer & Mathematical	90,530	4.7%	$95,900	29,280	3.6%	$82,230	3,460	1.8%	$67,910	20,030	3.3%	$70,750	720	1.7%	$58,280
Architecture Engineering	44,340	2.3%	$93,470	17,850	2.2%	$87,910	2,410	1.3%	$72,690	12,840	2.1%	$71,930	770	1.8%	$61,200
Life Physical Social Science	32,960	1.7%	$84,280	13,570	1.7%	$71,970	2,370	1.3%	$62,340	4,610	0.8%	$59,180	530	1.3%	$63,670
Community &Social Service	30,360	1.6%	$54,740	14,280	1.8%	$53,550	1,960	1.0%	$49,000	6,390	1.1%	$40,730	630	1.5%	$51,150
Legal	21,430	1.1%	$133,410	8,150	1.0%	$101,720	1,260	0.7%	$115,960	5,540	0.9%	$83,740	470	1.1%	$65,880
Education Training &Library	110,610	5.8%	$60,850	53,990	6.7%	$55,360	10,480	5.6%	$52,180	32,350	5.4%	$42,510	2,820	6.7%	$50,320
Arts Design Entertain. Sports & Media	39,630	2.1%	$66,830	8,950	1.1%	$53,350	2,300	1.2%	$49,310	9,530	1.6%	$44,580	420	1.0%	$39,390
Healthcare Practitioners & Technical	101,280	5.3%	$98,690	43,380	5.4%	$93,630	9,050	4.8%	$85,390	30,850	5.1%	$73,040	2,710	6.4%	$71,000
Healthcare Support	48,550	2.5%	$35,980	19,630	2.4%	$32,850	4,950	2.6%	$29,720	12,770	2.1%	$26,240	920	2.2%	$29,730
Protective Service	41,760	2.2%	$54,050	22,220	2.8%	$51,430	4,250	2.3%	$44,190	14,040	2.3%	$37,080	940	2.2%	$49,390
Food Preparation &Serving Related	171,110	8.9%	$24,870	70,190	8.7%	$21,940	20,140	10.7%	$21,700	42,960	7.1%	$21,900	3,780	8.9%	$19,710
Building & Grounds Cleaning/Maintenance	62,130	3.2%	$31,360	24,290	3.0%	$28,790	7,790	4.1%	$24,520	18,130	3.0%	$23,450	1,500	3.5%	$25,000
Personal Care & Service	45,820	2.4%	$31,320	19,710	2.4%	$25,430	8,260	4.4%	$24,190	11,280	1.9%	$24,960	1,420	3.4%	$23,460
Sales &Related	193,630	10.1%	$48,440	77,300	9.6%	$37,070	20,650	10.9%	$34,570	68,910	11.4%	$40,470	3,510	8.3%	$28,980
Office & Administrative Support	311,880	16.3%	$43,630	155,960	19.4%	$38,670	33,000	17.5%	$34,280	119,880	19.9%	$31,710	7,240	17.1%	$31,370
Farming Fishing & Forestry	1,300	0.1%	$30,710	3,350	0.4%	$24,490	160	0.1%	$29,550	270	0.0%	$29,400	-		-
Construction & Extraction	63,800	3.3%	$61,050	29,420	3.7%	$51,940	7,470	4.0%	$48,700	32,310	5.4%	$40,680	2,600	6.1%	$42,280
Installation	57,680	3.0%	$53,340	26,450	3.3%	$48,170	7,130	3.8%	$44,380	23,040	3.8%	$44,010	2,300	5.4%	$42,980

Maintenance &Repair															
Production	75,700	4.0%	$38,720	24,540	3.0%	$37,010	9,660	5.1%	$33,760	35,990	6.0%	$33,680	1,200	2.8%	$33,530
Transportation and Material Moving	102,630	5.4%	$40,320	43,380	5.4%	$34,470	14,130	7.5%	$33,940	39,170	6.5%	$35,910	3,670	8.7%	$36,190
Total All Occupations	1,911,930	100.0%	$61,370	805,110	100.0%	$51,550	188,690	100.0%	$43,390	602,420	100.0%	$43,680	42,280	100.0%	$41,280

Source: Bureau of Labor Statistics.

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[27] *Ibid,* pp. 52-53.
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I-80 Corridor System Master Plan Economic Assessment
Executive Summary for Washoe County

The summary presented herein is based on information contained in the report titled "I-80 Corridor System Master Plan" prepared For Atkins by RCG Economics in February 2013.

A comprehensive understanding of the economy within Washoe County requires a look beyond its boundaries at least as far west as Sacramento and as far east as Elko.

Sacramento sits in the crosshairs of I-80 and Interstate 5, which is the western U.S. region's primary north-south corridor. Sacramento is home to one of the most concentrated markets in the nation and it is only expected to expand.

Several primary developments could add to the capacity needs of I-80 in future years, including multi-million-dollar improvements underway at Sacramento International Airport. Because the airport services major cities across the United States, it has the potential to become an inland hub. Sacramento also has deep-water ports and the river connects to the San Francisco Bay Area. It is also anticipated that large office complexes and developments will continue to line I-80.

Both the Union Pacific (UP) and the Burlington Northern Santa Fe (BNSF) rail lines are increasing capacity in nearby Stockton, which could have an effect on cargo shipments from the airport and the ports along the Sacramento River.

The expansion of the UP and BNSF railroads will undoubtedly affect the **Reno/Sparks** region, which both companies already serve. The population of the region has increased two-fold since 1990; between the two cities, the population is 309,000. The area quickly transformed into a logistics hub; 22 percent of its workforce is involved in the trade, transportation, and utilities sector. That industry is likely to grow – Reno-Sparks currently serves 11 western states with a total population of 73 million.

Although the terrain and existing developments limit the amount of growth, the Reno-Tahoe International Airport is a designated alternative airport for Air China cargo shipments. Also, the Tahoe-Reno Industrial Center along I-80 consists of 30,000 acres of entitled sites pre-approved for manufacturing and distribution uses.

The logistics industry is likely to be the push behind Reno-Sparks growth. Because of that, major infrastructure improvements will be needed between the region and Southern California. In addition to the logistics hub, Apple announced in 2012 its plans to build a $1 billion data center just north of I-80 and the Industrial Center.

The growing industries have the potential to congest I-80 to the point that it interferes with east-west movements to the Bay Area ports and markets. Telecommunication and fiber optics services will also need to be upgraded in the near future.

Nearby **Fernley**, **Nevada** has strong potential for growth, with ample land for large-scale residential and commercial development. Fernley, considered a bedroom community to Reno, also relies heavily on the logistics industry and is home to the Crosswords Commerce Center, a 5,000-acre master-planned industrial park that is served by rail lines. Future tenants to the park could be drawn by a new I-80 interchange that provides better access to the park.

Fifteen years ago, Amazon opened a 750,000-square-foot warehouse in Fernley. The city relies heavily on trucking and rail service for its economic development strategies. City officials view the extension of the Nevada Pacific Parkway – which links I-80 to Highway 50 – as a vital access improvement to the south. That critical stretch of roadway will help the labor force better access employment centers.

Gold mining is the heart of **Elko**, **Nevada's** economy and it is critical for seamless exportation of the gold and import of equipment to keep the mines operating efficiently. Officials recently identified a gold reserve between Wells and Wendover that is estimated to contain a 30-year reserve, meaning mining will continue to dominate the town's economy for decades to come. As an outcome to this finding, Elko will become the administrative and logistic center for future mines.

The city's strategy is to identify manufacturing components and chain companies to support the mining industry. Two industrial parks have been classified as such – a 180-acre site on the east side of town and a 1,500-acre location on the west side of town. The eastside location is in need of an I-80 interchange; the larger site has an interchange that is considered inadequate as it cannot carry the volumes and loads.

Trucks working from an east side "rail port" must make their way into town on an old highway to reach I-80 because the interchange does not meet weight specifications.

Table ES-1. Strengths, Weaknesses, Opportunities and Threats Summary

	Strengths	Weaknesses	Opportunities	Threats
Reno, NV	• Economic development strategy • Proximity to CA and other western markets • Low-tax climate • Affordable housing • Affordable office space • Research capacity • Natural beauty	• High unemployment • Under-developed clusters other than leisure and hospitality • Lack of entrepreneur support system • Reliance on consumer spending for government operations • Limited venture capital availability • Underperforming K-12 education system	• Numerous entrepreneurs: sign of future growth • Commercializing research: strong innovation capacity • Downtown living: economic diversification and transit-oriented development • Potential for an inland port: multimodal distribution • Targeted growth sectors: diversification	• Strain on public resources and education • Overly dependent upon consumption industries • Gaming vulnerable to outside competition • College graduates leaving • Limited support for higher education

In conclusion, cities along the I-80 corridor are in various stages of rebounding from the recession, and the logistics industry plays a significant role in each community. While rail lines and cargo ships move goods, it is clear that I-80 remains the key freeway for the trucking industry and the economic outlook appears to be brighter along the I-80 corridor between Sacramento and Elko than many other places in the United States.

It was in light of this economic analysis of the corridor and the optimism for economic growth that the study team estimated a 10 percent increase in traffic volumes on the Washoe Freeway corridor system between 2014 and 2025. More specifically the following assumptions were used in deriving the growth estimate for use in one of three traffic forecasting scenarios used in the evaluation of recommendations made in the "2002 Washoe Freeway Corridor study":

- The economy will recover and grow slowly in the next 12 years based on the economic analysis conducted for the Reno metropolitan area and depicted in the RCG economic report.
- The population will increase in the "Reno area" at a rate consistent with the economic analysis conducted for this study and depicted on page 4-13 of the RCG economic report.
- New industry will be attracted and developed in accordance with the land use analyses conducted by Truckee Meadows Regional Planning Association in 2013/2014.
- Between 2013 and 2025 traffic will increase on the existing Washoe Freeway system at approximately half the "average" 30 year population growth rate
- Empirical evidence shows traffic decreased on the Washoe freeway system between 2000 and 2013 despite an increase in population. However, it is assumed that lack of growth in traffic during this period can be attributed to a severe downturn in the economy in addition to changes in demographics that influenced driver behaviour. The assumption that traffic will now grow in a manner that indirectly correlates to new population growth is predicated on the assumption that new demographic driver behaviour is stabilizing and new economic growth will begin to align with the new population growth resulting in additional work trips to/from newly developed industrial land accessed by the freeway system.
- The 10 % total growth estimate between 2014 and 2025 for the economic growth scenario is based on approximately half the "average" 30 year population growth rate from the RCG report. Average population growth for 30 years is calculated as (2.0+1.7+1.4)/3=1.7; this value was then divided by 2 assuming traffic on the freeway will grow at I/2 the population growth rate = .85 per year; and .85x12 (12 is the number of years between end of 2013 and end of 2025) is approximately equal to 10 percent.