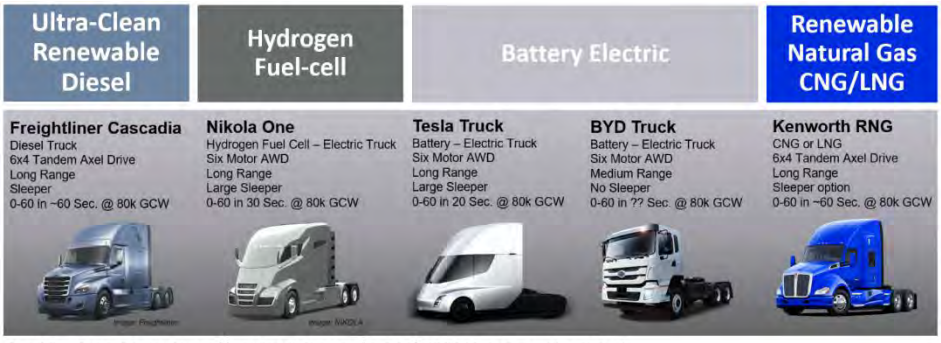
Pedestrian Overpass, McFarland

2022
Regional Transportation Plan/ Sustainable Communities Strategy

Bike Rodeo, Bike Bakersfield

Amtrak, Bakersfield Station



Graphic adapted from: https://seekingalpha.com/article/4127262-tesla-semi-revisited

Kern Council of Governments

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EXECUTIVE SUMMARY

INTRODUCTION

The 2022 Regional Transportation Plan (RTP) is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It has been developed through a federally required continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, state and federal agencies. Included in the 2022 RTP is the Sustainable Communities Strategy (SCS) required by California's Sustainable Communities and Climate Protection Act, of Senate Bill (SB) 375. The California Air Resources Board (ARB) set targets for Kern's greenhouse gas (GHG) emissions reductions from passenger vehicles and light-duty trucks at 9 percent per capita by 2020 and 15 percent per capita by 2035 as compared to 2005. The Kern region has outperformed the 2020 state GHG target and this plan shows we are on track to achieve the 2035 target, but it will not be easy. The easy reductions have been achieved and the region needs to fully implement the remaining strategies identified in this plan to achieve the target. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing needs Allocation (RHNA) ensuring consistency between low-income housing need and transportation planning. Kern COG closely coordinated the RHNA and RTP/SCS development process using the same oversight committee for both. Local jurisdictions will use the RHNA to identify locations to provide sufficient housing for all economic segments of the population and ensure that the state's housing goals are met.

The Kern region has outperformed the 2020 state GHG target and this plan shows we are on track to achieve the 2035 target, but it will not be easy.

Kern COG is a federally designated Metropolitan Planning Organization (MPO) and a state designated Regional Transportation Planning Agency (RTPA). These designations formally establish Kern COG's role in transportation planning. Preparing an RTP is one of Kern COG's primary statutory responsibilities under federal and state law.

Kern COG prepared a Program Environmental Impact Report (Program EIR), pursuant to the California Environmental Quality Act (CEQA), for the RTP. Individual transportation projects are preliminarily identified in the RTP; however, the Program EIR analyzes potential environmental impacts from a regional perspective, providing opportunities for streamlining the analysis required in project specific environmental documents. In addition, the companion RTP federal conformity document demonstrates that the Plan will not delay attainment of federal air quality standards in the State Implementation Plans for air quality.

PUBLIC PARTICIPATION: Listening to the Citizens and Stakeholders

Public participation is encouraged at every stage of the planning process and all meetings are open to the public. Community engagement and outreach are fundamental to the development of this RTP/SCS. By nature, this plan represents the region's mutual vision for its future and was developed using grassroots, bottom-up

ES-1 - Spanish Language Neighborhood Driveway Outreach in Rural Community of Fuller Acres near Lamont, CA

approach, garnering input from over 6,900 residents at over 50 online/phone/text surveys, meetings, and events across the region. Kern COG's comprehensive community engagement process was designed to solicit input from stakeholders and community members on priorities for the region's long-term future. The outreach featured four statically valid 1,200-person phone/text surveys with oversampling in disadvantaged outlying communities. The community engagement process extended from January 2019 through February 2022**.** The program provided numerous opportunities for community members, stakeholders, and local agencies and jurisdictions to participate, including public workshops, community events and interactive and educational booths at festivals and fairs, an interactive project website, statistically valid phone/text surveys and presentations to various clubs and community groups.

…the majority of residents want to maintain, fix and finish what we have.

What we heard was that a majority of residents want to maintain, fix and finish what we have. A discussion of Kern COG's extensive public participation activities is found in Chapter 4 of the RTP, and a Summary of Findings is documented in Appendix C of the RTP.

OUR VISION: Maintain, Fix and Finish What We Have

In response to the extensive grassroots public input, the Kern COG RTP process has placed an emphasis on sustainability and integrated planning. The intent of the SCS is to achieve the state's emissions reduction targets for automobiles and light trucks. The SCS will also provide opportunities for a stronger economy, healthier environment, and safer quality of life for community members in Kern County, and even more so for our disadvantaged communities.

This RTP/SCS seeks to: improve economic vitality, improve air quality, improve the health of communities, improve transportation and public safety, promote the conservation of natural resources and undeveloped land, increase regional access to community services, increase regional and local energy independence and increase opportunities to help shape our community's future.

Kern County is unlike any other region in California. Kern's large size and diverse valley, desert and mountain environs are dominated by agriculture, oil production, renewable energy, aerospace, military, recreation, transportation linkages and other activities that warrant unique and different approaches to address the SCS goals. These economic pursuits are the basis for dispersed rural centers and strategic locations for developments within the county that are unlike other areas of the state. Accordingly, unique strategies are needed to support Kern's equity, economic, and environmental transportation goals. This uniqueness is reflected in the General Plans and programs of Kern County's local governments and RTP/SCS.

This RTP/SCS supports an improved quality of life for our residents by providing more choices for where they will live, work, and play, and how they will move around. The safe, secure, and efficient transportation systems will provide improved access to opportunities, such as jobs, education, and healthcare. The emphasis on transit and active transportation will allow our residents to lead a healthier, more active lifestyles.

Figure ES-2 – Bakersfield SPIN Bike Share Program 1st in State to use ATP Funds for Discounts to Low-Income/Student Riders

CHALLENGES

Solutions for the Economy and Air Quality

Kern County continues to suffer from unemployment rates that are 50% higher than the rest of the State. In 2020, Kern County sank to the 2nd worst poverty rate after tiny Del Norte County at the NW corner of the state.[1] While the rest of the state has been recovering from the great recession, state policies to combat climate change have slowed Kern's recovery. Those polices have curtailed groundwater pumping for agriculture, and new investment in oil production, two of Kern's primary economic sectors.

The plan could ultimately add 26,000 permanent jobs to the region… triggering an upward economic spiral for future generations.

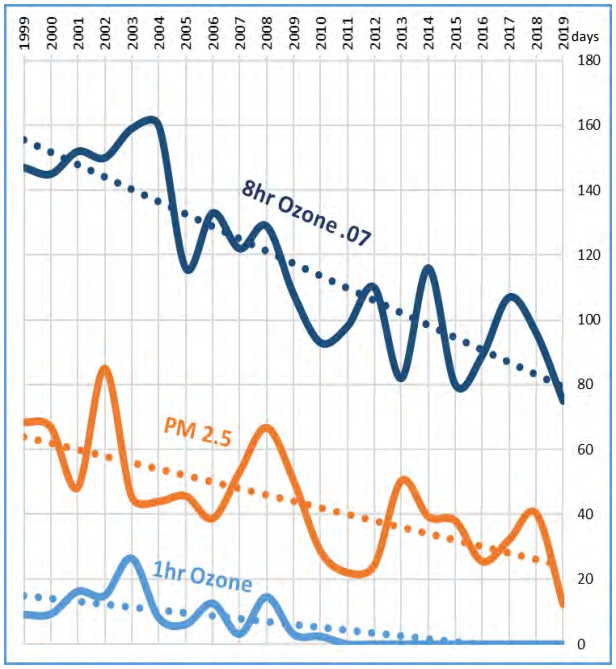
The Federal Highway Administration estimates that every $1 billion spent on transportation infrastructure creates 10,870 job years of which up to 4,000 can persist long after construction, generated by increased labor from better mobility and more efficient goods movement. This 24-year investment plan is projected to add over 77,000 job years (3,200 24-year jobs). The plan could ultimately add 26,000 permanent jobs to the region increasing Kern's economic base, adding capacity to re-invest in an ever more efficient/cleaner transportation system, triggering an upward economic spiral for future generations.

Since the 1990s, the Kern region has achieved consistent improvements in the number of days exceeding federal standards for ozone and particulate matter, generally defined as "fine dust". In 2012, Kern demonstrated attainment of the 1-hour ozone standard and has made significant progress on the 8-hour ozone and $PM_{2.5}$ standards (**Figure ES-3**). However, the easy reduction strategies have been implemented and extra efforts will be needed to achieve and maintain the federal air quality standards. Advancing emission reduction strategies will also help our region make significant progress toward state climate change goals. The climate change related reduction strategies such as improving transit, bike, walk, and housing options are included in the SCS in Chapter 4.

Financial Challenges

Of all the challenges facing us today, there is none more critical than funding. With the projected growth in population, employment and demand for travel, the costs of our multimodal transportation system surpass projected revenues available from our historic transportation funding source – the gas tax. Maintaining the local transportation infrastructure is of critical importance for the entire region and was ranked as the highest priority based on public outreach. Funding from the federal gas tax has traditionally been used to support the maintenance of these facilities. Over

Figure ES-3: 1999-2019 Observed Days Exceeding Federal Air Standards in Kern (Pre-COVID Travel/commute patterns)



Note: In this graph, lower ozone and PM 2.5 numbers are equivalent to better air quality. No monitoring data available for GHG. Source: CARB iADAM data 2019.

[1] U.S. Census Bureau, QuickFacts, 2020, https://www.census.gov/quickfacts/fact/dashboard/kerncountycalifornia/IPE120220

time, however, gas tax revenues have failed to keep up with inflation. Additionally, the increase in the number of electric and hybrid vehicles that pay significantly less gas tax per mile traveled only exacerbates the problem.

The recent state gas tax increase, SB 1, is a temporary solution to this problem. When adopted in 2017, estimates were that by 2030 the tax on gasoline will diminish to the point that another transportation funding source will be needed because of the number of electric cars on the road. In addition, the tax increase was estimated to only bring in half what was needed to bring our roadways up to good condition and being just enough to keep the road system from getting any worse. Thanks to the gas tax increase and heroic efforts of local jurisdictions and Caltrans, Kern saw a slight improvement in road condition over the past 4-years, however, a long-term solution is needed.

Most regions in the state have taken the maintenance and finishing of their transportation system into their own hands and have become "Self-Help" counties, that have passed a local ½ cent retail sales tax measure protected from state raids during economic downturns. The State has also identified a special fund of state gas tax revenue for regions that are Self-Help. Kern is the largest County in the state without a local sales tax for transportation and misses out on $2M per year from this special fund, even though our residents pay into it. Because Kern lacks a sales tax for transportation, visitors to our County get a free ride on our transportation system, but when we make purchases while traveling in their communities we usually pay for their roads.

Illustrating the continued underinvestment in transportation, the federal performance measure for road pavement and bridge condition on National Highway System routes in Kern failed to meet the federal target of 95% good or fair by 2019. Pavement was at 90% and bridges were at 93%. Of the 17 performance measures in Appendix D – Integrated Performance Measures Analysis, this is the only performance measure that wasn't at least partially met, even with the temporary increase in state gasoline tax revenue through state proposition 1B.

Kern is the largest County in the state without a local sales tax for transportation… visitors to our County get a free ride on our transportation system, but when we make purchases while traveling in their communities we usually pay for their roads.

Furthermore, with recent declines in transit ridership and fare revenue due to the pandemic, the region's transit operators continue to face major obstacles to providing frequent and convenient transit services. New services such as zero emission bus rapid transit (BRT), combined with Uber/Lyft style, curb-to-curb, on-demand, last-mile, micro-transit are promising but need funds to implement.

This plan assumes a modest increase in current funding levels. If existing revenue is not stabilized and new sources found, our ability to maintain, fix and finish what we have will be reduced.

PLANNING FOR OUR POPULATION

Population, Housing and Employment Forecasts

Population in the 8,200 square mile County of Kern was estimated to be over 909,000 in 2020.

Figure ES-4 – Golden Empire Transit Dist. Five New 40-Passenger Zero-Emission Hydrogen Fuel Cell Buses for BRT

The forecast projects that the population growth will average about 10,500 people per year over the 24-year forecast. The population is anticipated to grow by 30 percent to 1,186,600 by 2046. This is a significant reduction in the forecasted growth compared to the prior plan. The slowdown in growth has been driven primarily by out-migration exceeding natural increase (births minus deaths). Recent trends show a large exodus of people leaving the major urban counties and moving to more suburban counties like Riverside, or out of state. Still, according to the Department of Finance, of the top 10 largest cities in California, Bakersfield had the highest growth rate in 2020 at 8/10ths of a percent with most of the large cities seeing a net loss in population. The Kern region remains California's eleventh most populated of 58 counties ahead of San Francisco, but behind Fresno County.

The Kern region remains California's eleventh most populated of 58 counties ahead of San Francisco, but behind Fresno County.

According to the California Employment Development Department (EDD) Kern County gained 66,000 jobs since 2010. The unemployment rate for January 2022 in Kern County was 8.8 percent, up from a revised 7.5 percent in December 2021, and below the year-ago estimate of 11.2 percent. This compares with an unadjusted unemployment rate of 6.5 percent for California and 3.5 percent for the nation during the same period. Kern's continued high unemployment rate is partially due to the slow-down in the oil and agriculture sectors.

Much of Kern employment is dispersed, consequently, the Metropolitan Bakersfield area experiences a "reverse commute" whereby workers commute to outlying areas such as agricultural fields, food processing facilities, distribution/logistic centers, wind farms, oil fields, prisons, power plants, and military installations.

Land Use Development

Land use is one of the most important elements of effective transportation planning. Kern COG does not have jurisdiction over land use planning, but the agency does advise and encourage dialogue among those involved in the decision-making process. The RTP/SCS and Regional RHNA were developed in consultation with local jurisdictions and are consistent with existing adopted general plans and zoning. Kern COG will continue to use the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) to communicate with Kern cities and the county on issues of land use, transportation, and air quality to ensure that land use projects are environmentally sound.

Planning Goals

At the core of the 2022 RTP are seven goals:

1. **Mobility** – Improve the mobility of people and freight;
2. **Accessibility** – Improve accessibility to major employment and other regional activity centers;
3. **Reliability** – Improve the reliability and safety of the transportation system;
4. **Efficiency** – Maximize the efficiency of the existing and future transportation system;
5. **Livability** – Promote livable communities;
6. **Sustainability** – Minimize effects on the environment; and
7. **Equity** – Ensure an equitable distribution of the benefits among various demographic and user groups.

Figure ES-5 – Local Jurisdictions Developing Intermodal Rail such as this City of Shafter/Amazon Container Storage Facility

Past Plan Successes

Updated on a 4-year cycle, here are a few notable successes from the implementation of past plans. Over 50 success stories are found in appendix E.

Equity – Every RTP cycle since 1998 has included an Integrated Performance Measure Analysis (Appendix D). Each time the analysis has demonstrated that funds are being expended equitably and in a manner that benefits disadvantage communities better or as well as all communities countywide. This is in large part because of the grassroot public outreach effort that ensures that the projects in the plan are supported by all communities.

Safety – Although safety has seen some challenges in recent years based on performance measures, the Kern Region has completed a joint update of safety plans for 9 jurisdictions in 2022, ensuring eligibility for Highway Safety Improvement Program (HSIP) funds.

Local statistically valid surveys indicate that approximately 10% of all workers plan to continue telecommuting after the pandemic, resulting in the single most effective strategy for reduction of commute related traffic and emissions.

Goods Movement – Regional Planning efforts such as the Kern Area Regional Goods Movement Operations (KARGO) Sustainability Study are identifying strategies that mitigate the negative effects of goods movement in the region while enabling the economic benefits of high-tech jobs in resource processing, manufacturing, and logistics.

Telecommute Strategy – The Kern region has gone all in on promotion of continued telecommuting through its Commute Kern program. As demonstrated during the pandemic over, 35% of workers telecommuted up from 5% in prior years. Local statistically valid surveys indicate that approximately 10% of all workers plan to continue telecommuting after the pandemic, resulting in the single most effective strategy for reduction of commute related traffic and emissions.

Longest Class I Car-Free Bike Trail in California – Kern County has now completed the longest dedicated paved bike trail in the state. Started in 1976, the trail now extends 36.3 miles from Lake Ming to Lake Webb along the banks of the Kern River. The paved bikeway is used by commuters and recreational riders alike, promoting this plans sustainability and livability goals.

Infill – Kern has seen numerous market rate infill developments in downtown, consistent with the first High Speed Rail station area plan in the state. Unfortunately, low-income infill development is about 1/10th what it was when redevelopment funds were available.

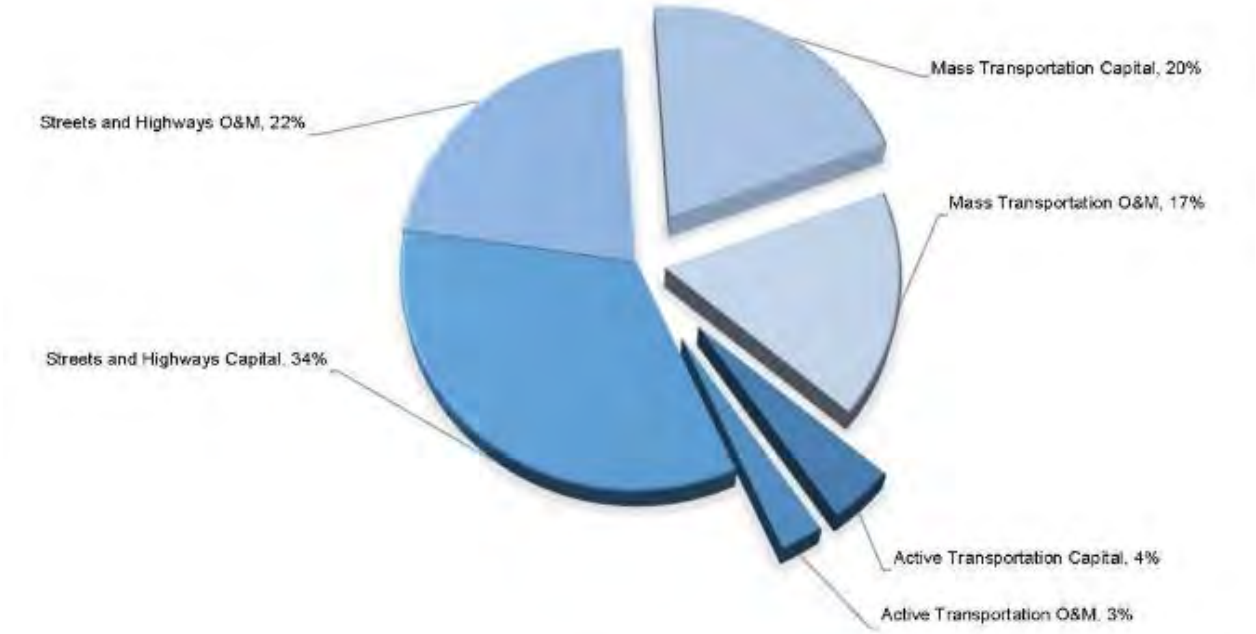
STRATEGIC INVESTMENTS

This RTP/SCS financial plan identifies how much money is available to support the region's transportation investments. The plan includes a core revenue forecast of existing local state and federal sources along with funding sources that may be considered reasonably available over the time horizon of the RTP/SCS.

This RTP promotes a more efficient transportation system that calls for fully funding alternative transportation modes, while emphasizing transportation demand and transportation system management approaches for new capacity. Two-thirds of investments are for maintenance, active transportation, and transit projects (**Figure ES-7**).

Figure ES-6 – Q Street Market Rate Infill Housing Under Construction Near the Amtrak Station in Downtown Bakersfield

Figure ES-7 – Two-Thirds of RTP Investments are for Operations & Maintenance (O&M), Transit and Active Transportation Projects – 2022-2046



REGULATORY REQUIREMENTS

The RTP fulfills several requirements with one document:

- Congestion Management Program
- Sustainable Communities Strategy & Rural Urban Connectivity Strategy
- Regional Housing Need Allocation
- Environmental Justice & Performance Measure Analysis
- Safety-Security Action Element

As the Congestion Management Agency, Kern COG has responsibility to ensure that all cities and the county are following the Congestion Management Program (CMP). Kern COG completes a coordinated and comprehensive review of current traffic data during each RTP update. Through the Kern Regional Traffic Count Program, the cities, county, and Caltrans undertake annual traffic counts on their roads. Use of current peak-hour traffic counts to monitor congestion ensures that the review is based on observed traffic conditions and includes an innovative multi-model level of service analysis policy. The SCS includes a Rural Urban Connectivity Strategy analysis designed to ensure that the economic development of rural areas for agriculture, energy, tourism, military, and other activities are not left out of efforts to provide for a more efficient transportation system.

Two-thirds of plan funds are for maintenance, active transportation, and transit projects.

To ensure consistency requirements with the SCS, Kern COG engaged in the RHNA process concurrently with the development of the RTP. The RHNA is an 8-year document that provides low-income housing goals for each community in the region.

Recognized as a state best practice, the Kern RTP includes an innovative analysis with the Integrated Performance Measures Analysis for System Level, Smart Mobility Framework, Health Equity, Environmental Justice, and Title VI. The analysis advises our decision makers on the progress we are making toward our goals, while ensuring disadvantaged communities are not left behind. The analysis includes Safety, and Ch. 5 includes the Safety-Security Action Element.

RTP SUMMARY HANDOUTS

The following are handouts summarizing this RTP/SCS benefits and assumptions.

SUMMARY OF BENEFITS

2022 Regional Transportation Plan

The region represented by the Kern Council of Governments is projected to grow by more than 30% by 2046. To protect the quality of life for future generations, the 2022 RTP is presented as an economic development strategy as well as a transportation, infrastructure and sustainability investment.

MOBILITY BENEFITS

- ✓ The plan improves overall mobility and provides needed congestion relief by maintaining, fixing and finishing what we have.
- ✓ This plan fully funds maintenance of the transportation system while increasing funding for bike, pedestrian, and transit facilities.
- ✓ Implementation of the plan will nearly double the number of homes within walking distance to quality transit. By integrating land use and transportation, more than 70% of homes will be near quality transit compared to less than 60% under older plans.

ECONOMIC BENEFITS

- ✓ The Federal Highway Administration estimates that every $1 billion spent on transportation infrastructure creates 10,870 job years of which up to 4,000 can persist long after construction, generated by increased labor from better mobility and more efficient goods movement.
- ✓ This 24-year investment plan is projected to add over 77,000 job years (3,200 24-year jobs) from construction, maintenance, and better mobility, and saves 21,000 additional existing jobs that would have been lost because of poor road conditions.
- ✓ The plan could ultimately add 26,000 permanent non-transportation sector jobs to the region, increasing Kern's economic base, adding capacity to re-invest in an ever more efficient transportation system, triggering an upward economic spiral for future generations.

HEALTH BENEFITS

- ✓ Improve air quality and public health by reducing all criteria pollutants, emissions and their precursors to meet national standards – oxides of nitrogen (NOx), reactive organic gasses (ROG), particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$) and carbon monoxide (CO).
- ✓ 4% or more reduction in health expenditures because of improved air quality.
- ✓ Promotes more active transportation by fully funding the Kern Active Transportation Plan and increasing funding for bike and pedestrian facilities 700% over the 2011 RTP.

SUSTAINABILITY BENEFITS

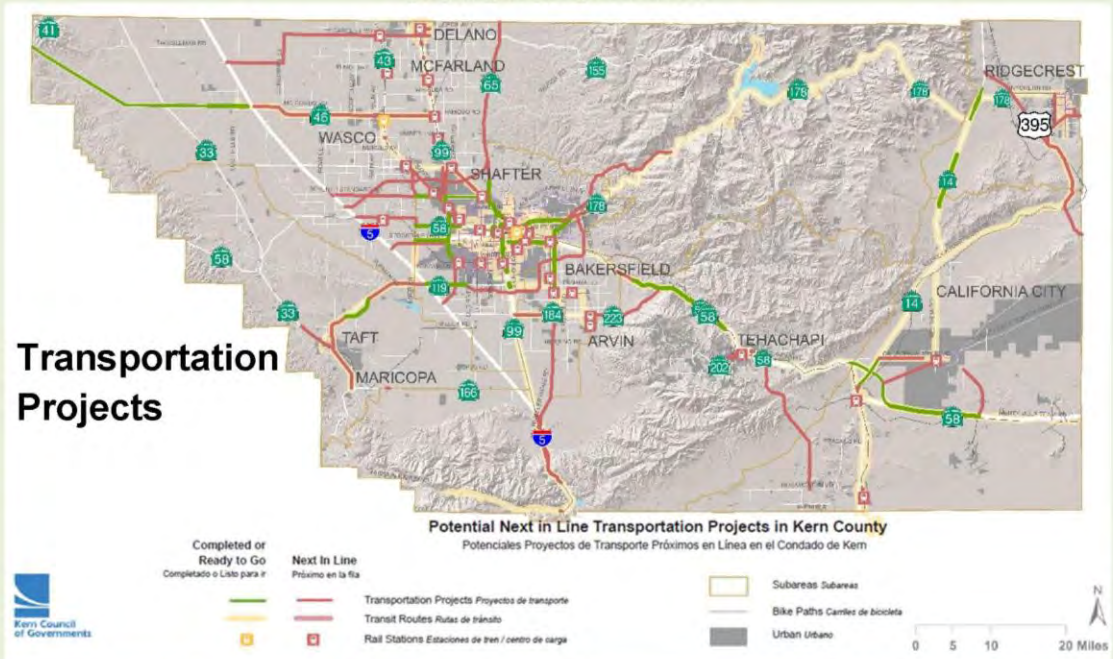
- ✓ 11% reduction in infrastructure costs by revitalizing existing communities compared to past plans.
- ✓ 15% reduction in household water use providing a full range of housing choices.
- ✓ 80% reduction in farmland converted to urban/built-up uses outside city spheres of influence.

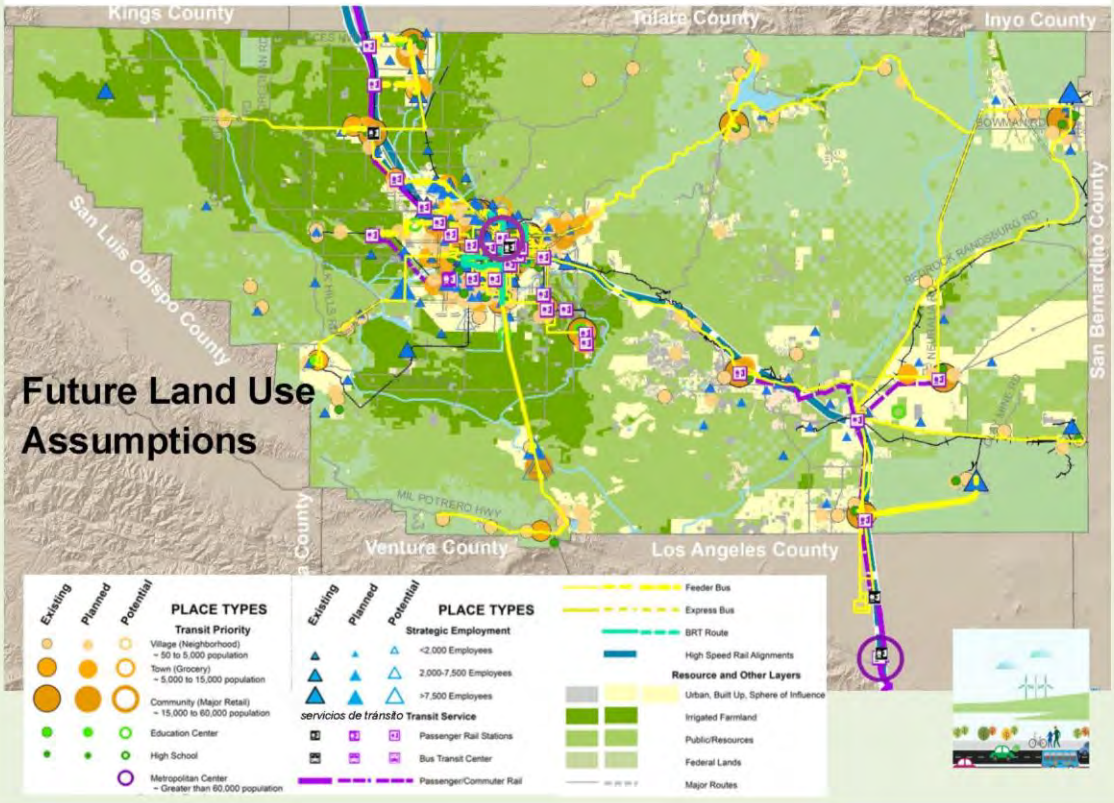
Kern Council of Governments

PLANNING ASSUMPTION MAPS

2022 Regional Transportation Plan

Reflecting diverse public input, the plan assumes projects that reflect a more efficient transportation system that will benefit the mobility, economy, health and sustainability of the region. Consistent with the prior plan, funding from traditional sources continue at historic rates as well as a slight increase in additional funding from potential new sources. Funding assumptions are updated every four years. Land use assumptions are based on local general plans with input from the public and the regional planning advisory committee.





CHAPTER 1 INTRODUCTION

The 2022 Regional Transportation Plan (RTP) is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It has been developed through a continuing, comprehensive, cooperative and consistent planning process, and provides for effective coordination between local, regional, state, and federal agencies. The Congestion Management Program (CMP) is designed to ensure that a balanced transportation system is developed relating population and traffic growth, land use decisions, environmental/equity performance measures, and air quality improvements. California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, calls for the Kern County RTP to include a Sustainable Communities Strategy (SCS) that reduces greenhouse gas (GHG) emissions from passenger vehicles and light-duty trucks. Executive Order B-30-15 approved in 2015, and SB 32 approved in 2016, established a statewide GHG reduction goal of 40 percent below 1990 levels by 2030 from all sources. This is the most aggressive benchmark enacted by any government in North America to reduce carbon emissions. The California Air Resources Board (ARB) sets the SB 375 emissions reduction target for each region. Targets are reflective of conditions in each area of the state and are tailored to address conditions in each area. As will be discussed in more detail below, SB 375 will help meet the state goals included in Assembly Bill 32, the Global Warming Solutions Act of 2006. Meeting these targets will point the County toward overall sustainability and will provide benefits beyond reducing carbon emissions.

Adopted in February 2021, the California Transportation Plan (CTP) 2050 Executive Summary states the following:

> This plan demonstrates how advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework, can collectively reduce transportation emissions to support these goals. As it addresses these efforts, the CTP 2050 also reinforces long-held values such as improving system safety, improving mobility and accessibility, advancing environmental health and justice, and enhancing quality of life.

Senate Bill 391:

> Senate Bill 391 (SB 391, 2009), requires the California Department of Transportation (Caltrans) to update the CTP every five years while showing how the state will achieve the statewide GHG reductions to meet the goals of AB 32 and Executive Order S-3-05. It directs Caltrans to consider "the use of fuels; new vehicle technology; tailpipe emissions reductions; and expansion of public transit, commuter rail, intercity rail, bicycling and walking." It also requires the CTP to identify the statewide, integrated multimodal transportation system needed to achieve these results.
>
> This system must reduce GHG emissions to 1990 levels from current levels by 2020, and 80 percent below the 1990 levels by 2050 as described by AB 32 and Executive Order S-03-05. Additionally, Executive Order B-30-15 and SB 32 requires GHG emissions 40 percent below 1990 levels by 2030.

REGIONAL PLANNING PROCESS

The Kern Council of Governments (Kern COG) is a federally designated Metropolitan Planning Organization (MPO) and a state-designated Regional Transportation Planning Agency (RTPA). These designations formally establish Kern COG's role in transportation planning. Kern COG's Board of Directors comprises elected representatives from the eleven incorporated cities within Kern County and two members of the County Board of Supervisors.

A Memorandum of Understanding between Kern COG and California Department of Transportation (Caltrans) District 6 also provides for a Transportation Planning Policy Committee, which is the existing Board plus ex officio members from Caltrans, Kern County's military bases, and the Golden Empire Transit

District. The Transportation Technical Advisory Committee, comprising technical staff from member agencies, the Consolidated Transportation Services Agency, Caltrans, the Kern County Air Pollution Control District, and the San Joaquin Valley Air Pollution Control District provides support to the Board of Directors. In addition, the Social Services Transportation Advisory Committee also provides support to the Board by focusing on the needs of transit-dependent and transit disadvantaged persons, including the elderly, disabled, and persons of limited means. The Regional Planning Advisory Committee comprises representatives from local jurisdictions, the public transit agency (Golden Empire Transit), Caltrans, Local Agency Formation Commission, Kern Economic Development Corporation, the Tejon Indian Tribe and community members. Kern COG worked with the Regional Planning Advisory Committee to develop a broad structure of SB 375 implementation as well as the community engagement process.

As a regional transportation planning agency, Kern COG is mandated by California Government Code Section 65080 to prepare and periodically update the RTP. Indeed, regional transportation planning is a dynamic process requiring periodic refinement, monitoring, and amendment. The planning program for the next four-year period will continue with extensive evaluation of the RTP and the elements required by the federal surface transportation spending re-authorization. Each component will be studied and modified consistent with RTP priorities as Kern County moves toward a more efficient, integrated and multimodal transportation system.

Public participation is encouraged at every stage of the planning process, and all meetings are open to the public. Kern COG performed extensive public outreach, and a discussion of Kern COG's public participation activities is provided in Chapter 4, while the Community Engagement Strategy for the 2022 RTP and summary of findings is documented in Appendix C.

The adopted RTP establishes a basis on which funding applications are evaluated. Use of any state or federal transportation funds by local governments must conform to the RTP, the State Implementation Plan (SIP) for air quality improvements, and the Federal Transportation Improvement Program (FTIP).

State transportation planning laws (Cal. Gov't Code § 65080 *et seq.*) also specify that actions by transportation agencies, such as Caltrans and Golden Empire Transit District, must be consistent with the RTP. Land use decisions should consider and accommodate transportation facilities and programs specified in the RTP whenever possible but are not required to be consistent with the RTP. The facilities listed in the RTP should be incorporated into city and county General Plans. Local transportation projects must be consistent with the RTP in order to obtain state or federal funding.

Kern COG has prepared this RTP to include the SCS within Chapter 4 and the Congestion Management Program and Transportation Security Plan within Chapter 5, Strategic Investments. Kern COG prepared an environmental document, pursuant to the California Environmental Quality Act (CEQA), for the 2022 RTP. The environmental document serves as an informational document to inform decision-makers and the public of the potential environmental consequences of approving the proposed plan. Because Kern COG has no land use authority, it cannot mandate changes to city or county land use policies and regulations, including general plans. The SCS was developed in consultation with local jurisdictions and is consistent with existing adopted General Plans and Zoning.

Based on the 2022 RTP, multimodal facilities will be constructed, and transportation services implemented, on a level consistent with projected funding. Funding projections are based on the assumption that current levels and sources of funding will continue throughout the planning time frame.

Using projected funding levels, each jurisdiction within Kern County, as well as Caltrans, the Kern County Air Pollution Control District, and the San Joaquin Valley Air Pollution Control District (the Air Districts), and other agencies, will implement transportation projects or transportation demand management strategies consistent with the goals and policies set forth in the 2022 RTP. The RTP supports maintaining the existing multimodal transportation system, improving the safety of the system, and increasing the system's efficiency as appropriate.

The Constrained Program of Projects, a complete list of planned improvements by mode, is provided in Table 5-1 and is consistent with those projects that have been evaluated according to Air Quality Conformity guidelines and have been found to improve air quality in Kern County. Table 5-2 provides the Unconstrained Program of Projects; these projects are important to the development of Kern County's transportation system but funding is not identified or available, and they are not included in the Air Quality Conformity model.

FEDERAL SURFACE TRANSPORTATION SPENDING REAUTHORIZATIONS

Periodically, Congress enacts long-term transportation spending bills providing funding certainty for surface transportation, meaning states and local governments can move forward with critical transportation projects, like new highways and transit lines, with the confidence that they will have a federal partner over the long term.

Recent reauthorizations have program structures and funding shares for highways and transit. The law makes changes and reforms to many federal transportation programs, including leveraging increased investment by state, local, and private partners, promoting improved project performance and accountability, and providing project sponsors maximum flexibility to propose innovative solutions to address specific, local needs. The law provides support for national or regional economic vitality, leveraging of federal funding, potential for innovation, and performance and accountability.

The RTP must also comply with Section 176 of the federal Clean Air Act which requires that no MPO may give its approval to any project, program, or plan which does not conform to the applicable State Implementation Plan (SIP) for air quality. *See* 42 U.S.C. § 7506(c).

OVERVIEW OF STATE REQUIREMENTS

MPOs and Regional Transportation Planning Agencies are required to adopt and submit an updated RTP to the California Transportation Commission (Commission) and Caltrans every four or five years depending on air quality attainment within the region. The State of California has adopted extensive RTP guidelines that largely mirror federal requirements. The recently adopted 2017 Regional Transportation Plan guidelines, under the auspices of the California Transportation Commission, have been used to prepare this document.

In 2005, Governor Schwarzenegger's signed Executive Order S-3-05 which established a goal to reduce statewide GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.

In 2006, California became the first state in the country to adopt statewide GHG emissions reduction targets through AB 32. This law codifies the Executive Order S-3-05 requirement goal to reduce statewide emissions to 1990 levels by 2020. In 2006, Assembly Bill 32 (AB 32) was signed into law. AB 32 codifies the Executive Order S-3-05 goal to reduce statewide GHG emissions to 1990 levels by 2020. AB 32 resulted in CARB's 2008 adoption of a Climate Change Scoping Plan (Scoping Plan), outlining the state's plan to achieve emissions reductions through a combination of direct regulations, alternative compliance mechanisms, various incentives, voluntary actions, market-based mechanisms, and funding. The Scoping Plan identifies local governments as "essential partners" in the state's efforts to reduce emissions.[1]

[1] Because the Scoping Plan time horizon is limited to 2020, analysis of the Scoping Plan is presented for the year 2020 only, not for 2035 or 2050. While Executive Order S-3-05 sets a goal that statewide GHG emissions be reduced to 80 percent below 1990 levels by 2050, the Executive Order does not constitute a "plan" for GHG reduction, and no state plan has been adopted to achieve the 2050 goal.

Passed in 2008, SB 375 supports the implementation of AB 32 and revises the planning requirements of the RTP. SB 375 targets regional emissions reductions from passenger vehicles and light-duty trucks through changes in land use and transportation development patterns. As a result, MPOs, in partnership with local governments, are now required to develop a SCS to identify land use and transportation measures that will be used to meet regional emissions reduction targets established by the California Air Resources Board (ARB).

Executive Order B-30-15 signed by Governor Brown in April 2015, and SB 32 approved in September 2016, establishes a California GHG target of 40 percent below 1990 levels by 2030 – the most aggressive benchmark enacted by any government in North America to reduce carbon emissions over the next decade and a half. The bill also requires a life-cycle accounting, including climate change considerations, in infrastructure investments made by the state.

The RTP must be an "internally consistent" document, meaning that the contents of the Policy, Action, and Financial elements must be consistent with one another. As a result, transportation investments and the forecast development pattern in the SCS should be complementary. The Regional Transportation Plan Checklist, included in the 2017 RTP Guidelines, was used to ensure internal consistency in this 2022 RTP (refer to Appendix A).

SB 375 has also increased the minimum level of public participation required in the regional transportation planning process, requiring collaboration between regional partners during development of the SCS. SB 375 also offers California Environmental Quality Act (CEQA) incentives to encourage projects that are consistent with a regional plan which achieves emissions reductions and coordinates the regional housing needs allocation (RHNA) process with the regional transportation process. To ensure consistency requirements with the SCS, the draft RHNA is incorporated into this document as an appendix. RHNA provides low income housing goals for each community in the region.

In addition to SB 375, transportation plans must comply with CEQA, and the 2022 RTP meets this requirement. The first four years of plans must be consistent with the four-year State Transportation Improvement Program (STIP), which includes the Kern COG Regional Transportation Improvement Program (RTIP).[2] State guidelines call for program-level performance measures that include objective criteria to reflect the RTP's goals and policies. State guidelines also require regional plans to contain three specific chapters: a policy element (Chapter 2, Transportation Planning Policies), an action element (Chapter 5, Strategic Investments), and a financial element (Chapter 6, Financing Transportation).

Public Outreach

As the MPO, Kern COG is required to implement a public involvement process to provide complete information, timely public notice, and full public access to key decisions and to support early and continuing public involvement in developing its regional plans.

Kern COG formally adopted a Public Participation Program in May 2001, then updated it in 2005, 2007, 2010, 2011, 2015, and 2019 (refer to Appendix B for the complete Public Participation Plan). This program, Title VI of the Civil Rights Act of 1964, and associated regulations and policies, including President Clinton's 1994 Executive Order 12898 on Environmental Justice, seeks to assure that minority, senior, and low-income populations are involved in the planning process. Kern COG's Public Participation Program seeks to encourage active participation of a broad range of stakeholder groups in the RTP process.

[2] The RTIP is the formal presentation of projects to the state that local agencies wish to implement within the next four years. Once projects are approved and presented in the STIP, the projects are then incorporated into the Federal Transportation Improvement Program (FTIP).

Kern COG has used a combination of methods to stimulate public involvement. Although the planning horizon year for the 2022 RTP is 2046, the community engagement process was designed to build on the Kern Regional Blueprint. The community engagement program was designed to provide an opportunity for community members to learn about the RTP project and identify priorities for the region's future.

The community engagement strategy used a multifaceted approach to target all sectors of the community within the Kern region, including traditionally underrepresented groups. The following public outreach methods were used:

- RTP-specific presentations to community-based organizations.
- RTP-specific stakeholder roundtable meetings with representatives from the business, industry, environmental justice advocacy, social services communities, and the Regional Planning Advisory Committee.
- RTP-specific community workshops throughout the Kern region.
- RTP-specific community events throughout the Kern region including community events such as the 2021 Native American Petro Glyph Festival in Ridgecrest. These types of events provided the most successful level of broad public participation.
- Kern COG hosted booths at Farmer's Markets to engage the public about planning transportation projects.
- Kern COG conducted community workshops and walk audits to enhance walking, bicycling and transit access throughout Kern County.
- In February 2020, the Kern COG Board of Directors designated a voting member seat for the federally recognized Tejon Indian Tribe on the Regional Planning Advisory Committee. Kern COG also provided a draft government-to-government agreement to the Tejon Indian Tribe to better facilitate the interaction between the two government organizations.
- RTP-specific interactive project website, which included online activities and a survey, community workshop public meeting notices, and the latest written information on the RTP.
- Social media was used to advertise the online activities, websites and events.
- Posting of all public outreach events on the Kern COG Facebook page.
- Direct outreach to limited-English-proficiency, minority, senior, and low-income populations.
- Written materials (in both English and Spanish), and visual materials to communicate the status and content of the RTP, including fact sheets and presentations. A public comment form was used throughout the outreach program at public meetings as well as online.
- Kern COG's website, featuring a section dedicated to the 2022 RTP.
- Outreach to media, including press releases and interviews.
- Kern COG staff was available to respond to comments via telephone and/or by e-mail.

In addition to these targeted outreach efforts, all regular and special meetings of the Regional Planning Advisory Committee, Transportation Technical Advisory Committee, Congestion Management Agency Technical Advisory Committee, and Social Services Transportation Advisory Committee, as well as the

Kern Transportation Planning and Policy Committee and Board of Directors, are publicly noticed and provided the opportunity for public comment. Kern COG coordinated with ARB and the California Department of Housing and Community Development (HCD) in the development of this RTP.

Input provided by elected officials, stakeholders, and community, agency, commission, committee and state agency members were recorded and informed development of the 2022 RTP (See Appendix C for a summary of the community engagement process and results).

Transportation Planning in the Kern Region

Kern COG is responsible for developing, coordinating, monitoring, and updating the RTP for Kern County. Kern COG develops the RTP in coordination with the eleven cities of Kern County and the County of Kern, transit operators, tribes, and other transportation stakeholders. This section has summarized the planning environment and discussed how Kern COG integrates the planning activities of each of the cities and the County of Kern to ensure a balanced, multimodal plan that meets regional and county-specific goals, as well as emissions reduction targets.

Over the past decade, Kern COG and its member agencies programed projects to benefit the traveling public throughout Kern County. **Figure 1-1** and **1-2** portray projects that are currently under construction, completed or already existing. Projects ranged from transit projects, bike paths and performance increasing projects that mitigate congestion and enhance public safety.

Figure 1-1: Kern County Transportation Projects

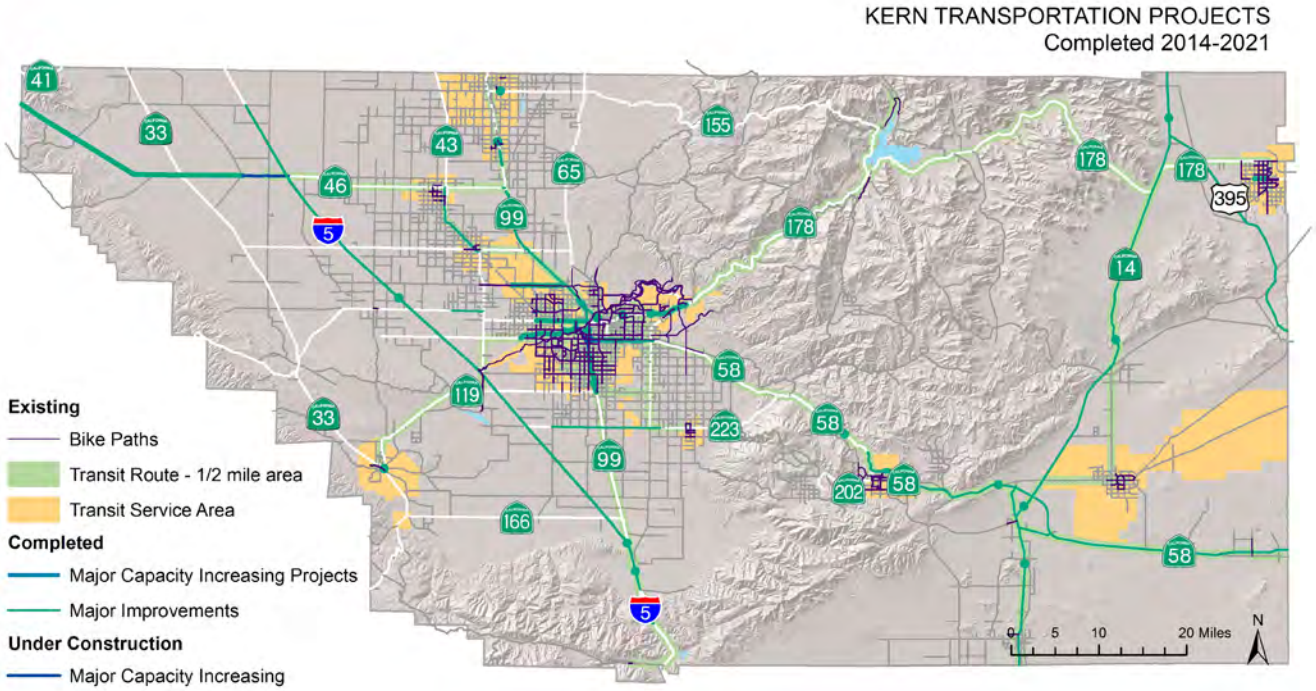
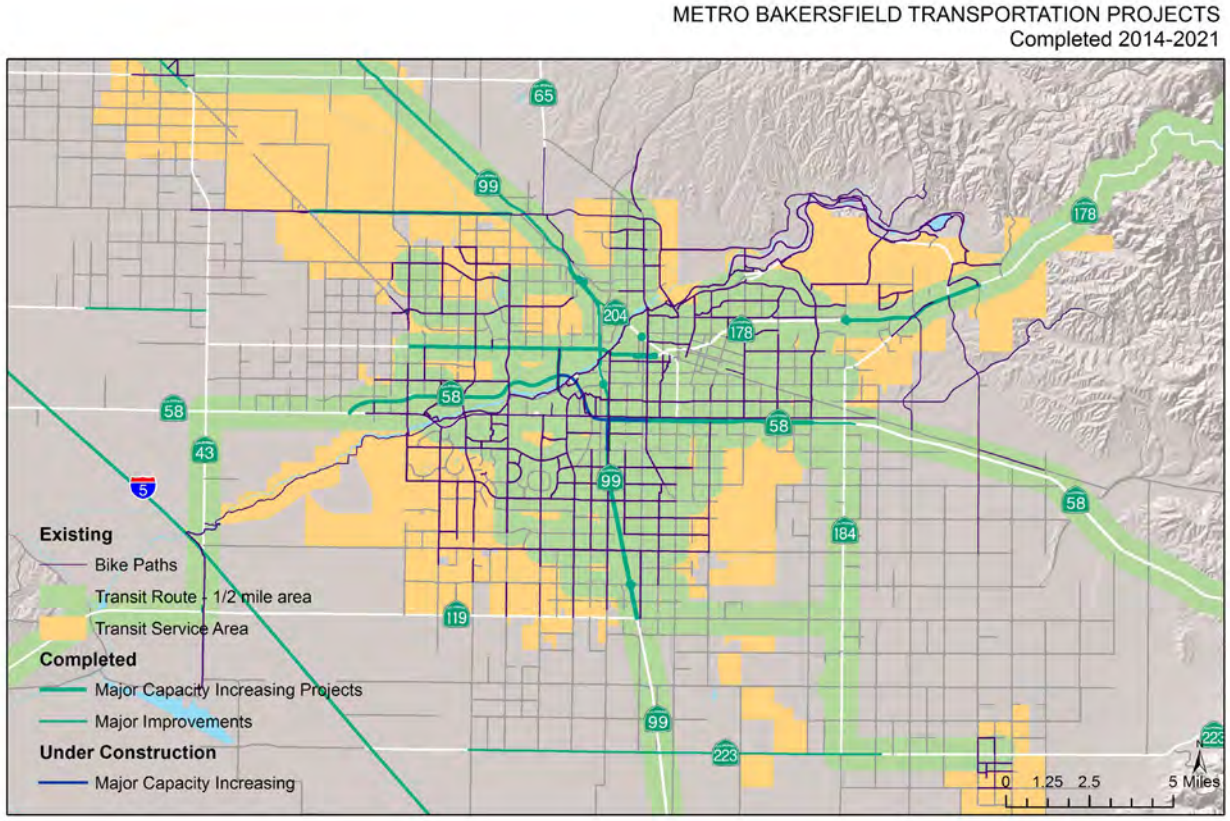


Figure 1-2: Metro Bakersfield Transportation Projects Completed Underway Projects



The Kern region comprises two air basins and four air quality nonattainment or maintenance areas. Federal law requires that transportation and air quality planning are coordinated in these nonattainment and maintenance areas. In addition, the Kern region is part of Caltrans Districts 6 and 9.

The Kern region is unique in that it not only contains the San Joaquin Valley, but mountain and desert sub-regions. The region's large area and dispersed centers support agriculture, oil and gas production, renewable energy, military, aerospace, recreation and other activities where abundant lands, unique geographic features and transportation linkages are important in supporting and enhancing the region's economic pursuits.

Given the challenges faced by our region, this RTP recognizes that our approach must be balanced, systematic, multimodal and at the same time focused to yield the best performance outcomes possible.

CONTENT OF THE 2022 RTP

The substantive portions of the 2022 RTP are structured as follows:

Chapter 1: Introduction
Chapter 2: Policy Element
Chapter 3: Planning Assumptions
Chapter 4: Sustainable Communities Strategy
Chapter 5: Strategic Investment
Chapter 6: Financial Element
Chapter 7: Future Links
Chapter 8: Monitoring Progress
Chapter 9: Glossary & Acronyms
Appendices

Policy Element

In Chapter 2, the Policy Element addresses legislative, planning, financial, and institutional issues and requirements, as well as areas of regional consensus (e.g., forecasted development patterns). This element provides guidance to decision-makers regarding the implications, impacts, opportunities, and forecasted options that will result from implementation of the RTP. In addition, the Policy Element is a resource that provides input and promotes consistency of actions taken by state, regional, and local agencies, such as transit agencies, congestion management agencies, and the California Highway Patrol.

Planning Assumptions

Chapter 3 describes the planning assumptions applied in developing the 2022 RTP. In 2001 the Kern COG Board adopted a policy to revisit the regional growth forecast every 3-5 years. The Board has adopted forecasts five times since that policy was implemented, the most recent being in March 2020. As in all parts of California, housing affordability is linked to job growth and Kern is noted for being the most affordable housing market in the state[3] making Bakersfield a destination for household migration from more expensive markets, like Southern California, that are experiencing a major housing shortage/affordability crisis. State policies for expanding the renewable energy portfolio continues to provide jobs in this industry and a new streamlined, environmentally protective permit system for oil and gas supports continued permit activity.

[3] Smart Asset, https://smartasset.com/mortgage/quicken-loans-review#california/most-affordable, 2017

In addition, the growth assumptions include a planned High Speed Rail station for Bakersfield that would provide 55 minute passenger rail service between Kern and L.A. Union Station. This potential connection could eventually bring greater job diversity and housing to Kern County beyond historic growth trends. The question is not if, but when we will see the forecasted growth in Kern.

Sustainable Communities Strategy

As discussed earlier, the 2022 RTP includes a SCS – Chapter 4. The SCS includes land use planning strategies and policies to reduce air emissions from passenger vehicle and light duty truck travel by better coordinating transportation expenditures with forecasted development patterns in order to meet the GHG emissions reduction targets for the region.

Strategic Investment

Chapter 5, Strategic Investment sets forth plans of action for the region to pursue and meet identified transportation needs and issues. Planned investments are consistent with the goals and policies of the plan, the SCS element and must be financially constrained. These projects are listed in the Constrained Program of Projects (Table 5-1) and are modeled in the Air Quality Conformity Analysis.

Financial Element

RTPs must include a Financial Element – Chapter 6, that identifies monetary resources to implement the plan (23 USC 134(h)(2)(B)). This Chapter serves as the Financial Element to fulfill the federal requirement that the 2018 RTP be financially constrained (i.e., budgeted) and provides a cost analysis for implementing the program of projects included in the Strategic Investments (Action Element). It describes the anticipated financial situation that will exist between FY 2022 and FY 2046, the implementation period for this 2022 RTP.

Future Links

Chapter 7 – Future Links, addresses key future trends that may affect the RTP in future cycles. Forecasting for more than 5 years can be challenging; as such, forecasts should be updated regularly. The Future Links Chapter discusses some major game changers that need to be watched closely with each update of the RTP including corridor preservation, needed unfunded projects and financial mechanisms, adaptive cruise control/autonomous vehicle technology, high speed rail, air quality contingencies, and the San Joaquin Valley Regional Overview chapter.

Monitoring Progress

Chapter 8 deals with monitoring the progress of the transportation system. As the designated MPO for the Kern region, Kern COG monitors transportation plans, projects, and programs for consistency with regional plans. Kern COG also monitors the performance of the transportation system. This performance monitoring is especially important to inform the planning process for future RTPs. Regional transportation problems cannot be solved until they are identified and measured.

Glossary & Acronyms

A list of special terms and abbreviations used in the RTP with accompanying definitions.

Appendices

The following Appendices are included with the 2022 Regional Transportation Plan:

Appendix A	Regional Transportation Plan Checklist
Appendix B	Public Information Policies and Procedures
Appendix C	Outreach Results
Appendix D	Integrated Performance Measures Analysis for System Level, Smart Mobility Framework, Health Equity, Environmental Justice and Title VI
Appendix E	A Great Start: Sustainable Community Success Stories
Appendix F	San Joaquin Valley Regional Overview
Appendix G	2022 Regional Transportation Plan Capital Improvement Program/Expenditure Plan by Sub Areas Using Existing Funding Sources (Ready-To-Go Major Projects) Together With Potential New Funding Sources (Next-In-Line Major Projects)
Appendix H	Response to Comments (To Be Included with Final RTP)

CHAPTER 2 TRANSPORTATION PLANNING POLICIES

INTRODUCTION

The 2022 Regional Transportation Plan is Kern County's comprehensive area-wide transportation program to address the mobility challenges created by the region's growth. The Policy Element is one of 4 required elements for a Regional Transportation Plan as required by the adopted California Transportation Commission guidelines. This Policy Element contains an integrated set of goals, policies, actions and performance measures that are consistent with publicly vetted principles to guide and monitor the improvements to Kern's transportation system through 2046.

This policy element contains an integrated set of goals, policies, actions and performance measures that are consistent with publicly vetted principles to guide and monitor the improvements to Kern's transportation system through 2046.

The Policy Element addresses legislative, planning, financial, and institutional issues and requirements, as well as areas of regional consensus (e.g., land use policies). This element provides guidance to decision-makers regarding the implications, impacts, opportunities, and forecasted options that will result from implementation of the RTP. In addition, the Policy Element is a resource that provides input and promotes consistency of actions taken by state, regional, and local agencies, such as transit agencies, congestion management agencies, and the California Highway Patrol.

The policies and actions of the RTP are listed by goal and Strategic Investments (see Chapter 5) and are provided in Table 2-1. This table is supported by a Performance Monitoring section containing a system-wide set of measures to monitor progress toward these goals as well as an Integrated Environmental Justice (EJ)/Title VI analysis (see Appendix D). A description of the issues, needs, and actions is included in Chapter 5, Strategic Investments, for each transportation mode.

Transportation planning policies discuss multiple plans including but not limited to transit plans, active transportation plans. The scope of goals, policies and actions within this document apply to all jurisdictions including unincorporated areas and disadvantaged communities.

Goals, policies, actions, and performance measures are defined as follows:

A "**goal**" is the end toward which effort is directed; it is general in application and timeless.

A "**policy**" is a direction statement that guides present and future decisions on specific actions. Policies support the attainment of goals. In this document, policies have been merged with objectives to streamline the policy element.

An "**action**" is a specific activity in support of the policy. Actions are detailed in Chapter 5, Strategic Investments (Action Element).

A "**performance measure**" is a quantitative system-level indicator of how actions in the plan support the goals and are included in Appendix D.

In accordance with Government Code 65080(b)(1), all policies are relevant for both the near term (6 years) and long term (20+ years). Short- and long-range actions implementing these policies are identified in Chapter 5.

The following 2022 RTP goals and policies were derived from other Kern COG transportation plans and studies. This 2022 RTP stands on its own, and revisions to these other plans will not affect the content of this document.

GOALS/POLICIES

At the core of the 2022 RTP are seven goals:

1) **Mobility** – Improve the mobility of people and freight.

2) **Accessibility** – Improve accessibility to, and the economic wellbeing of, major employment and other regional activity centers.

3) **Reliability/Safety** – Improve the reliability and safety of the transportation system.

4) **Efficiency** – Maximize the efficiency and cost effectiveness of the existing and future transportation system.

5) **Livability/Quality of Life** – Promote livable communities and satisfaction of consumers with the transportation system.

6) **Sustainability** – Provide for the enhancement and expansion of the system while minimizing effects on the environment.

7) **Equity** – Ensure an equitable distribution of the benefits among various demographic and user groups.

While all goals are considered interrelated and important, mobility is considered the plan's highest goal. Identified in Table 2-1 are policy objectives for Kern COG and its member agencies categorized by the goals they help to advance. The table also references the strategic investment category in Chapter 5, Strategic Investment.

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
1	Enhance Connectivity to Meadows Field and Inyokern Airport to accommodate future regional growth.								Aviation
1.1	Work with Meadows Field and Inyokern Airport to obtain funding from the state and federal governments for their respective development programs.								Aviation
1.2	Work with local and regional transit providers to increase alternative mode ground access options at Meadows Field.								Aviation
1.3	Assist Meadows Field with planning related to high-speed rail connections.								Aviation
2	Assist Kern County airports in expanding facilities to meet growing aviation demands.								Aviation
2.1	Participate in master plan updates for various Kern County airports.								Aviation
2.2	Implement the Action Plan of the Central California Aviation System.								Aviation
2.3	Work with public airports to increase their access to federal and state funding and to reduce air emission in nearby communities, including disadvantaged communities.								Aviation
3	Work with privately owned airports and local jurisdictions to support their operation and to maintain compatible uses within the airport area of influence.								Aviation
3.1	Work with the JLUS committee to implement planning activities listed in the JLUS for R-2508 airspace (China Lake Naval Weapons Station and Edwards Air Force Base).								Aviation
3.2	Implement planning actions and strategies listed in the JLUS for R-2508.								Aviation
4	Enhance and connect existing and future bikeways and pedestrian walkways in the Kern Region including disadvantaged communities.								Active Trans. (AT), Air Emission

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
4.1	Seek and assist member agencies to apply for funding for bicycle and pedestrian projects from local, state, and federal sources.								AT
4.2	Seek and assist member agencies to apply for funding to maintain existing bikeways and pedestrian walkways.								AT
4.3	Encourage allocating sufficient flexible funding sources to fully fund priority pedestrian/bicycle projects identified in local and/or regional plans.								AT
5	Encourage and w Kern COG member jurisdictions to update and implement their adopted local bicycle plans and to incorporate bicycle facilities into local transportation projects.								AT, Air Emissions
5.1	Fund updated bicycle plans for incorporated cities and unincorporated communities.								AT
5.2	In communities countywide and using appropriate funding sources create and fully fund pedestrian/bicycle facilities identified in local and/or regional plans.								AT
6	Identify appropriate funding sources, update and fund regional and local plans that promote bicycle/pedestrian travel.								AT, Air Emissions
6.1	Fund and periodically update the regional Active Transportation plan for bicycle, and pedestrian facilities for the Kern's incorporated and unincorporated communities.								AT
6.2	Periodically update the Kern Active Transportation Plan.								AT
7	Encourage using appropriate funding sources to promote and fund sustainable community design that supports transit use and increases active transportation (AT) while still meeting the mobility needs of residents and employees in all communities and particularly in disadvantaged communities.								AT, Public Transit, Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
7.1	Purchase and construct bicycle racks and lockers for Kern county multimodal stations.								AT
7.2	Purchase and construct bike tie-downs and racks on commuter trains and buses.								AT
7.3	Implement bus improvements including enhanced transit service (rapid bus, Bus Rapid Transit) in long range transit plans that promote service throughout the county especially for disadvantaged communities.								Transit
7.4	Introduce Express bus service along SR 178/24th Street/Rosedale Highway and SR 99.								Transit
7.5	Consider Bus Rapid Transit (BRT) in exclusive lanes with traffic signal priority.								Transit
7.6	Using appropriate funding sources, study additional express/inter-city bus service throughout the county.								Transit
7.7	Consider ramp metering.								Transit
7.8	Consider peak period only HOV lanes.								Transit
7.9	Consider converting BRT corridors to light rail transit.								Transit
7.10	Consider additional peak period HOV lanes.								Transit
8	Identify additions and alternatives that would improve the overall quality of transit service in Kern County.								Transit, Air Emissions
8.1	Identify additions and alternatives that would improve the overall quality of transit throughout the county, especially for disadvantaged communities.								Transit
8.2	Consider a new GET Transit Center at CSU Bakersfield.								Transit
8.3	Increase GET services to CSU Bakersfield and Bakersfield College.								Transit

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
8.4	Consider introducing "full" GET BRT.								Transit
8.5	Implement traffic flow improvements/railroad grade separations.								Air Emissions
8.6	Promote park and ride lots.								Air Emissions
8.7	Consider High Occupancy Vehicle (HOV) lane additions: Centennial Corridor provides room to accommodate HOV.								Air Emissions
8.8	Encourage transit providers to consider lower transit fares or transit subsidies for low income, disabled and elderly populations.								Air Emissions
8.9	Implement flextime program.								Air Emissions
9	Identify, explore and assist jurisdictions to apply for funding alternatives to traditional transit that address Kern Transit's (KT) rural mobility needs in all communities.								Transit, Air Emissions
9.1	Assist KT in refining KT scheduling practices to improve service, including frequency.								Transit
9.2	Consider KT route reconfiguration within Downtown Bakersfield.								Transit
9.3	Assist KT in analyzing stop placements and first/last mile linkages.								Transit
9.4	Continue discussions with the Southern California Regional Rail Authority regarding the extension of Metrolink from Lancaster to Rosamond.								Transit
9.5	Create and promote ridesharing and voluntary employer-based incentives.								Air Emissions
10	Develop coordination alternatives that would realize improvements over current Golden Empire Transit (GET) and other transit operations.								Transit, Air Emissions
10.1	GET may consider decreasing emphasis on timed connections at transit centers								Transit
10.2	GET may consider faster crosstown trips: New Express routes; New "Rapid" routes; More direct routes								Transit

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
10.3	GET may consider faster crosstown service connecting one side of Bakersfield to the other including downtown and unincorporated areas.								Transit
10.4	GET may consider circulator and/or demand response services within neighborhoods or adjacent unincoporated areas of Bakersfield.								Transit
10.5	Continuation of GET express routes.								Transit
11	Review, identify, and discuss alternative administrative and oversight models for transit services in Kern County. Support transit operators' replacement of fossil fueled vehicles to zero emission vehicles.								Transit
12	Create strategies to increase the visibility and importance of transit in Kern County.								Transit, Air Emissions
12.1	Monitor advancement of the California High-Speed Rail (HSR) project.								Transit
12.2	Introduce GET circulator, demand response and express service.								Transit
13	Create partnerships between transit and social services agencies in addressing Ker County's transit needs.								Transit, Air Emissions
14	Improve intercity connections and provide new services to expand the transportation alternatives in the Eastern Sierra region.								Transit, Air Emissions
14.1	Continue discussions with the Southern California Regional Rail Authority regarding the extension of Metrolink from Lancaster to Rosamond.								Transit
14.2	Initiate discussions with the San Joaquin Valley Joint Powers Authority regarding adding stops to Amtrak San Joaquin service between Bakersfield and Wasco.								Transit
14.3	Create ridesharing and voluntary employer-based incentives.								Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
14.4	Reassess feasibility of commuter rail in various corridors.								Transit
14.5	AS HSR proceeds to construction: Identify preferred corridor to connect Bakersfield and Delano with commuter rail/HSR feeder service; Identify potential funding for commuter rail operations; work with local transit providers to connect riders to commuter rail/HSR.								Transit
15	Investigate new federal, state, and local funding opportunities to maintain the current transportation system and promote future transportation development.								Highways
15.1	Pursue ground access improvements to Meadows Field.								Highways
15.2	Upgrade the present highways maintenance system whenever feasible.								Highways
15.3	Maintain and enhance existing roadway infrastructure and vehicles with emerging technology to provide for more efficient use and reduce emissions, including electrification and clean fuel technology.								Highways, Air Emissions
16	Work with Caltrans, COG member agencies, and other interested parties to prepare environmental studies and design engineering plans, reducing impacts to all communities.								Highways
16.1	Continue to improve safety on State Routes including 14, 43, 46, 58, 65, 99, 119, 178, 184, 202, 204, 223 and other regional connecting routes.,								Highways
17	Provide input to neighboring counties conducting corridor studies for routes significant to the Kern region.								Highways
17.1	Participate in San Bernardino County's study for the US Highway 395 corridor.								Highways

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
17.2	Review and analyze available rest areas, layover lots, and truck stops to determine needs for additional parking related to long-distance travel.								Highways
17.3	Implement the recommendations from completed transportation planning studies when appropriate and feasible.								Highways
18	Review countywide transportation impact fees and encourage member agencies to invest in active transportation, public transit and maintenance of local streets and roads.								Highways
18.1	Encourage local governments to consider pursuing alternative funding sources such as regional TIFs where justified as a necessary means to address transportation needs.								Highways
19	Delay the need for future increases in highway capacity and congestion through the implementation of measures that reduce transportation related air emissions.								Highways, Air Emissions
19.1	Pursuant to Transportation Development Act Statutes, encourage and assist member agencies to improve and explore funding opportunities for public transit in all communities especially for disadvantaged communities.								Air Emissions
19.2	Encourage and assist member agencies to implement transit mobility hubs with multiple transportation mode choices (transit, bike/car share, walk, bike, etc.) at central locations in all communities, and especially for disadvantaged communities.								Air Emissions
19.3	Create ridesharing and voluntary employer-based incentives.								Air Emissions
19.4	Facilitate traffic flow improvements/railroad grade separation.								Air Emissions
19.5	Consider High Occupancy Vehicle (HOV) lane additions: Centennial Corridor provides room to accommodate HOV.								Air Emissions
19.6	Consider implementing flextime programs.								Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
20	Prepare a systems-level planning analysis of various transportation system alternatives using multimodal performance measures.								Highways, Air Emissions
20.1	Maintain Regional Traffic Models to aid in traffic and air quality analyses.								Air Emissions
21	Coordinate planning efforts to ensure efficient, economical, and environmentally sound movement of goods mitigating impacts to all communities.								Highways, Freight
21.1	Prioritize and program the freight related capital improvements for highways, regional roads, and interchanges for the RTP planning period, consistent with adopted goals and policies and the project eligibility requirements for each funding program,								Highways
21.2	Support higher safety level requirements for hazardous material transport on interstates, state highways, and local roads, minimizing impacts to sensitive receptors such as schools and neighborhoods alternative routes and stormwater mitigation.								Highways
21.3	Encourage coordination and consultation between the public and private sectors to explore innovative and efficient goods movement strategies such as shifting goods-movement from road to rail. Convene an annual freight movement event for all stakeholders groups.								Freight
21.4	Identify and explore development of a program to shift goods-movement from road to rail through various incentives, potential tax credits and subsidies.								Freight
21.5	Encourage the use of rail and air for goods movement to reduce impacts to state and inter-county routes and lessen air quality impacts.								Freight
21.6	Oppose higher axle load limits for the trucking industry on general purpose roadways without adequate reinforcement and maintenance.								Freight
22	Advocate programs and projects for the intermodal linkage of all freight transportation.								Highways, Freight

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
22.1	Construct truck climbing lanes on the west grade of SR 58 over the Tehachapi Mountains to improve safety near the Cesar Chavez National Monument.								Freight, Highways
22.2	Program safety related infrastructure improvements such as widening of Seventh Standard Road, SR 46 and 43 in response to proposed freight movement activities in the area.								Freight
22.3	Widen State Route 184 to four lanes to improve safety for increasing agriculture trucking activity.								Highways, Freight
22.4	Widen Wheeler Ridge Road to four lanes and/or create a parallel expressway as a gap-closure to tie I-5 to SR 58 south of Arvin.								Highways, Freight
23	Construct new SR 58 freeway through Metropolitan Bakersfield from existing segments freeway SR 58 continuing west to I-5 and upgrade expressway portions east of SR 395.								Freight
23.1	Encourage communication between short-line rail operators, shippers, and economic development agencies.								Freight
23.2	Explore the potential to retain freight rail service on the southern portion of Arvin Subdivision. Coordinate with SJVR, Tejon Ranch, the Central California Rail Authority and others.								Freight
24	Explore rail intermodal, transfer facility, and alternative transfer options for the region. Develop the rural trucking network, avoiding populated areas to minimize impacts to both disadvantaged and all communities.								Freight, Safety, Environ. Justice
24.1	Continue development of the BNSF & UP intermodal freight hubs in/near Shafter as well as the BFL International Airport freight hub, into a TradePort District with a								Freight

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

Policy/ Action No.	Policy/Action	Goals Supported: Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	Strategic Action Element (Ch. 5)
	network spoke system of connecting truck access routes. Participate in state planning for a system of inland ports.								
24.2	Continue development of the Delano and McFarland Union Pacific intermodal rail freight shipping facilities, including last-mile truck access infrastructure.								Freight
24.3	Research Targeted Logistics Transportation Fees such as : Logistic Mitigation Fees, and Mobility Fees								Freight
25	Maintain liaison with Southern California Association of Governments and all San Joaquin Valley Councils of Government for efficient coordination of freight movement between regions and counties.								Freight
25.1	Work with other agencies to create an effective Central Valley-wide truck model to track regional commodity flows and to identify critical economic trends that will drive truck flows on regionally significant truck routes.								Freight
26	Provide heavy truck access planning guidance, including a review of the current surface transportation act route system, review of geometric issues, and signaling for all routes identified as major local access routes, as well as the development of performance standards.								Freight, Air Emissions
26.1	Develop clean trucking technology on highways: provide assistance applying for numerous existing programs; encourage revisions to building codes that require electric charging stations and new warehouse/manufacturing facilities and incentives for electric charging.								Freight, Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
26.2	Explore development of a Next Generation Industrial TradePort District – provide for phased incremental testing of emerging goods movement technology such as clean tech, autonomous trucks and warehouses/manufacturing & processing, mining and agriculture to foster higher paying jobs in the region.								Freight, Air Emissions
27	As planning funds are available, continue the technical and planning assistance grant program to assist and allow local jurisdictions to receive funding for coordinated land use, air quality and transportation planning.								Land Use, Air Emissions
27.1	Facilitate the Shafter Intermodal Rail Facility by programming infrastructure to service rail and truck traffic that may be generated by the facility.								Land Use, Air Emissions
27.2	Use the California Environmental Quality Act (CEQA) review process to inform stakeholders and decision makers on the impacts of future sensitive land use developments near vital transportation infrastructure necessary to handle increasing air traffic and international cargo, as well as increasing inland port activity.								Land Use, Air Emissions
27.3	Work with the Kern County Department of Airports and local planning departments to preserve existing airports from encroachment by sensitive land uses to strategic global gateways.								Land Use
27.4	Use the CEQA review process to inform stakeholders and decision makers on the impacts of sensitive land use developments near vital transportation infrastructure necessary to handle increasing local, intercity, and interregional transit use.								Land Use, Air Emissions
27.5	Implement the RTP in partnership with member agencies to preserve near- and long-term transportation infrastructure, thus promoting the gradual intensification of transit use.								Land Use, Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
27.6	Allow reduced parking requirements near transit centers that have alternative modes of access such as walking and bike paths, circulator buses, etc.								Land Use, Air Emissions
27.7	Monitor progress and allocated finding toward implementing principles developed by the *Directors to 2050* outreach process pursuant to the Project Delivery Policies and Procedures adopted November 17, 2016, and updates as needed.								Land Use, Air Emissions
27.8	Encourage cities and the county to provide parking requirements (and parking provisions) compatible with compact, pedestrian, and transit-supportive design and development. Requirements should account for mixed uses, transit access, and the linking of trips that reduce reliance on automobiles and total parking demand.								Land Use, Air Emissions
27.9	Promote land use along freight corridors that are compatible with goods movement traffic.								Land Use
28	Encourage land use planning by Kern COG local Government member agencies that recognizes Kern's large area, dispersed centers and unique geographic features of the region.								Land Use, Air Emissions
28.1	Implement the Directions to 2050 Growth Principles vision for economic vitality by planning and programming infrastructure to provide connectivity to air traffic and international cargo facilities.								Land Use

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
28.2	Monitor progress and as funds are available, allocate funding toward implementing regional principles developed by the *Directions to 2050* visioning process consistent with local general plans and provide funding to support that vision through the technical and planning assistance grant program in all communities including disadvantaged communities.								Land Use
29	Promote land use patterns that support current and future investments in public transit and active transportation in all communities particularly in disadvantaged communities that score high in many state and federal grant programs.								Land Use, Air Emissions
29.1	Encourage and assist with the adoption of general plan circulation elements that address transit, bike, and pedestrian modes. Consider specific plan lines and form-based codes where appropriate to implement transit improvements along designated transit corridors that connect transit-priority place types and centers and other transit ready areas.								Land Use, Air Emissions
29.2	Work with GET, KT, other local transit providers, and local land use planners to preserve existing and future transit opportunities from the encroachment of low-density land uses within transit-priority place types and centers and other transit ready areas.								Land Use, Air Emissions
29.3	Encourage the expansion of transportation choices and transit usage by providing housing choices that include more compact and mixed land uses within walking distance to transit priority place types and centers and other transit ready areas in all communities including disadvantaged communities.								Land Use, Air Emissions
29.4	Identify and space transit oriented village, town, and suburban/community centers a minimum of 1 to 4 miles apart.								Land Use, Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
29.5	Provide convenient and safe walking and bike paths to a fixed transit hub at each transit priority place type and other transit ready areas.								Land Use, Air Emissions
29.6	Promote more compact and mixed-use centers along transit corridors, where appropriate, to support more intense transit options such as BRT, light rail and active transportation as areas become revitalized and in other transit ready areas.								Land Use, Air Emissions
29.7	Land uses should be mixed both horizontally and vertically where appropriate. Vertical mixed use, with ground-floor retail in developed areas and activity centers as identified through local land use plans, can increase the vitality of the street and provide people with the choice of walking to desired services. More important for Bakersfield, mixing uses horizontally can prevent desolate, single-use areas and encourage increased pedestrian activity; scale of use and distance between uses are important to successful horizontal mixed-use development.								Land Use, Air Emissions
29.8	Support and enhance transit priority and strategic employment place types. These areas have a strong impact on transportation patterns as the major destinations. To make these places more transit-supportive, they should be enhanced by land use decisions that locate new and affordable housing and appropriately scaled retail and employment uses to diversify the mix, creating an environment that maximizes transportation choice in both Metro and outlying communities. Enhancement of these place types in outlying areas to create vibrant communities provides opportunities for employees to live closer to where they work, reducing overall travel.								Land Use, Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
29.9	Encourage cities and the county to provide land use intensities where appropriate at levels that will promote use of transit and support pedestrian and bicycle activity. A general threshold for transit-supportive residential uses is 10 to 15 units per acre within ½ mile of a high-frequency transit stop (15 min. headways or less). This density can be lower, however, if the urban environment supports easy pedestrian/bike access to transit. Nonresidential uses with a floor area ratio (FAR) of 0.5 provide a baseline that can support viable transit ridership levels. Local land use plans should provide flexibility to maximize the intensity of development in transit priority place types to be more responsive to changing market conditions.								Land Use, Air Emissions
29.10	Encourage the adoption of general plan circulation elements with specific plan lines as appropriate to preserve goods movement corridors and high frequency transit corridors.								Land Use, Air Emissions
29.11	The transportation and circulation framework should define compact districts and corridors that are characterized by high connectivity of streets to not overly concentrate traffic on major streets and to provide more direct routes for pedestrians, good access to transit, and streets that are designed for pedestrians and bicycles, as well as for vehicles.								Land Use, Air Emissions
29.12	New residential developments should include streets that provide connectivity. New development and revitalized areas should include streets that provide connectivity for pedestrian/bicycle access and public transit.								Land Use, Air Emissions
29.13	Streets should be designed to support use by multiple modes, including transit, bicycles, and pedestrians, through proper scaling and provision of lighting, landscaping, and amenities. Amenities must be designed to provide comfortable walking environments.								Land Use, Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
29.14	Buildings should be human scaled, with a positive relationship to the street (e.g. entries and windows facing onto public streets, and appropriate articulation and signage).								Land Use, Air Emissions
29.15	The impact of parking on the public realm should be minimized by siting parking lots behind buildings or screening elements (walls or landscaping). Buildings should be close to the road so parking can be located on the side or in the rear.								Land Use, Air Emissions
29.16	Encourage shared mobility, van pools and medically funded vans. Encourage pilot projects such as autonomous electric vehicles in rural communities where applicable to access larger transit operators. Promote partnerships and grant strategies that allow access to grant programs. This is an extension of Policy 9.								Land Use, Air Emissions
30	Promote increased communication with neighboring jurisdictions on interregional land use issues, including the coordination of land use decisions and transportation systems.								Land Use, Air Emissions
30.1	Coordinate with the County of Kern, City of Bakersfield, and City of Shafter on the proposed expansion of Meadows Field in the County of Kern Airport Master Plan.								Land Use
30.2	Coordinate with the Southern California Association of Governments, the Metropolitan Transportation Commission, and the ports to minimize impacts of port activity through Kern County.								Land Use, Air Emissions
30.3	Coordinate with the Kern County Department of Airports, municipalities and airport districts to establish intermodal connectivity for rail, trucking, transit, and passenger vehicles.								Land Use, Air Emissions
30.4	Coordinate with GET, KT, and the Kern County Department of Airports to improve intermodal connectivity between transit systems and Meadows Field.								Land Use, Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
30.5	Continue to use the CEQA review process to inform stakeholders and decision-makers on the impacts of sensitive land use developments near vital transportation infrastructure.								Land Use, Air Emissions
30.6	Work with member agencies to preserve existing and future road and highway rights-of-way from the encroachment of sensitive land uses.								Land Use, Air Emissions
30.7	Implement the long-range 2018 RTP in partnership with member agencies to preserve near- and long-term transportation infrastructure that promote the preservation of goods movement routes and facilities.								Land Use, Air Emissions
30.8	Transit improvement projects should be targeted in transit priority/strategic employment place types and other transit ready areas with transit-supportive land uses (existing and planned) in and around key destinations and projects that can increase pedestrian activity and safety.								Land Use, Air Emissions
30.9	Relax roadway level of service (LOS) standards in high-priority transit corridors. In high-demand, high-capacity transit corridors.								Land Use, Air Emissions
31	Support more efficient use of the transportation system through the implementation of Intelligent Transportation Systems (ITS) technology.								ITS, Air Emissions
31.1	Build upon the momentum and stakeholder coalition generated through the San Joaquin Valley Goods Movement Study to pursue ITS commercial vehicle projects.								ITS, Air Emissions
31.2	Investigate how ITS can support efforts to improve travel between the inland areas and coastal communities.								ITS

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
31.3	Build upon ITS planning efforts in the San Joaquin Valley in conjunction with federal rules (ITS architecture and standards conformity and statewide and metropolitan planning) to expand ITS actions.								ITS
31.4	Build upon the existing Caltrans District 6 Traffic Management Systems to fill gaps and complete coverage on major facilities, including expansion of their highway closures and restrictions database, to include other agencies.								ITS, Air Emissions
31.5	Capitalize on the extensive ITS technology testing and standards development conducted by Caltrans by using, where appropriate, Caltrans approaches for local traffic management systems.								ITS, Air Emissions
31.6	Build upon best practices from past and current transit ITS deployment experiences in the State of California.								ITS, Air Emissions
31.7	Build upon Caltrans District 6 experience with sharing facilities, equipment, and information between traffic management and California Highway Patrol staff.								ITS, Air Emissions
31.8	Provide traveler information for commercial vehicle operators at truck rest stops.								ITS, Air Emissions
31.9	Improve visibility and access to existing Caltrans valley-wide alternate route plans.								ITS, Air Emissions
31.10	Coordinate the Bakersfield area Transportation Operations Center with Caltrans District 6 Transportation Management Center via satellite.								ITS, Air Emissions
31.11	Integrate the ITS capabilities being implemented at GET with Bakersfield's traffic management system, including sharing information between the two centers during emergencies.								ITS, Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
31.12	Facilitate the transfer of lessons learned from GET ITS deployment to other area transit operators, and look for opportunities for those agencies to better coordinate with GET using its ITS capabilities.								ITS, Air Emissions
31.13	Expand the accident reduction campaigns on Kern's rural highways and county roads.								ITS, Air Emissions
32	Achieve national and state air quality standards for healthy air by the mandated deadlines for all communities and especially disadvantaged communities.								Air Emissions
32.1	Maintain air quality coordination MOU with the San Joaquin Valley Metropolitan Planning Organizations, San Joaquin Valley and East Kern Air Pollution Control District, and Caltrans Districts 6 and 10.								Air Emissions
32.2	Identification of all Reasonably Available Control Measures (RACM) for ozone and all Best Available Control Measures (BACM) for PM10 by Kern COG's member agencies.								Air Emissions
32.3	Coordinate with all necessary responsible agencies to implement feasible transportation control measures that limit harmful air emissions.								Air Emissions
32.4	Seek funding options for Congestion Mitigation Air Quality Program, AB 2766 Motor Vehicle Emissions Reductions Program, and other sources that allow allocations for air emission reduction strategies especially in disadvantaged communities which score high for many funding programs.								Air Emissions
32.5	During the project level environmental process perform local hot spot analysis of air pollution in accordance with the proscribed federal process to identify which communities may be impacted by proposed transportation projects.								Air Emissions

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
33	Proactively implement Federal Title VI and Environmental Justice requirements to ensure equity.								Environ. Justice
33.1	Avoid, minimize, and/or mitigate disproportionately high and adverse human health or environmental effects, including social and economic impacts, on traditionally disadvantaged communities, especially racial minority and low-income communities.								Environ. Justice
33.2	Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.								Environ. Justice
33.3	Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.								Environ. Justice
33.4	As part of the regional performance measures, catalogue existing health conditions, access to public transit and opportunities for active transportation. As part of the Regional Housing Needs Assessment, catalog access to basic infrastructure (drinking water, wastewater and storm water), key demographic indicators, and access to safe, quality and affordable housing.								Environ. Justice
33.5	Utilize tools like US EPA EJScreen and CalEnviroScreen to apply for funding for communities and invest in existing communities that demonstrate the highest level of need.								Environ. Justice
33.6	Allocate discretionary funding such as Regional Surface Transportation Program to meet the maintenance needs of existing communities first.								Environ. Justice
33.7	Encourage local jurisdictions to enhance their eligibility for new state grants by considering affordable housing support and stabilization programs that help mitigate displacement of disadvantaged populations.								Environ. Justice

Table 2-1: Regional Transportation Plan Goals, Policies and Actions

		Goals Supported							
Policy/ Action No.	**Policy/Action**	Mobility	Accessibility	Reliability/Safety	Efficiency	Livability/Quality of Life	Equity	Sustainability	**Strategic Action Element (Ch. 5)**
34	Encourage utility companies, California Air Resources Board and other state agencies to select locations within Kern County to site electric charging stations.								Environ. Justice
35	Work with the county to explore the development of a countywide VMT mitigation bank to retire potential future VMT from rural properties with conservation potential, and transfer that VMT savings as credit to other properties providing an incentive for rural conservation property owners to monetize their land.								Land Use Air Emissions
36	In consultation with local tribes, create signage, and/or roadside kiosks to demarcate and educate the public places of culture, historic, spiritual and environmental tribal importance along and within transportation corridors, as cultural mitigation for new projects, and to promote tourism around our regions extensive cultural heritage.								Environ. Justice

RELATIONSHIP OF RTP GOALS TO PUBLIC PARTICIPATION

In preparation of the 2022 RTP, Kern COG undertook a comprehensive community engagement program that solicited input from over stakeholders and community members in the Kern region. Building on the momentum of the 2008 Kern Regional Blueprint, the *community outreach* program revisited the nine adopted Blueprint principles for growth. It is important to note that the horizon year for the 2022 RTP is 2046. The community engagement program encouraged participants to think well into the future i.e. 2046.

Community workshop participants as well as online participants throughout the region were invited to prioritize the principles for growth. Community members expressed continuing support for all nine principles for growth, indicating they are still relevant to the Kern region.

Workshop participants identified the following principles as the top three priorities for the region and their community's future:

- Enhance economic vitality
- Provide a variety of housing choices
- Conserve undeveloped land and spaces

Table 2-2 provides a comparison of the *community workshops* principles for growth and the RTP goals. The RTP is an extension of the community engagement process, providing mobility goals, policies, and actions for the region.

Examples of how the principles for growth interrelate with the RTP goals include the following:

- Improving mobility can include the addition of alternative fuels and modes that would help conserve energy and natural resources;
- Improving accessibility to major employment centers can make it more efficient to access and provide public services to these areas;
- Improving reliability and safety of the transportation system during peak periods can make it more convenient to do business in Kern, enhancing our region's economic vitality;
- Maximizing efficiency of the transportation system can be improved by providing a variety of housing types and densities that are distributed to take optimum advantage of transit and highway infrastructure;
- Promoting livability can be assisted by building on a community's historic assets;
- Promoting sustainability can reduce long-term operating costs, enhancing the economic viability of a region; and
- Ensuring equity can be assisted by providing affordable transportation options such as biking, walking, and transit.

See Chapter 4, Sustainable Communities Strategy, for further information on the community engagement process.

Table 2-2: Directions to 2050 Principles for Growth/RTP Goals Comparison Matrix

LINKS BETWEEN *DIRECTIONS TO 2050* PRINCIPLES FOR GROWTH AND RTP GOALS	RTP Goals						
	1. Mobility – Improve the mobility of people and freight.	2. Accessibility – Improve accessibility to, and the economic wellbeing of major employment and other regional activity centers.	3. Reliability – Improve the reliability and safety of the transportation system.	4. Efficiency – Maximize the efficiency and cost effectiveness of the existing and future transportation system.	5. Livability – Promote livable communities and satisfaction of consumers with the transportation system.	6. Sustainability – Provide for preservation and expansion of the system while minimizing effects on the environment.	7. Equity – Ensure an equitable distribution of the benefits among various demographic and user groups.
Directions to 2050 Growth Principles							
A. Conserve energy and natural resources, and develop alternatives	♦	♦	♦	♦	♦	♦	♦
B. Provide adequate and equitable public services	♦	♦	♦	♦	♦	♦	♦
C. Enhance economic vitality	♦	♦	♦	♦	♦	♦	♦
D. Provide a variety of housing choices				♦	♦	♦	♦
E. Use and improve existing community assets and infrastructure	♦	♦	♦	♦	♦	♦	♦
F. Use compact, efficient development and/or mixed land uses where appropriate	♦	♦	♦	♦	♦	♦	♦
G. Provide a variety of transportation choices	♦	♦	♦	♦	♦	♦	♦
H. Preserve undeveloped land and spaces				♦	♦	♦	♦
I. Increase civic and public engagement					♦		♦

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Integrated Performance Measures and Environmental Justice/Title VI Analysis

In the 2010 California Regional Transportation Plan Guidelines, the Kern COG RTP was listed as a best practice for Environmental Justice analysis for small to mid-sized metropolitan planning organizations. The analysis is integrated with a system level performance measure analysis that measures progress toward the seven RTP goals, ensuring that progress toward goals is consistent with progress toward Environmental Justice requirements. Appendix D containing the integrated performance measures analysis indicates that this RTP is benefitting Environmental Justice and Title VI areas compared to the county as whole while performing well in most health equity, system level and smart mobility place type performance measures.

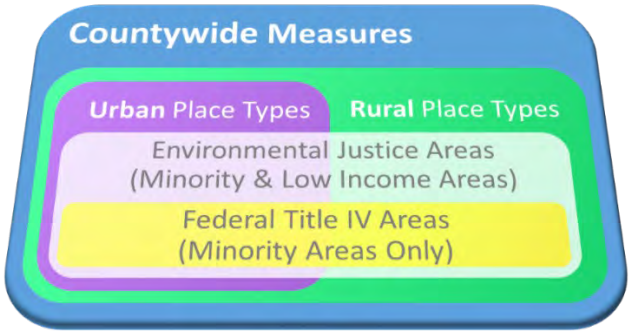
…the integrated performance measures analysis indicates that this RTP is benefitting Environmental Justice and Title VI areas compared to the county as whole while performing well in most health equity, system level and smart mobility place type performance measures.

An Environmental Justice/Title VI analysis has been prepared consistent with Federal Title VI of the Civil Rights Act of 1964, Section 11135 and Executive Order 12898 requiring metropolitan planning organizations to focus on Environmental Justice concerns in their planning processes. The analysis is part of a larger proactive planning effort to provide an intensive, proactive outreach to Environmental Justice communities. Garnering public input in the earliest planning stages from all communities can go a long way toward successfully delivering projects, and minimizes the potential for costly challenges late in the process. Appendix C summarizes the RTP outreach effort. In concert with the public input from Environmental Justice communities as a result of the all-inclusive outreach effort, the integrated performance measure analysis provides important feedback to policy makers on how well the regional transportation plan performs in areas that tie to the Regional Transportation Plan Goals. The results of the analysis indicate that with the implementation of the plan, Environmental Justice and Title VI communities will be better off in most measures of performance than the region as a whole.

Performance Measures Analysis Methodology

Kern COG has developed an integrated framework for twelve performance measures to demonstrate consistency of the RTP and SCS with its seven established goals. Some of the performance measures comply with as many as five goals.

Figure 2-1: Integrated Performance Measures Framework



This figure illustrates the overlap among the twelve integrate3d performance measures used for countywide analysis, health equity analysis, the two smart mobility framework place types, and Environmental Justice/Federal Title IV areas. For example, some measures are the same for Environmental Justice, urban and rural place types, and countywide, while other measures may only be used in two of the three categories. The following table contains summary of the analysis results by goals/performance measures.

Table 2-3: Performance Measures Analysis Summary by RTP Goals for System Level, Smart Mobility Framework, Health Equity and Environmental Justice and Title VI Areas

Table No. (Apdx. D)	RTP Goal/Performance Measure (PM) Category	Smart Mobility Geographic Coverage Place type(PT)	Performance Measure Description	Performance Measure Target/Test	Target Met? (Yes/No/ Partial)
D-4	Mobility / health equity (transit)	Urban, rural, countywide PT	Average Travel Time – Peak **Highway** Trips	Improvement over No Project Baseline	Yes
D-5			Average Travel Time – Peak **Transit** Trips	Improvement over No Project Baseline	Yes
D-6	Accessibility / economic well-being / health equity (transit)	Urban, rural, countywide PT	Average Travel Time to Job Centers – **Highway** Trips	Improvement over No Project Baseline	Yes
D-7			Average Travel Time to Job Centers – **Transit** Trips	Improvement over No Project Baseline	Yes
D-8	Efficiency / cost effectiveness / health equity (transit)	Urban, rural, countywide PT	Average Daily Investment per Passenger Mile Traveled – **Highways**	Improvement over Countywide Average	Yes
D-9			Average Daily Investment per Passenger Mile Traveled – **Transit**	Improvement over Countywide Average	Partial
D-10	Livability / customer satisfaction	Urban, rural, countywide PT	Average Trip Delay Time in Hours	Improvement over Countywide Average	Yes
D-11	Environment / health equity	3 Air Basins	% Change NOx/PM by air basin	Improvement over Base Year	Yes
D-12		Urban, rural, countywide PT	% Change in Households within 500 feet of Roadway Volumes > 50,000	Improvement over Base Year	Yes
D-13	Sustainability / preservation	Countywide PT	Percentage Change in Maintenance Dollars Per Lane Mile	Improvement over Base Year	Yes
D-14	Equity / health equity (transit)	Urban, rural, countywide PT	% of Expenditures versus Passenger Miles Traveled in 2035 – **Highways**	Improvement over Countywide Average	Partial
D-15			% of Expenditures versus Passenger Miles Traveled in 2035 –**Transit**	Improvement over Countywide Average	Yes
D-16	Land Consumption / health equity	Countywide PT	% change in Farmland consumed outside City Spheres of Influence	Improvement over Historic Baseline	Yes
D-17	Health equity	Countywide PT	Health Cost Savings	Improvement over No Project Baseline	Yes
D-18	Reliability / congestion	Urban, countywide PT	Average Level of Congestion in Hours	Improvement over Base Year	Partial
D-19	Reliability / safety / health equity	Urban, rural, countywide PT	Annualized Accident Statistics for Annual Average Daily Traffic	Improvement over Countywide Average	Yes
D-20	Federal PM-1 Safety/health equity	Countywide PT	Forecast of Accidents for Vehicles, Bicycles and Pedestrians	Improvement over 5 year running base	Partial
D-21	Federal PM-2 Sustainability / preservation	Countywide PT	Observed bridge/pavement condition on locally maintained national highway system routes	Improvement over 2-4 year targets	No
D-22	Federal PM-3 mobility/accessibility	Countywide PT	Observed travel time reliability on locally maintained national highway system	Improvement over 4 year targets	Yes

**Note: Due to data limitations Environmental Justice/Title VI areas were not able to be broken out for performance measures D-11, D-13, D-16, D-17, D-20, D-21, D-22 however, they are still included in these analyses.*

For the detailed performance measure results see the Integrated Performance Measures, Smart Mobility and Environmental Justice Measure Analysis in Appendix D.

CHAPTER 3 PLANNING ASSUMPTIONS

The Kern Council of Governments (Kern COG) is the state affiliate data center for Kern County, and oversees transportation plans, programs, and transportation-related projects for its eleven cities: Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. In addition, Kern COG has oversight of similar plans, programs, and projects within the unincorporated areas of Kern County.

The Kern COG Board adopted a policy to revisit the regional growth forecast every 3-5 years to ensure projections account for the latest growth trends

It is important that forecasts are updated frequently to account for recent trend changes. In 2001 the Kern COG Board adopted a policy to revisit the regional growth forecast every 3-5 years to ensure projections account for the latest growth trends. This timeframe provides stability to the regional environmental process by allowing time for documents to be completed without a major change to the forecast. On March 19, 2020 the Kern COG board adopted a growth forecast update developed by The California Economic Forecast Consulting of Santa Barbara, California. The report documents a sophisticated econometric forecast model used to update the regional growth forecast previously adopted in 2015. The report states,

> *"This report presents the 2020 update of the Kern COG Regional Growth Forecast, used principally to update the Kern County Regional Transportation Plan. The report provides forecasts for a number of demographic and economic indicators, but the principal elements are:*
>
> - *Population*
> - *Number of Housing Units*
> - *Number of Households, and*
> - *Employment*
>
> *The forecast of these indicators is largely influenced by economic conditions prevailing in the state and county. Economies which are vibrant and creating jobs will encourage new in-migrants that augment the population. Higher population growth influences the demand for housing, infrastructure, and transportation."*

The next scheduled update will be during the two-year window starting in 2023.

The forecast and planning assumptions process is implemented by joint subcommittees: the Kern COG Transportation Technical Advisory Committee (TTAC), the Regional Planning Advisory Committee (RPAC) and the Transportation Modeling Committee (TMC). The Kern COG Board set up the TMC in May 2001 with the adoption of the Transportation Modeling Policy and Procedure. This procedure was re-confirmed with the adoption of a Memorandum of Understanding on Transportation Modeling Coordination between Caltrans, City of Bakersfield, Kern County and Kern COG on January 15, 2004.

The TMC consists of the technical staff from Kern COG member agencies planning and public works departments. The committee is also responsible for sub-area distribution of the growth forecast as well as numerous other regional transportation modeling issues. As part of the development of the SCS, the TMC has been meeting jointly with the RPAC.

GROWTH TRENDS

Population in the 8,200-square-mile County of Kern was 909,235 in April 2020 (*Source: U.S. Census Bureau, 2020)*. This past decade Kern County's population increased, on average, by 7,000 per year, over 60% less than the 17,800 people per year from the prior decade 2000 to 2010 including the 3 years of the great recession. Growth in Kern is driven by value-added agriculture, aerospace/defense, energy/natural

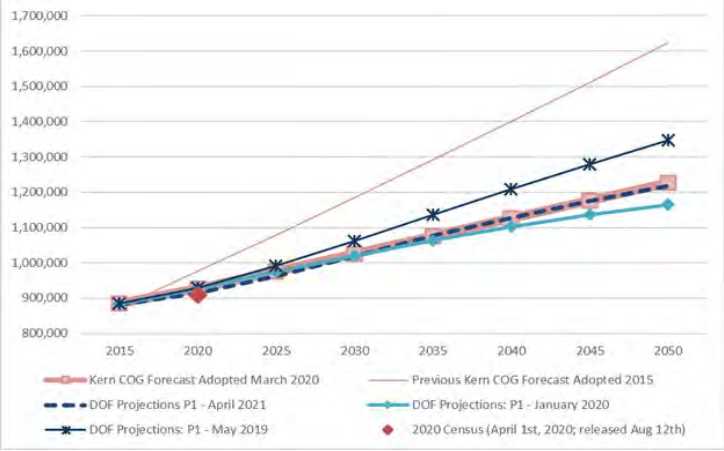
resources, transportation logistics/manufacturing, and health care. Early growth last decade was driven by employment in the oil sector and a new renewable energy sector in wind and solar. Kern County's Valley portion of the county produces over 75% of California's in-state oil and 58% of the state's total natural gas. County-wide both commercial scale wind and solar as well as distributed generation solar produces over 12,000 MW of electricity for California as well as local industries. Value added agriculture supported by alternative fuel production such as biodiesel made Kern County in 2016, the largest agricultural producing county in the nation for the first time. Further mission driven expansion at Edwards Air Force Base and China Lake Naval Weapons Station as well as the Mojave Spaceport fueled growth areas outside the Metropolitan Bakersfield area.

By 2011 Kern was one of the first counties in California to gain back all the jobs lost during the great recession and by 2013 Kern County had the 5th fastest growth rate in California at 1.25%. Four percent (4%) of employment in Kern is in the high-wage oil industry and Kern is consistently one of the top oil producing counties in the nation.[1] When the price of oil dropped more than 75% to $27 per barrel in 2014, a second recession not experienced elsewhere in the state hit Kern. Kern saw early signs of recovery as the price of oil more than doubled by 2018, however, state discussion of adoption of policies to reduce or eliminate fossil fuel production in California has negatively affected investment in one of the most important sectors high wage sectors of the local economy. Employment remains strong in logistics, renewable energy construction and value-added agriculture, but nothing like what was seen in the prior decade.

Unlike the previous decade when Kern grew by nearly 18,000 people per year, from July 2010 to July 2020 annual population growth ranged from a high of 8,300 in 2012/13 to a low of 2,600 in 2015/16, averaging 7,000 per year since July 2010. In 2020-21 Kern may have experienced its first negative growth year ever due to prison closures and early release of prisoners, people leaving the state due to high housing costs and concerns over the pandemic. The adopted 2015 forecast for the 2018 RTP assumed that the population growth will look more like the prior decade, averaging about 21,900 people per year over the entire forecast time frame from 2015 to 2042. The new adopted forecast for this RTP predicts a significant 51% reduction in population growth compared to prior RTP assumptions (**Figure 3-1**).

As in all parts of California, housing affordability is linked to job growth and Kern is noted for being the most affordable housing market in the state[2] making Bakersfield a destination for household migration from more expensive markets, like Southern California, that are experiencing a major housing shortage/affordability crisis. The availability of more affordable housing makes Kern a candidate location for satellite offices, and state policies for expanding the renewable energy portfolio continues to provide jobs in this industry and a new streamlined, environmentally protective permit system for oil and gas supports continued permit activity.

Figure 3-1 – Recent Population Forecast Comparison



In addition, the growth assumptions include a planned High Speed Rail station for Bakersfield that would provide 55-minute passenger rail service between Kern and L.A. Union Station. This potential connection could eventually bring greater job diversity and housing to Kern County beyond recent and historic growth trends. The question is not if, but when we will see the forecasted growth in Kern. Forecast trends will continue to be adjusted in future RTP updates every four years.

[1] Drilling Info http://info.drillinginfo.com/half-us-oil-production-comes-20-counties/, 2014
[2] Smart Asset, https://smartasset.com/mortgage/quicken-loans-review#california/most-affordable, 2017

Figure 3-2 – Unemployment Rate 2004-2025

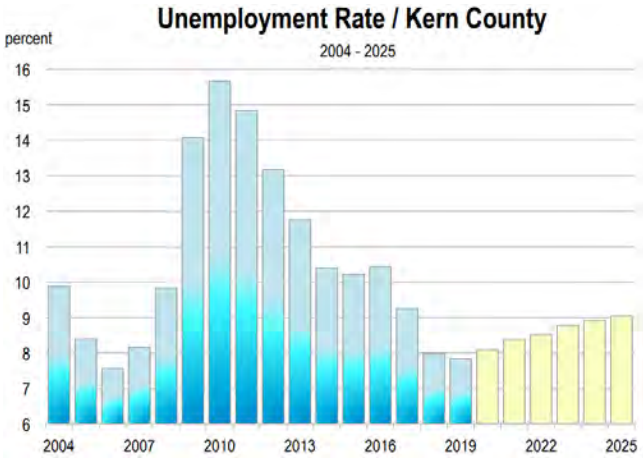


Figure 3-3 – Real Gross Domestic or State Product Growth

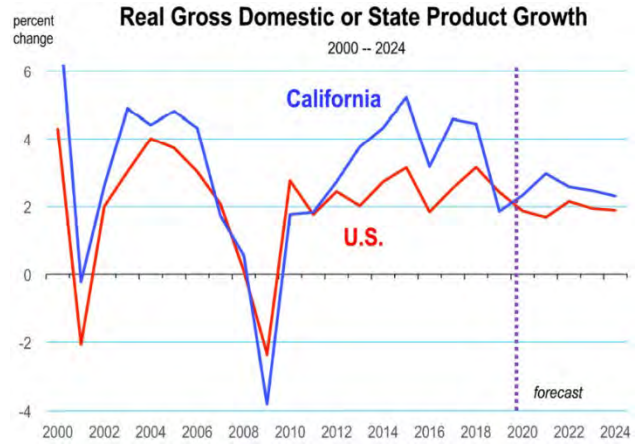
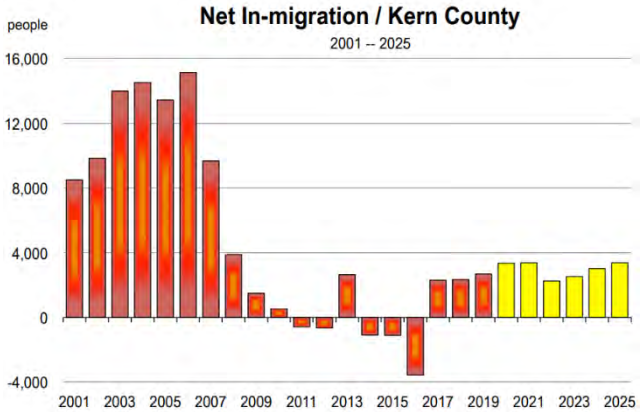


Figure 3-4 – Net In-migration 2001-2025



PRIMARY FORECASTS

This section is adapted from the executive summary narrative for the adopted 2020-2050 Regional Growth Forecast prepared by Dr. Mark Schniepp, Director and Chief Economist for California Economic Forecast consulting firm. The charts and data were adopted before the release of the 2020 Census data in August 2021 and prior to any available data on impacts of the pandemic.

SUMMARY OF ECONOMIC CONDITIONS TODAY UNDERLYING THE FORECAST UPDATE

The growth forecast for Kern County indicates that relatively healthy conditions will continue to prevail in the County over the longer term.

Clearly, however, the short term forecast is more beneficial to business and public policy makers because there is a higher degree of accuracy in the forecast over the next few years than over the next 30. Consider the short term forecast of 5 years (**Figures 3-2**). During this time, a recession in the U.S. economy is anticipated and growth of employment and population in Kern County would be impacted by such an event, just as it has in past recessions afflicting the national stage.

Figure 3-3 shows the outlook for the U.S. economy has growth slowing from 2.1 percent in 2019 to 1.6 percent in 2020, rising to 2.0 percent in 2021. The pandemic is assumed to have created conditions that might lead to GDP growth hovering around 1.0 percent. At this level, the economy becomes vulnerable to an unanticipated shock, even a mild one, which could push the business cycle into contraction. For example, recent state discussion of eliminating oil production has resulted in an additional shock to investment in the oil industry in Kern.

The state's economy, while not always the case, has moved in tandem with the National economy over the last 10 years. Furthermore, it is likely that any softening or contraction in growth will also impact California in a similar fashion. Moreover, recession in California is also presumed to impact Kern County.

Figure 3-5 – Net In-migration 2001-2025

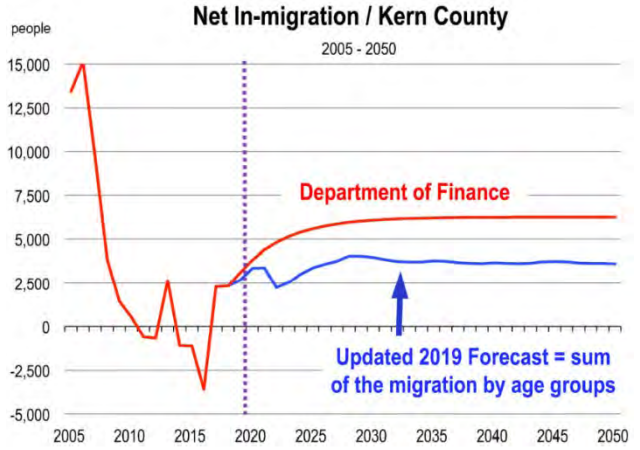


Figure 3-6 – K-12 Student Enrollment 2000 - 2050

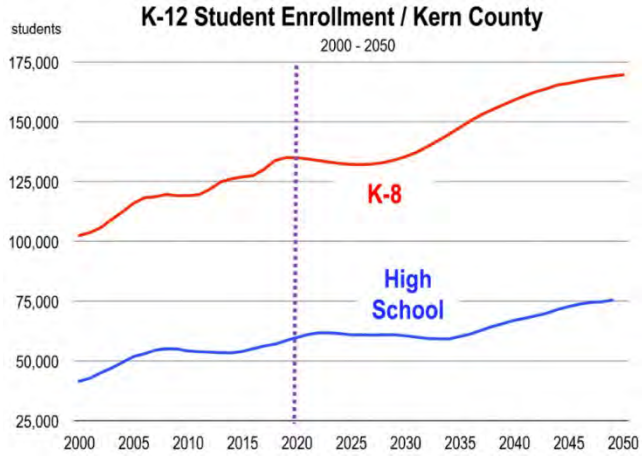
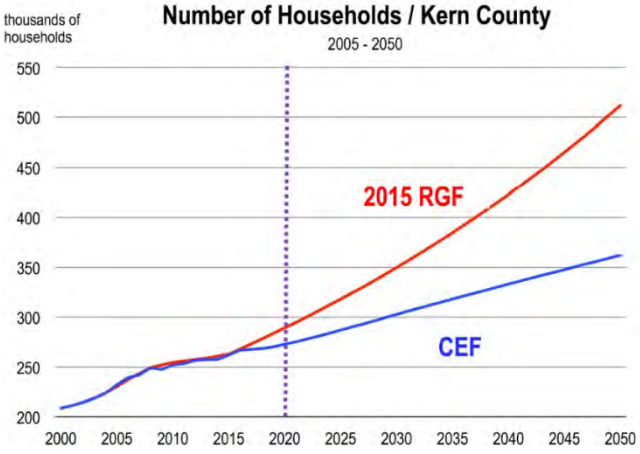


Figure 3-7 – K-12 Student Enrollment 2000 - 2050



Consequently, the forecast for employment growth is muted over the next few years relative to the last 5 years in Kern County. Nevertheless, the growth rate is positive and the unemployment rate remains relatively low over this time period.

A slowdown in the California and Kern County economies would typically reduce job opportunities and consequently, the attraction of new in-migrants. Population growth is forecast to slow in California as a result (**Figures 3-4 & 5**). But in Kern County, because job creation will remain positive and home prices extraordinarily competitive, the forecast for net migration remains consistent with actual levels between 2017 and 2019.

This differs from the May 2019 Department of Finance population projection, which assumes that in-migration will suddenly accelerate in 2020, pushing the overall population growth rate much higher.

Real estate assets are forecast to increase to accommodate population and job growth over the longer term. New housing units augment the existing housing stock, the number of households, and school enrollments: K through 12 and in the county's community colleges, trade schools, and at Cal State Bakersfield (**Figures 3-6 & 7**).

All of these influences drive the forecast of employment. Employment drives net migration. Together with the demographics of the current population, net migration impacts population growth, which ultimately influences the demand for housing. Housing then results in new households require improved transportation infrastructure to move between the workplace, schools, and home.

GROWTH INDUCING INFLUENCES

Clearly, California's High Speed Rail will increase the likelihood for an acceleration in population growth in Kern County. This is especially true when the Bakersfield to Palmdale to Burbank line is completed, as early as 2032. Until then however, the forecast makes no presumption that this line will be completed by then or how it exactly impacts net in-migrating populations. Consequently, the incorporation of the High Speed Rail project on the growth prospects for Kern County is deferred to a future forecast update.

Energy projects have been especially important to the County's economy over the last 5 years. New solar and wind farms are increasing energy outputs for thousands of California homes. Not many jobs however are being created by these projects.

Housing prices are forecast to remain competitive, meaning that more households will be able to become homeowners in Kern County compared to substantially higher housing cost areas in the coastal areas of California. While technology jobs are not as prolific in the County today compared to the Bay Area and Los Angeles metro regions, professional and scientific service jobs are forecast to increase slowly over time. Currently, there are very high level tech jobs in the East County areas of Ridgecrest, California City, Mojave, Rosamond, and Tehachapi. And these jobs will expand to support the missions at Mojave Spaceport, and military and NASA operations at China Lake Naval Air Station and Edwards Air Force Base.

KERN COUNTY REGIONAL GROWTH FORECASTS TO 2050

Actual information through 2019 was used to produce a 31-year forecast to 2050

Unlike previous forecast updates, most of the indicators were forecast from mathematical models based on local, state, and national economic factors. A macro model of the Kern County economy was used to produce many of the projections. The forecasts of the state and national indicators were taken from the UCLA Anderson Forecast which updates their projections four times per year.

Figure 3-8 – Total Wage/Salary Employment 2000 - 2050

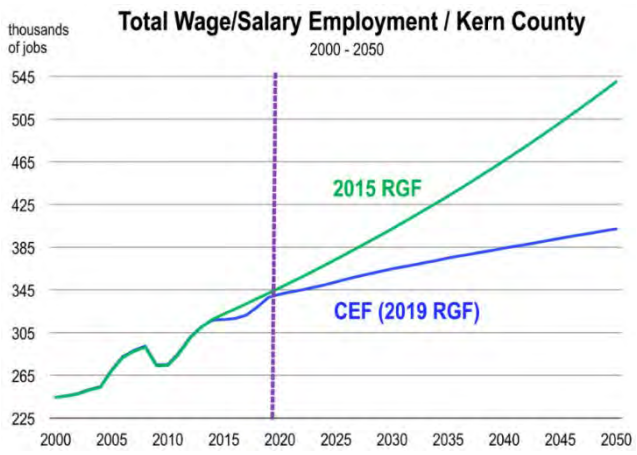
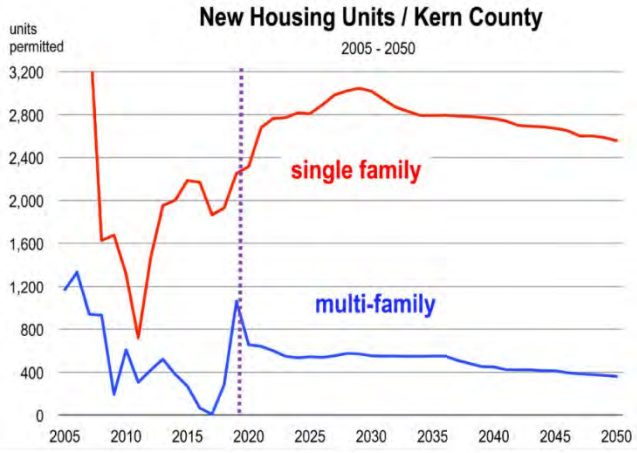


Figure 3-9 – New Housing Units



POPULATION, HOUSEHOLDS AND EMPLOYMENT

The new population forecast has been derived from the simple accounting identity:

Population this year = Population at the beginning of last year + Births during last year – Deaths during last year + net in-migration population during last year. We estimate the last three components of the identity using the Kern County econometric model. The resulting forecast is compared with two other forecasts for context. The two plotted population curves above include the adopted forecast, and the last population forecast from the 2015 Regional Growth Forecast update (by Placeworks), (**Figure 3-8**).

The development of the household forecast requires a forecast of new housing units. (**Figure 3-9**) New housing development is therefore forecast along with vacancy rates for the single, multiple, and mobile home housing stock. Because population is significantly lower in the new 2020 forecast, the projection of the number of households is also correspondingly lower.

Table 3-1 – Regional Growth Forecast 2010-2050

Year	Population	Household Population	Number of Households	Employment
	people		*homes*	*jobs*
2010	841,189	800,300	252,200	275,000
2020	927,500	894,900	272,900	341,000
2030	1,025,700	994,000	302,800	364,700
2040	1,126,000	1,095,100	333,200	384,100
2050	1,227,200	1,199,800	362,100	402,200

SUMMARY

The 2020 update in **Table 3-1** presents a more modest long term forecast of demographic and economic indicators for Kern County, compared to the 2015 forecast used in the 2018 RTP. The implication for this is not a downgrade of the potential for a vibrant and growing economy. Rather, it is an adjustment in the forecast.

The adjustment accounts for how the actual economic and demographic indicators moved during the 2015 to 2019 period. They were decidedly lower than the previous forecast levels for those years. This in turn lowered the forecast going forward. Furthermore, for the 2020 forecast, economic factors were taken into consideration for the development of net migration, housing units, and employment. The principal drivers of these indicators have also been revised lower at both the state and national levels as the economy matures and long term growth moderates.

SUB REGIONAL FORECAST DISTRIBUTIONS

Over the past decade, growth has concentrated in Metropolitan Bakersfield and the communities of Delano, Wasco, Ridgecrest, California City, Arvin, Shafter, Tehachapi, McFarland and the unincorporated communities around Tehachapi, Rosamond and Frazier Park. In addition, strategic growth occurred at Kern's southern gateway to Los Angeles County involving the Tejon Ranch Commerce Center and related development that supports transportation, logistics, commercial, tourism and other sustainable uses important to the region's economy.

In Metropolitan Bakersfield, approximately 80% of the new housing has been built on the west side, 40% north of the Kern River and another 40% in the southwest. With completion of a new water delivery system, the northeast has also seen activity.

Up to and after 2035, an increase will be seen in Kern's southern gateway with significant residential and related commercial/industrial development from Tejon Ranch Projects. The approved Tejon Mountain Village Specific Plan in the mountain areas along I-5 between Frazier Park and Fort Tejon will bring 700 hotel rooms, 160,000 square feet of commercial/retail uses adjacent to I-5, and 3,450 residential units. The approved Grapevine Project will bring 5.1 million square feet of commercial/retail uses and 12,000 residential units in a smart growth master planned community. The jobs housing balance shows that the related Tejon Ranch Commerce Center will provide jobs for the Grapevine project and reduce commutes as well as provide a variety of housing types. The 2022 RTP/SCS planning assumptions and growth forecasts include full buildout of the approved and entitled TRCC, Grapevine, and TMV projects by the end of the planning period. An increase in population growth in Southeast Kern is expected to begin to absorb spillover from the Palmdale/Lancaster market area. This coincides with a planned Metrolink station in Rosamond and potential completion of a high speed rail station in Palmdale. The growth is anticipated to syphon off some of the demand for housing in other areas of the county, consistent with existing long term forecasts.

Over the past two decades, Kern workers commuting to Los Angeles County (3%) have kept pace with the county's growth rate, reflecting Kern's self-contained labor market. If you live in Kern, you work in Kern. Of those who commute out of county, most commute to Los Angeles County from communities along the southern edge of the county, such as Rosamond, Tehachapi, and Frazier Park. However, more commuters

live in Los Angeles County and work in Kern than the reverse. Most of the imported workers commute to Edwards AFB, Kern's largest employer with over 10,000 jobs.

Much of Kern's employment is dispersed. Consequently, the Metropolitan Bakersfield area experiences a "reverse commute" whereby a segment of workers commute to outlying areas such as farm fields, food processing facilities, warehousing, wind farms, oil fields, prisons, power plants, and government installations. Historically, this reverse commute created a centrifugal force on Metropolitan Bakersfield's housing development where purchasing housing on the urban fringe often reduces a commuter's trip, even though it may increase trip lengths for other purposes such as shopping and services. For those working in the metropolitan area, growth in the suburban areas may also be fueled by the attractiveness of newer and perceived better schools.

Table 3-2 provides anticipated population and housing forecasts distribution for the county and its incorporated cities through 2046.

Employment distribution used EDD, InfoUSA data and the U.S. Census Longitudinal Employer-Household Dynamics (LEHD). Both employment and household distributions use the latest planning assumptions from local governments in Kern, including local general plan data shown in **Figure 3-10**.

Table 3-2: Growth Trends for Kern County and Selected Communities

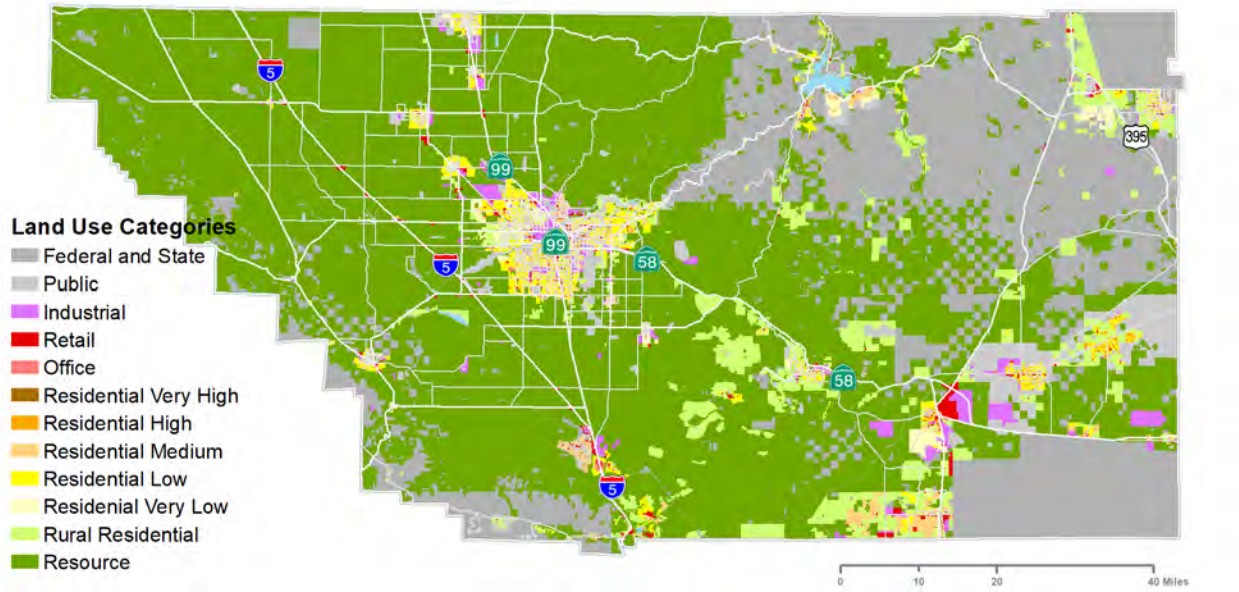
								1980-2020 Historic Growth		2020-2046 Forecast Growth	
Community	Census	Census	Census	Census	Census	Forecast	Forecast	Average Annual		Average Annual	
Year	**1980**	**1990**	**2000**	**2010**	**2020**	**2035**	**2046**	**Rate**	**Increase**	**Rate**	**Increase**
Kern County											
Population	403,089	543,477	661,653	839,600	909,235	1,076,000	1,200,000	2.0%	12,421	1.0%	10,600
Group Quarters	8,385	15,148	29,970	36,575	28,704	32,490	28,680	3.0%	499	0.0%	-1
Households	139,881	181,480	208,655	254,610	281,498	318,180	350,720	1.7%	3,475	0.8%	2,637
Employment	166,901	214,668	232,461	274,900	334,800	374,780	395,110	1.7%	4,120	0.6%	2,298
Metro Bakersfield											
Population	228,000	329,100	409,800	578,300	598,428	700,600	772,800	2.3%	9,090	1.0%	6,643
Group Quarters	2,000	3,100	4,400	3,900	5,240	5,900	5,200	2.3%	80	0.0%	-2
Households	89,500	120,000	134,100	176,600	187,362	209,000	229,200	1.8%	2,402	0.8%	1,594
Employment	99,200	136,700	158,500	183,700	211,235	229,300	239,500	1.8%	2,749	0.5%	1,077
Arvin											
Population	6,863	9,286	12,956	19,304	19,495	23,600	25,700	2.5%	310	1.0%	236
Group Quarters	19	107	71	349	91	100	100	3.8%	2	0.4%	0
Households	1,946	2,385	3,010	4,228	4,753	5,500	5,900	2.2%	69	0.8%	44
Employment	2,338	3,190	3,800	3,600	4,585	5,000	5,300	1.6%	55	0.6%	27
Bakersfield											
Population	105,611	174,820	247,057	347,483	403,455	507,400	590,100	3.2%	7,309	1.4%	7,110
Group Quarters	1,709	2,669	3,813	3,395	4,093	4,600	4,100	2.1%	59	0.0%	0
Households	39,602	62,516	83,441	111,132	127,864	151,700	174,100	2.8%	2,166	1.2%	1,761
Employment	49,249	77,610	118,100	137,700	143,449	166,100	181,200	2.6%	2,312	0.9%	1,438
California City											
Population	2,743	5,955	8,385	14,120	14,973	16,700	17,600	4.1%	300	0.6%	100
Group Quarters	0	0	58	2,614	2,065	2,300	2,100	100.0%	51	0.1%	1
Households	990	2,119	3,067	4,102	4,628	4,900	5,200	3.7%	89	0.4%	22
Employment	1,395	2,750	3,700	4,400	4,719	4,600	5,100	2.9%	82	0.3%	15

Community	Census	Census	Census	Census	Census	Forecast	Forecast	1980-2020 Historic Growth Average Annual		2020-2046 Forecast Growth Average Annual	
Year	1980	1990	2000	2010	2020	2035	2046	Rate	Increase	Rate	Increase
Delano											
Population	16,491	22,762	38,824	53,041	51,428	59,400	61,200	2.8%	857	0.7%	372
Group Quarters	147	77	5,057	10,897	8,359	9,500	8,400	9.4%	202	0.0%	2
Households	4,912	6,236	8,409	10,260	11,113	12,300	13,010	2.0%	152	0.6%	72
Employment	5,756	7,640	10,800	12,600	13,474	16,300	16,400	2.1%	189	0.7%	111
Maricopa											
Population	946	1,193	1,111	1,154	1,026	1,050	1,080	0.2%	2	0.2%	2
Group Quarters	4	0	0	0	0	0	0	0.0%	0	0.0%	0
Households	338	416	404	414	372	380	390	0.2%	1	0.2%	1
Employment	447	469	476	500	580	600	600	0.6%	3	0.1%	1
McFarland											
Population	5,151	7,005	9,618	12,707	14,161	14,800	16,950	2.5%	221	0.7%	106
Group Quarters	4	66	1,069	1,221	396	400	400	10.7%	10	0.0%	0
Households	1,399	1,685	1,990	2,599	3,345	3,500	4,000	2.1%	48	0.7%	25
Employment	1,623	1,950	2,800	3,300	5,521	8,200	8,400	3.0%	96	1.6%	110
Ridgecrest											
Population	15,929	28,295	24,927	27,616	27,959	31,500	34,950	1.4%	295	0.8%	266
Group Quarters	0	694	309	196	290	300	300	100.0%	7	0.1%	0
Households	5,762	10,349	9,826	10,781	11,186	12,100	13,240	1.6%	133	0.6%	78
Employment	7,622	13,710	12,300	13,300	10,674	11,700	13,200	0.8%	75	0.8%	96
Shafter											
Population	7,010	8,409	12,731	16,988	19,953	28,700	37,050	2.5%	318	2.3%	651
Group Quarters	117	28	647	665	785	890	780	4.6%	16	0.0%	0
Households	2,284	2,558	3,292	4,230	5,204	7,300	9,470	2.0%	72	2.3%	163
Employment	2,707	3,010	4,000	4,700	16,121	19,600	23,300	4.3%	329	1.4%	273
Taft											
Population	5,316	5,902	6,400	9,327	8,546	9,800	10,620	1.2%	79	0.8%	79
Group Quarters	123	139	559	2,955	1,620	1,800	1,600	6.1%	37	0.0%	-1
Households	2,096	2,209	2,233	2,254	2,379	2,700	2,960	0.3%	7	0.8%	22
Employment	2,401	2,590	2,600	3,000	3,690	3,900	4,200	1.0%	32	0.5%	19
Tehachapi											
Population	4,126	5,791	10,957	14,414	12,939	15,500	16,890	2.8%	216	1.0%	151
Group Quarters	0	25	4,399	5,927	3,640	4,100	3,600	100.0%	89	0.0%	-2
Households	1,534	2,335	2,533	3,121	3,526	4,100	4,540	2.0%	49	1.0%	39
Employment	1,773	2,390	2,600	3,000	3,026	3,100	3,700	1.3%	31	0.8%	26
Wasco											
Population	9,613	12,412	21,263	25,545	27,047	31,000	32,890	2.5%	428	0.7%	223
Group Quarters	0	18	6,219	5,720	4,379	5,000	4,400	100.0%	107	0.0%	1
Households	3,001	3,471	3,971	5,131	6,109	6,800	7,330	1.7%	76	0.7%	47
Employment	3,498	4,130	5,400	6,300	10,767	11,600	12,700	2.7%	178	0.6%	74
Unincorporated											
Population	223,290	261,647	264,111	297,901	308,253	336,600	341,540	0.8%	2,085	0.4%	1,268
Group Quarters	6,262	11,025	7,769	2,636	2,986	3,500	2,900	-1.8%	-80	-0.1%	-3
Households	75,947	85,201	86,474	96,358	101,019	106,900	110,580	0.7%	615	0.3%	364

Community	Census	Census	Census	Census	Census	Forecast	Forecast	1980-2020 Historic Growth Average Annual		2020-2046 Forecast Growth Average Annual	
Year	1980	1990	2000	2010	2020	2035	2046	Rate	Increase	Rate	Increase
Employment	88,092	95,229	66,361	119,900	118,194	124,080	121,010	0.7%	739	0.1%	107
Population of Major Unincorporated Communities											
Bear Valley Springs	n.a.	1,593	4,232	5,172	5,592	6,800	7,700	4.6%	149	1.2%	83
Benton Park	n.a.	n.a.	n.a.	n.a.	5,333	5,400	5,400	n.a.	n.a.	0.05%	3
East Bakersfield	n.a.	n.a.	n.a.	n.a.	9,749	9,800	9,870	n.a.	n.a.	0.05%	5
East Niles	n.a.	n.a.	n.a.	n.a.	28,390	28,600	28,740	n.a.	n.a.	0.05%	14
Golden Hills	n.a.	5,423	7,434	8,656	9,578	10,800	11,830	2.1%	155	0.8%	88
Greenacres	5,381	7,379	n.a.	5,566	5,496	5,500	5,560	0.1%	3	0.05%	3
Hillcrest	n.a.	n.a.	n.a.	n.a.	10,528	10,600	10,660	n.a.	n.a.	0.05%	5
La Cresta	n.a.	n.a.	n.a.	n.a.	8,787	8,900	8,900	n.a.	n.a.	0.05%	4
Lamont	9,616	11,517	13,296	15,120	14,049	15,100	15,870	1.0%	121	0.5%	71
Oildale	23,382	26,553	27,885	32,684	36,135	37,600	38,650	1.2%	347	0.3%	99
Potomac Park	n.a.	n.a.	n.a.	n.a.	9,164	9,200	9,280	n.a.	n.a.	0.0%	5
Rosamond	2,869	7,430	14,349	18,150	20,961	24,600	27,460	5.3%	492	1.1%	255
Rosedale	n.a.	4,673	8,445	14,058	18,639	22,100	24,800	5.0%	522	1.1%	242

Sources: 1980-2020 (April) data from U.S. Bureau of the Census; "n.a." = data not available. 2010-2020 Employment (January) Employment Data from CA Economic Development Dept.; Major unincorporated communities are Census designated places with population over 5,000; population from the 2020 Census. 2020-2046 (July) Kern COG growth forecast by Regional Statistical Areas (RSA), presented to the Kern COG Regional Planning Advisory Committee July 2020. Forecasts for unincorporated communities use the growth rate for the RSA with adjustments for annexation factors. Note: Community trends are subject to periodic annexation and de-annexation activity, population includes prisons.; Planning assumptions have been adjusted to reflect mitigation commitments and project variability in unincorporated areas.

Figure 3-10: Generalized Kern County Regional Land Use Map



CHANGING ETHNIC MAKEUP

The Kern region has a Hispanic/Latino ethnic majority of 55% of the total population in 2020, however Hispanic can also be of any race according to the Census. Non-Hispanic Whites account for 31% of the

population, down from 50% in 2000. The rise and shift in population makeup in the Kern region is primarily because of births along with an influx of new immigrants. Black, Asian, American Indian, and other populations make up 5.1%, 4.8%, .6% and .6% respectively. Population growth in Kern mirrors the rest of the state, which is one of the most diverse in the nation. Population growth results from large net increases in three population groups: aging baby boomers, their young children - the echo-boomers - and immigrants, mostly from Mexico and Central America. 3.1% of those who do not self-identify as Hispanic consider themselves as being of 2 or more races, up from 1.5% in 2000, on course to potentially be the third largest ethnic group by 2050 based on current trends.

LAND USE NEXUS

The Metropolitan Bakersfield General Plan Land Use Element contains a program that encourages infill development and designates key transportation corridors that support land use intensification, thereby allowing transit-compatible development. The livable communities component identifies specific incentives to encourage infill development and a more flexible mix of land uses that reduces the overall number of vehicle trips as well as the average length of trips. The element also distinguishes geographic limits (i.e., service area boundaries) that Golden Empire Transit serves in the metropolitan area.

Older sprawling low-density development, with widely separated land uses, creates extra vehicular trip-making and longer trip lengths for all trip categories. For the most part, residents in these low-density areas are unable to walk to shopping, recreation, or entertainment; they must use their automobiles for these trips. This extra travel also has detrimental effects on the community's air quality and livability. Residents will spend more time in traffic and have less time for more enjoyable activities.

The Kern County General Plan (the county areas outside the 409 square miles of the Metropolitan Bakersfield Plan) includes policies to incentivize residential development into developed cities and unincorporated communities as well as the development of smart growth communities. While the major population center remains the City of Bakersfield and the Metropolitan Bakersfield General Plan area, industries that cannot be placed in an urban core or need to be adjacent to I-5, SR 99 and SR 58 access are appropriately sited in the Kern County General Plan areas. These industries include oil, renewable energy, processing facilities for chemicals, alternative fuels, food products and logistics. New developments for residential have not been cited in the Kern County General Plan as low density isolated developments since 2009. With the exception of the Tejon Ranch projects, which incorporate smart growth and job housing balances principles, the county has emphasized renewable energy, oil permitting, industrial and commercial developments. Infill for unincorporated communities is provided in locations near parks, schools and that have public sewer and water.

Many of Kern COG's member agencies' land use elements have incorporated policies and programs that support development and forecasted development patterns which maximize the efficient use of land and promote reduced vehicle trips by encouraging the following: balanced jobs and housing, walkable spaces, infill development, mixed use development, and/or development along transit routes.

After 2035, limitations in groundwater availability county wide will be reflected in slower population growth and more compact development. The results of the Sustainability Groundwater Management Act (SGMA) required Sustainability Plans will be more compact development with alternative lower water use (such as solar) that may not be available for agricultural use. While traditionally these lands have been converted to residential and commercial uses, the need for water balancing under the new law will restrict those uses. Infill development and existing approved projects will provide for growth areas, rather than the creation of new areas.

SUSTAINABLE COMMUNITIES STRATEGY

The Kern Region's Sustainable Communities Strategy (SCS) supports a forecasted development pattern and corresponding transportation network that encourages the location of housing near jobs and

transportation corridors to reduce regional passenger vehicle travel and resulting emissions while providing sufficient and affordable housing options to accommodate a growing population and preserving Kern County's agricultural economic base, sensitive habitats, and resource areas. This strategy is focused on changing the character of traditional low-density sprawl to create community centers throughout the region composed of targeted mixes of housing and employment. Economic pursuits such as oil production, agriculture, renewable energy, aerospace and military are the basis for dispersed rural centers and strategic locations for developments within the county that are unlike other areas of the State. Accordingly, unique strategies are needed to support Kern's economic, transportation and other needs. This uniqueness is reflected in the General Plans and programs of Kern County's local governments. For additional discussion, see Chapter 4, Sustainable Communities Strategy.

CHAPTER 4 SUSTAINABLE COMMUNITIES STRATEGY

A SUSTAINABLE COMMUNITIES STRATEGY FOR THE KERN REGION

This 2022 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) seeks to guide the Kern region toward a stronger economy, healthier environment and improved quality of life for everyone, while ensuring each community's independence to determine the best path to that future. This Chapter outlines the required Sustainable Communities Strategy (SCS) component of the 2022 RTP. The following section describes what an SCS is, how the Kern region is unique in comparison to any other in California, and strategies that are addressed by the Kern region SCS from lessons learned by other California metropolitan planning organizations (MPOs) which have developed sustainable communities strategies.

What Is the Sustainable Communities Strategy?

The SCS strives to reduce polluting tailpipe emissions from passenger vehicle and light duty truck travel by better coordinating transportation expenditures with forecasted development patterns

The SCS strives to reduce polluting tailpipe emissions from passenger vehicle and light duty truck travel by better coordinating transportation expenditures with forecasted development patterns to help meet California Air Resources Board (CARB) greenhouse gas targets for the region. Under California law, an SCS must:

- Utilize the most recent planning assumptions, considering local general plans and other factors (Government Code (GC) Section 65080(b)(2)(B)).
- Identify the general location of uses, residential densities, and building intensities within the region (GC Section 65080(b)(2)(B)(i)).
- Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population over the course of the planning period of the RTP, taking into account net migration into the region, population growth, household formation and employment growth (GC Section 65080(b)(2)(B)(ii)).
- Identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region pursuant to GC Section 65584 (GC Section 65080(b)(2)(B)(iii)).
- Identify a transportation network to service the transportation needs for the region (GC Section 65080(b)(2)(B)(iv)).
- Gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivisions (a) and (b) of GC Section 65080.01 (GC Section 65080(b)(2)(B)(v)).
- Consider the state housing goals specified in GC Section 65580 and 65581 (GC Section 65080(b)(2)(B)(vi)).
- Set forth a forecast development pattern for the region which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas (GHG) emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the GHG emissions reduction targets approved by the state board (GC Section 65080(b)(2)(B)(vii)).
- Allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (GC Section 65080(b)(2)(B)(viii)).

- Consider spheres of influence that have been adopted by the Local Agency Formation Commission (LAFCo) within its region (GC Section 65080(b)(2)(G)).

- Quantify the reduction in GHG emissions projected to be achieved by the SCS and set forth the difference, if any, between the amount of that reduction and the target for the region established by CARB (GC Section 65080(b)(2)(H)).

- Consider any adopted multiregional goals and policies, such as the *Directions to 2050* Principles for Growth, in the development of an SCS (GC Section 65080(b)(2)(N)).

California law (GC Section 65080(b)(2)(K)) specifically, states that neither a sustainable communities strategy nor an alternative planning strategy regulates the use of land, nor is it subject to any state approval. Nothing in an SCS supersedes the exercise of the land use authority of cities and counties within the region, and a city's or county's land use policies and regulations, including its general plan, are not required to be consistent with the RTP.

This Chapter outlines how the Kern region will integrate its transportation network and related strategies with a forecasted development pattern for the region that responds to housing needs, changing demographics, and transportation demands. This SCS demonstrates how integrated land use and transportation planning can reduce local and regional GHG emissions from passenger vehicles and light-duty trucks, and shows how the various strategies and programs elsewhere in this RTP document are interrelated and work together to achieve lasting benefits for the region.

The SCS for the Kern region identifies the following:

- A forecasted development pattern to accommodate the region's future transportation, employment, and housing needs, while promoting conservation of natural resources and open space areas.

- A transportation network comprising well-maintained public transit, local streets and roads, managed lanes and highways, and bikeways and walkways.

- Strategies to manage demands on the region's transportation roadway system (also known as transportation demand management, or TDM) in ways that reduce or eliminate traffic congestion during peak periods of demand.

- Strategies to manage operations of the region's transportation system (also known as transportation system management, or TSM) to maximize the efficiency of the network and reduce congestion.

The Kern SCS will be updated every four years in conjunction with the RTP updates. Revisions will reflect amendments to local government general plans and other factors that respond to the changing needs of the cities and the county.

What is the Purpose of the Sustainable Communities Strategy?

The intent of the SCS is to achieve the state's GHG emission reduction targets for automobiles and light trucks. The SCS will also provide opportunities for a stronger economy, healthier environment and improved quality of life for community members in Kern County. The SCS seeks to:

Improve economic vitality

Our transportation system will be increasingly efficient and cost-effective in the future. The 2022 RTP will generate construction jobs for transportation projects and additional jobs in a broad cross-section of industries as a result of the improved transportation system. This SCS seeks to reduce obstacles to development and reduce infrastructure costs for new development, which will enable appropriate

development that supports the community's vision for the future. With a more efficient transportation system, our region will be more mobile, and our roadways will be less congested, enabling the efficient movement of goods through the region. With increased maintenance of streets and roads, and more transit and active transportation options, Kern region transportation costs will be lower and community members will have more resources to spend on themselves and their families.

Improve air quality

The RTP/SCS seeks to improve air quality in the Kern region by reducing emissions. The SCS component of the RTP will work in tandem with other RTP policies to reduce not only CO_2 emissions but also federal criteria pollutant emissions. We will achieve and exceed our CO_2 emissions reduction target set by CARB by achieving a 9% reduction by 2020 and a 15% reduction by 2035 compared to the 2005, 16.7 lbs. per capita. The RTP/SCS meets criteria pollutant emission budgets set by the Environmental Protection Agency. By improving air quality, the RTP/SCS helps to remove San Joaquin Valley's annual excess emission penalty for failure to attain the one-hour Ozone standard and to meet very fine dust (particulate matter—$PM_{2.5}$) attainment plan goals, as well as reducing emissions of other health-based criteria pollutants in Kern. In 2013, the San Joaquin Valley portion of Kern went from extreme non-attainment to attainment of the one-hour ozone standard. Continued progress in this area may positively affect climate change impacts. Eastern Kern Air Pollution Control District (EKAPCD) is expected to be in compliance with the 2008 Ozone Standard by 2023 and the 2015 Ozone Standard by 2027. With each passing year, Kern region community members should expect to breathe cleaner air and live healthier lives. This air quality benefit is made possible largely by integrating transportation and land use to allow Kern region residents to live closer to where they work and play and closer to high-quality transit service, bicycle paths, and sidewalks.

By improving air quality in Kern, this SCS helps to remove the excess emission penalty, assessed annually for failure of the San Joaquin Valley to attain the one-hour Ozone standard and to meet attainment plan goals for PM 2.5.

Improve communities' health

Our region's bicycle and pedestrian facilities will expand, providing more opportunities to bike and walk to work, school, the park, the store, the bank, etc. In the future, Kern region residents will be able to live closer to where they work and play. The share of households living within bike or walk distance from where they work and play will increase from 84% to 93% by 2035 compared to the old plan[1], signaling a more efficient overall development pattern in the future. As a result, more residents will be able to use transit and active transportation as a safe and attractive means of travel. Active transportation helps to maintain our communities' health and well-being. In addition, less vehicle trips will result in better air quality and healthier lives.

Increase transportation and public safety

Our local transit service and intercity transit services will be expanded, and our transit system efficiency will be improved. Kern region community members will be safer as the RTP/SCS seeks to lower accident rates on highways and local streets and roads.

[1] Analysis used methodology suggested by Kern COG RPAC participants based on Human Impact Partners (humanimpact.org) SB 375 Health & Equity Metrics. Kern COG GIS analyzed public services within a 10 min. walk or bike of public services (transit, parks, schools, hospitals). Access to private services remained at 90% between the two alternatives.

Promote the conservation of natural resources and undeveloped land

Our military air space, recreation, and agricultural lands are an important resource. Our economic resource areas are an important part of the region's economic base. This SCS acknowledges existing local general plan policies promoting resource conservation and supports Kern's agricultural sector by maintaining existing streets and roads and focusing appropriate compact and in-fill development in urban areas. Kern County has begun planning efforts to create a Natural Community Conservation Plan that combines existing Habitat Conservation Plans in the San Joaquin Valley portion of Kern.

Increase access to community services

In the future, Kern region residents will have more access to comprehensive community services for health, education, safety, and recreation. By improving transportation infrastructure, such as highways and local streets and roads, and increasing transit and active transportation options, traveling to these services will be more convenient.

Increase regional and local energy independence

Increased energy independence means less dependence on foreign oil, decreasing payments to foreign countries, reducing trade imbalances and improving the economy.

The Kern region will continue to increase its regional and local energy independence. With more transit and active transportation options and by living closer to where they work, community members will have alternatives to driving their cars. Additionally, this SCS seeks to promote conservation of our natural resources and open spaces, providing opportunities to invest in renewable energy production and distribution. Increased energy independence means less dependence on foreign oil, decreased payments to foreign countries, reduced trade imbalances and an improved economy. One recent study by Berry Petroleum Company estimates that even if fossil fuels were eliminated from fueling the transportation sector, local oil production would still see a significant demand from other non-fuel uses such as plastics, asphalt, lubricants and other products. There would not be a need to import oil into California.

Increase the opportunities to help shape our community's future

Kern region community members will continue to have ample opportunities to provide input in the transportation planning process. We value each person's opinion and will continue to solicit feedback from the public.

The Kern Region: Unlike Any Other in California

Kern County is unlike any other region in California. Kern's large size and diverse valley, desert and mountain environs are dominated by agriculture, oil production, renewable energy, aerospace, military, recreation, transportation linkages and other activities that warrant unique and different approaches to address the SCS goals. These economic pursuits are the basis for dispersed rural centers and strategic locations for developments within the County that are unlike other areas of the State. Accordingly, unique strategies are needed to support Kern's economic, transportation and other needs. This uniqueness is reflected in the general plans and programs of Kern County's local governments.

LOCAL AND REGULATORY FRAMEWORK FOR THE KERN REGION SUSTAINABLE COMMUNITIES STRATEGY

The framework for the Kern region SCS is established by two key California laws: Assembly Bill (AB) 32 and Senate Bill (SB) 375, described later in this section. The SCS is now a required component of RTPs and must identify how the region will meet GHG emissions reduction targets. One of the factors leading to adoption of AB 32 and SB 375 was the success of numerous grassroots "blueprint" planning efforts

throughout the state, including in Kern County. Blueprints bring regional land use and transportation planning efforts together to accommodate future growth in California communities in ways that reflect the grassroots values of local communities. The 2022 RTP presents goals and policies to achieve the region's mutual vision of a stronger economy, healthier environment and improved quality of life for everyone, while ensuring each community's independence to determine the best path to that future.

This SCS Chapter of the 2022 RTP includes a strong commitment to reduce emissions from transportation sources to comply with California state regulations, improve public health, and meet national air quality standards.

The following section describes:

- *Directions to 2050* and blueprint planning efforts that preceded the SCS.
- Kern COG's SB 375 Framework.
- The legal and regulatory authority for the SCS.
- Regional emissions and affordable housing targets for the SCS.

Laying the Groundwork for the Sustainable Communities Strategy

The Kern Regional Blueprint (2008), San Joaquin Valley Regional Blueprint (2009), Kern SB 375 Framework (2012), the 2014 RTP, and the 2018 RTP laid much of the groundwork for the Kern COG 2022 RTP.

Kern Regional Blueprint

Adopted in November 2008, the Kern Regional Blueprint, based on the local general plans of the cities and the county, established a grassroots vision, guiding principles, and an alternative growth scenario for the region as it progresses towards the year 2050. The Blueprint provides the foundation for advancing decision-making for growth management at the local and regional levels. It was developed to shape the region's future and as a tool for each community to inform how they shape their local community's future in the coming decades. Approximately 3,500 community members of all interests and backgrounds participated in the Blueprint development process. The Blueprint public involvement process began in 2006, and included two statistically valid, 1,200-person quality-of-life phone surveys.

The mutual vision for the future of the Kern region includes:

- Economic development opportunities linked to the education system and current and future industries to build strong local economies and diverse employment opportunities.
- Livable and safe communities for everyone.
- Unique natural resources and open spaces—a healthy environment in which to explore and recreate.

Blueprint participants crafted a set of principles for growth in the Kern region that will help inform decision-making in local communities. These principles for growth are:

- Enhance economic vitality
- Conserve energy and natural resources, and develop alternatives

- Provide adequate and equitable services
- Provide a variety of transportation choices
- Provide a variety of housing choices
- Use and improve existing community assets and infrastructure
- Use compact, efficient development and/or mixed land uses where appropriate
- Conserve undeveloped land and spaces
- Increase civic and public engagement

These principles were reconfirmed as part of the outreach process and are supported by the goals of this 2022 RTP (see Chapter 2, Transportation Planning Policies, Table 2-2). During the community engagement process, participants expressed continuing support for all the principles for growth, indicating they are still relevant to the Kern region. The community engagement program is described in detail later in this Chapter. It is important to note that the horizon year for the 2022 RTP is 2046; planning efforts consider progress towards 2050 but are not yet to the year 2050 as it is anticipated that lessons learned from the current SCS will be incorporated into future planning efforts for the year 2050.

Kern SCS Principles for Growth

The SCS employs the vision, guiding principles, and growth scenario developed at the grassroots level as part of the Kern Regional Blueprint and updated as part of the *2022 RTP* outreach process. These guiding principles are really more like broad categories of principles supporting the RTP goals and policies expressed in Chapter 2, Transportation Planning Policies.

Enhance economic vitality

Conserve energy and natural resources, and develop alternatives

Provide adequate and equitable services

Provide a variety of transportation choices

Provide a variety of housing choices

Use and improve existing community assets and infrastructure

Use compact, efficient development and/or mixed land uses where appropriate

Conserve undeveloped land and spaces

Increase civic and public engagement

Since the initial Blueprint process, Kern COG has completed annual statistically valid, quality-of-life phone surveys to track changes in public opinion. The most recent survey (2021) found improving the quality of public education is the highest-ranking issue on which local governments should be focused.

See Chapter 2, Transportation Planning Policies, for further information on community engagement.

San Joaquin Valley Regional Blueprint

The San Joaquin Valley Regional Blueprint stitched together the Kern Blueprint with the seven other county grassroots blueprint efforts, developed by the eight regional planning agencies (RPAs). The RPAs collaborated to develop a long-term strategy for the future of the eight-county region.

Adopted in 2009 by the San Joaquin Valley Regional Policy Council, the San Joaquin Valley Regional Blueprint effort included Kern Council of Governments, Fresno Council of Governments, Kings County Association of Governments, Madera County Association of Governments, Merced County Association of Governments, San Joaquin Council of Governments, Stanislaus Council of Governments, and Tulare County Association of Governments to develop voluntary, long-term regional growth principles for the future of the eight-county region.

The valley-wide Blueprint identified 12 voluntary growth principles that were consistent with the nine Kern Regional Blueprint principles for growth:

- Create a range of housing opportunities and choices
- Create walkable neighborhoods
- Encourage community and stakeholder collaboration
- Foster distinctive, attractive communities with a strong sense of place
- Make development decisions predictable, fair, and cost-effective
- Mix land uses
- Preserve open space, farmland, natural beauty, and critical environmental areas
- Provide a variety of transportation choices
- Strengthen and direct development toward existing communities
- Take advantage of compact building design
- Enhance the economic vitality of the region
- Support actions that encourage environmental resource management

Kern COG Grassroots SB 375 Framework

In February 2012, the Kern COG Board of Directors adopted the SB 375 Framework for development of the SCS. Kern COG's Regional Planning Advisory Committee (RPAC), a committee comprised of local government, agency and stakeholder representatives worked together to develop the framework at a grass roots level. The framework's purpose is to guide the development and implementation of the SCS with agreed-upon core values and core actions.

The SB 375 Framework Core Values are:

1) The Sustainable Communities Strategy relies on the existing and planned circulation networks and land use designations for Kern County and its eleven (11) incorporated cities.

2) The Sustainable Communities Strategy shall not hinder the local land use authority of Kern County and its eleven (11) incorporated cities,

3) The Sustainable Communities Strategy shall allow Kern County and its eleven (11) incorporated cities to continue the pursuit and promotion of a diversified economic base.

4) Kern County shall continue to discuss cooperation and coordination with the seven (7) other counties located in the Central San Joaquin Valley, while recognizing the Kern region's unique qualities and developing appropriate strategies for Kern County.

The SB 375 Framework Core Actions are:

1) Identify Kern County's existing and planned transportation and circulation network as the Sustainable Communities Strategy (SCS) network.

2) Identify and model transportation measures with the purpose of reducing vehicle trips and vehicle miles travelled for Kern County's existing and planned transportation and circulation network to determine anticipated effectiveness.

3) Include clean fuel and clean technology (Pavley) regulations when evaluating any measures that may reduce vehicle trips and vehicle miles traveled.

4) Use the adopted land uses, that may be amended from time to time, of Kern County and its eleven (11) incorporated cities as the forecasted development patterns.

5) Base all models utilized by Kern COG on locally adopted general plans and identified regional economic centers. Any request to change the baseline model will require approval of the local city and/or county whichever has the appropriate authority.

6) Consistent with adopted general plans, model strategic locations for new retail and employment uses to determine whether they reduce vehicle trips and vehicle miles traveled.

7) Allow for the flexibility to amend the adopted land use elements of Kern County and its eleven (11) incorporated cities based on market demands and market responses.

8) Identify local, community oriented, alternative feasible transportation strategies such as enhancing biking and walking within established communities.

9) Respect the uniqueness of Kern County when the California Air Resources Board considers revising the targets.

10) Strive to achieve an acceptable SCS to allow for the use of CEQA streamlining by the development community.

11) Identify regional modeling baseline information and provide updates for the eight (8) sub-regions of Kern County to provide feedback on progress towards achieving the state targets.

12) Develop two types of strategies within the plan: (1) strategies that reduce emissions county-wide; and (2) strategies that reduce emissions sub-regionally.

13) Explore the potential of establishing modeling budgets for each sub-region of the county.

Regulatory Framework

California Greenhouse Gas Emissions Legislation

Kern COG's SCS must be set within the context of the eight-county Central Valley and the state, where much of the momentum for climate change legislation in the United States originates. Kern COG's SCS must also recognize the significant portion of Kern County that is not in the Central Valley i.e. the desert of eastern Kern and the mountain portions of Kern County.

California has long been a sustainability leader, as illustrated by Governor Schwarzenegger's signing Executive Order (EO) S-3-05 in 2005. EO S-3-05 recognized California's vulnerability to reduced snowpack, exacerbation of air quality problems, and other issues that may require adaptive strategies. To address

these concerns, the Executive Order set a goal to reduce statewide emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.

In 2006, California became the first state in the country to adopt a statewide reduction target through AB 32. This law codifies the EO S-3-05 goal to reduce statewide emissions to 1990 levels by 2020. AB 32 resulted in CARB's 2008 adoption of a Climate Change Scoping Plan (Scoping Plan), outlining the State's plan to achieve emissions reductions through a combination of direct regulations, alternative compliance mechanisms, various incentives, voluntary actions, market-based mechanisms, and funding.[2] The Scoping Plan identifies local governments as "essential partners" in the State's efforts to reduce emissions. The Scoping Plan was updated and approved by CARB in 2014. The update identified opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments

AB 32 engendered several companion laws that can assist the Kern region in reducing transportation-related emissions, including, but not limited to, AB 1493 emissions performance standards for motor vehicles and EO S-1-07 performance standards for the carbon intensity of transportation fuels.

California Executive Order B-30-15 signed by Governor Brown in 2015, added the intermediate target of 40 % below 1990 levels by 2030, This intermediate target was codified into law by SB 32, which was signed into law by Governor Brown on September 8, 2016. On July 17, 2017, the legislature passed a law that authorized the Air Resources Board to operate a cap-and-trade system to achieve these emissions reductions.

Senate Bill 375 Requirements

SB 375, adopted in 2008, represents the latest in a series of actions at the state level to address California's contributions to global climate change. Building on AB 32, SB 375 seeks to coordinate land use decisions made at the local (city and county) level with regional transportation planning. By coordinating these efforts, it is envisioned that vehicle congestion and travel can be reduced resulting in a corresponding reduction in emissions. SB 375 directed CARB to set regional targets to reduce emissions; regional plans are required to identify how they will meet these targets.

SB 375 has three major components:

- Using the regional transportation planning process to achieve reductions in emissions consistent with AB 32's goals.
- Offering California Environmental Quality Act (CEQA) incentives to encourage projects that are consistent with a regional plan that achieves emissions reductions.
- Coordinating the Regional Housing Needs Allocation (RHNA) process with the regional transportation process while maintaining local authority over land use decisions.

An SCS is a required component of the RTP. The SCS is an emissions reduction strategy for the region which, in combination with transportation policies and programs, strives to reduce emissions and, if feasible, helps meet CARB's targets for the region. See the discussion above under "What Is the Sustainable Communities Strategy?"

[2] Because the Scoping Plan time horizon is limited to 2020, analysis of the Scoping Plan is presented for the year 2020 only, not for 2035 or 2050. While EO-S-3-05 sets a goal that Statewide GHG emissions be reduced to 80 percent below 1990 levels by 2050, the EO does not constitute a "plan" for GHG reduction, and no State plan has been adopted to achieve the 2050 goal.

An alternative planning strategy (APS) must be prepared if the SCS is unable to reduce emissions and achieve the emissions reduction targets established by CARB. The APS is separate from the RTP, but it may be adopted concurrently with the RTP.

The following is a further discussion of the mandated requirements for the RTP and SCS.

Meeting Federal Air Quality and Transportation Requirements

The SCS must allow the RTP to comply with Section 176 of the federal Clean Air Act (42 USC 7506) requiring that the RTP demonstrate that it conforms with the state implementation plan, and that it will not cause or contribute to any new violation of any standard, increase the frequency or severity of any existing violation of any standard, or delay timely attainment of any standard or any required interim emission reductions or other milestones in each air basin. In addition, GC Section 65584.01(i)(1) states that it is the intent of the legislature that planning for housing be coordinated and integrated with the RTP. To achieve this goal, the Regional Housing Needs Allocation plan shall allocate housing units within the region consistent with the development pattern included in the SCS.

Kern COG prepares and adopts concurrently with the RTP an air quality conformity analysis to ensure that the RTP/SCS meets the federal conformity requirements.

Greenhouse Gas Emissions Inventory, Projections, Targets

The purpose of SB 375 is to implement the state's emissions reduction goals for cars and light-duty trucks. This mandate requires CARB to determine per capita emissions reduction targets for each MPO in the state at two points: 2020 and 2035. The current RTP must achieve emissions reductions of 9% per capita in 2020 and 15% per capita in 2035. Because emissions in the transportation sector are closely related to passenger vehicle travel, a mandated reduction essentially requires Kern COG to devise a regional plan and a series of strategies that will produce a per capita reduction in passenger vehicle travel. New targets may be adopted by CARB every 4-8 years.

Regional Housing Needs Allocation

SB 375 combined transportation and housing planning by integrating the RHNA process with the 2022 RTP. Specifically, GC Section 65080(b)(2)(B), subparagraphs (iii) and (vi), requires that the SCS identify areas within the region sufficient to accommodate an eight-year projection of the regional housing need and consider the state housing goals specified in GC Sections 65580 and 65581. Kern COG engaged in the RHNA process concurrently with the development of the 2022 RTP. This process required Kern COG to work with its member agencies to identify areas within the region that can provide sufficient housing for all economic segments of the population and ensure that the state's housing goals are met. The RHNA allocations for the region have been updated jointly with the 2022 RTP.

COMMUNITY ENGAGEMENT

State and federal regulations require comprehensive public participation as part of the Global Warming Solutions Act of 2006 (AB 32) and the Sustainable Communities and Climate Protection Act of 2008 (SB 375). The Code of Federal Regulations–Title 23: Highways requires metropolitan planning agencies, such as Kern COG, to enable public participation in the RTP planning process, as well as to facilitate interagency coordination during SCS development. This section describes:

- SB 375 public participation and agency consultation requirements and actions.
- Community engagement activities supporting development of the Kern SCS.
- A summary of community input used to develop the SCS.

SB 375 Public Participation/Agency Consultation Requirements and Actions

The public participation requirements for development of the SCS, pursuant to the requirements of SB 375, can be incorporated into an existing plan. Kern COG currently has a public participation plan that meets federal and state requirements.

Public Participation Requirements and Actions

SB 375 increased the minimum level of public participation required in the regional transportation planning process, including collaboration between partners in the region during the development of an SCS. Pursuant to GC Section 65080(b)(2)(F), each MPO shall adopt a public participation plan, which shall include:

- Outreach effort to encourage the active participation of a broad range of stakeholder groups in the planning process, consistent with the agency's adopted Federal Public Participation Plan (GC Section 65080(b)(2)(F)(i)).

  Kern COG's four-year outreach process was successful in receiving input from a broad range of stakeholder groups and the public resulting in input from over 7,000 participants.

- Consultation with congestion management agencies, transportation agencies, and transportation commissions (GC Section 65080(b)(2)(F)(ii)).

  Kern COG serves as the congestion management agency for Kern County and includes Caltrans as an ex-officio member of the Board.

- Workshops throughout the region to provide the public with the information and tools necessary to provide a clear understanding of the issues and policy choices. At least one workshop shall be held in each county in the region. For counties with a population greater than 500,000, at least three workshops shall be held. Each workshop to the extent practicable shall include urban simulation computer modeling to create visual representations of the SCS and the APS, if one is prepared (GC Section 65080(b)(2)(F)(iii)).

  Kern COG conducted 13 stakeholder hosted public input events, 12 City Council and Board of Supervisors presentations, 3 Stakeholder Roundtable meetings, 9 safety transportation planning events, 13 Clean Mobility Option events, 8 community festivals and events, 4 online survey activities, 4 - 1,200 person statistically valid quality of life surveys (2018, 2019, 2020 & 2021), 2 Kern County Fairs (2018 & 2019) one virtual fair, and numerous other various workshops to exceed the statutory requirement.

- Preparation and circulation of a draft SCS (or an APS if one is prepared) not less than 55 days before adoption of a final regional transportation plan (GC Section 65080(b)(2)(F)(iv)).

  The draft SCS public review includes a 55-day review period prior to final adoption.

- At least three public hearings on the draft SCS in the regional transportation plan and APS, if one is prepared. If the MPO consists of a single county, at least two public hearings shall be held. To the maximum extent feasible, the hearings shall be in different parts of the region to maximize the opportunity for participation by members of the public throughout the region (GC Section 65080(b)(2)(F)(v)).

  Public hearings were held on May 17, 2022, in the City of Shafter and May 19, 2022, at Kern COG in the City of Bakersfield.

- A process for enabling members of the public to provide a single request to receive notices, information, and updates (GC Section 65080(b)(2)(F)(vi)).

  The Kern COG *Directions to 2050* website was created in 2012 to provide an opportunity for interested persons to sign up for notices related to the RTP/SCS development and the public review process. For the 2022 RTP/SCS development and public review process and new webpage was created at www.kerncog.org/2022-rtp/ and second location was made available on the main Kern COG web page at http://www.kerncog.org with an online form.

Community Consultation with Local Elected Officials Requirements and Actions

The Kern County RTP/SCS outreach effort was expanded beyond SB 375 requirements as follows:

- During the development of the SCS, Kern COG must conduct at least two informational meetings in each county for members of the board of supervisors and city councils. Only one informational meeting is needed in each county if it is attended by representatives of the county board of supervisors and city councils that represent a majority of the cities representing a majority of the population in the incorporated areas of that county. (GC Section 65080(b)(2)(E))

  Kern COG staff conducted 12 informational meetings with all 11 city councils and the Kern County Board of Supervisors in the spring of 2022.

- The meeting (or meetings) shall discuss the SCS, including the key land use and planning assumptions, with the members of the board of supervisors and city council members in that county and to solicit and consider their input and recommendations. Notices of these meetings are to be sent to the clerk of the board of supervisors and city councils and local elected officials as key stakeholders in the regional transportation system. While local elected officials serve on regional agency boards, expanded consultation is required pursuant to GC Section 65080(b)(2)(E) and (F) to provide outreach to all local elected officials and their member jurisdictions affected by the SCS (and APS if applicable).

  The meeting presentation to local elected leaders discussed strategies and land use planning assumptions for the purpose of soliciting their input and recommendations which Kern COG considered in developing the RTP/SCS. The meetings were fully noticed as part of each agenda sent out by the Clerk of the Board and respective City Clerks.

- Pursuant to GC Section 65080(b)(2)(G), in preparing an SCS, Kern COG shall consider spheres of influence that have been adopted by LAFCos within the region. Kern COG should also consult with LAFCos regarding special districts within the region that provide property-related services such as water or wastewater services, and should consult with these regional special districts, as appropriate, during development of an SCS (and APS if applicable).

  The Executive Officer of LAFCo is a member of the RPAC which provides oversight to the development of the RTP/SCS. In addition, the Kern COG land use model includes spheres proximity to existing water and wastewater services. Kern COG consulted with special districts to develop the water and wastewater service areas.

- Based on the 2017 California Regional Transportation Plan Guidelines, Kern COG is encouraged to share data on growth projections and consult with school districts in the development of the SCS (and APS if applicable), especially with respect to land uses and the regional transportation system. Where possible, an SCS should incorporate current and future school needs into the RTP. School-related trips constitute a significant portion of all vehicle trips.

  Kern COG consulted with the Kern County Superintendent of Schools to identify existing and forecasted locations of schools and enrollment.

California Air Resources Board Review

Prior to starting the public participation process, the MPO shall submit a description to the state board of the technical methodology it intends to use to estimate the emissions from its SCS (GC Section 65080(b)(2)(J)(i)). In December 2020 Kern COG provided a technical methodology on development of the 2022 SCS. Throughout the RTP development process, Kern COG has communicated regularly with CARB to obtain their input and CARB has participated online in many of the Kern COG SB 375 oversight committee meetings. In February 2021 CARB provided a letter commenting on the methodology. In August 2021 Kern COG provided CARB with a response to the comments. Following the Summer 2022 scheduled adoption, Kern COG shall submit the SCS to the state board for review (GC Section 65080(b)(2)(J)(ii)).

Community Engagement Activities Supporting Development of the Kern SCS

Kern COG Public Involvement Procedure

The Kern COG public involvement procedure was updated in May 2019 to reflect outreach and review requirements. The procedure provides guidance for Kern COG's elected officials and staff in public participation and interagency consultation throughout the regional planning process. It contains the policies, guidelines, and procedures Kern COG uses in developing the metropolitan planning process. This includes the development and approval of the RTP, Regional Transportation Improvement Plan (RTIP), and environmental review documentation related to growth, transportation, and air quality, and any product prepared by Kern COG staff that statutorily requires public participation or when public participation is directed by the Kern COG Board.

The public involvement process is guided by the following principles:

- It is the right and responsibility of citizens to be involved in the transportation planning process.
- Citizens should be educated about the needs and issues and encouraged to participate in finding solutions.
- Early and timely involvement of citizens is necessary to build community agreement on the needs and solutions before alternatives are proposed.
- Agreement on the final product is a desirable goal, but agreement does not mean 100% unanimity by all parties. Negotiation and compromise are essential ingredients to building agreement.
- The process by which a decision is reached is just as important as the product. Citizens should end the process satisfied that they had the opportunity to be significantly involved and that their voices were heard and reflected in the final document.
- After decisions are made, actions should follow to maintain confidence in the community involvement process.

The public involvement procedure identifies partner agencies with which Kern COG staff maintains regular contact and encourages participation in the development of local, regional, and state plans. The plan provides procedures and responsibilities for informing and engaging community members in various agency plans, programs, declarations, and policy evaluation. The plan also identifies media resources to use and legal display ad requirements to follow when posting public notices.

Community engagement and outreach were fundamental to the development of the 2022 RTP. By nature, this plan represents the region's mutual vision for its future and was developed using a grassroot, bottom-up approach.

SCS Public Outreach Program

The SCS outreach program, Kern COG's comprehensive community engagement process, was designed to solicit input from stakeholders and community members on priorities for the region's long-term future. The community engagement process extended from Fall 2018 through Spring 2022. Over 6,900 community members participated in the process. The program provided various opportunities for community members, stakeholders, and local agencies and jurisdictions to participate in the process, including:

- Three stakeholder roundtable meetings with business and industry, environmental and social equity and environmental justice stakeholders.

- Thirteen community workshops held throughout Kern County and hosted by 9 different local stakeholder groups including: the Ridgecrest Native American Petroglyph Festival, Kern County Black Chamber of Commerce, Bike Bakersfield, Bakersfield Senior Center, All Of Us Or None (AOUON), Taft Chamber of Commerce, Leadership Counsel for Justice and Accountability, Clean Cities Coalition, and Kern Transportation Foundation, The public input events featured a presentation by Kern COG and gained information from participants about growth principles, future development patterns, strategies for transportation spending and funding solutions. Each workshop included visual simulation computer modeling to create visual representations of regional growth and transportation projects. Workshop presentations and activities were designed to provide community members with the information and tools necessary to provide a clear understanding of the issues and policy choices.

- Eight community event interactive and educational booths at the Great Kern County Fair (2018 & 2019), the Ridgecrest Native American Petroglyph Festival, Taft Oildorado Days, Tehachapi Mountain Festival.

- Five online surveys using MetroQuest and PublicInput software.

- A Targeted social media outreach to 13 disadvantaged communities as part of the Clean Mobility Options survey included Delano, McFarland, Lost Hills, Wasco, Taft, Arvin, Lamont, Buttonwillow, Shafter, California City, Ridgecrest and Maricopa as well as the Tejon and Tubatulabal Tribes.

- Nine online meetings were held on Local Road Safety including the communities of Shafter, Delano, Bakersfield, Wasco, Maricopa, Taft, Tehachapi, Arvin, and California City. The meetings saw 350 participants.

- Four statistically valid phone surveys of 1,200 residents each of Kern County (2018, 2019, 2020 & 2021) to assess residents' overall opinion of the quality of life in their city or town, to survey the importance of issues related to the future, and to understand the daily commute for the average resident.

- Promotional efforts: Kern COG personally contacted stakeholders, such as city staff, agencies, health organizations, environmental groups, and community-based organizations, distributed fliers advertising community workshops, and posted advertisements and shared press releases with various media resources including social media outreach, promoting the website and online game/survey tool.

- 12 publicly noticed advertised presentations were made to each of the 11 incorporated cities and the County Board of Supervisors to receive input from local elected officials.

Additional presentations on the RTP/SCS were made to the Lamont Chamber of Commerce including the federally recognized Tejon Tribe. In total over 7,000 people provided input into the RTP/SCS.

Environmental and Social Equity Roundtable

As outlined above, Kern COG conducted three (3) meetings with business/industry and environmental/social equity groups. Over 20 participants attended each meeting. Topics discussed included public outreach, RTP/SCS requirements including growth forecasts, RHNA, environmental justice and Title VI. One of the seven goals at the core of the 2022 RTP is to ensure an equitable distribution of the benefits among various demographic and user groups. To that end, Chapter 2 outlines three policies:

- Avoid, minimize, and/or mitigate disproportionately high and adverse human health or environmental effects, including social and economic impacts, on traditionally disadvantaged communities, especially racial minority and low-income communities.
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

The purpose of the stakeholder meetings was to continue to share information about the outreach process, provide an overview of recent studies conducted by Kern COG, and present/discuss the environmental justice methodology to be used in the 2022 RTP/SCS. The third meeting focused on the Reginal Housing Needs Allocation method. For more information on performance measures related to social equity, see Chapter 2 and Appendix D – Integrated Performance Measures, Smart Growth and Environmental Justice Measures Analysis.

Regional Planning Advisory Committee

Formed by the Kern COG Board in 2011, the RPAC was created to provide a forum to review and develop recommendations on key activities associated with regional transportation plans and other planning issues, including SB 375 implementation. The Kern COG RPAC reviews and develops recommendations on the following topics:

- Appropriate planning-related sections of the RTP.
- Blueprint planning.
- Climate change planning.
- Sustainable communities planning.
- Regional Housing Needs Allocation.
- Land use and population projections.
- Studies related to the environment (air, water, habitat conservation).
- Rural-urban connections strategy.
- Appropriate studies for inclusion in the annual Overall Work Program.
- Regional Energy Action Planning.
- Other matters as referred by the Kern COG Board.

Members of the RPAC are planning directors, community development directors, or their designees from each Kern COG member jurisdiction. Additional voting members include the Tejon Indian Tribe, public transit agency (Golden Empire Transit) and Caltrans District 6. Community at-large voting members represent varied economic, social, and geographic sectors and are appointed by the Kern COG Board. They may include business groups, nonprofit organizations, military agencies, and tribes. Non-voting members consist of the executive officer of the LAFCo and the president/CEO of the Kern Economic Development Corporation. The San Joaquin Valley Air Pollution Control District (APCD) and the Eastern Kern APCD are encouraged to participate in RPAC meetings.

The RPAC formulated a SB 375 SCS Framework with values and actions that were approved by the Board of Directors in February 2012. The RPAC developed a broad structure of SB 375 implementation for the entire county that included solutions for the region's unique geographic and economic features.

Transportation Modeling Committee

The Kern Regional Transportation Modeling Committee currently meets jointly with the RPAC. It was established in 2001 to provide oversight for the Kern Regional Travel Demand Model. After the adoption of the Kern Regional Blueprint in 2008, the Kern COG Board established the Kern Climate Change Task Force. These two committees merged in 2010 to form the Transportation Modeling Committee. Made up primarily of member agency traffic engineers, transportation model users, and other stakeholders, the committee serves as a subcommittee to the RPAC and the Transportation Technical Advisory Committee dealing with technical modeling and forecasting issues and meet separately from the RPAC as needed.

Kern COG worked with the Transportation Modeling Committee and RPAC to develop and implement the community engagement process and the RTP/SCS.

Summary of Community Input

Economic vitality was the number one principle from the SCS public engagement process with housing choices, conserving land and spaces and conserving water and energy use close behind. Top strategies included freight capacity on highways, fix it first maintenance, and active transportation. This input helped shape the strategies included in the SCS.

SUSTAINABLE DEVELOPMENT PATTERN

One of the key components of the SCS is a sustainable regional forecasted development pattern that when integrated with the transportation network enables the region to accommodate future growth in a manner that reduces passenger vehicle emissions, enhances economic vitality, promotes housing affordability, and encourages resource land conservation while preserving private property rights and local land use decision making authority. This forecasted development pattern is the basis for development of the regional transportation system described throughout the 2022 RTP and summarized in this SCS. Kern County has a unique pattern that is dominated by rural, outlying areas. This section describes:

- Current development patterns, urban/rural connectivity, residential densities, and building intensities in the Kern region.
- Anticipated future population, jobs, and housing in the region.
- A forecasted development pattern, regional housing needs, and strategies to promote conservation of resource areas and farmland.

Current Uses, Residential Densities, and Building Intensities

GC Section 65080(b)(2)(B)(i) requires MPOs to identify the general location of uses, residential densities, and building intensities in the region. The assessment of existing conditions, based on local general plans and planning assumptions, provides the foundation for the Kern COG SCS.

See Chapter 3, Planning Assumptions, for further information on current land uses, residential densities, and building intensities.

Existing Conditions: Putting the SCS into Perspective

Kern County is unlike any other region in California. From an overall perspective, Kern County, consisting of 8,200 square miles (the size of New Jersey), is the third largest county in California. Kern County is 159 miles in length from the northwestern boundary to the southeastern boundary. The population is over 900,000 and is expected to grow by more than 30% over the next 24 years. Although two-thirds of Kern's population lives within 1/20th of the area of the county known as Metropolitan Bakersfield, many of the economic centers require long exurban commutes to areas that may not be conducive to urban development.

There are 11 incorporated cities within Kern County: Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi and Wasco. Kern County comprises separate regions based on significant variations in terrain, climate, geographic and environmental factors. The regions are identified as follows:

Valley Region: The southern San Joaquin Valley below an elevation of 1,000 feet mean sea level.

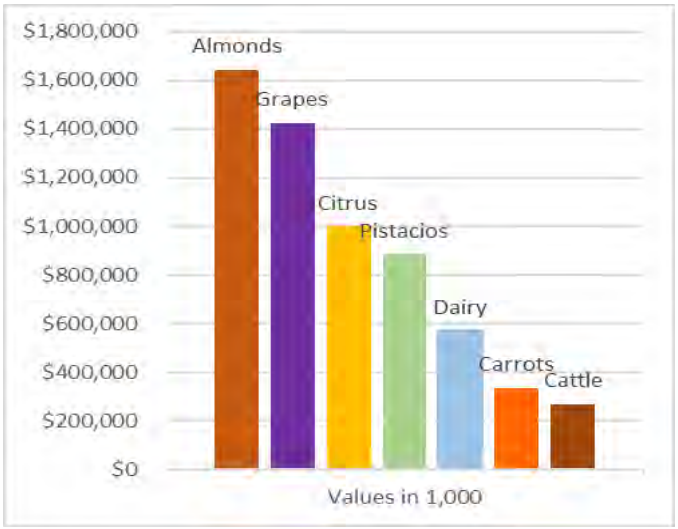
Mountain Region: The westernmost and central portion of the county above the 1,000-foot mean sea level contour in the valley and western region of the county and west of the primary alignment of the Los Angeles Aqueduct in the eastern county, including the southernmost portion of the county.

Desert Region: The eastern section of the county, east of the primary alignment of the Los Angeles Aqueduct.

Kern County has seven significant industry clusters, mostly in rural resource areas:

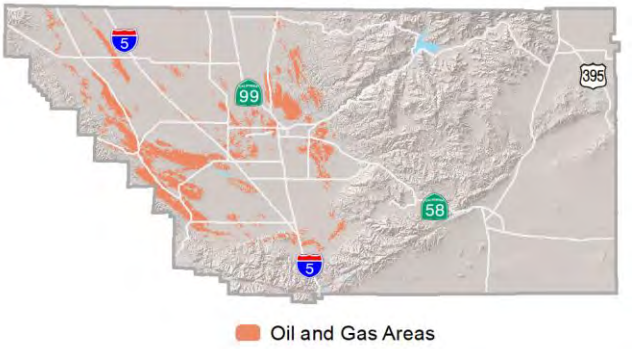
1) Value-Added Agriculture is defined as the transformation of agricultural products to a higher value for the end consumer. Examples can be seen when carrots are processed into smaller, "baby" carrots, or used in the production of vegetable juice. Locally produced products like POM Wonderful Pomegranate Juice, Wonderful Pistachios, Bunny-Luv Baby Carrots, and Halos Mandarins are well-known national brands. According to the Agriculture Issues Center at UC Davis, for every 100 jobs linked directly to the agricultural industry, an additional 106 jobs are created in the local economy. Kern County is the leading ag-producing region in the United States, with 1 in every 5 jobs related to agriculture. In addition, every dollar generated by value-added ag leads to an additional $1.27 generated by the region's non-agriculture economy. Kern is also a major supplier of dairy and cattle.

Figure 4-1: Kern County 2019 Crop Values ($)



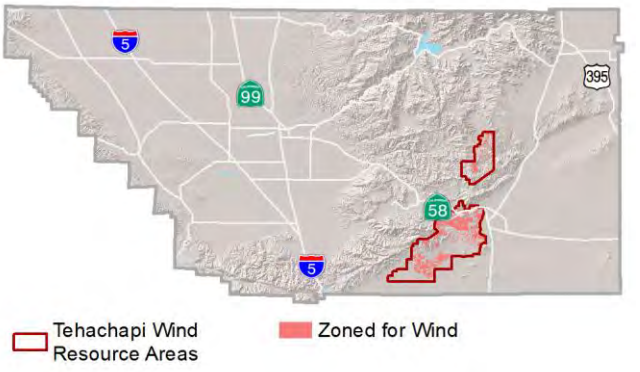
2) Transportation and Logistics is a fast-growing industry with tremendous potential within Kern. This is a leading cluster and supports the competitiveness of the Energy and Natural Resources and Value-Added Agriculture clusters through the use of warehousing and distribution services. Given Kern's location at the geographic population center of California, logistically and environmentally Kern is the best location in the state with the lowest carbon footprint, to centralize distribution services to the rest of the state. Kern also serves as the immediate northern gateway to Los Angeles County. With California's two major north-south freeways running through the county as well as the only year-round pass over the Sierra Nevada Mountain Range in the San Joaquin Valley, it is a natural place for growth in transportation and logistics. Kern has become the location for major distribution centers.

Figure 4-2: Oil and Gas Resources



3) Energy and Natural Resources production is the cornerstone and foundation of Kern County. Historically oil production has driven energy development. Kern County is the top oil-producing county in California. This county alone produces 71% of California's oil, Kern County has four giant oil fields (greater than 1 billion barrels of cumulative production) and as a whole produces about 326,000 barrels of oil per day (see **Figure 4-2**). In addition, cogeneration which produces electricity as a by-product from steam used in the oil fields produces much of the electricity used in both Kern and Los Angeles counties.

Figure 4-3: Kern County Wind Farms



Kern County led the state in 2011 with over 60,000 employed in the Natural Resource and Mining industry. Of those, nearly 40% are occupations which are directly related to production and extraction. Consequently, heavy commute traffic is experienced both within adjacent rural areas

and between urban and rural areas. This commute traffic is the primary consideration as, unlike agricultural products, petroleum products are transported primarily by rail and pipeline. East Kern also includes gold and other mining operations. The largest borax mining operation in the world is located at the eastern edge of the county next to Boron, employing 600 working three shifts per day, seven days per week. An average of 5 trains per week transport the mineral to a bulk transload facility at the Port of Long Beach.

Kern County is the renewable energy center for California producing more renewable energy than any other county in the state and is home to the nation's largest solar plant, wind farm, geothermal facility, and grid level battery storage system.[3] There are approximately 5,000 wind turbines in the Tehachapi-Mojave wind corridor, and combined with the region's solar fields produce 1.7 terawatt hours (1.7 million megawatts) each year (see **Figure 4-3**). Kern also has another 6,500 MWh of battery storage in place for these intermittent renewable sources. The county's dependence on energy and natural resource production as part of our economic structure is reflected in the fact that 8 out of 10 of the county's top taxpayers are either oil-producing and/or processing companies, renewable energy producers or mining operations. New installation-related traffic can be expected to continue into the near future and likely well-beyond.

4) Aerospace and Defense remains a leading industry cluster for the county and particularly for eastern California. California is home to approximately 139,000 aerospace jobs, with over 23,000 of them in Kern County. These high-wage, full-time jobs have staying power thanks to vast open land, lack of development encroachment, proximity to Los Angeles, and higher education levels per capita in East Kern than in most other regions in the county. China Lake is the Navy's largest single landholding in the world. It represents 85% of the Navy's land for research, development, test, and evaluation use, and 40% of the Navy's land holdings worldwide. As weapons development continues, China Lake consistently adds jobs, both military and civilian.

Figure 4-4: Kern County Military Installations

Edwards Air Force Base covers roughly 470 square miles and houses roughly 12,800 jobs at the Air Force Flight Test Center. Among its many military purposes, Edwards historically provided a landing-place for NASA spaceships coming back from space exploration when weather did not permit landings in Florida.

Mojave Air and Space Port emerged as the leading aerospace test center for commercial operations in North America. No longer a sleepy high desert general aviation Mojave Airport destination, Mojave Air and Space Port has amassed more first flights and significant newsworthy flight activity than any other airport in the world over the past twenty years. Mojave Air and Space Port and industrial park is currently home to more than 60 companies engaged in flight development to light industrial to highly advanced aerospace design, flight test and research and even heavy rail industrial manufacturing. The potential for space tourism continues to be great, though other states are fiercely competing for this business.

[3] Kern County Renewable Energy Fact Sheet http://www.drecp.org/counties/factsheets/Kern_county.pdf 2021

5) Tourism, Recreation and Entertainment suggests continued growth opportunities in both annual expenditures and employment. This includes the generation of tourism and visit activity from people traveling between major cities in Northern and Southern California. Kern County's tourism, recreation & entertainment cluster provides almost 23,000 jobs throughout the county primarily in accommodation and food services. Increasing strengths within this cluster are in sports and recreation related to outdoor assets such as off roading, water sports, and hiking. A major strategy of the RTP is promoting local history as a benefit to economic/tourism. Especially, highlighting cultural, Native American history. This City of Ridgecrest has done this with their recognition of Native American petroglyphs in xeriscaping along SR 178. The Tejon Indian Tribe is also developing a casino/resort hotel near the confluence of SR 99 & I-5.

6) Correctional Facilities - Another significant rural transportation issue is correctional institutions. Kern County has five public and private high-security institutions that house over 20,000 federal, state and local inmates. To manage these facilities, Kern County has almost 5000 correctional officers and first-line supervisors who commute by auto and vanpool for each shift.

Figure 4-5: Kern Correctional Facilities

7) Healthcare Services has been recast to reflect the vast array of services and networks in the county. Throughout the San Joaquin Valley, population growth has resulted in major increases in hospital and healthcare employment. Dignity Health is staying a step ahead of population growth by expanding services and facilities. Through teamwork, innovation and advocacy, Mercy Hospital Downtown, Mercy Hospital Southwest, and Memorial Hospital all operated by Dignity Health, are delivering on their promise to provide excellent, affordable health care to the community. New advancements in cardiac care at Memorial Hospital offer lifesaving options for heart patients. The Robert A. Grimm Children's Pavilion for Emergency Services is the newest edition to the Lauren Small Children's Center established in 2012 at Memorial Hospital. The Pavilion is the only dedicated pediatric emergency department between Los Angeles and Madera, California. The Grossman Burn Center at Memorial Hospital is dedicated to delivering high quality, compassionate care to the community. One concept for the Bakersfield HSR station area vision is a medical research campus, due to its close proximity to two existing hospitals.

Rural Resource Area Transportation Safety

Alternative transportation connectivity to these resource areas are dominated by regional transit and vanpooling. The rural job market plays an important role among rural and urban residents alike. As rural lands transition into non-agricultural uses, commute and other high speed auto traffic will experience conflicts with slow moving farm vehicles. In addition, vehicle miles traveled are appreciably higher than in urban settings due to the lower population density of rural areas. This results in a disproportionately higher number of accidents per capita in rural settings than urban. A sustainable community strategy is required to address rural highway safety issues and provide financial incentives to address them.

Rural/Urban Connectivity Strategy for Farmland and Other Strategic Resource Areas

California Government Code 65080(b)(4)(C) states, "The metropolitan planning organization … shall consider financial incentives for cities and counties that have resource areas or farmland, as defined in Section 65080.01, for the purposes of, for example, transportation investments for the preservation and safety of the city street or county road system and farm to market and interconnectivity transportation needs." Kern has developed a guideline to direct funding to outlying rural areas to promote safety and interconnectivity in accordance with SB 375. A more complete discussion can be found in Section VII. of the SCS under the Project Selection Criteria. This goes into greater detail on the nature of Kern's unique resource areas and farmland.

Rural, resource areas represent the vast majority of Kern County land uses. Kern's rural lands hold diverse resources strategic to Kern and California's growth and success. For example, Kern County produces 71% of all oil produced in California, has over 1.7 million megawatts of operating and permitted renewable energy. One in six jobs in Kern County are directly related to the resource sectors of forestry, fishing, hunting, mining (esp. oil/gas) and agriculture. Growing interest in ecotourism, from white water rafting to farmer's markets, offers an insight into the development of a diverse and vibrant economy.

Kern strives to provide feasible solutions to transportation, land use and air quality issues that connect these strategic rural employment areas with the major urban areas of the county. The Blueprint, adopted in 2008 by the Kern COG Board made up of local officials from 11 cities and the County of Kern, provides information to assist in the formation of strategies that enhance strategic agriculture, rural communities, resource conservation, recreation, quality of life, and regional sustainability.

Agricultural Resource Areas (Farmland) - Residential rural areas of Kern County number 38,700 acres. Semi-agricultural lands, like warehousing and packaging facilities, yield less than 12,000 additional acres. The combination of which are roughly a third of the 165,000 acres of urban land. When taking inventory of agricultural land; however, the ratio inverts dramatically. Farmland as defined by GC Section 65080.01 (b) is classified as prime, of statewide importance, or otherwise unique in character outside all existing city spheres of influence or city limits; the combination of these lands exceeds 700,000 acres.

Additionally, designated grazing land provides a stunning 3.7 million acres. From these lands, Kern County's agricultural revenues topped $7 billion in 2020, accounting for 1 in 5 jobs in Kern.

Figure 4-6: Kern County Dairies

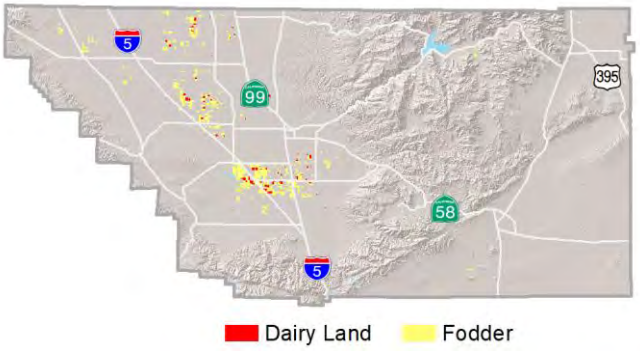
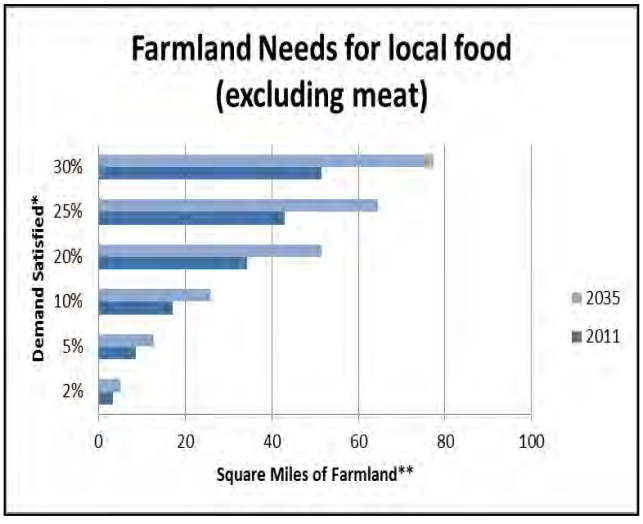


Figure 4-7: Farmland Needs for Local Food



Another significant portion of Kern's rural economy is dairies (see **Figure 4-6**). In 2019, total milk production was 40 million pounds for a total value of $500 million. Kern produces about 10% of California's milk products and ranks 5th among California's counties of which the top eight counties comprise the San Joaquin Valley region and produce about 95% of the state's milk products. The number of dairies in Kern has dropped from 55 in 2012 to 48 in 2016, and the number of cows has dropped from 168,000 to 158,000.[4]

Farm to Market Needs – Central to farm production, Metropolitan Bakesfield provides ideal connectivity for the transportation of agricultural products to markets, both local and statewide. The proportion of locally grown produce destined for local markets is low. Due to the economies of scale, delivery networks often find it more economical to send produce to distant distribution facilities, often resulting in local markets being provided with products not only distributed from other areas, but

[4] California Department of Food and Ag., https://www.cdfa.ca.gov/dairy/pdf/Annual/2016/2016_Statistics_Annual.pdf, 2016

sourced from them as well. It's estimated that 2% of regional consumption is locally produced (see **Figure 4-7)**. One recent development is the establishment of a Walmart grocery distribution center in Shafter. This facility should increase the availability of locally grown produce on local grocery store shelves.

Farmland Needs for Local Food - Despite low consumption of locally-sourced fare, direct markets continue to grow and thrive. Kern County's farmers' markets (see **Table 4-1**) provide area residents access to a variety of locally-farmed products. Additional forms of agritourism flourish among many local farms that provide retail outlets at the farms themselves. In 2014 California implemented the Urban Agricultural Zone Incentive Act (SB 551) which allows landowners of at least .1 acre and no more than 3 acres in size within metropolitan areas to receive tax incentives for putting land into agricultural use. The minimum five-year agricultural preserve will likely accelerate the proliferation of community gardens and markets in urban settings.

From this inventory come a variety of themes to which rural development strategies are focused: *Production, Infrastructure and Consumption*.

***Production*:** Connect farmers to available markets & provide business training opportunities to farmers.

Table 4-1: Farmers' Markets in the Kern Region

Tesch Family Farms 1508 Garces, Delano	Jun – Nov	Alt. Tues	3 pm – 5 pm
Tesch Family Farms 8787 Hall Rd, Lamont	Jun – Nov	Alt. Tues	3 pm – 5 pm
Tehachapi Fmrs Mkt N. Green St, Tehach.	Jun – Aug	Thurs	4 pm – 7 pm
Wasco Farmer' Mkt, Hwy 43 btwn 7th & 8th, Wasco	Jun – Aug	Wed	6 pm – 9 pm
Brimhall Farmers' Mkt 9500 Brimhall Rd, Bak	Year Round	Sat	9 am-1:30 pm
Mkt at 7 Oaks Bus. Pk, 4521 Buena Vista, Bak	Mar – Oct	4th Wed	4:30 pm - 7:30pm
Haggin Oaks Fmrs Mkt 8800 Ming Av, Bak	Year Round	Sun	9 am – 2 pm
Adv. Health Fmrs Mkt 2615 Chester Av, Bak	Mar - Nov	2nd Thur	5-7:30 pm
Mkt On the Hill 3700 Mall View Rd, Bak	Year Round	Sat	9 pm – 2 pm
From the Farmhouse GoldenState/F St, Bak	Year Round	Sat	8 am - noon

Source: Kern Ag Dept., 2019 Crop Report

***Infrastructure*:** Increase local processing capacity & distribution

***Consumption*:** Increase the number and types of food outlets, promote local food sourcing.

Forecast Development Pattern

GC Section 65080(b)(2)(B)(vii) requires MPOs to set forth a forecasted development pattern for the region, which when integrated with the transportation network and other transportation measures and policies will reduce emissions from automobiles and light-duty trucks to achieve, if there is a feasible way to do so, the emissions reduction targets approved by CARB.

Housing the Kern Region's Population

The SCS Strategy Maps (**Figures 4-9** and **4-10**) have been developed by Kern COG staff and show both the place types reflecting forecasted development patterns and Kern COG modeling assumptions, and the planned transportation investments from this RTP. The maps show how investments in transportation are being coordinated with forecasted development patterns to reduce emissions from automobiles and light-duty trucks. The maps contain transit priority and strategic employment areas and transportation infrastructure that are existing, planned or proposed and have been grouped by Kern COG staff into descriptive types. The maps were developed with input from the Transportation Modeling Committee and the RPAC but there are currently no general plans adopted that use these terms or categories. Note that the Transit Priority Place types are suited to develop some of the clean mobility options found in a mobility hub. These options would vary based on the size of the mobility hub and surrounding land use. For example, a Metro place type would have many more mobility options than a town or village place type.

Each mobility hub would implement mobility options as appropriate for that place type (see **Figure 4-8** and Chapter 5 – Public Transportation/Shared Mobility Action Element).

To develop these conceptual maps staff identified existing, planned and potential Transit Priority and Strategic Employment Place Types. The map legend identifies which place types are existing by using a dark outline, planned place types have no outline, and potential place types are hollow (see legend on each map). Aerial photography was used to identify which place types were existing. Each agency's local general plan was used to identify the land uses where these types of developments were permitted. And local jurisdiction staff provided feedback on final placement of the place types locations. If one was requested that was not shown in a local general plan, it is shown as a potential location on the map. In summary, the place type locations on SCS Strategy Maps reflect local jurisdiction general plans and input. Updates are made every 4 years.

The following place types employed in the RTP are not intended to represent detailed land use designations or policies but are used to describe the general conditions likely to occur within a specific generalized area based on the assumptions made by local authorities. The place types are each comprised of specific characteristics related to jobs and housing intensity, urban design and transportation choices. It is important to note that these maps are only a snapshot of forecasted development patterns and Kern COG modeling assumptions to be updated every 4 years. For the latest information on land use, land use designations and transit concepts, please refer to the appropriate local jurisdiction.

Figure 4-8: Mobility Hubs – Shared Mobility Services at a Metro Transit Priority Place Type

Metropolitan (Metro)

Metro areas are the regions primary business, civic, commercial and cultural centers that can exceed 60,000 in population. These districts have significant amounts of employment and corresponding residential uses and retail, typically clustered in multistory buildings and include easy access to neighboring residential and employment areas. Metro areas are served by numerous transportation choices providing a diverse

mobility hub (see **Figure 4-8**). Existing and planned enhancements may include easy walk/bike design and improved transit. Metro areas are also typically located at the convergence of a number of high-capacity transit facilities such as passenger rail. The proposed Bakersfield metro center for Kern is also the planned location for the enhanced passenger rail service such as high-speed rail. In East Kern, the closest metro place type is Palmdale/Lancaster in Northern L.A. County.

Community

Community place types feature subregional business, civic, commercial and cultural centers and draw activity from the subregional area. These areas may range from 15,000 to 60,000 persons or more and contain significant employment centers and a mix of housing choices, supported by retail and daily services. Existing and planned community enhancements may include easy walk/bike design and improved transit.

Town

Town place types feature business activity, local-serving retail, daily services, housing choices, and may include a civic and cultural center and draws activity from the town and immediate area. These areas may range from 5,000 to 15,000 people or more. Existing and planned enhancements may include easy walk/bike design and improved transit.

Village

Village place types feature business activity and essential local services, and housing choices. These areas may range from 50 to 5,000 people or more. Existing and planned enhancements may include easy walk/bike design and improved transit as appropriate.

Strategic Employment (Rural/Urban)

Strategic employment areas can be found in rural and more urban areas and may include both jobs and housing, though these two uses are rarely found in close proximity to each other. These locations correspond to local jurisdiction general plan areas designated primarily for industrial and/or commercial uses and adjusted based on local jurisdiction input. The maps include three different sizes of strategic employment areas based on future employment levels. These areas often contain employment in isolated resource areas with sporadic activity dependent on the strategic resource at the site (wind energy, agriculture, etc.). Many strategic employment areas are characterized by large operations located in close proximity to a resource to minimize transportation costs and the carbon footprint. In urban areas, existing and planned enhancements may include easy walk/bike design and improved transit. In rural strategic employment areas, regional transit and or vanpooling are existing or planned along with interconnectivity and safety projects.

The transit priority and strategic employment areas were jointly adopted by the city and county into the Metropolitan Bakersfield General Plan in 1982 and are found in the community plans for most of the outlying communities. The concepts have a distinct advantage over a corridor and strip commercial development pattern in that it provides for activity nodes around which future transit, and vanpooling services can be planned for in a way that is supportive of forecasted development patterns.

FIGURE 4-9: TRANSIT PRIORITY & STRATEGIC EMPLOYMENT PLACE TYPES

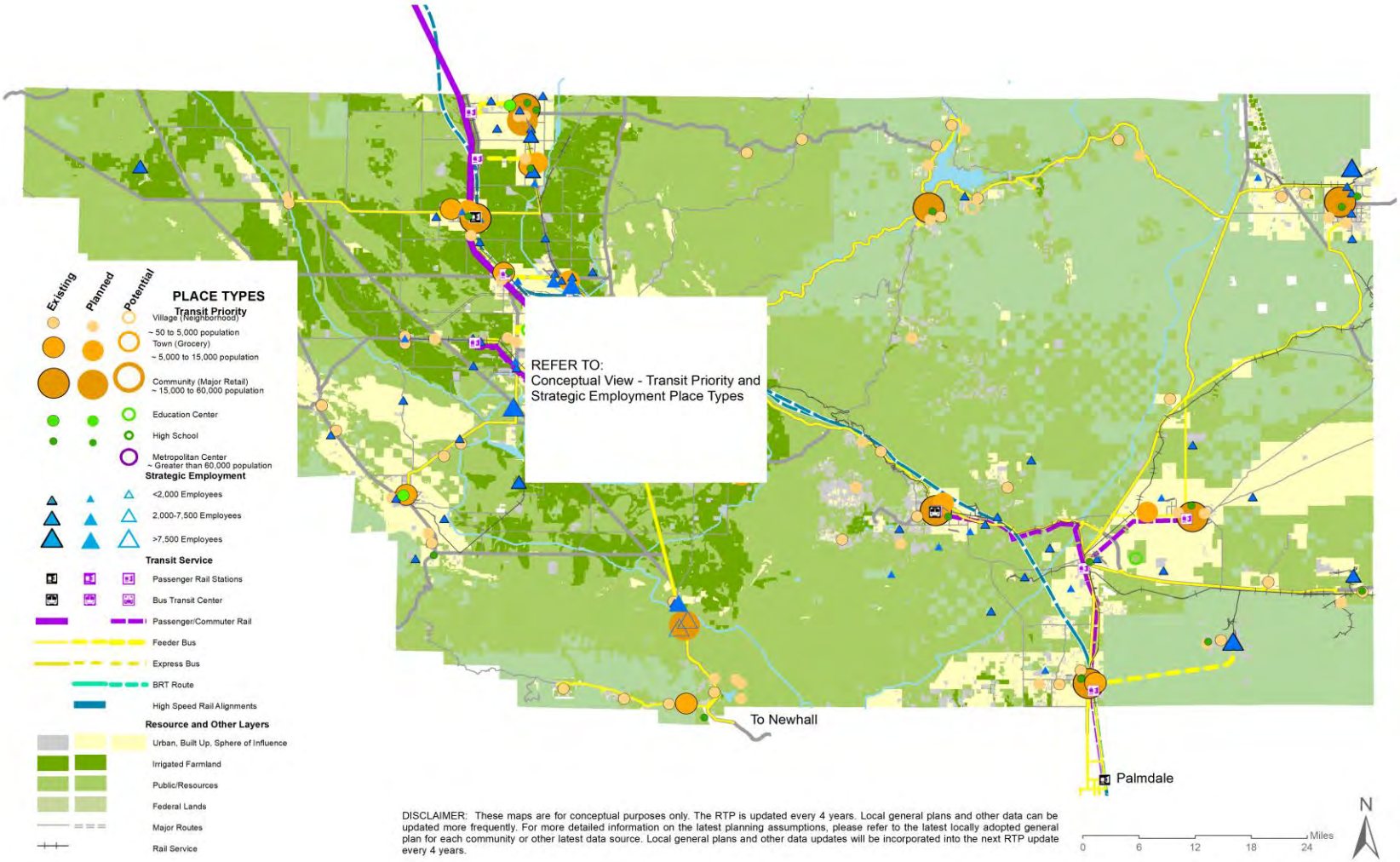
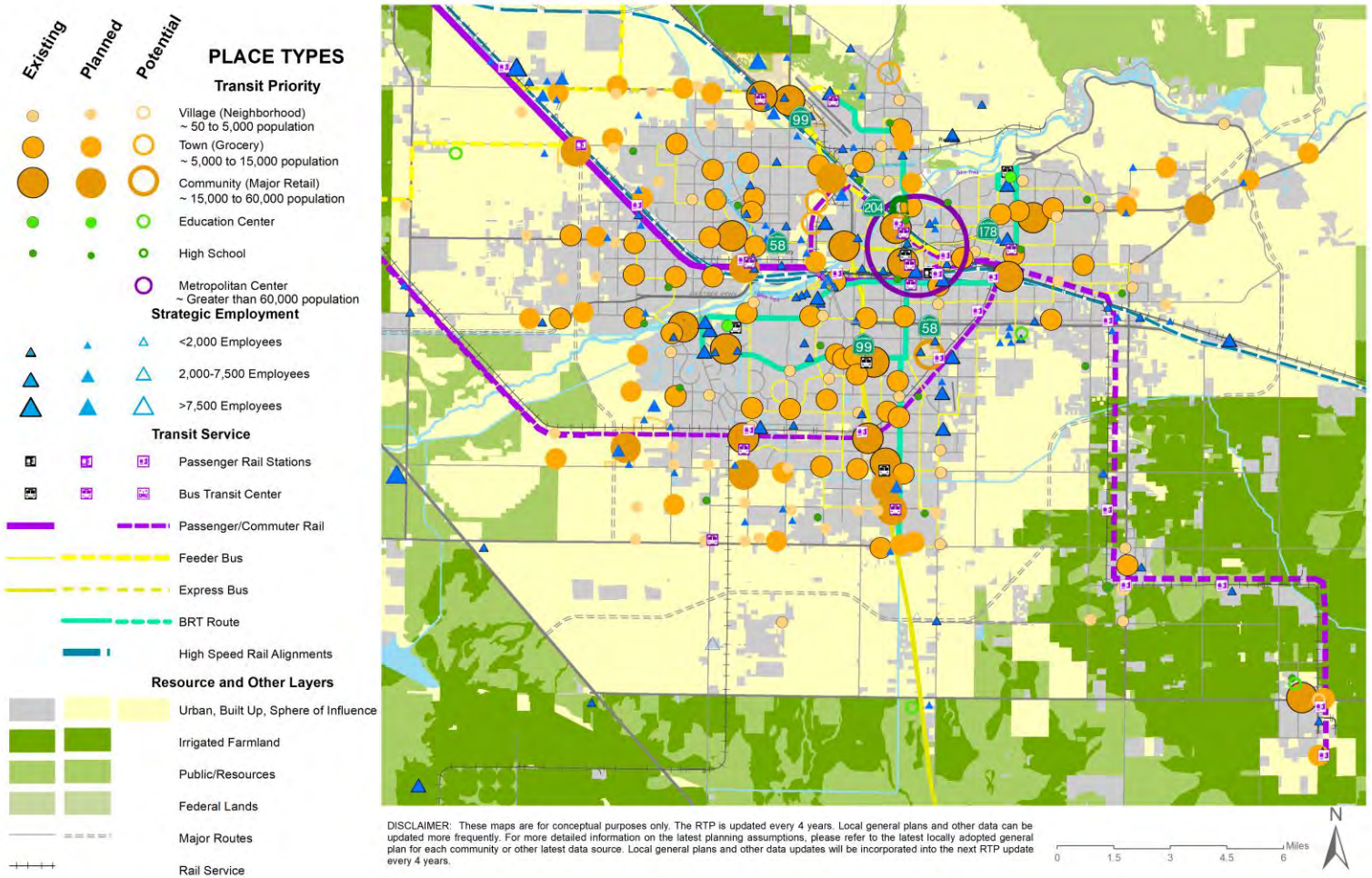


FIGURE 4-10: TRANSIT PRIORITY & STRATEGIC EMPLOYMENT PLACE TYPES – METRO BAKERSFIELD



Education Centers

The SCS Strategy Maps also include existing, planned and potential education centers provided by the Kern County Superintendent of Schools and addressed matched using a geographic information system. Kern COG also interviewed staff at the universities, colleges, and trade schools to ensure the latest information was used in development of the maps.

Forecasted Development Pattern

Figure 4-11 depicts a forecasted development pattern based on local area planning assumptions consistent with the transit priority and strategic employment areas. The map also indicates a network of Quality Transit Areas (QTA). These are areas within one-half mile of fixed route transit service based on planned transit expenditures or a last-mile on-demand service connection to quality transit routes at transit priority place type mobility hubs. Rural strategic employment areas outside the QTAs will also have access to carpool, vanpool and the HOV network being developed to benefit the resource areas consistent with SB 375.

FIGURE 4-11: FORECASTED DEVELOPMENT PATTERN MAP – KERN REGION 2035

DISCLAIMER: These maps are for conceptual purposes only. The RTP is updated every 4 years. Local general plans and other data can be updated more frequently. For more detailed information on the latest planning assumptions, please refer to the latest locally adopted general plan for each community or other latest data source. Local general plans and other data updates will be incorporated into the next RTP update every 4 years.

Transit Priority Areas

The SCS identifies QTAs as being located within ½ mile of fixed route transit service along the length of existing and planned routes. The SCS also identifies illustrative Transit Priority and Strategic Employment Place Types which are primarily strategic employment areas characterized by concentrations of residential uses and jobs in close proximity to transit stations to minimize transportation costs and the carbon footprint. Transit Priority Areas (TPAs) combine these two concepts. TPAs are locations within ½ mile of transit stations where urban uses exist or may be planned. Not all of these areas have been identified, as station planning is in the early stages for some routes. The Golden Empire Transit (GET) Long Range Transit Plan, adopted in June 2012, was developed in anticipation of Kern COG's 2014 SCS.

Figure 4-12: 2020 Metro Bakersfield Modified Mid-Term Transit Improvements

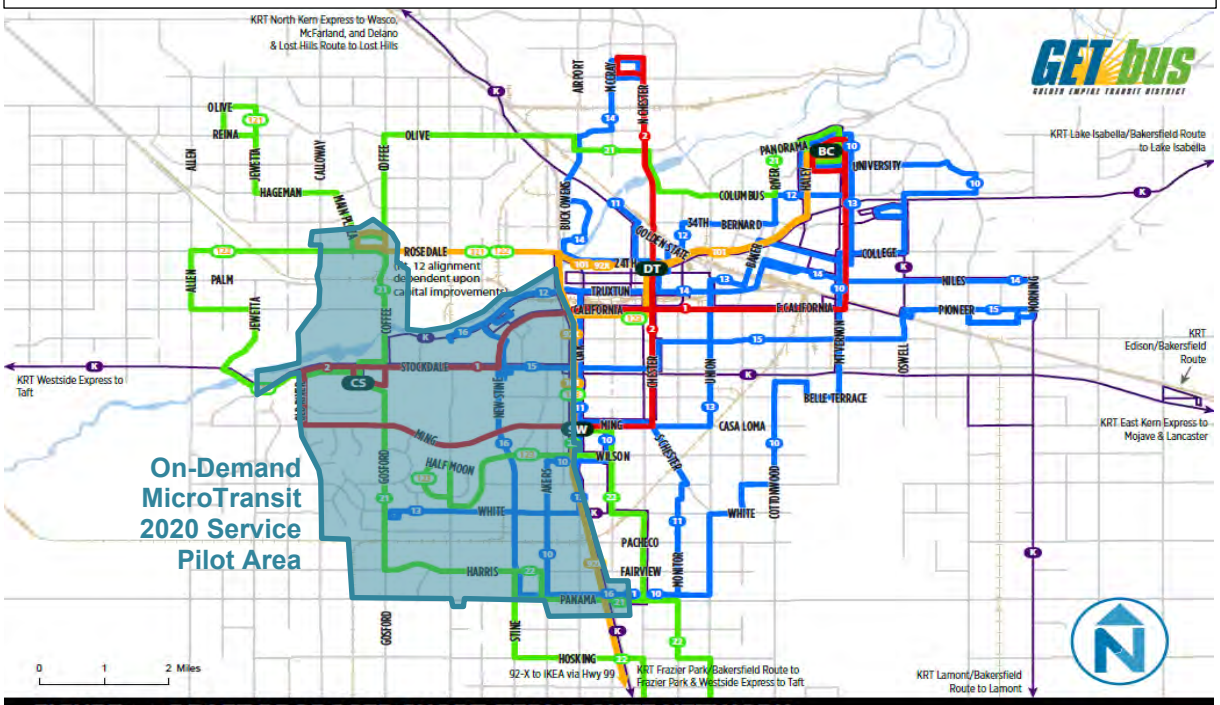
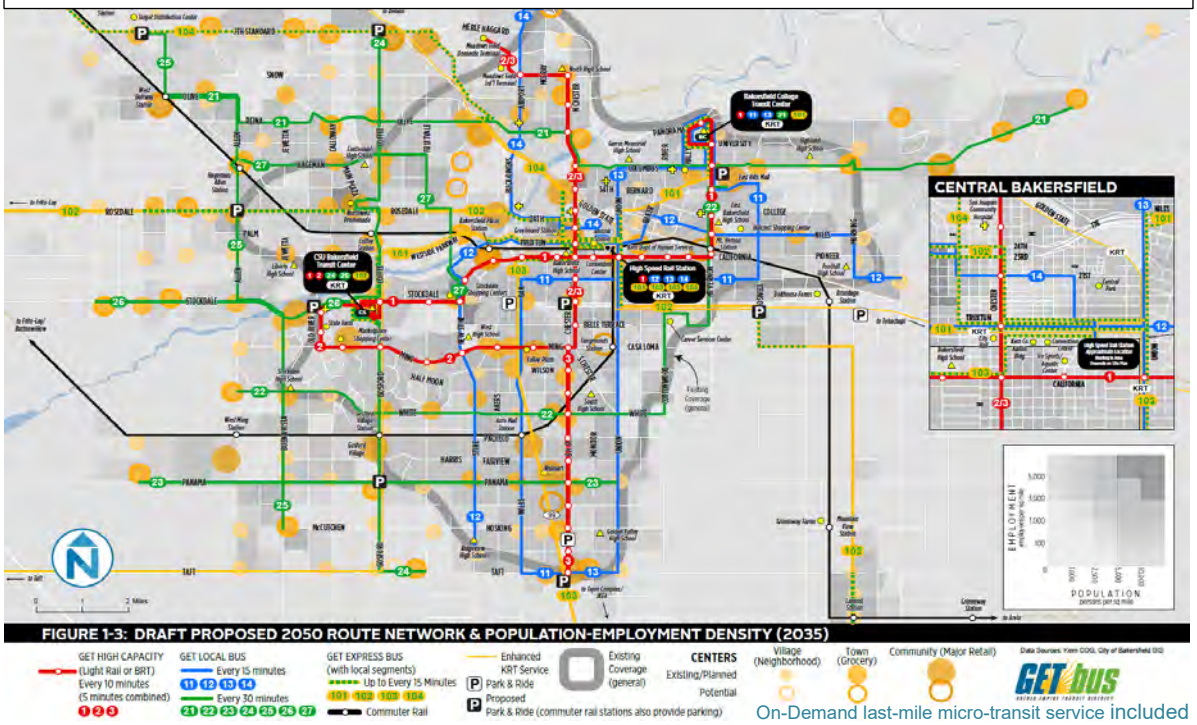


Figure 4-13: 2035-2046 Long-Term Transit Improvements



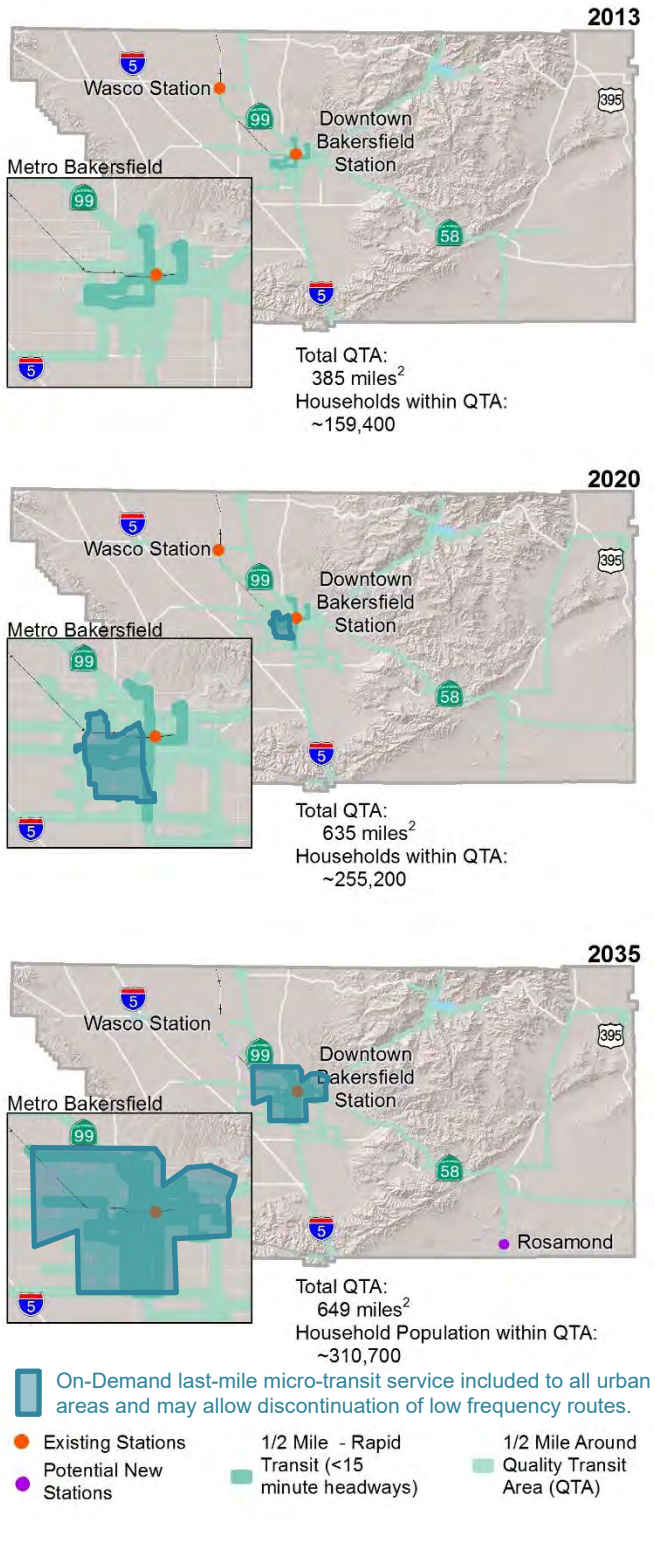
On-Demand last-mile micro-transit service included to all urban areas and may allow

The plan provides for gradual phasing of near-, mid- and long-term improvements. The near-term improvements were implemented immediately after the plan was adopted in 2012. The plan supports the centers/mobility hub concept by providing improved service to Transit Areas in Metropolitan Bakersfield. The red line on the map indicates bus rapid transit (BRT) service now in place, which provides regular service at each stop every 15 minutes. In addition, stops are spaced approximately one-half mile apart to better service the centers concept. **Figures 4-12, 13** illustrate phased improvements to regional transit service. Note that GET is working on updating the long-range transit plan to include micro-transit and new HSR station location. The Long-Range Transit Plan provides for an expansion of transit priority areas that are eligible for environmental streamlining provisions under SB 375. The maps in **Figure 4-14** illustrate the expansion of areas within one-half mile of passenger rail service or bus rapid transit (BRT)/micro-transit (15-minute headways) and/or light rail. Prior to 2012, only 5,600 people lived within one-half mile of high-quality transit areas. The Kern region has been proactive in expanding high-quality transit service since SB 375 passed in 2008. With the implementation of short-term transit improvements in 2012, population served by transit priority areas has already expanded more than 20 times. Another 38% increase is anticipated by 2020, and an increase of up to 225% is anticipated by 2035 over 2012 service areas. The long-range transit plan assumes passage of a local transportation measure or other new funding source.

The Long-Range Transit Plan also analyzed improvements to the Kern Transit express bus system that services outlying communities. The plan found that KT can achieve operating efficiencies by interfacing with GET at its outlying transfer centers, reducing operating costs and allowing service improvements to outlying communities.

In addition, 2012 saw the finalization of the Kern Commuter Rail Study. The study called for consideration of extending L.A. Metrolink service from Lancaster north to Rosamond and Edwards AFB in eastern Kern. The study recommended additional passenger rail stops

Figure 4-14: Expanding Transit Priority Areas to Populations Within One-Half Mile of High Quality Transit



on the Burlington Northern Santa Fe Railway alignment in northwest Bakersfield. The stops may become part of a future passenger feeder rail system for the high-speed rail project.

These transit improvements are subject to the voluntary application of the centers/mobility hub concept or other TOD concepts in local general plans. In addition, other factors include removal of barriers to develop these centers and a healthy, diverse housing market demand, and the resources necessary to improve transit. Note that since the last SCS BRT has been implemented but a new mobility option, micro-transit is providing more convenient, last mile access to the BRT. GET is planning to study this during the next cycle.

Local Agency Formation Commissions' Spheres of Influence

During development of the SCS, MPOs are required by GC Section 65080(b)(2)(G) to consider spheres of influence that have been adopted by Local Agency Formation Commissions (LAFCos) within the region. The duties of LAFCo are to review and approve or disapprove with or without amendment, proposals for the incorporation of cities, formation of special districts, annexation of territory to local agencies, exclusion of territory from a city, disincorporation of a city, consolidation of two or more cities, and the development of a new community. MPOs should consult with LAFCos regarding municipal service review boundaries, foreseeable changes to those boundaries, and service capacities over the period covered by the RTP as well as any local LAFCo-adopted policies regarding conservation of agricultural and open space land, island annexations, annexations, service extensions, and sphere changes. MPOs are encouraged to request the most recent Municipal Service Reviews for local agencies providing services in the region, as well as LAFCo-prepared GIS maps, if available, for all local agency boundaries and spheres of influence in the region. The Executive Officer of LAFCo is a member of the RPAC which provides oversight to the development of the RTP/SCS.

The Transit Priority and Strategic Employment Areas maps (**Figures 4-9** and **4-10**) include the latest spheres of influence areas adopted by LAFCo, and are consistent with the Forecasted Development Pattern Map. It is important to note that the SCS is a snapshot of the latest available information and will be updated every 4 years in consultation with LAFCo.

Regional Housing Needs

Accommodating Eight-Year Regional Housing Needs

Kern COG prepares the RHNA of low- and very low-income housing for each jurisdiction in the region that must be approved by the California Department of Housing and Community Development (HCD). Each jurisdiction is assigned a forecast of housing need that is used in local General Plan housing elements. The law's intent is that all cities provide sufficient housing to accommodate forecast growth in an effort to slow increases in migration from coastal communities to inland communities. The increasing need for lower-income housing may require jurisdictions to consider strategies such as more affordable, compact housing around transit centers. Recent surveys on housing market demand (see Appendix H – Forecast and Modeling Assumptions) indicate a growing interest for higher-density housing and mixed-use development in certain areas. With enough land identified in local general plans to accommodate significantly more than the total forecasted housing need by 2031, and local plans and zoning that are flexible and responsive to changing market trends, the Kern region continues to have little difficulty in providing adequate acreage for low-income housing.

With enough land identified in local general plans to accommodate significantly more than the total forecasted housing need by 2023 … the Kern region continues to have little difficulty in providing adequate acreage for low-income housing.

Kern region's official 6th cycle regional housing need from the California Department of Housing and Community Development (HCD) for the projection period December 2023 – December 2031 is a minimum of 57,650 housing units. This RTP/SCS exceeds and is consistent with the minimum required by the HCD

6th Cycle Regional Housing Need Determination. Of these, approximately 41.6% are expected to be in the very low- and low-income category (affordable to those who make less than 80% of area median income), 16% are expected to be in the moderate-income category (affordable to those who make between 80% and 120% of median income) and 42% are expected to be offered at the above moderate-income category (**Table 4-2**) The allocation represents the minimum housing need that Kern COG's RHNA plan must address in total and also for very-low, low, and moderate income ranges. The SCS incorporates the overall RHNA target for the Kern region and provides a forecasted development pattern that shows where new housing growth can be accommodated in the future.

Table 4-2: RHNA by Income Category

Regional Housing Need Determination by Income Category for Projection Period: June 30, 2023 through December 31, 2031		
Income Category	**Percent (minimum)**	**Housing Units (rounded)**
Very – Low	25.4	14,658
Low	16.2	9,328
Moderate	16.1	9,299
Above-Moderate	42.3	24,365
Total	**100.0**	**57,650**

The RHNA allocation was developed with reliance on local input on projected household growth and responses to local surveys. Results from the surveys support consistency with the state housing goals by encompassing a variety of planning factors that identify opportunities and constraints for jurisdictions to plan for housing at all income levels. These factors include the availability of suitable land, market demand for housing, distribution of household growth along transit corridors, and replacement need. To address increasing concerns regarding affordability, each jurisdiction's future housing need is adjusted to balance the proportion of affordable housing by county across the region. This adjustment considers areas that have a high proportion of certain income groups and adjusts future household growth toward a goal of social equity. This mitigates overconcentration of income groups and encourages planning for affordable housing in areas with limited opportunities in affordable housing.

Pursuant to Section 65584, the SCS must identify areas within the region sufficient to house an eight-year projection of the regional housing need. **Table 4-3** shows the Kern region has more than enough vacant land capacity for housing at a variety of densities to accommodate the regional

Table 4-3: Vacant Land Capacity for Housing Units by Jurisdiction

Jurisdiction	Existing Housing Units (2020)	Residential Units Capacity* (Vacant)		
		Medium, High, and Mixed Use Density	Very-Low and Low Density	Total
Arvin	4,884	536	1,025	1,561
Bakersfield	132,697	27,524	64,870	92,394
California City	5,196	48,354	34,947	83,301
Delano	11,572	1,303	3,493	4,796
Maricopa	432	0	253	253
McFarland	3,412	82	449	531
Ridgecrest	12,359	1,784	3,543	5,328
Shafter	5,412	1,303	19,713	21,015
Taft	2,596	1,065	4,289	5,354
Tehachapi	3,784	460	2,305	2,765
Wasco	6,366	242	3,029	3,272
Unincorporated County	112299	229,230	147,711	376,940
County Total	**301,009**	**311,883**	**285,627**	**597,511**

**The residential units capacity used a GIS analysis of each jurisdiction's latest general plan information outside urban/built-up areas, and demonstrates sufficient existing capacity to accommodate a variety of density ranges to meet each jurisdiction's housing need.*

housing needs for the existing and projected housing population. It is also important to note that in most communities in the region, low density housing rents are affordable to low- and very low-income households. For more information on this issue, the Draft RHNA document is included as Appendix H and is scheduled to be adopted concurrently with the RTP/SCS.

Conserving Resource Areas and Farmland

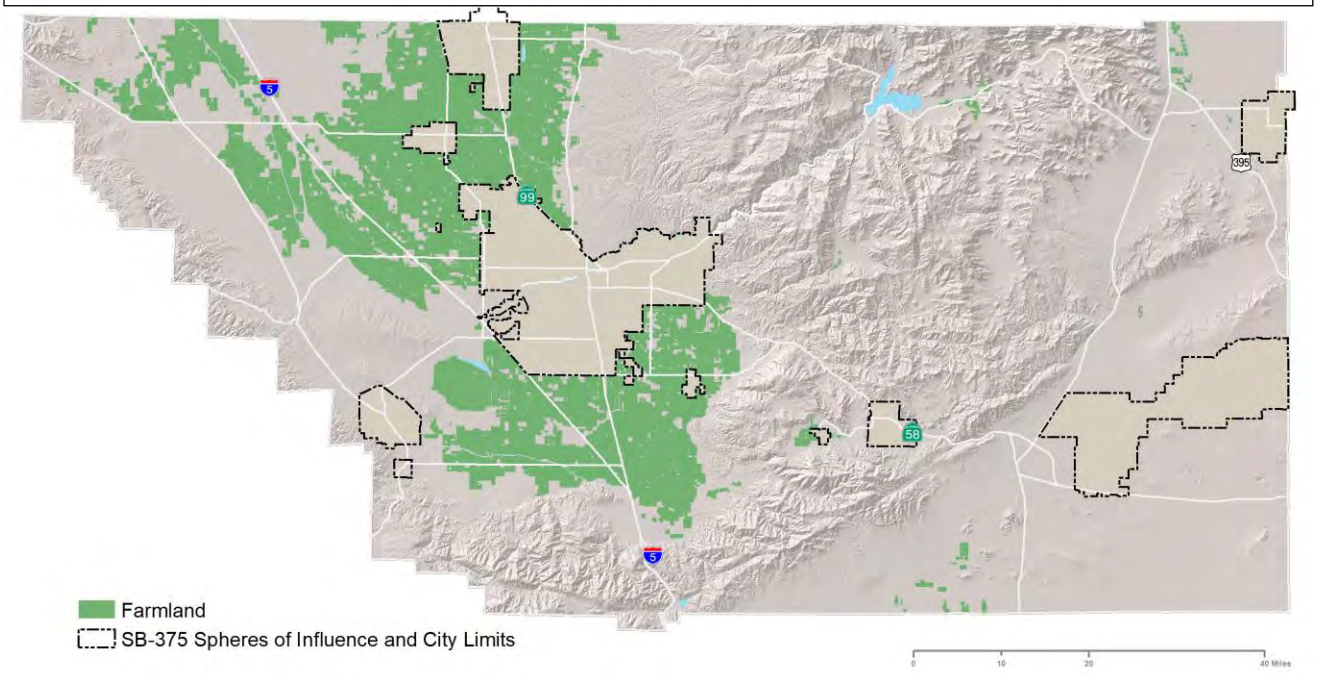
The RTP/SCS forecasted development pattern and transportation system attempts to minimize negative impacts on various natural and manmade resources, by acknowledging local general plan policies and strategies related to conservation of these resources. There is acknowledgement around the region of the need to maintain a balance between the need to urbanize and the need to conserve rural lands and their uses while ensuring land use decisions remain local and private property rights are protected.

Agriculture and Farmland

Agriculture has deep roots in the region's history and future. The Kern region has some of the most productive farmland in the world. According to the 2019 Kern County Agricultural Crop Report, the gross value of all agricultural commodities produced in Kern County is $7.6B which represents an increase of 2% from the prior year.

Kern County's agricultural areas also provide benefits such as habitat, flood control, groundwater recharge, and energy production. Loss of these lands for agricultural purposes has economic, environmental, and social impacts. In developing the RTP forecasted development pattern and transportation system, Kern COG relied on the policies of local governments to develop urbanization assumptions based on the most recent information available. Local land use policies related to agricultural preservation were of particular importance in this effort.

Figure 4-15: Kern County Important Farmland 2018



The California Department of Conservation maps farmland throughout California under the Farmland Mapping and Monitoring Program (FMMP). **Figure 4-15** shows a 2018 FMMP map of these farmlands outside the spheres of influence boundaries. **Table 4-4** presents an acreage summary of the FMMP

mapping categories countywide and outside the spheres of influence. As the table shows, 0.5 square miles (320 acres) per year of important farmland will be consumed by 2046, of which 0.06 square miles (38.4 acres) will be consumed outside the cities spheres of influence annually. The definition of farmland under Government Code Section 65080.01 (b) excludes farmland from spheres of influence boundaries. In the 30-year period from

Table 4-4: Kern County Important Farmland Conversion 1988 - 2046

	Historic Trend				Forecast			Annual Average	
Year	1988	2018	1988-2018	% Change	2046	2018-2046	% Change	1988-2018	2020-2046
Kern County Population	511,200	895,700	384,500	75.2%	1,200,000	304,300	34%	12,800	10,600
Land Including City Spheres of Influence[2] (square miles)									
Urban/Built-Up	126	258	132	104.8%	283	25	9.5%	4.4	0.9
Total Important Farmland[3]	1668	1366	-302	-18.1%	1353	-13	-1.0%	-10.1	-0.5
Farmland to urban/ built-up			-40	-2.4%	1353	-13	-1.0%	-1.3	-0.5
Farmland to other[4]			-263	-15.8%	1353	0	0.0%	-8.8	0.0
SB 375 Defined Land Outside City Spheres of Influence (square miles)									
Urban/Built-Up	39	102	63	161.5%	113	11.0	13.3%	2.1	0.42
Total Important Farmland[3]	1407	1163	-244	-17.3%	1168	-1.5	-0.1%	-8.1	-0.06
Farmland to urban/ built-up			**-8**	**-0.6%**	**1168**	**-1.5**	**-0.1%**	**-0.3**	**-0.06**
Farmland to other[4]			-236	-16.8%	1168	0.0	0.0%	-7.9	0.00

Source: California Department of Conservation Farmland Mapping Monitoring Program (FMMP) 1988-2018, Kern COG Land Use Model 2020-2046; [2]analysis used SB375 required city sphere boundaries; [3]identification of important farmland in 2046 includes areas designated for agriculture by the local general plans; [4]conversion of farmland to other uses include fallow/no water available, groundwater recharge, habitat and other uses not analyzed with the Kern COG land use model. This land use forecast is limited to land lost from future urbanization. Figures may not add due to independent rounding. Analysis excludes urbanization from 2018-2020 because it was not yet available from FMMP.

1988 to 2018, an average of 0.3 square miles (192 acres) of farmland per year was converted to urban use outside city spheres. With this RTP, farmland consumption may be reduced as much as 80% to an average of 0.06 square miles (38.4 acres) per year through 2046.

During the period from 1988 to 2018, the region grew by 75.2% or 384,500 people and urban/built-up areas grew at a rate of 104.8%. In the same timeframe, approximately 302 square miles of farmland was converted to urban and other uses (18.1% of total important farmland). Surprisingly the majority of this conversion was outside spheres of influence to other non-urban uses (solar farms, fallow/no water available, groundwater recharge, habitat, etc.). Over the past two decades water availability has had a more significant impact on farmland conversion than urbanization, driving conversions to solar farms and habitat.

For the 2018-2046 planning period (28 years), this RTP/SCS forecasts the addition of 290,900 people and the conversion of 13 square miles. This significantly lower rate of conversion is due largely to local government efforts to balance urban expansion with the conservation of economically viable farmland. This decrease in the impact to farmland from the RTP is important, as the viability of the agriculture industry is correlated with the amount of land in production and the type of production. Limited farmland conversion outside identified areas for economic growth can help to maintain the economic output related to agriculture in the Kern region and protect employment in the agricultural industry.

The California Legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. An agricultural preserve defines the boundary of an area within which a city or county will enter into Williamson Act contracts with landowners. The Williamson Act creates an arrangement whereby private landowners contract for a minimum of 10 years with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value.

Farmland Security Zones are another vehicle to preserve agricultural and open space lands. Farmland Security Zones offer landowners greater property tax reduction than that of the Williamson Act. Land restricted by a Farmland Security Zone contract is valued for property assessment purposes at 65% of its Williamson Act valuation, or 65% of its Proposition 13 valuation, whichever is lower. The minimum initial term for a farmland Security Zone Contract is 20 years.

Though state subventions to backfill lost property tax revenue have been eliminated, the program is still embraced by the County and remains an important part of its farmland conservation strategy. Private land use agreements, such as the Tejon Ranch Conservation and Land Use Agreement, are another alternative method to conserve the right to continue farming agricultural lands.

A Notice of Conservation Easement can be placed on land to retain land predominantly in its natural, scenic, historical, agricultural, forested, or open-space condition. A conservation easement is a voluntary agreement between a landowner and a land trust or government agency that permanently limits the uses of the land to protect its conservation or agricultural value. The landowner retains ownership of the land, but certain restrictions are agreed on through the easement, and recorded on the deed. Eleven land trusts currently operate in Kern County, covering thousands of acres of land.

Only one percent of agriculture and open space lands (49 out of 3,580 square miles) are in city spheres of influence where they may be at risk for urbanization.

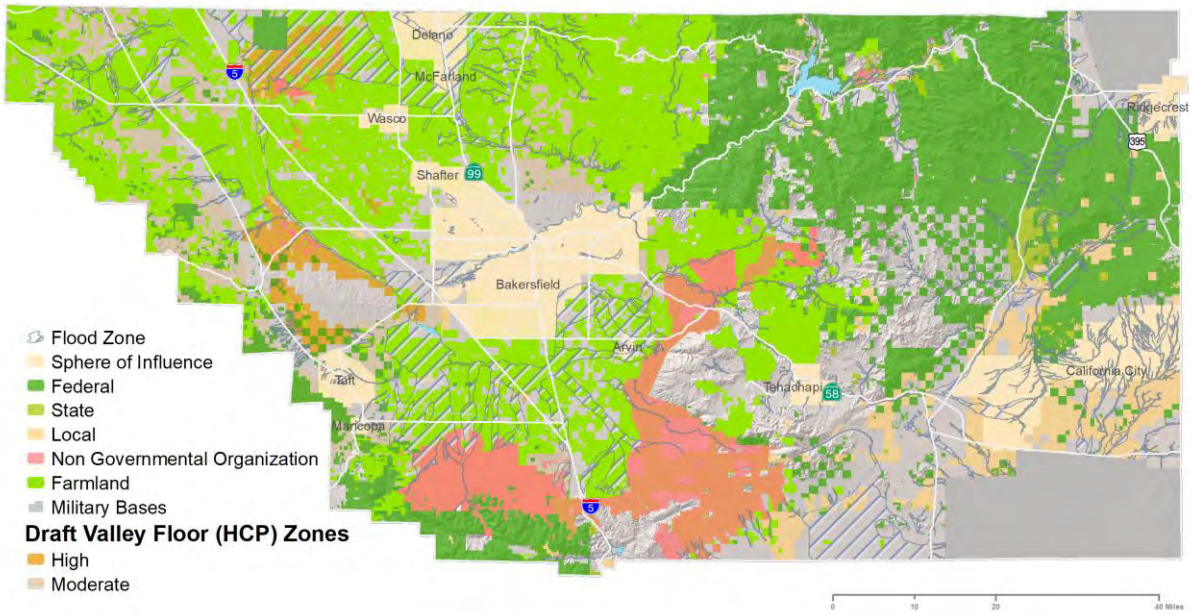
Recreation and Open Space

Beyond agriculture, open space includes forestry, parks, trails, and wildlife areas that provide habitat and support recreational activities, educational opportunities, and the connection and transition between built and natural environments. Kern COG's inventory of these lands currently account for roughly 3,500 square miles of parks and conservation lands or 43% of the total area of the county. Only one percent of agriculture and open space lands (50 out of 3,500 square miles) are in city spheres of influence where they may be at risk for future urbanization. (**Figure 4-16**).

According to federal and state requirements, every land development and transportation project must mitigate, or compensate for, the loss of identified habitat. In response to the mandate to conserve natural resources in a more systematic manner, several private development companies and jurisdictions in the region have developed habitat conservation plans (HCPs) and natural communities conservation plans (NCCPs). **Table 4-5** describes the HCPs approved in Kern County.

HCPs are voluntary from private companies. One of the largest is the Metropolitan Bakersfield Habitat Conservation Plan which covers 409 square miles of the largest city and sphere of influence in Kern. A

Figure 4-16: Resource Areas: Farmland, Habitat, Open Space and Government Lands 2018



Joint Powers Authority (JPA) between the City of Bakersfield and Kern County has managed the HCP since adoption in 1994 for coverage of incidental take of identified protected species under State and Federal law. The plan was in place for a 20-year timeframe and has successfully conserved close to hundreds of square miles of land for these species. The City and County are working under a time extension for development to process a new permit and timeline. To date no NCCP has been adopted in Kern County, but they are being considered.

Table 4-5: Kern County Habitat Conservation Plan Areas

Habitat Conservation Plans	Acres
PG&E San Joaquin Valley Operations & Maintenance HCP	276,350
Metropolitan Bakersfield HCP	262,000
Nuevo-Torch	21,800
Kern Water Bank	19,900
Seneca and Enron Oil and Gas	650
Cal. Dept. of Corrections Delano Prison	635
Aera Block 12 Development Project	496
Lamont Public Utility District	160
Champagne Shores	82
Chevron Pipeline	26
Total (909 sq. mi., or 11% of Kern County)	582,017

Source: U.S. Fish & Wildlife Environmental Conservation Online System (ECOS) 2021

Conservation organizations also provide an important contribution to open space. To date, nearly 1,000 square miles of land has been acquired by conservation groups including, but not limited to the Nature Conservation, Trust for Public Lands and Sequoia Riverland Trust. These conservation easements and fee ownership of large ranches provide important linkages for wildlife as well as property owner and community benefits.

During implementation of specific projects, an activity subject to Section 10 of the Endangered Species Act and considered a covered project under the implementing rules of an adopted HCP or NCCP may be able to participate in the plan. To the extent possible, Kern COG and local jurisdictions work with federal agencies and regional partners regarding proposed development in areas containing federally or state protected natural resources. Kern COG gathers and considers information on the timing of any applicable permits and their relationship to

HCP and NCCP planning efforts to feed into phasing assumptions for the RTP land use forecast. Given available data, mapping, and HCP and/or NCCP status, Kern COG recognizes the constraints imposed by the federal and state Endangered Species Laws. The ultimate resolution of the many ongoing natural resources planning efforts will have a major influence on future growth patterns in the region. The forecasted development pattern in this RTP considered the uncertainties associated with these ongoing efforts throughout the region. The progress of these planning initiatives will be carefully monitored, and it is expected that once the HCPs/NCCPs are adopted and being implemented, their provisions will have a significant influence on the land use forecasts in future RTP/SCS cycles.

It is important to point out that the land use modeling used for the RTP/SCS is constrained to the local adopted general plans which implement the HCPs/NCCPs. This ensures that the SCS adopted forecasted development pattern will not plan for growth in areas identified in the HCPs/NCCPs for conservation. The County of Kern is in the midst of a major general plan update. The update will address land use conservation issues such as habitat and farmland. Appropriate changes to the county's update will be reflected in future RTP/SCSs.

Framework and Funding for Streamlined Land Conservation

The Kern region is committed to funding conservation easements on a project-by-project basis and has implemented an innovative process for this effort. This commitment is exhibited in three ongoing efforts:

- **Framework for Coordinating Strategic Investments in Land Conservation** – Kern COG provided $300,000 in planning funds to assist in developing the Metropolitan Bakersfield HCP and Valley Floor HCP in an effort to streamline mitigation of habitat land for transportation projects in the region. They provide a tool to integrate conservation data into project level alternative selection and development and coordinate strategic investments in mitigation.
- **Funding Program for Conservation Easements** – Habitat mitigation has become a major cost in the development of transportation projects, sometimes as high as 20% of the project cost. A typical widening project in flat rural areas averages about 3% in habitat mitigation in the Kern region. With $2.2 billion in state/federal highway capital costs (see Chapter 6, **Table 6-1**) approximately $67 million will be used to acquire conservation easements. Assuming a typical easement is estimated at $13,000 per acre, enough transportation funding will be available to purchase approximately 8 square miles by 2046. High speed rail could add up to 4.5 square miles in the San Joaquin Valley and habitat and farmland mitigation from future land development, energy production and other uses will provide significant funding streams to ensure conservation goals in the region.
- **Addressing Farmland and Habitat in the Kern County General Plan Update** – The County of Kern is in the midst of a major general plan update that began in 2014. County land use authority makes this general plan update the appropriate venue to comprehensively address farmland and habitat conservation efforts. The results of those efforts will be reflected in the next RTP update as appropriate.

MOVING PEOPLE AND GOODS IN KERN COUNTY: A SUSTAINABLE TRANSPORTATION NETWORK

The RTP is at its core a transportation plan. The SCS seeks to better coordinate the process that Kern COG and local agencies use to prioritize long-range transportation investments by ensuring that they are aligned with the forecasted development patterns which achieve RTP goals. This section discusses the following components of a sustainable transportation system to serve the needs of the Kern region:

- A revenue-constrained transportation network funded by financial resources expected between now and 2046.
- Transportation Demand Management (TDM) measures.
- Transportation System Management (TSM) measures.
- Pricing measures.

Each of these four components is explained in further detail in Chapter 5, Strategic Investments.

Revenue-Constrained Network

Important parts of the revenue-constrained transportation network, which is described more fully in Chapter 5, Strategic Investments, includes an emphasis on maintenance, global gateways, a significant investment in public transit (rail and bus), and facilities that encourage walking and bicycling as forms of active transportation. The aim of these investments is to significantly increase the attractiveness of these more-efficient, less-polluting forms of transportation. Investments in the Kern region's local streets and roads, including access to regional airports, goods movement projects, and TDM and TSM projects and programs, also are integral to the overall transportation network.

Rail/Public Transit

The overarching goal of the rail and public transit investments detailed in this RTP is to provide high-volume rail and transit corridors to move goods and people in and through the region. The objective is to efficiently move goods to and through the region, while connecting homes to the major regional employment centers and high-speed connections to destinations beyond the region.

Rail and public transit measures identified in this RTP (see Chapter 5) include:

- 320 new buses in the region including Bus Rapid Transit, Rapid Bus, and Express Bus Service
- Extension/enhancement of transit and on-demand micro-transit service to new and intensified centers and mobility hubs
- Addition of an HSR station and potential feeder passenger rail stops
- Carsharing (Miocar), ridesharing and voluntary employer-based incentives
- Traffic flow improvements/railroad grade separations/roundabouts
- Park and ride lots and vanpooling

Figures 4-8 through **4-14** show the high level of integration between the planned transit system and the forecasted development pattern consistent with the Long-Range Transit Planning in the region.

Bicycles and Pedestrians

Investments that promote bicycling and walking also are an important part of the revenue-constrained transportation network. In 2017 Kern COG completed the Kern Active Transportation Plan to build on previous planning efforts, conversations with community stakeholders, and careful observations of the existing transportation network to establish recommendations that can help make Kern County a better place for people to walk and bike. The Plan encourages safer, healthier communities that provide safe and comfortable access to local parks, schools, workplaces, retail, transit and other essential destinations. One objective of the Plan is to serve disadvantaged communities by improving bicycle and pedestrian infrastructure, safety and accessibility. For example, bicycle lanes and bicycle boulevards are recommended throughout Lamont and Weedpatch to provide better connectivity and safer local and regional bicycle travel. Regional connectivity to Arvin will be enhanced through the addition of bicycle lanes and bicycle routes on several other key corridors in southeast Metropolitan Bakersfield. Corridor improvements are also recommended in Lamont along Panama Road, Myrtle Avenue, and San Diego Street to create a stronger pedestrian network and to improve connections to schools and parks. Corridor improvements are also proposed along State Route 184, which runs through both Lamont and Weedpatch, to address a history of pedestrian-related collisions.

Table 4-6: Existing/Planned Bicycle Travel Facilities Mileage by Community

	Existing	Planned
Unincorporated County	108	593
Arvin	5	30
Bakersfield (Metro)	281	534
California City	10	36
Delano	8	34
Maricopa	0	10
McFarland	7	31
Ridgecrest	27	63
Shafter	8	39
Taft	20	18
Tehachapi	19	22
Wasco	2	52
Total	494	1,461

Note: Existing estimated from previous construction awards. Planned expansion from 2017 Kern Regional Active Transportation Plan

The Plan calls for an additional 1,245 miles of new Class I, Class II and Class III bicycle paths, lanes and routes in the Kern region. The Plan also calls for 242 miles of pedestrian facilities in the Kern region.

In 2012, Kern COG completed the Kern County Bicycle Master Plan and Complete Streets Recommendations to enhance bike, pedestrian and transit use of the transportation network in the unincorporated portion of Kern County. Since the adoption of the plan Kern County has been one of the most successful regions in California in applying for and being awarded grants for bike and pedestrian facilities. In the 2014 RTP/SCS Kern COG forecasted it would receive $37 million for active transportation projects by 2040. In the first 6 years of that plan Kern has already received more than double that amount with roughly half coming from the state Active Transportation Program. However, since that plan, the identified need has doubled with the adoption of the 2017 Active Transportation Plan. Still, staff forecasts that we should be able to fully fund the projects in the Active Transportation Plan over the next 24 years should our recent funding success continue.

Bicycle and pedestrian measures identified in the 2017 Active Transportation Plan include:

- 41 miles of Class I bike paths
- 291 miles of Class II bike lanes
- 287 miles of Class III bike routes
- Bike parking facilities
- 16 miles of neighborhood green streets

- Pedestrian facilities as part of local transportation projects and developments
- 116 miles of Canal Bike Paths

Planned bicycle travel facility mileage by community in Kern County is provided in Table 4-5. Bicycle and pedestrian measures identified in the 2022 RTP (see Chapter 5) include:

- Encourage member jurisdictions to implement their adopted local bicycle plans and to incorporate bicycle facilities into local transportation projects.
- Continue to seek funding for bicycle projects from local, state, and federal sources.
- Continue to seek funding to maintain existing bikeways.
- Promote the purchase and construction of bicycle racks and lockers for Kern County multimodal stations.
- Promote the inclusion of bike tie-downs and racks on commuter trains and buses.
- Fund updated Bicycle Facilities Plans for the incorporated cities.

Figure 4-17: Proposed Bicycle Facilities in the 2017 Kern County Active Transportation Plan

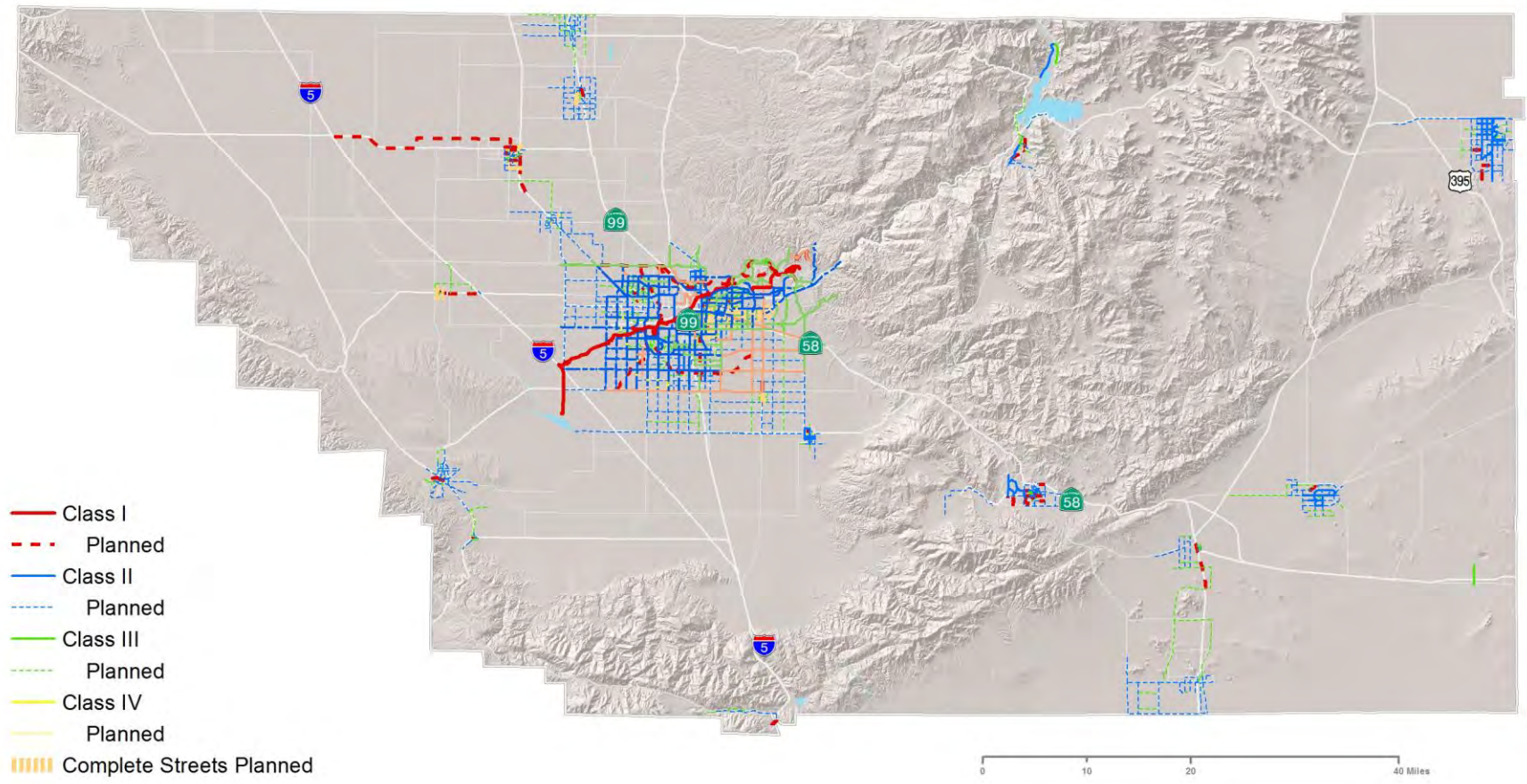
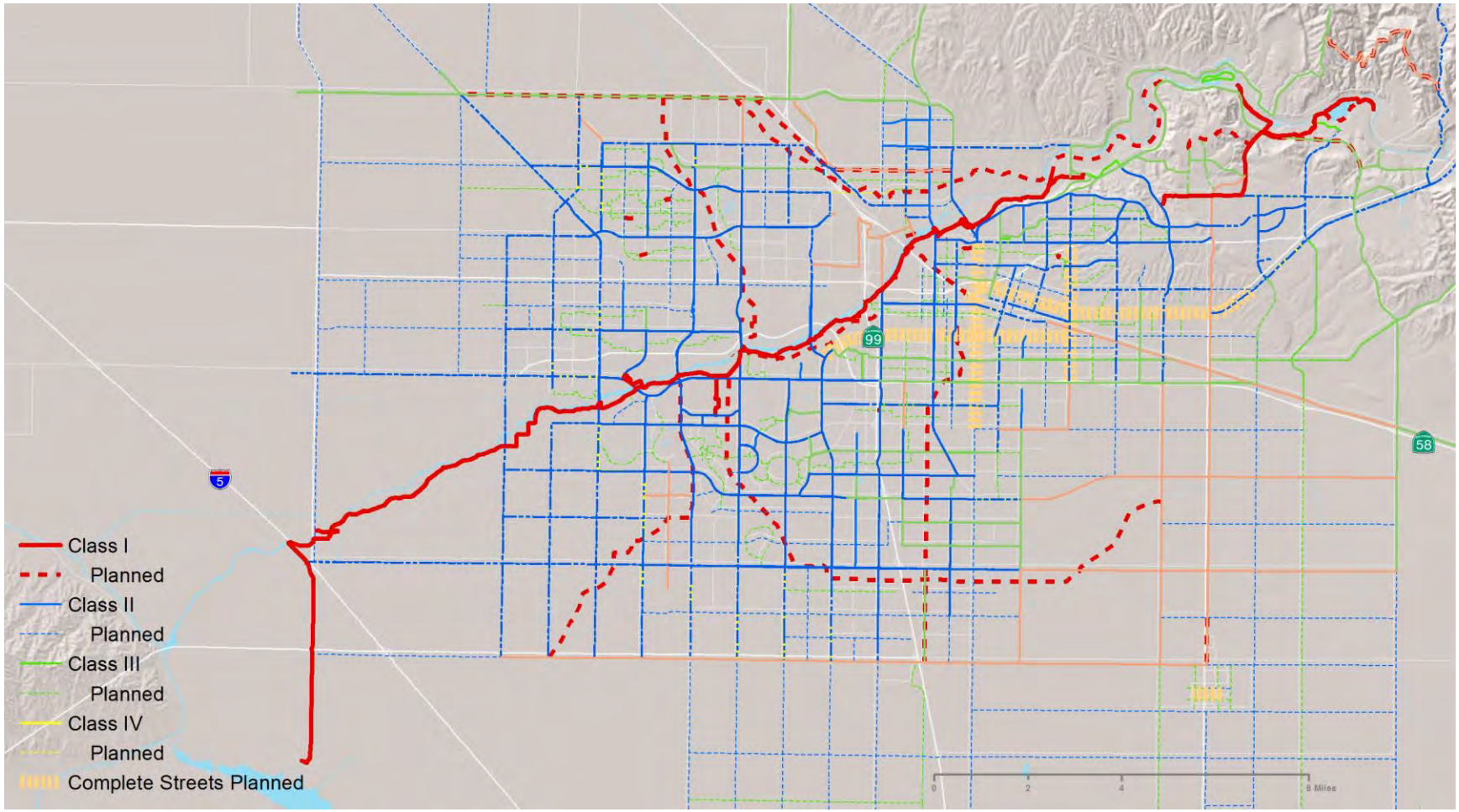


Figure 4-18: Proposed Metro Bakersfield Bicycle Facilities in the 2017 Kern County Active Transportation Plan



Highway/Road Facilities and Complete Streets

The Complete Streets Act of 2008 requires local jurisdictions in California to plan for the needs of all transportation system users with every major revision to general plan local circulation elements. Highways and roads can be designed to optimize pedestrian, bike, and transit usage. The complete streets approach affords policymakers, planners, and engineers the opportunity to carefully evaluate and accommodate the needs of motorists, pedestrians, cyclists, transit vehicles and transit users, the young and old, and the able-bodied and physically challenged through the entire project development process. This ensures that the needs of all users of the public right-of-way are properly accommodated based on informed decisions about existing and future demand and that proper accommodations are designed into the project from the outset.

Highway/road facilities and complete streets measures identified in this RTP in Chapter 5 and include:

- As roads are maintained, bikeways should be implemented and upgraded per local development standards.
- Apply for funding to implement bike and pedestrian projects in the active transportation plan.

Transportation Demand Management Measures

TDM measures are important in helping to improve the efficiency of the region's regional transportation system. These measures help reduce or eliminate vehicle trips during peak periods of demand. They typically offer programs and incentives to encourage the use of modes of transportation other than driving alone or to encourage people to shift their trips to times when demand on the transportation system is low. Examples of current TDM measures are employer-sponsored transportation benefits, regional transit and vanpool subsidies, and carpool and biking incentives.

TDM measures identified in the 2022 RTP (see Chapter 5) include:

- Free car-pool and van-pool programs
- Transit
- Park and ride lots
- Encourage flextime programs
- Intelligent transportation system technologies

Transportation System Management Measures

TSM measures also help to maximize the efficiency of existing and future transportation facilities. A combination of programs—including signal and ramp metering coordination and optimization, improved performance monitoring, and advanced vehicle and roadside communication platforms—will increase the ability of operators to monitor the performance of the transportation system, manage the system better, and improve efficiency.

TSM measures identified in the 2022 RTP (see Chapter 5) include:

- Carpool facilities where appropriate
- Traffic signalization and synchronization
- Ramp metering where appropriate
- Truck auxiliary lanes on major inclines
- Railroad grade separations

Pricing Measures

Pricing strategies are also used to reduce the demand on the Kern region's transportation system. On major freeway and highway facilities, HOV lanes/ramps, ramp metering. HOV/Bus lanes, and variable toll lanes (in northern L.A. County) are used by Kern's drivers to and fund new capacity for non-single-occupant vehicle traffic with trips extending in to Kern County. In other California regions, odometer-based tolling (i.e., a passenger vehicle travel fee) is also being considered to fund and maintain infrastructure that support goods movement activity. Variable parking costs, including time limits, are also used as a strategy to reduce congestion during peak periods. The rising cost of fuel in the Kern region can act as a TSM measure.

Pricing measures identified in this RTP (see Chapter 5) include:

- Assume a vehicle operating costs by 2035 consistent with the San Joaquin Valley Transportation Planning Agencies validated methodology used by the 7 COGs to the north and approved by ARB. The methodology includes region-specific fuel prices, effective passenger vehicle fuel efficiency, which are used to calculate the fuel related automobile operating costs, and also includes non-fuel related costs (tires, insurance, etc.)
- Continue timed parking and parking pricing in downtown Bakersfield parking structures.
- Congestion pricing in North L.A. County implemented by FasTrak and subscribed to by Kern residents that use these variable toll lanes.

REDUCING GREENHOUSE GAS EMISSIONS IN KERN COUNTY

The key purpose of SB 375 and the Kern region SCS is to reduce per capita emissions originating from passenger vehicles and light trucks. This section:

- Compares the emissions reductions anticipated with implementation of the SCS with the regional targets.
- Quantifies the effect of policies and programs in the RTP that reduce transportation-related emissions in the region.
- Describes sources of emissions in the Kern region, 2020 and 2035 emission reduction targets established by CARB for the San Joaquin Valley, and modeling techniques used to estimate and forecast emissions.
- Identifies statewide strategies to reduce transportation-related emissions and their anticipated effect within the Kern region.
- Identifies regional strategies that complement the SCS by reducing emissions in other sectors (e.g., energy consumption).

Comparison to Reduction Targets

In 2018, CARB set targets for lowering emissions in the eight San Joaquin Valley counties. The targets call for a 9% reduction in per capita emissions from passenger vehicles and light trucks by 2020, and a 15% reduction by 2035 through land use and transportation planning.

Based on the analysis of strategies included in the SCS, CO_2 emissions are anticipated to be 10.8% lower than 2005 levels by 2020 and 15.1% lower by 2035, exceeding the targets established by CARB in 2018 as illustrated by **Table 4-7**.

Table 4-7: Results of Greenhouse Gas Emissions and Vehicle Trips Reductions

Indicators and Measures	2020	2035	2046
Total Population	906,710	1,076,000	1,200,000
Vehicle Miles Traveled (VMT)			
VMT per Weekday (Miles, in Thousands)	23,980	26,979	28,782
VMT by Passenger Vehicles per Weekday (-XX, Miles, in Thousands)	19,630	22,305	24,601
Per Capita VMT (All Travel)	26.45	25.07	24.05
Per Capita VMT SB 375	21.65	20.73	20.56
Difference between 2005 Base Per Capita VMT (24.22 miles)	-10.6%	-14.4%	-15.9%
SB 375 CO2 Emissions			
Modeled SB 375 CO2 Emissions by Passenger Vehicles per Weekday (tons)*	7,299	8,323	9,287
Off-Model SB 375 CO2 Emissions by Passenger Vehicles per Weekday (tons)**	-146	-206	-252
Total SB 375 CO2 Emissions by Passenger Vehicles per Weekday (tons)	7,152	8,117	9,035
CO2e Pounds Per Capita Reduction*	-10.9%	-15.1%	-15.4%
SB 375 Targets (Targets Beginning October 1, 2018)**	-9%	-15%	N/A

** The first RTP/SCS was developed using Emfac2011, however the modeling for this RTP/SCS uses Emfac2014, therefore, adjustment is needed to isolate SCS strategy impacts from changes due to emission modeling assumptions.*

*** Off-model strategy adjustment made consistent with Kern COG Technical Methodology and described in RTP/SCS Ch. 4. 2042 assumes the same level of off-model adjustment as 2035.*

**** Targets are expressed as a percent change in per capita passenger vehicle greenhouse gas emissions relative to 2005; CARB first set regional targets on September 23, 2010 and updated targets on March 22, 2018. Targets are updated every 4-8 years.*

Modeling

To better maintain consistence with the 2018 RTP/SCS, the analysis of strategies for the SCS used the same UPlan land use model, and the same travel demand model (updated and revalidated with the 2019/2020, over 1,200 traffic counts and 2020 U.S. Census data), and the same CARB Emission Factor model (EMFAC 2014) as requested by CARB. The modeling methodology was developed in close coordination with CARB and the 7 other San Joaquin Valley COGs using the best available information and best modeling practices. The modeling reflects all the strategies that are technically feasible to model and avoid double-counting with state-level strategies. The modeling follows the CARB and California Transportation Commission (CTC) guidelines for demonstrating progress toward the targets to ensure that strategies are NOT double counted. A more detailed discussion of modeling assumptions and forecasts can be found in Chapter 3.

Table 4-8: Quantified SCS Strategy Types and Categories

Strategy Type	Quantification Approach	Responsible Agencies	Status -- Notes
Land Use:			
Infill, compact development, transit-oriented development, mixed-uses and allocation of growth along transportation corridors and in areas with higher access to bike, ped, and transit	Traffic/land use model	Local jurisdictions	Present in last plan -- Consistent with Core Area Impact Fee Development Incentive
Rebalance housing closer to employment/shopping areas	Traffic/land use model	Local jurisdictions	Present in last plan -- Assumes more shopping opportunities and housing in outlying communities near jobs
Accessory Dwelling Units (ADUs)	Traffic/land use model	Local jurisdictions	Present in last plan
Transit:			
Add new fixed transit lines/improve frequencies/Bus Rapid Transit/Express Bus Service	Traffic model	Transit Agencies	Present in last plan – Long Range Transportation Plan (LRTP)
Expanded bus routes coordinated with planned centers/mobility hubs	Traffic/land use model	COG, Transit Agencies, Local Jurisdictions	Present in last plan -- LRTP
Transit/On-demand Micro Transit/Dial-a-Ride Improvements	Off model	Transit Agencies,	New quantified strategy
Transportation Demand Management (TDM):			
Vanpooling	Off model	Vanpool entities	New quantified strategy
Employer- based trip-reduction programs (Rule 9410) eTRIP	Off model	Air District	New quantified strategy
Additional Bike & Pedestrian Infrastructure	Off model	Local jurisdiction	New quantified strategy
Telecommuting Promotion	Off model	COG	New quantified strategy
Transportation System Management (TSM):			
Transportation System Management (TSM), Intelligent Transportation Systems (ITS)	Off model	Local jurisdiction	New quantified strategy

Strategy Type	Quantification Approach	Responsible Agencies	Status -- Notes
Add HOV facilities	Traffic model	Caltrans	Present in last plan – ramp metering
Technology Improvements:			
Additional Regional/Local Electric Vehicle Charging Station Installations	Off model	Local jurisdiction	New quantified strategy
Miocar Electric Carsharing in Disadvantaged Communities	Off model	COG, Non-profit	New quantified strategy
Bike Share Program with SPIN-FMC	Off model	Local jurisdiction	New quantified strategy
Regional Electric Vehicle Incentive Program	Off model	Air District	New quantified strategy
Pricing:			
Parking Management Program	Off model	Local jurisdiction	New quantified strategy
Reduced in transit fares	Traffic model	Local jurisdiction	Present in last plan
Increased Fuel & Auto Operating Costs	Traffic model	State	Present in last plan – 37% increase in AOC
Circulation Improvements:			
Delay Need For Capacity Projects	Traffic model	COG, Local jurisdictions	Present in last plan – delay south and west beltways

Off-Model Adjustments

The land use, travel and air quality models used are not able to account for all the benefits of some SCS strategies toward achieving the targets. This SCS quantifies ten strategies that further SCS goals while avoiding overlapping or double counting strategies. The three most effective off-model strategies are promotion of electric vehicle charging facilities, telecommuting, and the SJVAPCD Rule 9410 eTRIP program that requires large employers greater than 2050 employees to encourage vanpooling and telecommuting. To avoid double counting, Kern COG has subtracted the vanpooling emissions savings from the Rule 9410 strategy and subtract the Rule 9410 strategy emission savings from the Telecommuting strategy.

Off-Model Adjustment Strategy Details

The following list of off-model adjustment strategies are not duplicative of the strategies quantified using the traffic model.

- **Electric Vehicle Charging Station Installation Program** – Kern COG has developed an EV Charging Blueprint plan and is working with local jurisdictions to apply for grants that will install over 2,000 EV

charging spaces. This strategy is not captured by the traffic model and does not duplicate any other strategies.

- **Telecommuting Promotion Program** – Kern COG is encouraging people through the Commute Kern rideshare program to continue to telecommute after the pandemic crisis. To avoid duplication with Rule 9410 which among other things promotes telecommuting, 100% of the emissions to be saved from rule 9410 is subtracted from the emissions savings calculated for this strategy.
- **SJVAPCD Rule 9410 eTRIP Program** – A non-state program requires employers with more than 2050 employees to encourage rideshare, telecommuting, etc. This strategy among other things also promotes vanpooling, so 100% of the emission savings from this program is deleted from this strategy to avoid double counting.
- **Bike & Pedestrian Infrastructure Program** – Kern has created the longest class 1 bike path in the nation along the Kern River and is expanding the bike network from 288 miles to more than 400 miles by 2035 with plans to ultimately build 1,667 miles. This strategy is not captured by the traffic model and does not duplicate any other strategies.
- **Vanpooling** – Enterprise Commute (private sector) and CalVans (public vanpool service) are the two major vanpool providers that provide 30 vanpools in the region. To avoid double counting, this strategy is subtracted from the Rule 9410 strategy which also promotes vanpooling.
- **Miocar Electric Carsharing Program at Low-income Apartment Complexes in Outlying Disadvantaged Communities** – Miocar, a public non-profit organization started by the SJV MPOs has installed electric vehicle charging at five low-income apartment complexes and provided 12 EVs servicing 400 units in 3 rural disadvantaged communities in Kern. Note that the vehicles are available to persons that don't live in the apartment complexes. This strategy is not captured by the traffic model and does not duplicate any other strategies.
- **Transportation System Management (TSM)/Intelligent Transportation System (ITS) Traffic Signal Synchronization Program** – The Kern region has long used federal CMAQ funding for traffic signal synchronization and signalization of 4-way stop intersections. This program assumes an incremental improvement to the signal synchronization system improving 5% of the system by 2035. This strategy is not captured by the traffic model and does not duplicate any other strategies.
- **Transit/On-demand Micro Transit/Dial-a-Ride Improvements on Low Frequency Routes Not Modeled in the Travel Model** – 7% of total ridership in the region is low frequency transit ridership is not modeled in the travel model. This adjustment accounts for this portion of the transit improvement strategy. This strategy is not captured by the traffic model and does not duplicate any other strategies.
- **Bakersfield Bike Share Contract** – In 2022 Bakersfield implements a contract with SPIN, a division of Ford Motor Company, to provide a bike & scooter share services as well as bike charging facilities. This strategy is not captured by the traffic model and does not duplicate any other strategies.
- **Regional Electric Vehicle Incentive Program** – SJVAPCD provides a combined program for zero emission vehicle incentives that provides an average $2390 rebates for 200 vehicles in Kern annually

including the state CVRP program. A minimum of 10% of the funding for this program is from non-state programs. This strategy is not captured by the traffic model and does not duplicate any other strategies.

- **Parking Management Program** – Downtown Bakersfield recently completed a downtown parking study that standardized parking times limits downtown and inventoried paid downtown parking a garages. This strategy is not captured by the traffic model and does not duplicate any other strategies.

State-Level Strategies

For SB 375, the State of California has implemented numerous strategies that are assisting the region in attaining the SCS targets. For the most part these strategies are accounted for in various state level documents required by AB 32 and are NOT included the SB 375 modeling for this region. For example:

- AB 118 – Air Quality Improvement Program
- AB 2766 – Motor Vehicle Fee Program
- CalStart
- California's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)
- Cap and Trade Program
- Clean Diesel
- Clean Vehicle Rebate Project
- Caltrans Funded High-Occupancy Vehicle Facilities
- CARB Funding Agricultural Reduction Measures for Emission Reductions (FARMER)
- Incident Management/Caltrans Traffic Information Center
- Inspection & Maintenance Programs
- Carl Moyer Memorial Air Quality Standards Attainment Program
- Caltrans Funded Park-and-Ride Facilities
- Shifting/Separating Freight Movements
- Caltrans Funded Signal Synchronization and Roadway Intersection Improvements
- California Energy Commission Clean Transportation Program and Investment Plan

Regional Strategies

The San Joaquin Valley Air Pollution Control District implements numerous strategies that are assisting the region in attaining the SB 375 targets as well as other district goals. The Eastern Kern Air Pollution Control District manages planning and incentive programs to improve air quality. Kern COG and other non-state entities have also promoted strategies/programs that help with attainment of the SCS targets. For example:

- AB 617 City of Shafter & City of Arvin Community Steering Committee 2019 Community Emissions Reduction Program (CERP)
- Bakersfield High Speed Rail Station Area Plan – General Plan Update
- Kern COG Mobility Innovations and Incentives Program (4,000 EV charging spaces by 2025, shared mobility, autonomous vehicles, MD and HD Zero Emission Vehicle Infrastructure Planning, etc.)

- Kern Regional Active Transportation Plan Including Disadvantaged Communities
- SJV Rural Transit Shared Mobility Study and Pilot Project for Disadvantaged Communities
- Kern County General Plan Update – Land Use, Conservation, Open Space, Circulation, Housing, and other key elements
- Kern COG Intelligent Transportation System Plan Update
- CalVans Vanpool Program
- Kern COG Commute Kern TDM Programs/Incentives
- Kern Energy Watch and Kern Region Energy Action Planning
- Eastern Kern Air Pollution Control District (EKAPCD) Lower Emission School Bus Program
- EKAPCD DMV Voucher Program and DMV Grant Program
- SJVAPCD Diesel Engine Retrofit Incentive Program
- SJVAPCD Drive Clean Rebate Program
- Project Clean Air (PCA)
- SJVAPCD REMOVE II Programs
- SJVAPCD Retirement/Replacement of Heavy-Duty Trucks Incentives Program
- SJVAPCD Rule 9310 (SJVAPCD) School Bus Fleets: Retirement/Replacement of Buses
- SJVAPCD Rule 9410 (SJVAPCD) Employer-Based Trips Reduction (eTRIP)
- SJVAPCD Rule 9510 (SJVAPCD) Indirect Source Review: Infill Incentive Zone Transportation Impact Fee Land Use Strategies.
- San Joaquin Valley Clean Cities Coalition
- Valley Clean Air Now (CAN)

Note that this list is not comprehensive, and many of these strategies reduce emissions from trucks and other areas accounted for separately under AB 32.

INCENTIVES AND OTHER APPROACHES ADVANCING SCS GOALS

The Kern Region SCS provides for an incentive-based approach to help achieve the state greenhouse gas emissions goals. This section:

- Describes steps Kern COG and local jurisdictions in Kern County will take to implement the SCS.
- Outlines new CEQA streamlining and other key local provisions afforded to projects that meet certain criteria established in the SCS.

Promoting Sustainability through Incentives and Collaboration

The 2022 RTP is first and foremost a transportation plan. However, the transportation network and forecasted development patterns envisioned must complement each other. Integration of transportation and land use is essential for improved mobility and access to transportation options.

SB 375 calls for the integration of forecasted development patterns with transportation investments and asks that MPOs identify, quantify, and highlight co-benefits throughout the process. SB 375 provides CEQA incentives for development projects that are consistent with the regional SCS and help meet GHG emissions reduction targets. Kern County and the cities maintain their existing authority over local planning

and land use decisions, including discretion in certifying the environmental review for a project, regardless of eligibility for streamlining.

To achieve the goals of the 2022 RTP, public agencies at all levels of government may implement a wide range of strategies that focus on four key areas:

- A transportation network that consists of public transit, highways, local streets, bikeways, and walkways.
- TDM measures that reduce peak-period demand on the transportation network.
- TSM measures that maximize the efficiency of the transportation network.
- A forecasted development pattern that accommodates the region's future employment and housing needs, especially in rural outlying areas while protecting habitat and resource areas.

The following tables list specific implementation strategies that local governments, Kern COG, and other stakeholders may consider in order to successfully implement the SCS.

Other Sustainable Practices

Along with the rest of the state the County of Kern is increasing sustainable practices. Through information sharing, coordination among agencies and other feasible means, including provision of funds as appropriate, Kern COG will continue to work to encourage and facilitate:

- Energy and water conservation
- Protection of open space
- Protection of sensitive uses from noise and air quality impacts
- Increased permeable surfaces
- Improved stormwater management and protection of water resources
- Quality design
- Other measures to minimize impacts on natural and man-made resources and promote increased livability in Kern County.

SB 375 Streamlining the CEQA Process

SB 375 provides incentives in the form of CEQA streamlining to encourage community design that supports reductions in per capita emissions. Generally, two types of projects are eligible for streamlined CEQA review once a compliant RTP has been adopted: (1) residential/mixed-use projects (consistent with the SCS) or (2) a transit priority project (TPP).

Residential/Mixed-Use Projects

Residential and mixed-use projects (projects where at least 75% of the total building square footage consists of residential use or TPPs) that are consistent with the use designation, density, building intensity, and applicable policies specified for the project area in an SCS and are consistent with an approved SCS may qualify for streamlined CEQA review. If a project meets these requirements and if the project incorporates the mitigation measures required by an applicable prior environmental document, any environmental review conducted will not be required to discuss growth-inducing impacts, any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on climate change or the regional transportation network, or a reduced-density alternative.

Transit Priority Projects (TPP)

A TPP is eligible for CEQA streamlining if it is consistent with an approved SCS, contains at least 50% residential use, is proposed to be developed at a minimum 20 dwelling units per acre, and is located within a half-mile of a major transit stop or high-quality transit corridor that is included in the RTP.

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

Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining consistency of any future project with the SCS. Kern COG staff may provide a lead agency at the time of its request readily available data and documentation to help support its finding.

Other California Environmental Quality Act (CEQA) Streamlining Strategies

CEQA Guidelines Section 15332 for In-Fill Development Projects is used extensively by the local governments in Kern as an exemption for approving infill development. The guidelines state that "*Class 32 consists of projects characterized as in-fill development meeting the conditions described in this section. (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations. (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses. (c) The project site has no value, as habitat for endangered, rare or threatened species. (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality. (e) The site can be adequately served by all required utilities and public services."* This CEQA exemption coupled with other infill incentives are providing significant opportunities for infill development in Kern.

Transportation Impact Fee Infill Incentive Zones

Both Tehachapi and Bakersfield, jointly with the County of Kern, adopted transportation impact fees for new development in the greater Tehachapi and greater Bakersfield areas. Both impact fee ordinances have identified core areas where the impact fee is almost half what the fee is on the periphery of the community. The incentive takes into account the higher cost of providing infrastructure on the periphery of a community while providing a financial incentive for infill development.

Indirect Source Review (ISR) Rule

The San Joaquin Valley Air Pollution Control District is the only region in the State that has implemented a rule to require new development to pay a fee to offsite travel emissions. Called the indirect source review (ISR) rule, the fee uses a modeling tool called CalEEMod to quantify emissions from a proposed development. The tool can account for the incorporation of pedestrian, bike, transit and other strategies to reduce travel. Developments that are successful in providing these strategies could receive reductions or elimination of the fee. This incentive is already resulting in new Kern region developments that are designed to be more pedestrian, bike and transit friendly.

Project Selection Criteria

The 2012 Kern COG policy for the project selection process with updates through 2021, incorporates Kern Regional Blueprint growth management and SB 375 SCS framework concepts into the project selection process to:

- Influence local government land use policy by giving priority to transportation projects that reduce vehicle miles traveled (VMT) and/or promote livable communities or transit-oriented development (TOD) as applicable.
- Leverage additional funding sources, including new funding sources, by modifying project performance measurement requirements for large projects to allow them to better compete for state and federal discretionary funds.

Table 4-9 summarizes consistency between the goals of the Kern COG RTP, and the performance measures/outcomes of the Kern COG funding programs included in this document. The table also demonstrates that all programs include performance measures and outcomes that give priority to projects that reduce VMT, reduce emissions and improve livability consistent with SB 375.

Table 4-9: Consistency of RTP Goals with Performance Measures Outcomes

Funding Programs	KCOG RTP Goals							
	SB 375-Related Outcomes			Congestion Relief	Cost-Effectiveness	Safety	Sustainability/State of Good Repair	Economic Well-Being
	VMT Reduction	Emissions Reduction	Livability[1]					
RTIP	✔	✔	✔	✔	✔	✔	✖	✔
RSTP		✖					✖	✖
CMAQ	✔	✔	✔	✔	✔	✔		✖
TE	✖	✖	✖	✖		✖		
TDA	✔	✔	✔	✔		✔	✖	

✔ = Performance measure included in the project ranking criteria

✖ = Outcomes derived from eligible projects

[1] Livability includes enhancing or reducing the average cost of user mobility through the creation of more convenient transportation options for travelers; improving existing transportation choices by enhancing points of modal connectivity, increasing the number of modes accommodated on existing assets, or reducing congestion on existing modal assets; improving travel between residential areas and commercial centers and jobs; improving accessibility and transportation services for economically disadvantaged populations, non-drivers, senior citizens, and persons with disabilities, or make goods, commodities, and services more readily available to these groups.

Table 4-10 illustrates the consistency between the project selection criteria outcomes from the various Kern COG funding programs with the Kern COG SCS Framework Strategies.

TABLE 4-10: CONSISTENCY OF SCS FRAMEWORK STRATEGIES WITH FUNDING PROGRAM OUTCOMES

Outcomes from KCOG Transportation Funding Programs	KCOG SCS Framework Strategies																		
					Road			Transit				Pricing					TDM		
	Modify Distribution of households, population, and jobs	Rebalance the mix of land uses	Increase the level of density	Improve the pedestrian environment	Add HOV lanes	Implement ITS / Traffic management	Add general purpose roadway lanes	Construct new transit lines	Increase transit service	Upgrade transit service	Improve accessibility	Develop tolls and toll roads	Implement HOT lanes	Increase the cost of parking	Change in transit fares	Change in auto operation cost	Promote car/vanpooling, telecommuting/teleconferencing	Promote walking and biking	Implement employer-based trip reduction strategies
VMT Reduction				✔	✔			✔	✔	✔	✔	✔	✔		✔	✔	✔	✔	✔
Emissions Reduction				✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Livability				✔	✔	✔	✔	✔	✔	✔	✔		✔		✔	✔	✔	✔	✔
Congestion Relief				✔	✔	✔	✔	✔	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔
Cost-Effectiveness				✔	✔	✔	✔	✔	✔	✔	✔		✔				✔	✔	✔
Safety				✔	✔	✔	✔						✔					✔	✔
State of Good Repair				✔	✔	✔	✔			✔								✔	✔
Economic Well-Being					✔	✔	✔	✔	✔		✔	✔	✔						

(THIS CHART IS AN ILLUSTRATION FROM THE KERN COG PROJECT DELIVERY POLICIES AND PROCEDURES)

In addition to providing performance measures that reward projects that further the goals of SB 375, the new project selection process includes "Regional Priorities and Equity Guidance" that provides for a financial incentive for safety and connectivity projects in resource areas by targeting 40% of the Regional Improvement Program funding for rural resource areas consistent with Sec. 65080(b)(4)(C) of SB 375.

Community Travel Feedback Monitoring System

The Kern Transportation Modeling Committee has developed an innovative tool to track progress toward the California SB 375 related passenger vehicle and light duty truck travel. The process will provide feedback to each community and sub area of the county to help them track progress on how they are reducing travel per capita. Kern COG will provide updated travel statistics by community for the Kern region. The Transportation Modeling Committee and the Regional Planning Advisory Committee envision a method to assist communities that are having difficulty reducing emissions per capita. This method may be developed in future cycles of the RTP.

A Great Start: Sustainable Community Success Stories (See Appendix E)

In order to help demonstrate the Kern region's extensive efforts to comply with state climate change goals, Kern COG has identified related member agency activities. All of the following success stories, described in Appendix E, benefit the disadvantaged communities by improving emissions. The highlighted strategies benefit Kern's disadvantaged communities directly.

NEW STRATEGIES

1. Bakersfield High Speed Rail Station Area Plan – Specific/General Plan Update
2. Kern COG 4,000 Electric Vehicle Charging Spaces by 2025
3. Improvements to 51 Bus Stops – Metro Bakersfield/Disadvantaged Neighborhoods
4. New Taft Transit Center / Regional Transit Hub
5. Early Delivery of Wasco Disadvantage Community Active Transportation Projects
6. Bakersfield Disadvantage Communities Bike Share & Downtown Bicycle Connectivity Project
7. Kern Highway Projects Advancing Complete Streets
8. Kern Regional Active Transportation Plan Including Disadvantaged Communities
9. Kern COG Intelligent Transportation System Plan Update
10. SJV Rural Transit Shared Mobility Study for Disadvantaged Communities
11. SR 184 Lamont Bike and Pedestrian improvements
12. SR 184 and 155 Roundabouts in Disadvantage Communities of Delano and Weedpatch
13. Kern County General Plan Update – Land Use, Conservation, Open Space, Circulation, Housing, and other key elements
14. Early Deployment Pricing Policies for Parking and FastPass HOT Lanes
15. Golden Empire Transit transition to Hydrogen Fuel Cell Buses – Install a Hydrogen Station, purchase 5 buses in 2021 and 5 in 2022.
16. New McFarland Transit Center with Public EV Charging
17. MioCar electric carshare at low-income housing in Arvin, Lamont, and Wasco

ENHANCED STRATEGIES

18. City of Bakersfield Redevelopment Projects – Mill Creek and Baker Street
19. Commuter Rail Feasibility Study – Amtrak Improvements
20. Rideshare Program – Commute Kern
21. Expanding Park and Ride Lots
22. Dial-A-Ride and Local Transportation Services
23. Kern County Bicycle Master Plan & Complete Streets Recommendations/City of Tehachapi Bicycle Master Plan
24. City of Bakersfield Bicycle Facilities
25. Westside Station Multi-modal Transit Center
26. San Joaquin Valley Vanpool Program (CalVans)
27. Kern County Wind Farm Areas (Largest in U.S.)
28. City of Shafter Container Yard and Intermodal Rail Facility Expansion
29. Intersection Signalization/Synchronization

30. City of Bakersfield 4 New Downtown Infill Housing Projects
31. Cities of McFarland and Shafter – Conversion of transit fleet to electric vehicles
32. Golden Empire Transit – Purchase of 2 Electric Buses
33. Lost Hills Wonderful Park and Communitywide Improvements
34. Grapevine Specific and Community Plan and Special Plan

EXISTING/CONTINUING STRATEGIES

35. City of Tehachapi General Plan (Form-Based Code, Transect Zone, Mobility Element, Town Form Element)
36. Infill Incentive Zone – Lower Transportation Impact Fee Core Area
37. City of Taft General Plan – Sustainability Principles
38. City of Ridgecrest General Plan and Multi-Modal Circulation Element
39. Metro Bakersfield General Plan Sewer Policy – Hook-up required for parcels less than 6 acres
40. City of Bakersfield Required Lot Area Zoning Strategies
41. San Joaquin Valley Air District's Indirect Source Review to Mitigate Off-Site Impacts of Development
42. Transit Priority Areas in the Kern COG SCS
43. Metropolitan Bakersfield General Plan Centers Concept – Transit Priority & Strategic Employment Place Types
44. GET Short-Term Service Plan (2012–2020)
45. GET X-92 Commuter Express bus service to Tejon Industrial Complex
46. Kern511 – Traveler Information System
47. San Joaquin Valley Blueprint Integration Project
48. Caltrans Vehicle Detection System – State Route 43 Intersection Improvements and East Bakersfield Vehicle Detection Systems
49. California Highway Patrol's Safety Corridors
50. Purchase of CNG Buses (80+ bus fleet)
51. The Electric Cab Company of Delano
52. Downtown Elementary School Expansion (Bakersfield)
53. Traffic Control Devices
54. Kern Region Energy Action Plans (Kern REAP) and Kern Energy Watch Goal 3
55. Tejon Ranch Conservation and Land Use Agreement
56. Kern County Community Revitalization Program
57. Kern Transit – Route Connection with Antelope Valley Transit Authority
58. CSU Bakersfield – Public Transit Center

ADAPTIVE PLANNING FOR CLIMATE CHANGE

In June 2020, the California Governor's Office of Emergency Services produced an update to the 2012 California Adaptation Planning Guide (APG) to planning for adaptive climate change available at https://www.adaptationclearinghouse.org/resources/california-climate-adaptation-planning-guide.html. . The guide is an excellent resource for communities interested in planning for the effects of climate change, described as "resiliency". The APG has identified the need to evaluate vulnerability for the following climate change effects which vary based on location:

- Increases in temperature
- Increases in extreme storms/events
- Changes in precipitation

These climate change effects may have the following impacts in Kern County:

- Reduced water supply
- Reduced agricultural productivity
- Flooding
- Decrease in tourism – Sierra Nevada foothills
- Wildfire risk in the Sierra Nevada foothills

In 2015, California SB 379 requires cities and counties to update their Local Hazard Mitigation Plan (LMHP) to address climate adaptation and resiliency strategies applicable to their jurisdiction on or after January 2017 for existing plans and on or before January 2022 where jurisdictions did not have a LHMP.

Although not a comprehensive listing, the Kern region has identified several projects that will address the effects of climate change.

- The 2020 update to the Kern Multi-Jurisdiction Hazard Mitigation Plan (MJHMP) states that the plan was developed in part, to meet the following objective. Meet or exceed requirements of the Disaster Mitigation Act of 2000 (DMA 2000) and the 2015 California legislation requiring the incorporation of climate adaptation strategies into hazard mitigation planning (SB 379). (http://mitigatehazards.com/county-of-kern/)
- Kern County has established public cooling centers with "temperature triggers" indicating when they become active. This program was funded through a grant from PG&E and Southern California Edison and includes sites in Metro Bakersfield and outlying communities that service agricultural workers and seniors. (http://www.co.kern.ca.us/pio/coolingcenters.asp)
- The Kern Water Agency and its member districts continue to implement and expand the largest water banking operation in the state, providing agriculture and urban users greater storage and a more reliable water supply during dry years.
- U.S. Army Corp of Engineers is implementing the Lake Isabella Dam retrofit project that will strengthen and increase the height of the dam by 16 ft. to accommodate larger spring run-off volumes that were not anticipated when the dam was designed in the 1950s. The project will increase storage, protect from flooding and improve recreational and tourism opportunities in the Southern Sierra Nevada.
- Kern County Flood Plain Management Department has developed a plan to improve flood control from extreme weather events in uncontrolled drainage basins. The plan prioritizes projects that benefit disadvantaged communities.
- The State of California is working on the Bay Delta Conservation Plan to provide improved water delivery through the Delta to Southern California.

In addition, Kern COG member agencies received energy related adaptive climate planning information through the Kern Region Energy Action Plan and Kern Energy Watch programs. Many of the communities that participated in the programs developed climate action plans or at a minimum, energy action plans. The climate action planning process includes adaptive planning.

CHAPTER 5 STRATEGIC INVESTMENT

INTRODUCTION

This Chapter sets forth plans of action for the region to pursue and meet identified transportation needs and issues. Planned investments are consistent with the goals and policies of the plan, the Sustainable Community Strategy Element (see Chapter 4), and must be financially constrained. These projects are listed in the Constrained Capital Improvement Program (**Table 5-1**) and are modeled in the Air Quality Conformity Analysis.

Forecast modeling methods in this Regional Transportation Plan primarily use the "market-based approach" based on demographic data and economic trends (see Chapter 3). The forecast modeling was used to analyze the strategic investments in the combined action elements found in this Chapter.

Alternatives are not addressed in this document; they are, however, addressed and analyzed for their feasibility and impacts in the Environmental Impact Report prepared for the 2022 Regional Transportation Plan, as required by the California Environmental Quality Act (State CEQA Guidelines Sections 15126(f) and 15126.6(a)).

The 2022 Regional Transportation Plan promotes a more efficient transportation system that calls for fully funding alternative transportation modes, while emphasizing transportation demand and transportation system management approaches for new highway capacity.

The 2022 Regional Transportation Plan promotes a more efficient transportation system that calls for fully funding alternative transportation modes, while emphasizing transportation demand and transportation system management approaches for new highway capacity.

The Constrained Capital Improvement Program (**Table 5-1**) includes projects that move the region toward a financially constrained and balanced system. Constrained projects have undergone air quality conformity analyses to ensure that they contribute to the Kern region's compliance with state and federal air quality rules. The Unconstrained Capital Improvement Program (**Table 5-2**) incorporates the region's unbudgeted "vision." These projects represent alternatives that could be moved to the constrained program if support for an individual project remains strong and if project funding is identified.

Status as an unconstrained project does not imply that the project is not needed; rather, it simply cannot be accomplished given the fiscal constraints facing Kern County. Kern Council of Governments (Kern COG) is vigilant in its search for funding to support these projects.

No unconstrained projects are included in the air quality conformity analysis. In the future, as the funding picture changes and community values and priorities for transportation projects are honed, unconstrained projects may be moved to the constrained program. Should this occur, the RTP would be amended and a new assessment of the plan's conformity with state and federal air quality rules and standards would be made.

For this Regional Transportation Plan, the Unconstrained Capital Improvement Program reflects the vision for Kern County's ideal system. Dialogue is ongoing with business, government, social services, and agriculture interests to improve everyone's understanding of how the transportation system impacts the region's quality of life. The participation process sheds light on important values such as mobility choice and accessibility, travel time reliability, cost effectiveness, and environmental sensitivity.

The planning process is iterative. System-wide performance measures have been developed and will be used to help policymakers and the community-at-large evaluate tradeoffs among transportation improvement alternatives. Performance measures will also be used to help evaluate how the 2022 RTP

contributes to the Kern region's quality of life. Refer to Chapter 2 for additional information about the performance measures.

Each element in this Chapter addresses proposed actions to implement the goals and policies of Chapter 2. These actions outline specifically how the goals of the plan will be accomplished. This Chapter contains the following action elements:

- Freight Movement Action Element
- Public Transportation/Shared Mobility Action Element
- Active Transportation Action Element
- Transportation Air Emissions Reduction Action Element
- Intelligent Transportation Systems Action Element
- Congestion Management Program Action Element
- Regional Streets and Highways Action Element
- Aviation Action Element
- Safety/Security Action Element
- Land Use Action Element

In the following Constrained Capital Improvement Program, major highway improvements are divided into five chronological groupings to facilitate estimations of project completion. Highway improvements that cannot be constructed within the financial constraint of any one group may be repeated in later groups. If a project is not fully funded within the five-year time frame, it would require phasing over a longer time frame. The entire corridor, however, would be environmentally assessed during the preliminary engineering phase.

Figure 5-1A: Constrained Projects Countywide

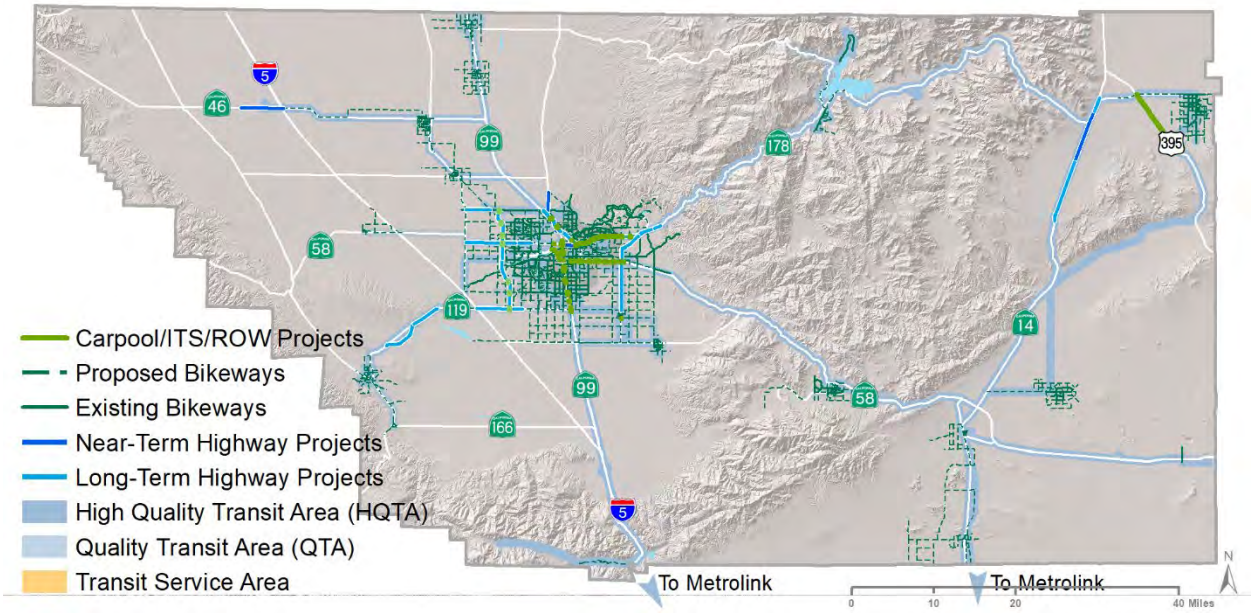
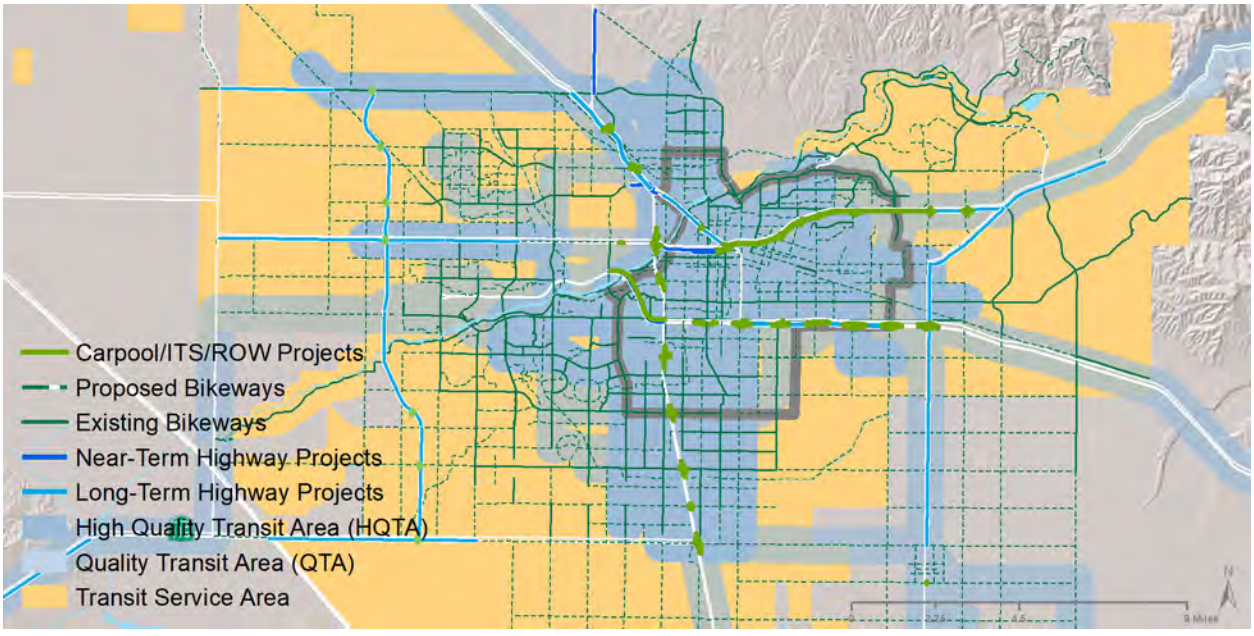


Figure 5-1B: Constrained Projects Metro Bakersfield



Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program

2022 through 2046 - Transit & Other

Project	Location	Scope	YOE Cost
Vanpool	Countywide	Vanpools - build and maintaine fleet of 500 Vans by 2040	48,000,000
Park and Ride	Various	Park and Ride Lots (1,500 spaces)	6,000,000
Bus Service	**Metro Bkd**	**Full size alternative fuel buses**	**232,500,000**
		Full size alternative fuel buses - 120 replacement buses	
		Full size alternative fuel buses - Fixed Routes - 130 new buses	
		Full size alternative fuel buses - Bus Rapid Transit - 24 new buses	
		Full size alternative fuel buses - Express Service - 36 new buses	
Bus Service	**Countywide**	**Full, midsize and mini-van size alternative fuel buses**	**34,700,000**
		Full size alternative fuel buses - Express Service - 10 new buses	
		Midsize alternative fuel buses - 120 replacement buses	
		Midsize alternative fuel buses - 120 new buses	
		Mini van / buses - 45 replacement buses	
Bus Service	Metro Bkd	2 Transit Maintenance Stations	60,000,000
Bus Service	Metro Bkfd	3 transfer stations	15,000,000
ITS	Countywide	ITS related improvements / upgrades	3,000,000
Aviation	Countywide	Capital, Maintenance and Operational Improvements	48,000,000
Passenger Rail	Rosamond	Metrolink extension - Palmdale/Lancaster to Rosamond	112,000,000
Passenger Rail	Bakersfield	Amtrak Station - Phase II	13,000,000
Passenger Rail	Bakersfield	High Speed Rail Station - Bakersfield	50,000,000
Passenger Rail	Region	High Speed Rail Alignment and Facilities Fresno to Bakersfield	1,000,000,000
Passenger Rail	Shafter/Wasco	High Speed Rail Heavy Maintenance Facility	450,000,000
		Sub-total	**$2,072,200,000**

2022 through 2046 - Highway Operational Improvements

Project	Location	Scope	YOE Cost
HOV Lanes	**Bakersfield**	**Various State Routes - HOV lanes**	**149,000,000**
		Westside Parkway - Heath Road and Stockdale Highway to SR 58 at Fairfax	
		State Route 178 - Existing west freeway terminus to Oswell Street	
HOV Ramps	**Bakersfield**	**Install HOV Ramps and metering improvements at various locations**	**148,000,000**
		SR 99 Interchange at Snow Road - HOV Ramp Metering	
		SR 99 Interchange at Olive Drive - HOV Ramp Metering	
		SR 99 Interchange at Rosedale Hwy - HOV Ramp Metering	
		SR 99 Interchange at California Ave - HOV Ramp Metering	
		SR 99 Interchange at Ming Ave- HOV Ramp Metering	
		SR 99 Interchange at White Lane- HOV Ramp Metering	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Highway Operational Improvements (Continued)

Project	Location	Scope	YOE Cost
		SR 99 Interchange at Panama Lane- HOV Ramp Metering	
		SR 99 Interchange at SR 119 - HOV Ramp Metering	
		SR 58 Interchange at Oak Street - HOV Ramp Metering	
		SR 58 Interchange at H-Chester Ave - HOV Ramp Metering	
		SR 58 Interchange at Union Street - HOV Ramp Metering	
		SR 58 Interchange at Cottonwood Road - HOV Ramp Metering	
		SR 58 Interchange at Mount Vernon - HOV Ramp Metering	
		SR 58 Interchange at Oswell Street - HOV Ramp Metering	
		SR 58 Interchange at Fairfax Road - HOV Ramp Metering	
		SR 58 Interchange at Weedpatch Hwy - HOV Ramp Metering	
		SR 178 Interchange at SR 204 - HOV Ramp Metering	
		SR 178 Interchange at Beale Avenue - HOV Ramp Metering	
		SR 178 Interchange at Haley Street - HOV Ramp Metering	
		SR 178 Interchange at Mount Vernon Street - NOV Ramp Metering	
		SR 178 Interchange at Oswell Street - HOV Ramp Metering	
		SR 178 Interchange at Fairfax Road - HOV Ramp Metering	
		SR 178 Interchange at Morning Drive - HOV Ramp Metering	
		West Beltway Interchange at 7th Standard Road - HOV Ramp Metering	
		West Beltway Interchange at Olive Drive - HOV Ramp Metering	
		West Beltway Interchange at Rosedale Hwy - HOV Ramp Metering	
		West Beltway Interchange at Stockdale Hwy - HOV Ramp Metering	
		West Beltway Interchange at Ming Avenue - HOV Ramp Metering	
		West Beltway Interchange at White Lane - HOV Ramp Metering	
		West Beltway Interchange at SR 119 - HOV Ramp Metering	
		Sub-total	**$297,000,000**

*the Passenger Rail Program is partially funded through the High Speed Rail Authority and is provided as information. The funding summary includes a portion of $5 billion of the constrained revenue estimates for work expected between Fresno County and Kern County. The constrained amount of $1.5 Billion is for work in the Kern region. The remaining $13 billion is unconstrained for work in the Kern Region and is reflected in Table 4.2. $26 Billion is the current cost estimate.

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized

Project	Location	Scope	YOE Cost
Various locations	**Countywide**	**Construct Class I, II or Class III Bike Path; striping; signage**	**$85,500,000**
Arvin	Incorporated	5th Av (N Hill St to N A St) .1 mi. - Class III Bike Route	
Arvin	Incorporated	A St (Olson Wy to 5th Av) 1.1 mi. - Class II Bike Ln	
Arvin	Incorporated	Campus Dr (Grapevine Dr to Varsity Rd) .5 mi. - Complete Streets	
Arvin	Incorporated	Campus Dr (Sunset Blvd to Richardson Rd) .5 mi. - Class III Bike Route	
Arvin	Incorporated	Comanche Dr (Mark St to Sycamore Rd) 1. mi. - Class II Bike Ln	
Arvin	Incorporated	Franklin St (Walnut Dr to S Derby St) .8 mi. - Class II Buffered Bike Ln	
Arvin	Incorporated	Grapevine Dr (Campus Dr to N Hill St) .1 mi. - Class III Bike Route	
Arvin	Incorporated	Haven Dr (Comanche Dr to Tejon Hwy) 1. mi. - Class II Bike Ln	
Arvin	Incorporated	Mark St (Comanche Dr to Walnut Dr) .2 mi. - Class II Bike Ln	
Arvin	Incorporated	Meyer St (El Camino Real to Sycamore Rd) .5 mi. - Class III Bike Route	
Arvin	Incorporated	Meyer St (Hwy 223 to Sycamore Rd) 1. mi. - Class II Bike Ln	
Arvin	Incorporated	N Comanche St (Bear Mountain Rd to Varsity Av) .5 mi. - Class II Bike Ln	
Arvin	Incorporated	N Hill St (Grapevine Dr to 5th Av) .1 mi. - Class III Bike Route	
Arvin	Incorporated	North City Path (Bear Mountain Blvd to Varsity Av) .5 mi. - Class I Shared Use Path	
Arvin	Incorporated	Olsen St (A St to Meyer St) .5 mi. - Class II Bike Ln	
Arvin	Incorporated	Sycamore Rd (Comanche Dr to Rancho Dr) .5 mi. - Class III Bike Route	
Arvin	Incorporated	Sycamore Rd (Comanche Dr to Tejon Hwy) 1. mi. - Class II Bike Ln	
Arvin	Incorporated	Sycamore Rd (Towerline Rd to Tejon Hwy) 1. mi. - Class II Bike Ln	
Arvin	Incorporated	Tejon Hwy (Hwy 223 to Burkett Blvd) 2.5 mi. - Class II Bike Ln	
Arvin	Incorporated	Varsity Av (N Comanche Dr to Tejon Hwy) 1. mi. - Class II Bike Ln	
Arvin	Incorporated	Walnut Dr (W Sycamore Rd to Alderette Dr) 1.2 mi. - Class II Bike Ln	
Arvin	Incorporated	Bear Mtn Blvd SR 223 (Tejon Hwy to Comanche Dr) 1. mi. - Class IV Cycle Track	
Arvin	Incorporated	E Bear Mtn Blvd SR 223 (Comanche Dr to Union St) 12.6 mi. - Class II Bike Ln	
Arvin	Incorporated	SR 223 (Malovich Rd to Tejon Hwy) .5 mi. - Class II Bike Ln	
Bakersfield	Incorporated	Baker Street from Bernard Street to California Avenue - 1.57 miles - Class II	
Bakersfield	Incorporated	Potomac Avenue from S. King Street to Monticello Avenue - 0.82 miles - Class II	
Bakersfield	Incorporated	River Bike Trail Connection from Kern River Parkway to Elm Street - 0.26 miles - Class I	
Bakersfield	Incorporated	Baker Street from California Avenue to S. King Street - 0.35 miles - Class III	
Bakersfield	Incorporated	E. Pacheco Road from Hughes Lane to Cottonwood Road - 2.52 miles - Class III	
Bakersfield	Incorporated	Belle Terrace from Stine Road to Madison Street - 3.04 miles - Class II	
Bakersfield	Incorporated	Pin Oak Boulevard from Bear Creek Road to District Boulevard - 1.14 miles - Class III	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued
2022 through 2046 - Non-motorized

Project	Location	Scope	YOE Cost
Bakersfield	Incorporated	Ewoldsen Class III Route from Oak Grove Street to N. Half Moon Drive - 1.43 miles - Class III	
~~Bakersfield~~	~~Incorporated~~	~~Harris Road from Ashe Road to Akers Road - 1.51 miles - Class III~~ COMPLETED	
~~Bakersfield~~	~~Incorporated~~	~~Harris Road from Ashe Road to Wible Road - 0.5 miles - Class II~~ COMPLETED	
~~Bakersfield~~	~~Incorporated~~	~~Hughes Lane from Ming Ave to E. Pacheco Road - 1.5 miles - Class II~~ COMPLETED	
Bakersfield	Incorporated	Harris Road from S. Allen Road to Ashe Road - 4.08 miles - Class II	
~~Bakersfield~~	~~Incorporated~~	~~Haley Street from Panorama Drive to Columbus Street - 0.87 miles - Class II~~ COMPLETED	
Bakersfield	Incorporated	E. Pacheco Road from Gasoline Alley to Monitor Street - 1.33 miles - Class II	
~~Bakersfield~~	~~Incorporated~~	~~Akers Road from Wilson Rd to McKee - 3.99 miles - Class II~~ COMPLETED	
Bakersfield	Incorporated	Arvin-Edison Canal Path from Stockdale Highway to Cottonwood Road - 9.54 miles - Class I	
Bakersfield	Incorporated	17th Street from A Street to Truxtun Avenue - 1.26 miles - Class III	
Bakersfield	Incorporated	M Street from 30th Street to 17th Street - 0.85 miles - Class II	
Bakersfield	Incorporated	Sillect Avenue from Buck Owens Boulevard to Kern River Parkway - 1.33 miles - Class II	
Bakersfield	Incorporated	H Street Canal Path from Railroad Bridge to Highway 99 - 7.97 miles - Class I	
Bakersfield	Incorporated	Friant-Kern Canal from Seventh Standard Road to Kern River - 6.1 miles - Class I	
Bakersfield	Incorporated	Beale Avenue from Grace Street to 21st Street - 1 mile - Class II	
Bakersfield	Incorporated	Q Street from Columbus Street to Highway 178 - 1.12 miles - Class II	
~~Bakersfield~~	~~Incorporated~~	~~Haggin Oaks Blvd from Camino Media to Limoges Way - 0.74 miles - Class III~~ COMPLETED	
Bakersfield	Incorporated	Kentucky Street from Alta Vista Drive to Mt. Vernon Avenue - 1.81 miles - Class II	
Bakersfield	Incorporated	Flower Street from Alta Vista Drive to Owens Street - 0.64 miles - Class III	
Bakersfield	Incorporated	S. King Street from California Avenue to Brundage Lane - 1 mile - Class III	
Bakersfield	Incorporated	4th Street from Union Avenue to City Limits - 1.25 miles - Class III	
Bakersfield	Incorporated	Watts Drive from Cottonwood Road to Madison Street - 0.5 miles - Class III	
Bakersfield	Incorporated	Brundage Lane from Union Avenue to Oswell Street - 5.08 miles - Class III	
Bakersfield	Incorporated	Niles Street from Alta Vista Drive to Virginia Street - 1.28 miles - Class II	
Bakersfield	Incorporated	Bernard Street from Chester Avenue to Mt. Vernon Avenue - 2.95 miles - Class II	
Bakersfield	Incorporated	Berkshire Road from Stine Road to Santana Sun Drive - 1.5 miles - Class III	
~~Bakersfield~~	~~Incorporated~~	~~21st Street from King Street to Washington Street - 0.89 miles - Class II~~ COMPLETED	
Bakersfield	Incorporated	178 Overcrossing from Height Street to Mirador Drive - 0.1 miles - Class I	
~~Bakersfield~~	~~Incorporated~~	~~Laurelglen Boulevard from Pin Oak Park Boulevard to Gosford Road - 0.48 miles - Class III~~ COMPLETED	
Bakersfield	Incorporated	Mountain Oak - McInnes Rt from Park Path to McInnes - Westwold Path - 0.59 miles - Class III	
Bakersfield	Incorporated	22nd Street from Elm Street to F Street - 0.72 miles - Class III	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized

Project	Location	Scope	YOE Cost
Bakersfield	Incorporated	Christmas Tree Lane from Mt Vernon Avenue to Panorama Drive - 1.65 miles - Class III	
Bakersfield	Incorporated	Madison Street from Belle Terrace to White Ln - 1 mile - Class II	
Bakersfield	Incorporated	Park Path from Mountain Oak Road to Broad Oak Avenue - 0.19 miles - Class I	
Bakersfield	Incorporated	Wible Road from Planz Road to Taft Highway - 4 miles - Class II	
Bakersfield	Incorporated	Pacific Street from Union Avenue to Alta Vista Drive - 0.36 miles - Class III	
Bakersfield	Incorporated	Chinon - Limoges Route from McInnes Boulevard to Haggin Oaks Boulevard - 0.37 miles - Class III	
Bakersfield	Incorporated	Maywood - Charger Route from Oswell Street to Piper Way - 1.85 miles - Class III	
Bakersfield	Incorporated	McInnes - Westwold Path from McInnes Boulevard to Westwold Drive - 0.08 miles - Class I	
~~Bakersfield~~	~~Incorporated~~	~~Riverlakes Drive from Olive Drive to Coffee Road - 1.67 miles - Class II~~ COMPLETED	
Bakersfield	Incorporated	Stine Road from Panama Lane to Taft Highway - 2 miles - Class II	
~~Bakersfield~~	~~Incorporated~~	~~Noriega Road from Renfro Rd to Calloway Drive - 2.01 miles - Class II~~ COMPLETED	
Bakersfield	Incorporated	Marella Class III from Garnsey Avenue to Montclair Street - 0.55 miles - Class III	
Bakersfield	Incorporated	Marella Way from California Avenue to Montclair Street - 1 mile - Class III	
Bakersfield	Incorporated	Hosking Avenue from Wible Rd to Cottonwood Road - 3.03 miles - Class II	
Bakersfield	Incorporated	P Street from Brundage Lane to Belle Terrace - 0.5 miles - Class II	
Bakersfield	Incorporated	Sundale Avenue from La Puente Drive to New Stine Road - 0.91 miles - Class III	
Bakersfield	Incorporated	Palm Street from Real Road to P Street - 1.79 miles - Class III	
~~Bakersfield~~	~~Incorporated~~	~~Verdugo Lane from Olive Drive to Hagaman Road - 1.22 miles - Class II~~ COMPLETED	
Bakersfield	Incorporated	A St/Hughes Ln from California Ave to Terrace Way - 1.26 miles - Class II	
Bakersfield	Incorporated	Raider Drive from Planz Road to Merrimac Avenue - 0.25 miles - Class III	
Bakersfield	Incorporated	University Avenue from Haley Street to River Boulevard - 0.58 miles - Class III	
Bakersfield	Incorporated	Quailwood - Quailridge from Truxtun Avenue to Stockdale Highway - 1.02 miles - Class III	
Bakersfield	Incorporated	School House Road from Ming Ave to Ashe Road - 1.33 miles - Class III	
Bakersfield	Incorporated	18th St - 19th St Route from 21st Street to 17th Street - 1.01 miles - Class III	
Bakersfield	Incorporated	Calloway Drive from Snow Road to Norris Road - 0.5 miles - Class II	
Bakersfield	Incorporated	Panama Lane from H Street to Cottonwood Road - 2.03 miles - Class II	
Bakersfield	Incorporated	Broad Oak - Oak Grove Rt from Park Path to Westwold Drive - 0.2 miles - Class III	
Bakersfield	Incorporated	Ridge Oak Drive from Rose Petal Street to Mountain Oak Road - 0.42 miles - Class III	
Bakersfield	Incorporated	Harris Rd-Gasoline Alley from Wible Road to Pacheco Road - 0.7 miles - Class III	
Bakersfield	Incorporated	White Lane from Dovewood Street to Hughes Lane - 1.22 miles - Class III	
Bakersfield	Incorporated	Morning Drive from Auburn Street to Willis Avenue - 1.38 miles - Class II	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized

Project		Location	Scope	YOE Cost
	~~Bakersfield~~	~~Incorporated~~	~~Snow Road from Allen Road to Verdugo Lane - 1.5 miles - Class II~~ **COMPLETED**	
	~~Bakersfield~~	~~Incorporated~~	~~Clay Patrick Farr Way from Hageman Road to Granite Falls Dr - 0.83 miles - Class II~~ **COMPLETED**	
	Bakersfield	Incorporated	Buena Vista Canal Path from Ming Ave to Taft Hwy - 8.29 miles - Class I	
	Bakersfield	Incorporated	Merrimac Avenue from Raider Drive to Monitor Street - 0.06 miles - Class III	
	Bakersfield	Incorporated	Monitor Street from Merrimac Avenue to White Lane - 0.25 miles - Class III	
	Bakersfield	Incorporated	Spring Creek Loop from Wilderness Drive to Reliance Drive - 1.03 miles - Class III	
	Bakersfield	Incorporated	Mountain Vista Drive from Grand Lakes Avenue to Berkshire Road - 2.73 miles - Class III	
	~~Bakersfield~~	~~Incorporated~~	~~Half Moon Drive from Ashe Rd to Ashe Rd - 1.15 miles - Class II~~ **COMPLETED**	
	Bakersfield	Incorporated	Bakersfield Commons Conn. from Coffee Road to Friant-Kern Canal - 0.44 miles - Class I	
	Bakersfield	Incorporated	Madison Street from Brundage Lane to Belle Terrace - 0.49 miles - Class III	
	Bakersfield	Incorporated	Jewetta Avenue from Palm Avenue to Brimhall Road - 0.5 miles - Class III	
	Bakersfield	Incorporated	University Avenue from Columbus Street to Panorama Drive - 0.68 miles - Class II	
	Bakersfield	Incorporated	Coffee Road Path Widening from Truxtun Avenue to Kern River Parkway - 0.06 miles - Class I	
	Bakersfield	Incorporated	Gosford Road from Harris Road to Taft Highway - 2.5 miles - Class II	
	Bakersfield	Incorporated	Comanche Drive from City Limit to Highway 178 - 0.16 miles - Class III	
	Bakersfield	Incorporated	Campus Park from Buena Vista Road to Old River Road - 1.06 miles - Class III	
	Bakersfield	Incorporated	Patton Way from Weldon Avenue to Hageman Road - 0.28 miles - Class II	
	Bakersfield	Incorporated	Morning Drive from Paladino Drive to Morningstar Avenue - 0.8 miles - Class II	
	Bakersfield	Incorporated	Auburn Street from Morning Drive to Fairfax Road - 0.92 miles - Class II	
	Bakersfield	Incorporated	Highway 178 from City Limits to Masterson Street - 6.6 miles - Class III	
	Bakersfield	Incorporated	Allen Road from Ming Avenue to White Lane - 1.52 miles - Class II	
	Bakersfield	Incorporated	Olive Drive from Santa Fe Way to Allen Road - 1.52 miles - Class II	
	Bakersfield	Incorporated	Claymore Extension from Eissler Street to Piper Way - 0.11 miles - Class I	
	Bakersfield	Incorporated	Paladino Drive from Rivani Drive to Grand Canyon Drive - 1.87 miles - Class II	
	Bakersfield	Incorporated	Kern Canyon Road from Masterson Street to Morning Drive - 2.66 miles - Class II	
	Bakersfield	Incorporated	North Rosedale Park Path from Campfire Drive to Jewetta Avenue - 0.18 miles - Class I	
	Bakersfield	Incorporated	Jewette Avenue from Bernard Street to 30th Street - 0.27 miles - Class III	
	Bakersfield	Incorporated	Jewetta Avenue from Columbus Street to Bernard Street - 0.52 miles - Class III	
	Bakersfield	Incorporated	36th Street from Chester Avenue to San Dimas Path - 0.59 miles - Class III	
	Bakersfield	Incorporated	La France Drive from Castro Lane to El Toro Drive - 1.03 miles - Class III	
	Bakersfield	Incorporated	Park/Blanch/11th/10th Route from Oak Street to Union Ave - 1.08 miles - Class III	
	Bakersfield	Incorporated	Bank Street 2nd Street Ro from Oak Street to S. P Street - 1.59 miles - Class III	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized

Project		Location	Scope	YOE Cost
	Bakersfield	Incorporated	White Lane from Union Street to Cottonwood Road - 0.99 miles - Class II	
	Bakersfield	Incorporated	Ming Avenue from Oak Street to Union Avenue - 2.03 miles - Class II	
	Bakersfield	Incorporated	McKee Rd from Ashe Rd to SH 99 - 2.76 miles - Class II	
	Bakersfield	Incorporated	Polo Drive from Dapple Avenue to Meadow Creek Street - 0.26 miles - Class III	
	Bakersfield	Incorporated	Wilderness Drive from Harris Road to Reliance Drive - 0.54 miles - Class III	
	Bakersfield	Incorporated	Garnsey Avenue from Garnsey Lane to Stockdale Highway - 0.57 miles - Class III	
	Bakersfield	Incorporated	Height Street from River Boulevard to 178 Overcrossing - 0.75 miles - Class III	
	Bakersfield	Incorporated	W. Jeffrey Street from Overcrossing to River Boulevard - 1.1 miles - Class III	
	Bakersfield	Incorporated	Grand Lakes Avenue from Rossilyn Lane to Brandy Rose Street - 1.83 miles - Class III	
	Bakersfield	Incorporated	Almondale Pk Shared Path from Meadow Creek Street to Verdugo Lane - 0.14 miles - Class I	
	Bakersfield	Incorporated	San Dimas Path from 36th Street to Jeffrey Street - 0.43 miles - Class I	
	Bakersfield	Incorporated	China Grade Loop from City Limit to Panorama Drive - 0.11 miles - Class III	
	Bakersfield	Incorporated	Half Moon Drive from Ashe Road to Ashe Road - 0.96 miles - Class III	
	Bakersfield	Incorporated	Hughes Lane from E Pacheco Rd to Fairview Road - 1 mile - Class III	
	Bakersfield	Incorporated	Coventry - Benton Route from Ming Avenue to Oak Street - 1.4 miles - Class III	
	Bakersfield	Incorporated	Noble Avenue Route from River Boulevard to Columbus Street - 2.3 miles - Class III	
	Bakersfield	Incorporated	Old Farm Road from Snow Road to Hageman Road - 2 miles - Class II	
	Bakersfield	Incorporated	Buena Vista Road from Panama Lane to Highway 119 - 2 miles - Class II	
	Bakersfield	Incorporated	Mt. Vernon Avenue from Panorama Drive to Flower Street - 2.19 miles - Class II	
	Bakersfield	Incorporated	Old River Road from Harris Road to Taft Highway - 2.5 miles - Class II	
	Bakersfield	Incorporated	Emerald Cove Park Path from Vaquero Avenue to Hageman Road - 0.23 miles - Class I	
	Bakersfield	Incorporated	Polo Park Shared Path from Old Farm Road to Grazing Avenue - 0.37 miles - Class I	
	Bakersfield	Incorporated	21st St from Oak St to Westwind Dr - 0.13 miles - Class II	
	Bakersfield	Incorporated	Panama Lane from Dennen Street to Colony Street - 0.33 miles - Class II	
	Bakersfield	Incorporated	Berkshire Road from Colony Street to Madison Street - 1.81 miles - Class III	
	Bakersfield	Incorporated	Fairview Road from Hughes Lane to Cottonwood Road - 2.53 miles - Class III	
	Bakersfield	Incorporated	21st St from Westwind Dr to Kern River Bike Path - 0.06 miles - Class I	
	Bakersfield	Incorporated	Hosking Avenue from Wible Rd to Gosford Rd - 2.99 miles - Class II	
	Bakersfield	Incorporated	Verdugo Lane from Seventh Standard Road to Snow Road - 1 mile - Class II	
	Bakersfield	Incorporated	Edison Road from Highway 178 to End of Street - 1.15 miles - Class III	
	Bakersfield	Incorporated	Patton Way from Weldon Avenue to Hageman Road - 0.28 miles - Class II	
	Bakersfield	Incorporated	Rudd Avenue from Seventh Standard Road to Santa Fe Way - 1.5 miles - Class III	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized

Project	Location	Scope	YOE Cost
~~Bakersfield~~	~~Incorporated~~	~~Alfred Harrell Highway from Morning Drive Bike Path to Highway 178 - 3.32 miles - Class III~~ COMPLETED	
Bakersfield	Incorporated	Oswell Street from Columbus Street to City Limits - 0.66 miles - Class II	
Bakersfield	Incorporated	Masterson Street from Highway 178 to Alfred Harrell Highway - 1.43 miles - Class II	
Bakersfield	Incorporated	NE Bakersfield Path from Paladino Drive to Morning Drive Path - 2.7 miles - Class I	
Bakersfield	Incorporated	Columbus Path from Kern River Parkway to Columbus Street - 0.37 miles - Class I	
Bakersfield	Incorporated	Real Road from Gamsey Lane to Palm Street - 0.08 miles - Class III	
Bakersfield	Incorporated	Ridge Road from Camino Real to Mt. Vernon Avenue - 0.16 miles - Class III	
Bakersfield	Incorporated	Chippewa - Yorkshire from Jewetta Avenue to Verdugo Lane - 0.88 miles - Class III	
Bakersfield	Incorporated	Chamber Boulevard from S. Allen Road to Grand Lakes Avenue - 1.45 miles - Class III	
Bakersfield	Incorporated	Laurel Park - Wrangler from Bay Meadows Lane to Calloway Drive - 1.83 miles - Class III	
Bakersfield	Incorporated	Iron Creek Goose Creek CT from Allen Road to Coffee Road - 3.66 miles - Class III	
Bakersfield	Incorporated	Wenatchee Avenue from Panorama Drive to Columbus Street - 1.02 miles - Class II	
Bakersfield	Incorporated	Ashe Road from Panama Lane to Taft Highway - 2 miles - Class II	
~~Bakersfield~~	~~Incorporated~~	~~Alfred Harrell Highway from City Limit to Panorama Drive - 0.1 miles - Class III~~ COMPLETED	
Bakersfield	Incorporated	Toluca Drive Route from Renfro Road to Allen Road - 1.48 miles - Class III	
Bakersfield	Incorporated	Panama Lane from Mountain Vista Road to Gosford Road - 1.5 miles - Class II	
Bakersfield	Incorporated	Overcrossing from Willow Drive to Rio Mirada - 0.17 miles - Class I	
Bakersfield	Incorporated	Allen Road from Pensinger Road to Highway 119 - 2.75 miles - Class II	
Bakersfield	Incorporated	Mohawk Street from Hageman Road to Rosedale Highway - 1.26 miles - Class II	
Bakersfield	Incorporated	Panama Lane from Interstate 5 to Gosford Road - 2.02 miles - Class II	
Bakersfield	Incorporated	Camino Grande from Alfred Harrell to NE Bakersfield Path - 1.29 miles - Class III	
Bakersfield	Incorporated	Patton Way Shared Path from Weldon Avenue to Hageman Road - 0.27 miles - Class I	
Bakersfield	Incorporated	Appletree - Hahn Route from Wilson Road to Wible Road - 1.8 miles - Class III	
Bakersfield	Incorporated	Cottonwood Road from Casa Loma Drive to E. Panama Lane - 3 miles - Class III	
Bakersfield	Incorporated	S. H Street from Panama Lane to Taft Highway - 2 miles - Class III	
Bakersfield	Incorporated	Greenwich - Balvanera from Verdugo Lane to Calloway Road - 0.55 miles - Class III	
Bakersfield	Incorporated	Arvin-Edison Canal Path from Cottonwood Road to Fairfax Road - 3.77 miles - Class I	
Bakersfield	Incorporated	Sage Drive from Half Moon Bay Drive to Wilson Road - 0.2 miles - Class III	
Bakersfield	Incorporated	Stellar Avenue from Old Farm Road to Campfire Drive - 0.34 miles - Class III	
Bakersfield	Incorporated	Westholme Boulevard from Ming Avenue to Wilson Road - 0.4 miles - Class III	
Bakersfield	Incorporated	El Capitan Bike Route from Noriega Road to Polo Park Path - 0.44 miles - Class III	
Bakersfield	Incorporated	Allegheny Court from Old Walker Pass Road to Rivers Edge Park - 0.44 miles - Class III	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized

Project	Location	Scope	YOE Cost
Bakersfield	Incorporated	Olympia Drive from S. Laurel Glen Boulevard to Half Moon Bay Drive - 0.49 miles - Class III	
Bakersfield	Incorporated	Old Walker Pass Road from Comanche Drive to Rancheria Road - 1.46 miles - Class III	
Bakersfield	Incorporated	Knudsen Drive from Olive Drive to Hageman Road - 0.47 miles - Class II	
Bakersfield	Incorporated	Brimhall Road from Renfro Road to Allen Road - 1.01 miles - Class II	
Bakersfield	Incorporated	Santa Fe Way from 7th Stnard Road to Hageman Road - 4.14 miles - Class II	
Bakersfield	Incorporated	Rail ROW Path from 7th Standard Road to E. Norris Road - 2.23 miles - Class I	
Bakersfield	Incorporated	Kahala - Constitution Rou from Hawaii Lane to Jewetta Avenue - 1.34 miles - Class III	
Bakersfield	Incorporated	Mezzadro/Alderbrk/Lavina from Allen Road to Allen Road - 3.63 miles - Class III	
Bakersfield	Incorporated	Panorama Class I Connecti from Kern River Parkway to Panorama Drive - 0.06 miles - Class I	
Bakersfield	Incorporated	Mountain Ridge Rd from Panama Ln to Taft Hwy - 2 miles - Class II	
Bakersfield	Incorporated	Reina Road from Renfro Road to Verdugo Lane - 2.04 miles - Class II	
Bakersfield	Incorporated	Calloway Shared Path from Balvanera Drive to Noriega Road - 0.28 miles - Class I	
Bakersfield	Incorporated	Yarnell Bike Route from Paul Avenue to Calloway Drive - 0.31 miles - Class III	
Bakersfield	Incorporated	Hawaii - Wailea from Allen Road to Noriega Road - 0.38 miles - Class III	
Bakersfield	Incorporated	Allen Road from Snow Road to Hageman Road - 1.89 miles - Class II	
Bakersfield	Incorporated	Mountain Park Dr from Kern River Parkway to River Run Boulevard - 0.18 miles - Class III	
Bakersfield	Incorporated	Rose Petal Street from Brandy Rose Street to Ridge Oak Drive - 0.2 miles - Class III	
Bakersfield	Incorporated	River Run Boulevard from Ming Avenue to Buena Vista Road - 0.93 miles - Class III	
Bakersfield	Incorporated	Truxtun Shared Path link from Coffee Road to Quailridge Road - 0.15 miles - Class I	
Bakersfield	Incorporated	Panama Lane from Interstate 5 to Gosford Road - 2.02 miles - Class II	
Bakersfield	Incorporated	Various Feasibility Studies for Other Bike and Pedestrian Related Improvements	
Bakersfield	Incorporated	Various Locations - Construct Bike Boulevard projects	
Bakersfield	Incorporated	Various Locations - Construct Intersection enhancement projects	
Bakersfield	County Area	Union Avenue from Panama Road to Bear Mountain Blvd - 4 miles - Class II	
Bakersfield	County Area	Santa Fe Way from Driver Road to Riverside Street - 3.6 miles - Class II	
Bakersfield	County Area	Rudd Avenue from Palm Avenue to Brimhall Road - 0.5 miles - Class II	
Bakersfield	County Area	Roberts Lane from Norris Road to Washington Avenue - 0.5 miles - Class II	
Bakersfield	County Area	Roberts Lane from Washington Avenue to Standford Drive - 0.7 miles - Class II	
Bakersfield	County Area	River Blvd from Panorama Drive to Bernard Street - 1.3 miles - Class II	
Bakersfield	County Area	Pioneer Drive from Oswell Steet to Morning Drive - 2 miles - Class II	
Bakersfield	County Area	Pegasus Road from Merle Haggard Drive to Norris Road - 1.8 miles - Class II	
Bakersfield	County Area	Patton Way from Snow Road to Hageman Road - 1.8 miles - Class II	
Bakersfield	County Area	Panama Road from Weedpatch Hwy to S Comanche Drive - 4 miles - Class II	
Bakersfield	County Area	Palm Avenue from Heath Road to Renfro Road - 1 miles - Class II	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized

Project		Location	Scope	YOE Cost
	Bakersfield	County Area	Palm Ave (Country Breeze & Slikker Drive) from Old Farm Road to Country Breeze Place - 1.7 miles - Class II	
	Bakersfield	County Area	Old River Road from Taft Hwy to Shafter Road - 3 miles - Class II	
	Bakersfield	County Area	Old Farm Road from Palm Avenue to Brimhall Road - 0.5 miles - Class II	
	Bakersfield	County Area	Old Farm Road from Good Place to Rosedale Hwy - 0.5 miles - Class II	
	Bakersfield	County Area	Norris Road from Snow Road to Roberts Lane - 0.7 miles - Class II	
	Bakersfield	County Area	Nord Avenue from Kratzmeyer Road to Stockdale Hwy - 4.5 miles - Class II	
	Bakersfield	County Area	Niles Street from Virginia Street to Morning Drive - 3.5 miles - Class II	
	Bakersfield	County Area	Muller Road from S Owell Street to Weedpatch Hwy - 2 miles - Class II	
	Bakersfield	County Area	Merle Haggard Drive from South Granite Road to N Chester Avenue - 1 miles - Class II	
	Bakersfield	County Area	McCray Street from Merle Haggard Drive to China Grade Loop - 1 miles - Class II	
	Bakersfield	County Area	Landco Drive from Calloway Canal to Rosedale Highway - 0.7 miles - Class II	
	Bakersfield	County Area	Kratzmeyer Road from Santa Fe Way to Enos Lane - 4.5 miles - Class II	
	Bakersfield	County Area	Knudsen Drive from Norris Road to Hageman Road - 0.9 miles - Class II	
	Bakersfield	County Area	Hageman Road from Wegis Avenue to Nord Road - 0.5 miles - Class II	
	Bakersfield	County Area	Flower Street from Owens Street to Mt Vernon Avenue - 1 miles - Class II	
	Bakersfield	County Area	Enos Lane from Beech Avenue to Panama Lane - 11.3 miles - Class II	
	Bakersfield	County Area	Decatur Street from Airport Drive to Sequoia Drive - 0.3 miles - Class II	
	Bakersfield	County Area	Day Avenue from N Chester Avenue to Manor Street - 0.5 miles - Class II	
	Bakersfield	County Area	Comanche Drive from E Panama Lane to Varsity Avenue - 5.5 miles - Class II	
	Bakersfield	County Area	Buena Vista Blvd from S Union Avenue to S Comanche Drive - 9.1 miles - Class II	
	Bakersfield	County Area	Brimhall Road from Enos Lane to Superior Road - 1 miles - Class II	
	Bakersfield	County Area	Brimhall Road from Wegis Avenue to Rudd Avenue - 1 miles - Class II	
	Bakersfield	County Area	Brae Burn Drive from Country Club Drive to College Avenue - 0.6 miles - Class II	
	Bakersfield	County Area	Beech Avenue from E Los Angeles to Enos Lane - 2.3 miles - Class II	
	Bakersfield	County Area	Airport Drive from China Grade Loop to Roberts Lane - 1.3 miles - Class II	
	Bakersfield	County Area	Olive Drive from Victor Street to SR 99 - 0.3 miles - Class III	
	Bakersfield	County Area	N Chester Avenue from Existing Bike Route to Merle Haggard Drive - 0.3 miles - Class III	
	Bakersfield	County Area	Rosedale Hwy from Enos Lane to Mohawk Street - 10.9 miles - Caltrans Shoulder	
	Bakersfield	County Area	Woodrow Ave from Roberts Lane to N Chester Ave - 1.8 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Wilson Avenue - Castaic Ave from Roberts Lane to North Chester Avenue - 1.9 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Valencia Drive from College Ave to Pioneer Drive - 1 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Shalimar Drive from Niles Street to Pioneer Drive - 0.5 miles - Neighborhood Green Streets	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized

Project		Location	Scope	YOE Cost
	Bakersfield	County Area	Pesante Road from Cul-de-sac to Pioneer Drive - 1 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Jeffrey Street from Union Ave to River Blvd - 0.2 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Jeffrey Street from Loma Linda Drive to River Blvd - 0.7 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Height Street from River Blvd to Haley Street - 0.5 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Decatur Street from Sequoia Drive to Chester Ave - 0.8 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Country Club Drive - Horace Mann Ave- Pentz St from College Ave to Center St - 0.8 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Center Street/Rosewood Avenuenue from Shalimar Drive to Monica Street - 1.8 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Center Street from Oswell Steet to Pesante Road - 0.8 miles - Neighborhood Green Streets	
	Bakersfield	County Area	Tupman Path from Enos Lane to Moose Street - 5.6 miles	
	Bakersfield	County Area	Stine Canal from Stockdale Hwy to Belle Terrace - 0.5 miles - Other	
	Bakersfield	County Area	Lake Evans Loop from Lake Evans to Lake Evans - 2.7 miles - Other	
	Bakersfield	County Area	Enos Lane Path from Panama Lane to Buena Vista Rec Area Loop - 4.5 miles - Other	
	Bakersfield	County Area	East Side Canal from Kentucky Street to Fairfax Road - 2.7 miles - Other	
	Bakersfield	County Area	East Side Canal from E Brundage Lane to Panama Road - 7.9 miles - Other	
	Bakersfield	County Area	East Branch Canal from Belle Terrace to Casa Loma Drive - 0.7 miles - Other	
	Bakersfield	County Area	Cumberland Road from Bear Valley Road to Bear Valley Springs - 3.6 miles - Other	
	Bakersfield	County Area	Central Branch Canal from Ming Avenue to Union Avenue - 1.3 miles - Other	
	Bakersfield	County Area	Central Branch Canal from E Pacheco Road to Buckley Avenue - 0.8 miles - Other	
	Bakersfield	County Area	Central Branch Canal from E Panama Lane to Berkshire Road - 0.5 miles - Other	
	Bakersfield	County Area	Calloway Canal from Coffee Road to Hwy 99 - 3.8 miles - Other	
	Bakersfield	County Area	Buena Vista Rec Area Loop from Lake Buena Vista to Lake Buena Vista - 7.7 miles - Other	
	Bakersfield	County Area	Beardsley Canal from Fruitvale Avenue to Manor Street - 4 miles - Other	
	Bakersfield	County Area	Arvin-Edison Canal from S Oswell Street to Marion Avenue - 1.5 miles - Other	
	Bakersfield	County Area	Arvin-Edison Canal from Central Branch Canal to Mount Vernon Avenue - 1.3 miles - Other	
	Bakersfield	County Area	Lake Ming Loop from Kern River Parkway to Campground Road - 2.6 miles - Class I	
	Bakersfield	County Area	Airport Drive from Manor Street to W China Grade Loop - 1 miles - Class II	
	Bakersfield	County Area	Unknown Bike Path from Knudsen Drive to SR 99 - 0.7 miles - Class I	
	Bakersfield	County Area	Unknown Bike Path from Arrow Street to May Street - 0.6 miles - Class I	
	Bakersfield	County Area	Unknown Bike Path from Beardsley Avenue to Kern River Parkway - 0.5 miles - Class I	
	~~Bakersfield~~	~~County Area~~	~~Weedpatch Hwy from SR 58 East Hwy to Panama Road - 6 miles - Class II~~ COMPLETED	
	Bakersfield	County Area	Taft Hwy from Heath Road Extension to Buena Vista Road - 3 miles - Class II	
	Bakersfield	County Area	Standard Street from Rio Mirador Drive to Gilmore Avenue - 1.1 miles - Class II	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
Bakersfield	County Area	Panama Road from Buena Vista Road to Weedpatch Hwy - 12.1 miles - Class II	
Bakersfield	County Area	Muller Road from Weedpatch Hwy to S Comanche Drive - 4 miles - Class II	
Bakersfield	County Area	Gilmore Avenue from Mohawk Street to Standard Street - 1 miles - Class II	
Bakersfield	County Area	Fairfax Road from E Brundage Lane to Panama Road - 6 miles - Class II	
Bakersfield	County Area	Edison Hwy from Washington Street to S Comanche Drive - 7.8 miles - Class II	
Bakersfield	County Area	E Panama Lane from Cottonwood Road to S Comanche Drive - 8.1 miles - Class II	
Bakersfield	County Area	E Norris Road from Roberts Lane to N Chester Avenue - 2.1 miles - Class II	
Bakersfield	County Area	Cottonwood Road from E Panama Lane to Panama Road - 2 miles - Class II	
Bakersfield	County Area	S H Street from Taft Hwy to Shafter Road - 3.2 miles - Class II	
California City	Incorporated	California City Blvd / Hwy 14-Yerba Blvd - 6.8 mile - Class III Bicycle Route	
California City	Incorporated	Mendiburu Path / California City Blvd-88th St 1.6 mile - Add new off-St class I shared use path	
California City	Incorporated	California City Blvd / Redwood Blvd-Sandy Ave - .8 mile - Class III Bicycle Route	
California City	Incorporated	Hacienda Blvd / North Loop Blvd-California City Blvd - .6 mile - Class II Bicycle Lane	
California City	Incorporated	Neuralia Rd / Redwood Blvd-Poppy Blvd - 1.5 mile - Add new class II bike lane	
California City	Incorporated	S Loop Blvd / California City Blvd-Hacienda Blvd - 1.2 mile - Extend new class II bike lane	
California City	Incorporated	North City Path / 88th St-Hacienda Blvd - .2 mile - Add new off-St class I shared use path	
California City	Incorporated	Proctor Blvd / Randsburg Mojave Rd-College Blvd - .5 mile - Class II Bicycle Lane	
California City	Incorporated	Redwood Blvd / California City Blvd-Hacienda Blvd - 1.4 mile - Maintain existing lane & add bike lane on south side	
California City	Incorporated	California City Blvd / S College Blvd-Proctor Blvd - .7 mile - Fill gap in existing bikeway	
California City	Incorporated	Hacienda Blvd / Mendiburu Rd-N Loop Blvd - .6 mile - Add new class III bike route	
California City	Incorporated	Hacienda Blvd / Redwood Blvd-Sequoia Blvd - 1. mile - Class II Bicycle Lane	
California City	Incorporated	Mendiburu Rd / Hacienda Blvd-Randsburg Mojave Rd - 2.1 mile - Add new class III bike route	
California City	Incorporated	Redwood Blvd / Airway Blvd-Neuralia Rd - .7 mile - Extend new class II bike lane	
California City	Incorporated	92nd St / Fir Av-S Loop Blvd - .2 mile - Add new class III bike Blvd	
California City	Incorporated	Conklin Blvd / Mendiburu Rd-North Loop Blvd - .6 mile - Class III Bicycle Blvd	
California City	Incorporated	Conklin Blvd, Heather Av / California City Blvd-Calhoun Court - .5 mile - Add class II bike lane to connect to central park lake	
California City	Incorporated	Neuralia Rd / Redwood Blvd-Sequoia Blvd - 1. mile - Class II Bicycle Lane	
California City	Incorporated	Randsburg Mojave Rd / Mcintosh Wy-Hooker Dr - .7 mile - Extend new class II bike lane	
California City	Incorporated	Redwood Blvd / Proctor Blvd-California City Blvd - .7 mile - Class II Bicycle Lane	
California City	Incorporated	Yerba Blvd / Mendiburu Rd-California City Blvd Class III Bike Route - 1. mile - Class III Bicycle Route	
California City	Incorporated	90th St / California City Blvd-Catalpa Av - .2 mile - Add new class II bike lane	
California City	Incorporated	Airway Blvd / Redwood Blvd-Sequoia Blvd - 1. mile - Class II Bicycle Lane	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
California City	Incorporated	Forest Blvd / Neuralia Rd-Desert Butte Blvd - 2.6 mile - Class III Bicycle Route	
California City	Incorporated	Mendiburu Rd / Baron Blvd-Rusche Blvd - 2.5 mile - Class III Bicycle Route	
California City	Incorporated	Rusche Blvd / Mendiburu Rd-Bolden Dr - .3 mile - Class III Bicycle Blvd	
California City	Incorporated	Catalpa Av / 92nd St-90th St - .2 mile - Add new class III bike Blvd	
California City	Incorporated	92nd St / Catalpa Av-Fir Ave Blvd - .1 mile - Add new class III bike Blvd	
California City	Incorporated	Desert Butte Blvd / Forest Blvd-Sequoia Blvd - Class III Bicycle Route	
California City	Incorporated	Division Rd / Midway Rd-Ironwood St - 1. mile - Class III Bicycle Route	
California City	Incorporated	Fir Av / 92nd St-92nd St - .1 mile - Add new class III Bike Blvd	
California City	Incorporated	Neuralia Rd / Mendiburu Rd-Poppy Blvd - .5 mile - Class III Bicycle Route	
California City	Incorporated	Sequoia Blvd / Neuralia Rd-Desert Butte Blvd - 2.5 mile - Class III Bicycle Route	
County area	Arvin	Main Street from Panama Road to Di Giorgio Road- 1 Mile - Class II	
County area	Arvin	E Bear Mountain Blvd from S Comanche Drive to Weedpatch Hwy - 4.1 miles	
County area	Bakersfield	Truxtun Av (Oak St to Washington St) 3.5 mi. - Bikeway Study	
County area	Bakersfield	Bike/Ped Bridge SR 99 (Wood Lane to Wood Lane) .1 mi. - Class I Shared Use Path	
County area	Bakersfield	Norris Rd (Snow Rd to Manor St) 3.3 mi. - Class I Shared Use Path	
County area	Bakersfield	Beardsley Av (McCray Street to Chester Avenue) .5 mi. - Class II Bike Ln	
County area	Bakersfield	Braeburn Dr (Country Club Dr to College Av) .6 mi. - Class II Bike Ln	
~~County area~~	~~Bakersfield~~	~~Breckenridge Rd (Weedpatch Hwy to Comanche Dr) 4.3 mi. - Class II Bike Ln~~ COMPLETED	
County area	Bakersfield	Brimhall Rd (Enos Ln to Rudd Av) 4.5 mi. - Class II Bike Ln	
County area	Bakersfield	Brundage Ln (Madison St to Edison Hwy) 1.9 mi. - Class II Bike Ln	
County area	Bakersfield	Calloway Dr (Rosedale Hwy to Brimhall Rd) 1. mi. - Class II Bike Ln	
County area	Bakersfield	China Grade Loop (Carrere St to Manor St) .4 mi. - Class II Bike Ln	
County area	Bakersfield	Comanche Dr (Panama Ln to Muller Rd) 7.5 mi. - Class II Bike Ln	
~~County area~~	~~Bakersfield~~	~~Day Av (Manor St to N Chester Av) .5 mi. - Class II Bike Ln~~ COMPLETED	
County area	Bakersfield	DiGiorgio Rd (Vineland Rd to Comanche Dr) 3. mi. - Class II Bike Ln	
County area	Bakersfield	Douglas St (McCray St to Chester Av) .5 mi. - Class II Bike Ln	
County area	Bakersfield	Edison Hwy (Mt Vernon Av to Comanche Dr) 7.8 mi. - Class II Bike Ln	
County area	Bakersfield	Edison Rd (Breckenridge Road to Edison Highway) .8 mi. - Class II Bike Ln	
County area	Bakersfield	Hageman Rd (Jenkins Rd to Nord Av) 2.5 mi. - Class II Bike Ln	
County area	Bakersfield	Hall Rd (SR 184 to Habecker Rd) .5 mi. - Class II Bike Ln	
County area	Bakersfield	Heath Rd (Hageman Rd to Stockdale Hwy) 3. mi. - Class II Bike Ln	
County area	Bakersfield	Hermosa Rd (Fairfax Rd to Comanche Dr) 5. mi. - Class II Bike Ln	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
County area	Bakersfield	Houghton Rd (Old River Rd to Union Av) 6. mi. - Class II Bike Ln	
County area	Bakersfield	James Rd (SR 65 to Chester Av) 3.5 mi. - Class II Bike Ln	
County area	Bakersfield	McCray St (Merle Haggard Rd to Day Av) .4 mi. - Class II Bike Ln	
County area	Bakersfield	Meacham Rd (Nord Av to Allen Rd) 3. mi. - Class II Bike Ln	
County area	Bakersfield	Merle Haggard Rd (Chester Av to Airport Dr) 1. mi. - Class II Bike Ln	
County area	Bakersfield	Mountain View Rd (Fairfax Rd to Comanche Dr) 5. mi. - Class II Bike Ln	
County area	Bakersfield	Muller Rd (Comanche Dr to Oswell St) 6. mi. - Class II Bike Ln	
County area	Bakersfield	N Chester Av (McKelvey Av to Manor St) .3 mi. - Class II Bike Ln	
County area	Bakersfield	Old Farm Rd (Rosedale Hwy to Mia Virginia Court) .5 mi. - Class II Bike Ln	
County area	Bakersfield	Old River Rd (Taft Hwy to Shafter Rd) 4. mi. - Class II Bike Ln	
County area	Bakersfield	Panama Rd (Habecker Rd to S Comanche Dr) 3.5 mi. - Class II Bike Ln	
County area	Bakersfield	Pegasus Dr (Merle Haggard Dr to Norris Rd) 1.8 mi. - Class II Bike Ln	
County area	Bakersfield	Pioneer Dr (Vineland Rd to Oswell St) 3. mi. - Class II Bike Ln	
County area	Bakersfield	Roberts Ln (Norris Rd to Sequoia Dr) 1.7 mi. - Class II Bike Ln	
County area	Bakersfield	Roberts Ln (Chester Av to Manor St) .5 mi. - Class II Bike Ln	
County area	Bakersfield	Sunset Blvd (Weedpatch Hwy to Vineland Rd) 1. mi. - Class II Bike Ln	
County area	Bakersfield	Superior Rd (SR 58 to Stockdale Hwy) 2. mi. - Class II Bike Ln	
County area	Bakersfield	Vineland Rd (Pioneer Dr to SR 223) 11. mi. - Class II Bike Ln	
County area	Bakersfield	Airport Dr (Roberts Ln to Merle Haggard Dr) 2.2 mi. - Class II Buffered Bike Ln	
County area	Bakersfield	California Av (Mt Vernon Av to Edison Hwy) .6 mi. - Class II Buffered Bike Ln	
County area	Bakersfield	Chester Av (Merle Haggard Rd to Norris Rd) 1.4 mi. - Class II Buffered Bike Ln	
County area	Bakersfield	Di Giorgio Rd (Pierce Dr to S Vineland Rd) 1.8 mi. - Class II Buffered Bike Ln	
County area	Bakersfield	Olive Dr (Coffee Rd to Victor St) 1.7 mi. - Class II Buffered Bike Ln	
County area	Bakersfield	S Union Av (Panama Rd to Bear Mountain Blvd) 4. mi. - Class II Buffered Bike Ln	
County area	Bakersfield	Baldwin Rd (Terrace Wy to Ming Av) .8 mi. - Class III Bike Blvd	
County area	Bakersfield	Breckenridge Rd (End of Street to Comanche Drive) 4.5 mi. - Class III Bike Blvd	
County area	Bakersfield	C Club Dr/H Mann Av/Pentz St (College Av to Ctr St) .8 mi. - Class III Bike Blvd	
County area	Bakersfield	Castro Ln (Wood Lane to La France Drive) .1 mi. - Class III Bike Blvd	
County area	Bakersfield	Center St (Pentz St to Pesanta Rd) .8 mi. - Class III Bike Blvd	
County area	Bakersfield	China Grade Loop (City Limit to Alfred Harrell Highway) .9 mi. - Class III Bike Blvd	
County area	Bakersfield	Culver St (Sterling Rd to Pasante Rd) .1 mi. - Class III Bike Blvd	
County area	Bakersfield	Edwards Av (Mt Vernon Avenue to Oswell Street) 1.2 mi. - Class III Bike Blvd	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
County area	Bakersfield	Ferguson Av (Chester Av to Manor St) .5 mi. - Class III Bike Blvd	
County area	Bakersfield	Floral Dr (Camino Real to Mt Vernon Avenue) .1 mi. - Class III Bike Blvd	
County area	Bakersfield	Habecker Rd (Panama Rd to Di Giorgio Rd) 1. mi. - Class III Bike Blvd	
County area	Bakersfield	Hall Rd (Main St to Habecker Rd) .4 mi. - Class III Bike Blvd	
County area	Bakersfield	Iron Oak Wy (Norris Rd to Exodus Ln) .1 mi. - Class III Bike Blvd	
County area	Bakersfield	Myrtle Av (Di Giorgio Rd to Panama Rd) 1. mi. - Class III Bike Blvd	
County area	Bakersfield	Norris Rd (Coffee Rd to Knudsen Dr) 1.8 mi. - Class III Bike Blvd	
County area	Bakersfield	Palm Av (Wagis Av to Heath Rd) .5 mi. - Class III Bike Blvd	
County area	Bakersfield	Pesante Rd (Culver St to Center St) .1 mi. - Class III Bike Blvd	
County area	Bakersfield	Round Mountain Rd (End of Street to China Grd Lp) 9.8 mi. - Class III Bike Blvd	
County area	Bakersfield	San Diego St (Di Giorgio Rd to Panama Rd) 1.1 mi. - Class III Bike Blvd	
County area	Bakersfield	Segrue Rd (San Emidio St to Habecker Rd) .9 mi. - Class III Bike Blvd	
County area	Bakersfield	Shafter Rd (Old River Rd to H St) 5. mi. - Class III Bike Blvd	
County area	Bakersfield	Shalimar Dr (Pioneer Dr to Niles St) .5 mi. - Class III Bike Blvd	
County area	Bakersfield	Sterling Rd (Brundage Ln to College Av) 2. mi. - Class III Bike Blvd	
County area	Bakersfield	Terrace Wy (A St to Baldwin Rd) .1 mi. - Class III Bike Blvd	
County area	Bakersfield	Valencia Dr (Pioneer Dr to College Av) 1. mi. - Class III Bike Blvd	
County area	Bakersfield	Wood Ln (99 Overcrossing to Castro Lane) .3 mi. - Class III Bike Blvd	
County area	Bakersfield	Wood Ln (Stine Road to 99 Overcrossing) .5 mi. - Class III Bike Blvd	
County area	Bakersfield	Woodrow Av (Roberts Ln to N Chester Av) 1.8 mi. - Class III Bike Blvd	
County area	Bakersfield	Airport Dr (Bksfld-Glennville Rd to Merle Haggard Dr) 1.9 mi. - Class III Bike Route	
County area	Bakersfield	Edison Rd (Edison Hwy to SR 223) 9.7 mi. - Class III Bike Route	
County area	Bakersfield	Fairfax Rd (Panama Rd to SR 223) 4. mi. - Class III Bike Route	
County area	Bakersfield	Olive Dr (Sequoia Dr to N Chester Av) .7 mi. - Class III Bike Route	
County area	Bakersfield	Olive Dr (Victor St to Sequoia Dr) 1.6 mi. - Class IV Cycle Track	
County area	Bear Valley	Bear Valley Road from Cumberland Road to Hwy 202 - 6.8 miles - Other	
County area	County	Kern River Parkway from Western end of Path to Lake Buena Vista - 2.9 miles - Class I	
County area	County	Sierra Hwy from Rosamond Blvd to LA County Line - 3 miles - Class II	
County area	County	Rosamond Blvd from 60th Street to Sierra Hwy - 4.2 miles - Class II	
County area	County	Kiddyland Drive from River Crossing to Alfred Harrel Hwy - 0.3 miles - Class II	
County area	County	SR 178 from SR 14 to Sierra Hwy - 32.3 miles - Caltrans Shoulder	
County area	County	SR 178 from Bakersfield City Limits to Kern River Valley - 26.4 miles - Caltrans Shoulder	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
County area	County	SR 14 from SR 178 to Mojave - 46.6 miles - Caltrans Shoulder	
County area	County	202 Hwy from Tehachapi Blvd to Bear Valley Road - 5.7 miles - Caltrans Shoulder	
County area	County	Weedpatch Hwy from Di Giorgio Road to E Bear Mountain Blvd - 3 miles - Class II	
County area	Delano	Lake Woollomes Loop from Lake Woollomes to Lake Woollomes - 5.3 miles - Class I	
County area	Delano	Stradley Avenue from SR 155 to Sherwood Avenue - 6 miles - Class II	
County area	Delano	Pond Road from Benner Avenue to Stradley Avenue - 3 miles - Class II	
County area	Delano	Mast Avenue from Garces Hwy to Airport Avenue - 1 miles - Class II	
County area	Delano	Airport Avenue from Mast Avenue to Proposed Woollomes - 2.7 miles - Class II	
County area	Golden Hills	Woodford Tehachapi Road from Valley Blvd to Highline Road - 1 miles - Class II	
County area	Golden Hills	Valley Blvd from Tucker Road to Woodford Tehachapi Road - 1.5 miles - Class II	
County area	Golden Hills	SR 202 from Bear Valley Road to Woodford Tehachapi Road - 5.7 miles - Class II	
County area	Golden Hills	Pellisier Road from Banducci Road to Giraudo Road - 2 miles - Class II	
County area	Golden Hills	Old Town Road from Mariposa Road to Tehachapi Road - 0.7 miles - Class II	
County area	Golden Hills	Highline Road from Tucker Road to Banducci Road - 3.1 miles - Class II	
County area	Golden Hills	Golden Hills Blvd. from Santa Barbara Drive to Highline Road - 1.1 miles - Class II	
County area	Golden Hills	Giraudo Road from Pellisier Road to Bailey Road - 0.5 miles - Class II	
County area	Golden Hills	Cummings Valley Road from Bailey Road to Bear Valley Road - 1 miles - Class II	
County area	Golden Hills	Cummings Valley Road from Bailey Road to SR 202 - 0.4 miles - Class II	
County area	Golden Hills	Bear Valley Road from SR 202 to Proposed Road - 1.5 miles - Class II	
County area	Golden Hills	Banducci Road from SR 202 to Highline Road - 0.2 miles - Class II	
County area	Golden Hills	Banducci Road from Comanche Point Road to Pellisier Road - 2.5 miles - Class II	
County area	Golden Hills	Bailey Road from Giraudo Road to Cummings Valley Road - 1.5 miles - Class II	
County area	Golden Hills	Stallion Springs Road/Comanche Point Road from Banducci Road to Banducci Road - 3.1 miles - Other	
County area	Indian Wells	Brown Road from SR 14 to US 395 - 20 miles - Class III Signage Only	
County area	Indian Wells	Brown Road from US 395 Northern Overpass to US 395 Southern Overpass - 0.3 miles - Class III Signage Only	
County area	Indian Wells	Athel Avenue from Us 395 to Brown Road - 2.6 miles - Class III Signage Only	
County area	Indian Wells	US 395 from Brown Road to China Lake Blvd. - 10.1 miles - Caltrans Shoulder	
County area	Indian Wells	US 395 from Brown Road to Inyo County Line - 10.4 miles - Caltrans Shoulder	
County area	Indian Wells	SR 14 from Athel Avenue to SR 178 - 5.9 miles - Caltrans Shoulder	
County area	Indian Wells	SR 14 from US 395 to Athel Avenue - 1 miles - Caltrans Shoulder	
County area	Indian Wells	Brown Road from US 395 to Ridgecrest Blvd. - 8.2 miles - Pave Shoulder	
County area	Indian Wells	Brown Road from Athel Avenue to US 395 - 7.8 miles - Pave Shoulder	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
County area	Indian Wells	Brown Road from US 395 Northern Overpass to US 395 Southern Overpass - 0.3 miles - Pave Shoulder	
County area	Indian Wells	Inyokern Road from SR 178 Ridgecrest City Limits to SR 14 - 9.2 miles - Other	
County area	Inyokern	Broadway from Orchard Avenue to Plains Avenue - 0.5 miles - Class II	
County area	Kern River	Lake Isabella Blvd from Nugget Ave to Erskine Creek Road - 2.2 miles - Class II	
County area	Kern River	Kelso Valley Road from SR 178 to Adams Drive - 1.8 miles - Class II	
County area	Kern River	Kelso Valley Rd / Kelso Valley Creek Road from SR 178 to Loops Back to SR 178 - 9.7 miles - Class III	
County area	Kern River	SR 178 from Kelsy Valley Creek Road to Kelso Valley Road - 1.2 miles - Caltrans Shoulder	
County area	Kern River	Lake Isabella Loop from Loop to - 30.1 miles - Other	
County area	Kernville	Kern River/Lake from Riverside Park to Wofford Heights Park - 4.3 miles - Class I	
County area	Kernville	Sierra Way from Valley View Drive to Cyrus Canyon Road - 2.2 miles - Class III	
County area	Kernville	Sirretta Street from Burlando Road to Existing Class II - 1 miles - Neighborhood Green Streets	
County area	Kernville	Burlando Road from Rio Del Loma/Whiskey Flat to Kernville Road - 2.1 miles - Neighborhood Green Streets	
County area	Kernville	Burlando Road from Kernville to Wofford Heights - 3 miles - Class I	
County area	Lake Isabella	Wofford Road Lake Isabella 2 2.0 from Burlando Road to SR 155 - 2 miles - Class II	
County area	Lake Isabella	McCray Road from SR 178 to Dogwood Road - 0.4 miles - Class II	
County area	Lake Isabella	Erskine Creek Road from Lake Isabella Blvd to Pasadena Lane - 1.4 miles - Class II	
County area	Lake Isabella	Bodfish Canyon Road from Lake Isabella Blvd to End of Road - 2.9 miles - Class II	
County area	Lake Isabella	Sierra Way from Kernville Airport to SR 178 - 11.2 miles - Class III	
County area	Lake Isabella	Hwy 155 from Wofford Road to Lake Isabella Blvd - 5.5 miles - Class III	
County area	Lake Isabella	SR 178 from SR 155 to Sierra Way - 11.4 miles - Caltrans Shoulder	
County area	Lake Isabella	SR 178 from Mobile Drive to Poplar Street - 0.8 miles - Caltrans Shoulder	
County area	Lake Isabella	Lynch Canyon Drive from SR 178 to Poplar Street - 0.7 miles - Neighborhood Green Streets	
County area	McFarland	Sherwood Avenue from Stradley Avenue to S Garzoli Avenue - 1 miles - Class II	
County area	McFarland	Perkins Avenue from Stradley Avenue to S Garzoli Avenue - 1 miles - Class II	
County area	Mojave	Sierra Hwy from Oak Creek Road to Purdy Avenue - 2.4 miles - Class I	
County area	Mojave	Rosewood Blvd from Kyle Street to 5th Street - 5 miles - Class II	
County area	Mojave	Purdy Ave from 45th Street to Town Limits - 6.8 miles - Class II	
County area	Mojave	Oak Creek Road from 45th Street to K Street - 2.3 miles - Class II	
County area	Mojave	O Street from Inyo Street to Park Street - 0.4 miles - Class II	
County area	Mojave	Kock Street from Arroyo Avenue to Purdy Avenue - 3.1 miles - Class II	
County area	Mojave	K Street from Oak Creek Road to Inyo Street - 0.5 miles - Class II	
County area	Mojave	Inyo Street from K Street to O Street - 0.3 miles - Class II	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
County area	Mojave	Holt Street from Arroyo Avenue to Purdy Avenue - 3 miles - Class II	
County area	Mojave	Denise Avenue from 5th Street to Town Limits - 1.5 miles - Class II	
County area	Mojave	Camelot Blvd from 45th Street to Holt Street - 1.6 miles - Class II	
County area	Mojave	Butte Avenue from 5th Street to Town Limits - 1.5 miles - Class II	
County area	Mojave	Arroyo Avenue from 5th Street to Town Limits - 1.5 miles - Class II	
County area	Mojave	Arroyo Avenue from 45th Street to SR 58 - 1.9 miles - Class II	
County area	Mojave	5th Street from Rosewood Blvd to Purdy Avenue - 5.1 miles - Class II	
County area	Mojave	40th Street from Arroyo Avenue to Purdy Avenue - 3.1 miles - Class II	
County area	Mojave	Sierra Hwy from Rosamond Blvd to Silver Queen Road - 9.3 miles - Class III	
County area	Mojave	SR 58 from SR 14 (Sierra Hwy) to 5th Street - 2.9 miles - Caltrans Shoulder	
County area	Ridgecrest	Javis Avenue Parkway from China Lake Blvd to S Downs St Parkway - 1.2 miles - Class I	
County area	Ridgecrest	Indian Wells Valley Parkway Trail from N Jacks Rancho Road to N Jacks Rancho Road - 12.6 miles - Class I	
County area	Ridgecrest	Bowman Road from Jacks Ranch Road to Brady Street - 1 miles - Class I	
County area	Ridgecrest	Springer Avenue from College Heights Blvd to Gateway Blvd - 1 miles - Class II	
County area	Ridgecrest	Springer Avenue from S Downs Street to Norma St Parkway - 0.5 miles - Class II	
County area	Ridgecrest	Springer Ave from Jacks Ranch Road to Brady Street - 1 miles - Class II	
County area	Ridgecrest	S Downs Street from S China Lake Blvd to E Javis Ave - 1.1 miles - Class II	
County area	Ridgecrest	Javis Ave from South China Lake Blvd to Norma St Parkway - 1.8 miles - Class II	
County area	Ridgecrest	Jacks Ranch Road from Ridgecrest Blvd to Springer Avenue - 2 miles - Class II	
County area	Ridgecrest	Drummond Avenue from Jacks Ranch Road to Downs Street - 1 miles - Class II	
County area	Ridgecrest	Brady Street from Inyokern Road (SR 178) to South China Lake Blvd - 4.7 miles - Class II	
County area	Ridgecrest	E Dolphin Avenue from Gateway Blvd to Lumill Street - 0.5 miles - Class III	
County area	Ridgecrest	E Belle Vista Parkway from Gateway Blvd to Summit Street - 0.4 miles - Class III	
County area	Ridgecrest	US 395 from China Lake Blvd to San Bernardino Cty Line - 14 miles - Caltrans Shoulder	
County area	Shafter	Shafter Avenue from Sierra Avenue (Shafter) to Kimberlina Road - 3.3 miles - Class II	
County area	Shafter	Riverside Street from Central Valley Hwy to Driver Road - 2.6 miles - Class II	
County area	Shafter	Riverside Street from Poplar Avenue to Cherry Avenue - 2.5 miles - Class II	
County area	Shafter	Poplar Avenue from Fresno Avenue to Riverside Street - 2 miles - Class II	
County area	Shafter	Palm Avenue from Kimberlina Road to Fresno Avenue - 3 miles - Class II	
County area	Shafter	Palm Avenue from Lupine Court to Kimberlina Road - 1.5 miles - Class II	
County area	Shafter	Magnolia Avenue from McCombs Road to Kimbelina Road - 4 miles - Class II	
County area	Shafter	Kimberlina Road from Magnolia Avenue to Shafter Avenue - 5.1 miles - Class II	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
County area	Shafter	Fresno Avenue from Palm Avenue to Shafter Avenue - 4.1 miles - Class II	
County area	Wasco	Central Avenue from Filburn Avenue to Kimberlina Road - 1.5 miles - Class II	
County area	Taft	Pico Street from S 6th Street to Asher Way - 0.1 miles - Class II	
County area	Taft	Olive Avenue from Supply Row to Wood Street - 0.3 miles - Class II	
County area	Taft	Harding Avenue from A Street to E Street - 0.2 miles - Class II	
County area	Taft	Grevillea Street from Division Road to Harrison Street - 0.5 miles - Class II	
County area	Taft	General Petroleum from 2nd Street to Wood Street - 0.4 miles - Class II	
County area	Taft	Elm Street from Division Road to Harrison Street - 0.5 miles - Class II	
County area	Taft	E Street from Harding Avenue to 10th Street - 0.6 miles - Class II	
County area	Taft	E Ash Street from Adams Street to Airport Road - 0.9 miles - Class II	
County area	Taft	Division Road from Grevillea Street to Ash Street - 0.7 miles - Class II	
County area	Taft	Cedar Street from Harrison Street to Airport Road - 1.6 miles - Class II	
County area	Taft	Cedar Street from Division Road to Tyler Street - 0.4 miles - Class II	
County area	Taft	Asher Avenue from Supply Row to South Street - 0.5 miles - Class II	
County area	Taft	Ash Street from Emmons Park to Harrison Street - 0.2 miles - Class II	
County area	Taft	A Street from Arroyo Drive to Hilard Street - 0.3 miles - Class II	
County area	Taft	Taft Path from Kern River Parkway to Gardner Field Road - 10.6 miles - Other	
County area	Taft	Gardner Field Road from County to Aqueduct - 1.5 miles - Other	
County area	Tehachapi	White Pine Drive from Tehachapi Blvd to Mariposa Road - 0.4 miles - Class II	
County area	Tupman	Tule Elk Reserve Path from Tupman Path to Tule Elk Reserve State Park - 1.3 miles - Other	
County area	County	Garlock Road from Redrock-Randsburg Road to US 395 - 18 miles - Class III	
County area	Wasco	Hwy 46 from Gun Club Road to Magnolia Ave - 8 miles - Caltrans Shoulder	
Delano	Incorporated	11th St (Randolph St to Albany St) 1.5 mi. - Class II	
Delano	Incorporated	20th St (Girard St to Browning Rd) 1.5 mi. - Class II	
Delano	Incorporated	Albany St (Garces Hwy to Woollomes Av) 1. mi. - Class II **PROGRAMMED**	
Delano	Incorporated	Cecil Av (Hiett Av to Albany St) 5. mi. - Class II	
Delano	Incorporated	Garces Hwy (Hiett Av to Albany St) 5. mi. - Class II	
Delano	Incorporated	Girard St (20th St to County Line Rd) .5 mi. - Class II **PROGRAMMED**	
Delano	Incorporated	Hiett Rd (Cecil Av to SR 155) 1. mi. - Class II **PROGRAMMED**	
Delano	Incorporated	High St (SR 155 to Woollomes Av) 1.1 mi. - Class II	
~~Delano~~	~~Incorporated~~	~~Randolph St (Garces St to County Line Rd) 2. mi. - Class II~~ **COMPLETED**	
~~Delano~~	~~Incorporated~~	~~S Lexington St (Woollommes Rd to Garces Hwy) 2.1 mi. - Class II~~ **COMPLETED**	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
Delano	Incorporated	Ellington St (11th Av to Woollomes Av) 1. mi. - Class II	
Delano	Incorporated	Dover Pkwy (Millenium Pkwy to Garzoli Av) .6 mi. - Class II	
Delano	Incorporated	Schuster Rd (Lexington St to Browning Rd) .6 mi. - Class II	
Delano	Incorporated	Hiett Av (County Line Rd to Cecil Av) 1. mi. - Class II **PROGRAMMED**	
Delano	Incorporated	Garzoli Av (Woollomes Av to Pond Rd) 2. mi. - Class II	
Delano	Incorporated	Browning St (Garces Hwy to 9th Av) .5 mi. - Class II	
~~Delano~~	~~Incorporated~~	~~Browning St (9th Av to County Line Rd) 1.5 mi. - Class II~~ **COMPLETED**	
Delano	Incorporated	High St (Garces Hwy to Girard St) 1.7 mi. - Class II	
Delano	Incorporated	Clinton St (Cecil Av to Garces Hwy) 1. mi. - Class III **PROGRAMMED**	
~~Delano~~	~~Incorporated~~	~~Lexington St (Garces Hwy to Cecil Av) 1. mi. - Class III~~ **COMPLETED**	
~~Delano~~	~~Incorporated~~	~~Norwalk Av (Cecil Av to County Line Rd) 1. mi. - Class III~~ **COMPLETED**	
~~Delano~~	~~Incorporated~~	~~11th Av (Albany St to Hiett Av) .5 mi. - Class III~~ **COMPLETED**	
Delano	Incorporated	20th Av (Albany St to Belmont St) .1 mi. - Class III **PROGRAMMED**	
Delano	Incorporated	9th St (High St to Browning Rd) 1.3 mi. - Class III **PROGRAMMED**	
Delano	Incorporated	Belmont St (20th Av to Cecil Av) .5 mi. - Class III	
Delano	Incorporated	Browning Rd (SR 155 to Skyline Rd) 2. mi. - Class III	
Delano	Incorporated	County Line Rd (Hiett Av to Veneto St) 3. mi. - Class III **PROGRAMMED**	
Delano	Incorporated	Melcher Rd (County Line Rd to Cecile Wy) 1. mi. - Class III	
Delano	Incorporated	Veneto St (County Line Rd to 20th St) .5 mi. - Class III	
Delano	Incorporated	Garzoli Av (Pond Rd to Delano City Limit) .5 mi. - Class III	
Maricopa	Incorporated	SR 33/166 (Clark St to South City Limits) 1. mi. - Class II Bike Ln	
Maricopa	Incorporated	California St SR 33 (Poso St to Kern St) .5 mi. - Class II Buffered Bike Ln	
Maricopa	Incorporated	Maricopa Hwy SR 166/33 (Fresno St to Scott Dr) 1.1 mi. - Class II Buffered Bike Ln	
Maricopa	Incorporated	Wagy St (Maricopa Hwy to Welch St) .1 mi. - Class I Shared Use Path	
Maricopa	Incorporated	Hazelton St (Main St to Poso St) .3 mi. - Class II Bike Ln	
Maricopa	Incorporated	Main St (Hazelton St to California St) .1 mi. - Class II Bike Ln	
Maricopa	Incorporated	Chico St (California St to Welch St) .1 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Elkhorn St (SR 33 to Fresno St) .4 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Fresno St (Poso St to Elkhorn St) .2 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Green St (Hazelton St to California St) .1 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Hazelton St (SR 166 to South City Limits) .3 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Union St (Maricopa Hwy SR 33 to Ruth St) .4 mi. - Class III Bike Blvd	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
Maricopa	Incorporated	Welch St (Chico St to Wagy St) .1 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Stanislaus St (Klipstein St to School St) .2 mi. - Class III Bike Route	
Maricopa	Incorporated	SR 33/166 (Clark St to South City Limits) 1. mi. - Class II Bike Ln	
Maricopa	Incorporated	California St SR 33 (Poso St to Kern St) .5 mi. - Class II Buffered Bike Ln	
Maricopa	Incorporated	Maricopa Hwy SR 166/33 (Fresno St to Scott Dr) 1.1 mi. - Class II Buffered Bike Ln	
Maricopa	Incorporated	Wagy St (Maricopa Hwy to Welch St) .1 mi. - Class I Shared Use Path	
Maricopa	Incorporated	Hazelton St (Main St to Poso St) .3 mi. - Class II Bike Ln	
Maricopa	Incorporated	Main St (Hazelton St to California St) .1 mi. - Class II Bike Ln	
Maricopa	Incorporated	Chico St (California St to Welch St) .1 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Elkhorn St (SR 33 to Fresno St) .4 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Fresno St (Poso St to Elkhorn St) .2 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Green St (Hazelton St to California St) .1 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Hazelton St (SR 166 to South City Limits) .3 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Union St (Maricopa Hwy SR 33 to Ruth St) .4 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Welch St (Chico St to Wagy St) .1 mi. - Class III Bike Blvd	
Maricopa	Incorporated	Stanislaus St (Klipstein St to School St) .2 mi. - Class III Bike Route	
McFarland	Incorporated	Union Pacific RR (Sherwood Av to Elmo Hwy) 1.1 mi. - Class I Shared Use Path	
McFarland	Incorporated	Browning Rd (Elmo Hwy to W Taylor Av) 1.5 mi. - Class II Bike Ln	
McFarland	Incorporated	Davis Av (Elmo Hwy to Perkins Av) .5 mi. - Class II Bike Ln	
McFarland	Incorporated	Elmo Hwy (Browning Rd to West City Limits) 3.5 mi. - Class II Bike Ln	
McFarland	Incorporated	Frontage Rd (Sherwood Av to Taylor Av) .6 mi. - Class II Bike Ln	
McFarland	Incorporated	Frontage Rd (Hail Ln to Perkins Av) .3 mi. - Class II Bike Ln	
McFarland	Incorporated	Hail Ln (Garzoli Av to Frontage Rd) .7 mi. - Class II Bike Ln	
McFarland	Incorporated	Kendra St (Elmo Hwy to Perkins Av) .5 mi. - Class II Bike Ln	
McFarland	Incorporated	Mast Av (Taylor Av to Whisler Rd) 1.5 mi. - Class II Bike Ln	
McFarland	Incorporated	Perkins Av (Garzoli Av to Stradley Av) 1. mi. - Class II Bike Ln	
McFarland	Incorporated	Sherwood Access Ramps (SR 49/99 to Sherwood Av) .3 mi. - Class II Bike Ln	
McFarland	Incorporated	Sherwood Av (Wiley St to Driver Rd) .7 mi. - Class II Bike Ln	
McFarland	Incorporated	Taylor Av (Mast Av to Frontage Rd) .4 mi. - Class II Bike Ln	
McFarland	Incorporated	Taylor Av (SR 99 to Driver Rd) 1.1 mi. - Class II Bike Ln	
McFarland	Incorporated	W Kern Av (5th St to Garzoli Av) .4 mi. - Class II Bike Ln	
McFarland	Incorporated	E Perkins Av (Industrial St to Bowman Rd) .7 mi. - Class II Buffered Bike Ln	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project		Location	Scope	YOE Cost
	McFarland	Incorporated	E Sherwood Av (Industrial St to Wiley St) .4 mi. - Class II Buffered Bike Ln	
	McFarland	Incorporated	Garzoli Av (Hanahwalt Av to Elmo Hwy) 2. mi. - Class II Buffered Bike Ln	
	McFarland	Incorporated	Perkins Av (Garzoli Av to Frontage Rd) .7 mi. - Class II Buffered Bike Ln	
	McFarland	Incorporated	Perkins Av Access Ramp (W Prkns Av to E Prkns Av) .3 mi. - Class II Buffered Bike Ln	
	McFarland	Incorporated	3rd St (Perkins Av to Sherwood Av) .5 mi. - Class III Bike Blvd	
	McFarland	Incorporated	5th St (Hail Ln to Ebell St) .9 mi. - Class III Bike Blvd	
	McFarland	Incorporated	E Kern Av (McFarland Bridge to Wiley St) .5 mi. - Class III Bike Blvd	
	McFarland	Incorporated	Ebell St (5th St to Mast Av) .1 mi. - Class III Bike Blvd	
	McFarland	Incorporated	W Kern Av (1st St to 5th St) .3 mi. - Class III Bike Blvd	
	Ridgecrest	Incorporated	Ridgecrest Blvd SR 178 (Richmd Rd to San Bdno Blvd) .8 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	E Rcrest Blvd SR 178 (N Chna Lk Blvd to S Richmd Rd) 1.2 mi. - Class II Buffered Bike Ln	
	Ridgecrest	Incorporated	Bowman Path (Brady St to S Downs St) 1. mi. - Class I Shared Use Path	
	Ridgecrest	Incorporated	Bowman Path (Richmond Rd to San Bernardino Blvd) 1.1 mi. - Class I Shared Use Path	
	Ridgecrest	Incorporated	E Javis Av (S Gateway Blvd to College Heights Blvd) 1. mi. - Class I Shared Use Path	
	Ridgecrest	Incorporated	Jarvis Av (S Downs St to Lacey St) .5 mi. - Class I Shared Use Path	
	Ridgecrest	Incorporated	W Kendall Av (S Downs St to S Del Rosa Dr) .8 mi. - Class I Shared Use Path	
	Ridgecrest	Incorporated	Bowman Rd (Gateway Blvd to San Bernardino Blvd) 1. mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Dolphin Av (S Mahan St to S China Lake Blvd) .9 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Drummond Av (N Mahan St to N Down St) .5 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	E Dolphin Av (S China Lake Blvd to S Gateway Blvd) 1.5 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	E Las Flores Av (French Av to N China Lake Blvd) .3 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Inyokern Rd (Hawk to Mahan St) 10.1 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Javis Av (College Heights Blvd to Lacey St) .5 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Kendall Av (S Del Rosa Dr to S Gateway Blvd) 1.2 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Mahan St (W Inyokern Rd to W Springer Av) 4. mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Norma St (Bowman Rd to W Upjohn Av) .5 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Richmond Rd (Inyokern Rd to Ridgrecrest Blvd) 2. mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Ridgecrest Blvd (S Brady St to S Norma Streeet) 1.5 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	S Gateway Blvd (E Upjohn Av to Ridgecrest Blvd) .5 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	S Gateway Blvd (Bowman Rd to E Kendall Av) 1.6 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Saratoga Av (Lauritsen Rd to Blue Ridge Rd) .9 mi. - Class II Bike Ln	
	Ridgecrest	Incorporated	Springer Av (Jack Ranch Rd to S Gateway Blvd) 4. mi. - Class II Bike Ln	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
Ridgecrest	Incorporated	Sunland St (E Upjohn Av to E Kendall Av) 2 mi. - Class II Bike Ln	
Ridgecrest	Incorporated	W Upjohn Av (Brady St to S Downs St) 1 mi. - Class II Bike Ln	
Ridgecrest	Incorporated	Downs St (Inyokern Rd to Springer Av) 4 mi. - Class II Buffered Bike Ln	
Ridgecrest	Incorporated	Drummond Av (N China Lake Blvd to French Av) .6 mi. - Class II Buffered Bike Ln	
Ridgecrest	Incorporated	French Av (Drummond Av to N China Lake Blvd) .8 mi. - Class II Buffered Bike Ln	
Ridgecrest	Incorporated	Norma St (W Upjohn Av to W Inyokern Rd) 2.5 mi. - Class II Buffered Bike Ln	
Ridgecrest	Incorporated	Gold Canyon St (Ridgecrest Blvd to Richmond Rd) 1.3 mi. - Class III Bike Blvd	
Ridgecrest	Incorporated	Rowe St (Knox Rd to Richmond Rd) 1 mi. - Class III Bike Blvd	
Ridgecrest	Incorporated	N Brady St (China Lake Blvd to Inyokern Rd) 4.7 mi. - Class III Bike Route	
Ridgecrest	Incorporated	Norma St (Bowman Rd to S China Lake Blvd) .4 mi. - Class III Bike Route	
Ridgecrest	Incorporated	Pilot Plant Rd (Richmond Rd to East City Limits) .7 mi. - Class III Bike Route	
Ridgecrest	Incorporated	S Richmond Rd (E Ridgecrest Blvd to Upjohn Av) .6 mi. - Class III Bike Route	
Ridgecrest	Incorporated	W Las Flores Av (N Brady St to N Mahan St) .5 mi. - Class III Bike Route	
Ridgecrest	Incorporated	W Ridgecrest Blvd (N Norma St to N China Lake Blvd) .5 mi. - Class III Bike Route	
Ridgecrest	Incorporated	S China Lake Blvd (W Springs Av to E Inyokern Rd) 4.5 mi. - Class IV Cycle Track	
Shafter	Incorporated	Beech Av (SR 43 to 7th Std Rd) 4.8 mi. - Class II Bike Ln	
Shafter	Incorporated	Fresno Av (Palm Av to Cherry Av) 6.1 mi. - Class II Bike Ln	
Shafter	Incorporated	Poplar Av (Fresno Av to Riverside St) 2 mi. - Class II Bike Ln	
Shafter	Incorporated	E Lerdo Hwy (Cherry Av to Mannel Av) 1.5 mi. - Class II Buffered Bike Ln	
Shafter	Incorporated	E Tulare Av (Mannel Av to N Beech Av) .5 mi. - Class II Buffered Bike Ln	
Shafter	Incorporated	Lerdo Hwy (Poplar Av to SR 43) 1.4 mi. - Class II Buffered Bike Ln	
Shafter	Incorporated	Los Angeles Av (Mettler Av to Thompson St) .7 mi. - Class II Buffered Bike Ln	
Shafter	Incorporated	Mannel Av (E Tulare Av to E Lerdo Hwy) .5 mi. - Class II Buffered Bike Ln	
Shafter	Incorporated	Shafter Av (Redwood Dr to Lerdo Hwy) .7 mi. - Class II Buffered Bike Ln	
Shafter	Incorporated	Shafter Av (Lerdo Hwy to Riverside St) 1 mi. - Class II Buffered Bike Ln	
Shafter	Incorporated	E Tulare Av (Shafter Av to Mannel Av) .5 mi. - Class III Bike Blvd	
Shafter	Incorporated	James St (Shafter Av to E Lerdo Hwy) .4 mi. - Class III Bike Blvd	
Shafter	Incorporated	Mark Av (Knight St to N Valley St) .4 mi. - Class III Bike Blvd	
Shafter	Incorporated	N Beech Av (E Tulare Av to E Lerdo Hwy) .5 mi. - Class III Bike Blvd	
Shafter	Incorporated	N Wall St (Richland Dr to W Tulare Av) .2 mi. - Class III Bike Blvd	
Shafter	Incorporated	Poso Av (N Valley St to Shafter Av) .2 mi. - Class III Bike Blvd	
Shafter	Incorporated	Schnaidt St (W Los Angeles St to Mark Av) .7 mi. - Class III Bike Blvd	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
Shafter	Incorporated	Valley St (Poso Av to Rodriguez Av) .7 mi. - Class III Bike Blvd	
Shafter	Incorporated	Beech Av (Fresno Av to Tulare Av) .5 mi. - Class III Bike Route	
Shafter	Incorporated	Burbank St (Drr Rd to Zachary Av) 1. mi. - Class III Bike Route	
Shafter	Incorporated	Cherry Av (Fresno Av to Riverside St) 2. mi. - Class III Bike Route	
Shafter	Incorporated	Drr Rd (Riverside St to Burbank St) 1. mi. - Class III Bike Route	
Shafter	Incorporated	E Los Angeles Av (Thompson St to SR 43) .8 mi. - Class III Bike Route	
Shafter	Incorporated	Mannel Av (Redwood Dr to E Tulare Av) .2 mi. - Class III Bike Route	
Shafter	Incorporated	Redwood Dr (Shafter Av to Mannel Av) .5 mi. - Class III Bike Route	
Shafter	Incorporated	Riverside St (SR 99 to Drr Rd) 5.1 mi. - Class III Bike Route	
Shafter	Incorporated	Shafter Av (Kimberlina Rd to Redwood Dr) 3.3 mi. - Class III Bike Route	
Shafter	Incorporated	Zachary Av (Burbank St to 7th Std Rd) 2. mi. - Class III Bike Route	
Taft	Incorporated	SR 119 (Midway Rd to South City Limits) 6.6 mi. - Class II Bike Ln	
Taft	Incorporated	SR 33 (Kern St to SR 119) .5 mi. - Class II Bike Ln	
Taft	Incorporated	SR 33 (West City Limits to Cascade Pl) 1.2 mi. - Class II Bike Ln	
Taft	Incorporated	Kern St SR 33 (Cascade Pl to 1st St) 1.2 mi. - Class II Buffered Bike Ln	
Taft	Incorporated	SR 33 (Cadet Rd to California St) 2.3 mi. - Class III Bike Route	
~~Taft~~	~~Incorporated~~	~~10th St (Center St to F St) .7 mi. - Class II Bike Ln~~ COMPLETED	
~~Taft~~	~~Incorporated~~	~~A St (Terrace Dr to S 10th St) .9 mi. - Class II Bike Ln~~ COMPLETED	
~~Taft~~	~~Incorporated~~	~~Ash St (N 10th St to Airport Rd) 1.9 mi. - Class II Bike Ln~~ COMPLETED	
~~Taft~~	~~Incorporated~~	~~Wood St (S 10th St to SR 33) 1.1 mi. - Class II Bike Ln~~ COMPLETED	
~~Taft~~	~~Incorporated~~	~~1st St (West Side Hwy SR 33 to Calvin St) .3 mi. - Class II Buffered Bike Ln~~ COMPLETED	
~~Taft~~	~~Incorporated~~	~~2nd St (Calvin St to Williams Wy) .3 mi. - Class II Buffered Bike Ln~~ COMPLETED	
~~Taft~~	~~Incorporated~~	~~6th St (Oak St to Ash St) 1.1 mi. - Class II Buffered Bike Ln~~ COMPLETED	
Taft	Incorporated	Cedar St (Division Rd to Airport Rd) 2.1 mi. - Class II Buffered Bike Ln	
~~Taft~~	~~Incorporated~~	~~2nd St (Calvin St to Supply Row) .6 mi. - Class III Bike Blvd~~ COMPLETED	
~~Taft~~	~~Incorporated~~	~~Harding Av (A St to E St) .4 mi. - Class III Bike Blvd~~ COMPLETED	
~~Taft~~	~~Incorporated~~	~~Oak St (Lierly Av to S 10th St) .2 mi. - Class III Bike Blvd~~ COMPLETED	
~~Taft~~	~~Incorporated~~	~~Airport Rd (Ash St to SR 119) 1.1 mi. - Class III Bike Route~~ COMPLETED	
Taft	Incorporated	Cadet Rd (SR 33 to Duval Rd) 2. mi. - Class III Bike Route	
~~Taft~~	~~Incorporated~~	~~Church St (F St to Ranier Av) .9 mi. - Class III Bike Route~~ COMPLETED	
Taft	Incorporated	Gardner Field Rd (SR 33 to East City Limits) 4.2 mi. - Class III Bike Route	
~~Taft~~	~~Incorporated~~	~~Midoil Rd (Thomas St to Terrace Dr) .7 mi. - Class III Bike Route~~ COMPLETED	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
~~Taft~~	~~Incorporated~~	~~10th St (Center St to Ash St) .6 mi. - Class IV Cycle Track~~ **COMPLETED**	
Tehachapi	Incorporated	Tucker Rd SR 202 (Enterprise Wy to Tehachapi Blvd) .7 mi. - Class II Bike Ln	
~~Tehachapi~~	~~Incorporated~~	~~Class I (Orchard Path to Highline Rd) .3 mi. - Class I Shared Use Path~~ **COMPLETED**	
Tehachapi	Incorporated	East City Path (Tucker Rd to Mount View Av) .5 mi. - Class I Shared Use Path	
Tehachapi	Incorporated	Pinon St (Brandon Ln to Dennison Rd) .5 mi. - Class I Shared Use Path	
~~Tehachapi~~	~~Incorporated~~	~~Tehachapi Blvd (Steuber Rd to Snyder Av) 1.4 mi. - Class I Shared Use Path~~ **COMPLETED**	
~~Tehachapi~~	~~Incorporated~~	~~Valley Blvd (S Snyder Av to Steuber Rd) 1.4 mi. - Class I Shared Use Path~~ **COMPLETED**	
Tehachapi	Incorporated	Anita Dr (S Snyder Av to Dennison Rd) .4 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Challenger Dr (Burnett Rd to Capital Hills Pkwy) 1.1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Cherry Ln (Tucker Rd to Elm St) .7 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Classico Dr (Pinon St to Alder Av) .1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Dennison Rd (SR 58 to Highline Rd) 2.1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	E C St (Pepper Dr to S Snyder Av) .2 mi. - Class II Bike Ln	
Tehachapi	Incorporated	E I St (N Curry St to N Mojave St) .4 mi. - Class II Bike Ln	
Tehachapi	Incorporated	E J St (N Curry St to N Hayes St) .4 mi. - Class II Bike Ln	
Tehachapi	Incorporated	E Orchard Pkwy (Classico Dr to S Curry St) .1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	E St (Mulberry St to S Mojave St) .7 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Enterprise Wy (Mill St to Tucker Rd) 1.1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	H St (N Mill St to S Hayes St) .6 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Industrial Pkwy (N Mill St to N Curry St) .2 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Mojavee St (J St to E H St) .1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Mount View Av (W D St to Maple St) .1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	N Curry St (E J St to W H St) .1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	N Curry St (Industrial Pkwy to W J St) .1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	N Mill St (Challenger Dr to W H St) .8 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Pepper Dr (S Mojave St to E C St) .1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Pinon St (S Curry St to Brandon Ln) .5 mi. - Class II Bike Ln **FUNDED**	
Tehachapi	Incorporated	Pinon St (Classico Dr to Applewood Dr) .1 mi. - Class II Bike Ln	
Tehachapi	Incorporated	S Hayes St (Pepper Dr to E H St) .3 mi. - Class II Bike Ln	
Tehachapi	Incorporated	S Snyder Av (E Tehachapi Blvd to Valley Blvd) .5 mi. - Class II Bike Ln **FUNDED**	
Tehachapi	Incorporated	Steuber Rd (E Tehachapi Blvd to Highline Rd) 1.2 mi. - Class II Bike Ln	
Tehachapi	Incorporated	Tehachapi Willow Springs Rd (E Teh Blvd to Highline Rd) 1.1 mi. - Class II Bike Ln	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
Tehachapi	Incorporated	E Tehachapi Blvd (Dennison Rd to Teh Willow Spr Rd) 1. mi. - Class II Buffered Bike Ln	
Tehachapi	Incorporated	Tucker Rd (Tehachapi Blvd to Highline Rd) 1.5 mi. - Class II Buffered Bike Ln	
Tehachapi	Incorporated	W Tehachapi Blvd (Mt View Av to S Snyder Av) 1.2 mi. - Class II Buffered Bike Ln	
Tehachapi	Incorporated	W Valley Blvd (McIntosh St to Las Colinas St) .3 mi. - Class II Buffered Bike Ln	
Tehachapi	Incorporated	Brentwood Dr (Clearview St to Cherry Ln) .9 mi. - Class III Bike Blvd	
Tehachapi	Incorporated	Clearview St (Valley Blvd to White Oak Dr) .3 mi. - Class III Bike Blvd	
Tehachapi	Incorporated	Elm St (Maple St to Cherry Ln) .5 mi. - Class III Bike Blvd	
Tehachapi	Incorporated	Maple St (Mt View Av to S Mill St) .3 mi. - Class III Bike Blvd	
Tehachapi	Incorporated	S Mojave St (E Tehachapi Blvd to Pepper Dr) .3 mi. - Class III Bike Blvd	
Tehachapi	Incorporated	White Oak Dr (S Curry St to Clearview St) .2 mi. - Class III Bike Blvd	
Tehachapi	Incorporated	Applewood Dr (Elm St to Pinon St) .2 mi. - Class III Bike Route	
Tehachapi	Incorporated	Elm St (Cherry Ln to Applewood Dr) .2 mi. - Class III Bike Route	
Tehachapi	Incorporated	Pinon St (Applewood Dr to S Curry St) .2 mi. - Class III Bike Route	
Tehachapi	Incorporated	S Green St (H St to C St) .3 mi. - Class III Bike Route	
Wasco	Incorporated	SR 46 (East City Limits to SR 43) .6 mi. - Class II Bike Ln	
Wasco	Incorporated	SR 46 (Central Av to F St) 1.4 mi. - Class IV Cycle Track	
Wasco	Incorporated	Filburn/Central Av Path (Palm Av to North Palm Av) 2.5 mi. - Class I Shared Use Path	
Wasco	Incorporated	Filburn/McCombs Path (I-5 N to SR 43) 22.6 mi. (partial funding)- Class I Shared Use Path	
Wasco	Incorporated	Wasco Av & SR 46 (Filburn Av to Palm Av) 2.5 mi. - Class I Shared Use Path	
Wasco	Incorporated	6th St (Broadway St to D St) .1 mi. - Class II Bike Ln	
Wasco	Incorporated	Central Av (Flower St to Poso Av) .3 mi. - Class II Bike Ln	
Wasco	Incorporated	Central Av (Filburn St to Jackson St) .5 mi. - Class II Bike Ln	
Wasco	Incorporated	D St (Filburn St to 4th St) 1.3 mi. - Class II Bike Ln	
Wasco	Incorporated	E St (6th St to SR 46) .4 mi. - Class II Bike Ln	
Wasco	Incorporated	Filburn St (Central Av to G St) 1.4 mi. - Class II Bike Ln	
Wasco	Incorporated	Jackson St (Central Av to Shared Use Path) 1.5 mi. - Class II Bike Ln	
Wasco	Incorporated	4th St (F St to G St) .1 mi. - Class II Buffered Bike Ln	
Wasco	Incorporated	6th St (D St to Wasco Av) .5 mi. - Class II Buffered Bike Ln	
Wasco	Incorporated	7th St (Central Av to Griffith Av) 1. mi. - Class II Buffered Bike Ln	
Wasco	Incorporated	Central Av (Paso Robles Hwy SR 46 to Posos Av) 1. mi. - Class II Buffered Bike Ln	
Wasco	Incorporated	Palm Av (Gromer Av to Jackson St) 2.5 mi. - Class II Buffered Bike Ln	
Wasco	Incorporated	Poplar Av (Filburn St to Sunset St) .8 mi. - Class II Buffered Bike Ln	

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Non-motorized (Continued)

Project	Location	Scope	YOE Cost
Wasco	Incorporated	16th St (Shamrock Court to G St) .5 mi. - Class III Bike Blvd	
Wasco	Incorporated	1st St (Peters St to E St) .9 mi. - Class III Bike Blvd	
Wasco	Incorporated	5th St (Woodside Dr to G St) 1.4 mi. - Class III Bike Blvd	
Wasco	Incorporated	7th St (G St to Griffith Av) .5 mi. - Class III Bike Blvd	
Wasco	Incorporated	9th Pl (Beckes St to D St) 1. mi. - Class III Bike Blvd	
Wasco	Incorporated	9th St (G St to D St) .2 mi. - Class III Bike Blvd	
Wasco	Incorporated	Beckes St (Camellia St to SR 46) 1.2 mi. - Class III Bike Blvd	
Wasco	Incorporated	Krista St (Beckes St to Central Av) .3 mi. - Class III Bike Blvd	
Wasco	Incorporated	Poplar Av (Sunset Av to SR 46) .7 mi. - Class III Bike Blvd	
Wasco	Incorporated	SR 43 (Paso Robles Hwy SR 46 to Filburn St) 1.5 mi. - Class IV Cycle Track	
Wasco	Incorporated	Griffith St (Gromer Av to Jackson St) 2.5 mi. - Complete Streets	
Various locations	Countywide	Construct Pedestrian Enhancement Improvements	77,500,000
Various locations	Countywide	Construct Complete Streets Improvements	261,000,000
		Sub-total	**$424,000,000**

2022 through 2046 - Freight Rail

Project	Location	Scope	YOE Cost	Project ID	Start
Freight Rail	Tehachapi	Double-track sections from Bakersfield to Mojave - Phase 2	$100,000,000		
Freight Rail	Shafter	Shafter Intermodal Rail Facility - Phase 3	60,000,000		
		(Information only) Sub-total	**$160,000,000**		

2022 through 2026 - Major Highway Improvements

Project	Location		YOE Cost	Project ID	Start
Route 46	Lost Hills	Brown Material Rd to I-5 - interchange upgrade at I-5 - Phase 4B	40,000,000	KER08RTP018	2022
Route 46	Lost Hills	Brown Material Rd to I-5 - interchange upgrade at I-5 - Phase 4C	37,000,000	KER08RTP018	2023
Route 58	Metro Bkfd	Rosedale Hwy @ Minkler Spur / Landco - construct grade separation	27,000,000	KER08RTP118	2026
Route 58	County	General Beale Rd to E. of Broome Rd - Construct truck climbing lanes	99,000,000	KER22RTP006	2023
Route 65	Metro Bkfd	James Rd to Merle Haggard Dr - widen to four lanes	3,000,000	KER08RTP094	2023
Route 99	Bakersfield	Olive Drive - construct interchange upgrades	6,100,000	KER08RTP091	2026
Route 184	Metro Bkfd	At Union Pacific Railroad - construct grade separation	26,400,000	KER08RTP108	2026
Route 204	Bakersfield	F St - construct interchange	61,700,000	KER08RTP081	2024
Centennial Corridor	Bakersfield	At Route 99 & 58 – Construct operational improvements	100,000,000	KER22RTP003	2023
Centennial Corridor	Bakersfield	Stockdale Hwy from SR 43 to Heath Road - widen existing highway	59,000,000	KER22RTP005	2026
Hageman Flyover	Bakersfield	Knudsen Dr to Rt 204 - construct extension	68,900,000	KER08RTP013	2023
		Sub-total	**$587,100,000**		

Project Listing – Table 5-1: Constrained Capital Improvement Program

2027 through 2031 - Major Highway Improvements

Project	Location	Scope	YOE Cost	Project ID	Start
Route 14	Inyokern	Redrock / Inyokern Rd to Rt 178 - widen to four lanes (Phase 2)	42,000,000	KER08RTP017	2031
Route 58	County	Business 58 OC to Edwards Air Force Base OC - improve access to EAFB (Phase 1)	40,000,000	KER22RTP007	2027
Route 119	Taft	Cherry Ave to Elk Hills Rd (Phase 1, bypass) - widen to four lanes	115,000,000	KER08RTP022	2031
Route 178	Metro Bkfd	Near Oswell St to Vineland Rd - widen existing	17,000,000	KER08RTP111	2031
		Sub-total	**$397,293,000**		

2032 through 2036 - Major Highway Improvements

Project	Location	Scope	YOE Cost	Project ID	Start
Route 14	Inyokern	Redrock / Inyokern Rd to Rt 178 - widen to four lanes (Phase 3)	$32,000,000	KER08RTP024	2036
Route 58	Bakersfield	At various locations - ramp improvements (HOV - ramp metering)	$32,600,000	KER08RTP103	2036
Route 58	Bakersfield	Union Ave to Fairfax Rd - widen to eight lanes	47,400,000	KER08RTP093	2036
Route 99	Bakersfield	Beardsley Canal to 7th Standard Rd - widen to eight lanes	90,800,000	KER08RTP138	2036
Route 99	Bakersfield	At Olive Drive - reconstruct interchange	108,000,000	KER08RTP021	2036
Route 99	Bakersfield	At Snow Rd - construct new interchange	138,200,000	KER08RTP115	2036
Route 99	Bakersfield	At various locations - ramp improvements (HOV - ramp metering)	37,000,000	KER08RTP105	2036
Route 119	Metro Bkfd	I-5 to Buena Vista - widen to four lanes	31,300,000	KER08RTP099	2036
Route 178	Bakersfield	At Rt 204 and 178 - reconstruct ramps (HOV - ramp metering)	50,000,000	KER08RTP085	2036
Route 178	Bakersfield	At various locations - ramp improvements (HOV - ramp metering)	37,000,000	KER08RTP106	2036
Route 178	Bakersfield	Existing west terminus to Oswell St - widen to eight lanes (HOV)	140,500,000	KER08RTP026	2036
Route 184	amont/Fuller Acres	Panama Rd to Rt 58 - widen to four lanes	10,500,000	KER08RTP100	2036
Route 184	Bakersfield	Morning Dr to Rt 178 - widen to four lanes	5,000,000	KER08RTP101	2032
Route 184	Bakersfield	Rt 58 to Rt 178 - widen to four lanes	90,000,000	KER08RTP045	2036
Route 204	Bakersfield	Airport Drive to Rt 178 - widen existing highway	55,000,000	KER08RTP083	2036
7th Standard Rd	Shafter/Bkfd	Rt 43 to Santa Fe Way - widen existing roadway	14,000,000	KER08RTP113	2036
West Urban Corridor	Metro Bkfd	White Lane to Westside Parkway - construct new facility	115,793,000	KER08RTP139	2036
West Urban Corridor	Metro Bkfd	Rosedale Hwy to 1/2 mile north of 7th Standard Rd - construct new facility	115,793,000	KER08RTP102	2033
West Urban Corridor	Metro Bkfd	Rosedale Hwy to Westside Parkway - construct new facility	93,500,000	KER08RTP016	2033
		Sub-total	**$1,244,386,000**		

2037 through 2046 - Major Highway Improvements

Project	Location	Scope	YOE Cost	Project ID	Start
Route 119	Taft	Elk Hills - County Rd to Tupman Ave - widen to four lanes (Phase 2)	48,000,000	KER08RTP086	2046
Route 178	Metro Bkfd	Vineland to E. of Alfred Harrell Hwy - new freeway segment, interchange	119,000,000	KER08RTP025	2046
Route 178	Bakersfield	Miramonte to Rancheria - widen existing highway	19,800,000	KER08RTP084	2046
US 395	Ridgecrest	Between Rt 178 and China Lake Blvd - construct passing lanes	20,000,000	KER08RTP089	2046
West Urban Corridor	Metro Bkfd	Taft Hwy to White Lane - construct new facillity	90,000,000	KER08RTP097	2046
		Sub-total	**$296,800,000**		
		Total Major Highway Improvements	**$2,203,286,000**		

NOTE: $77 MILLION OR 3% OF THE TOTAL ESTIMATE FOR MAJOR HIGHWAY PROJECTS IS EXPECTED TO FINANCE LAND CONSERVATION MITIGATION

Project Listing – Table 5-1: Constrained Capital Improvement Program

TABLE 5.1 - Constrained Capital Improvement Program Continued

2022 through 2046 - Local Streets and Roads

Project	Location	Scope	YOE Cost	Project ID	Start
Various Locations	Metro Bkfd	Bridge and street widening; reconstruction	$540,000,000		
Various Locations	Metro Bkfd	Signalization	15,000,000		
Various Locations	Rosamond	Street widening; signalization	112,000,000		
Various Locations	Countywide	Transportation Control Measures	386,000,000		
Various Locations	Countywide	Bridge and street widening; reconstruction; signalization	632,000,000		
		Sub-total	**$1,685,000,000**		

* Note: Adjustments to programming were made regarding the overlap of HOV related improvements listed separately from regionally significant highway improvements.

2022 through 2046 - Summary of Constrained Projects

Program Category	Totals
Transit / Rail / High Speed Rail	2,072,200,000
Operational Improvements - HOV Lanes / Ramp Metering	297,000,000
Pedestrian Complete Streets and Bicycle Improvements	424,000,000
Local Streets and Roads	1,685,000,000
Major Highway Improvements 2022-2026	$587,100,000
Major Highway Improvements 2027-2046*	1,751,186,000
Freight Rail	160,000,000
Grand Total	$6,976,486,000

TABLE 5.2 - Unconstrained Program of Projects
Beyond 2046 - Transit

Project	Location	Scope	YOE Capital Cost
Local Passenger Rail	Shafter, Bakersfield	Amtrak San Joaquins stop in North/West Bakersfield - platform, track turnout , park&ride, ticket both, RoW (2012 Commuter Rail Study)	$5,000,000
Local Passenger Rail	Shafter, Bakersfield	Up to 4 Amtrak San Joaquins stops on BNSF - platform, track turnout , park&ride, ticket both, RoW (2012 Commuter Rail Study)	$20,000,000
Local Passenger Rail	Wasco, Bakersfield	Positive Train Control Port Chicago - Bakersfield (Draft 2012 State Rail Plan)	$24,000,000
Local Passenger Rail	Shafter, NW Bakersfield	Double Track BNSF Jastro/Landco to Shafter (Draft 2012 State Rail Plan)	$71,300,000
Local Passenger Rail	Shafter, Wasco	Double Track BNSF Shafter to Wasco (Draft 2012 State Rail Plan)	$37,000,000
Local Passenger Rail	NW Bakersfield	Jastro Curve Realignment (Draft 2012 State Rail Plan)	$50,000,000
Local Passenger Rail	Wasco, Bakersfield	Corridor Wide Signal Upgrades to 90 MPH - Oakland to Bakersfield (Draft 2012 State Rail Plan)	$55,000,000
Local Passenger Rail	Wasco, County	Double Track BNSF Wasco to Corcoran (Draft 2012 State Rail Plan)	$200,000,000
Local Passenger Rail	Eastern California	Mammoth Lakes to Lancaster/Palmdale (2005 E. Sierra Public Transit Study)	$3,335,000,000
Local Passenger Rail	Metro Bakersfield	Rail Connections to High Speed Rail Station	$200,000,000
Commuter Rail	Buttonwillow, SW Bakersfield	Metro/Southwest Corridor (2012 Commuter Rail Study)	$158,300,000
Commuter Rail	Arvin, Lamont, SE Bakersfield	Metro/Southeast Corridor (2012 Commuter Rail Study)	$162,400,000
Commuter Rail	Wasco, Shafter, NW Bakersfield	Metro/Northwest Corridor (2012 Commuter Rail Study)	$220,600,000
Commuter Rail	Mojave, Cal City, Tehachapi	Metrolink Service Extension - Tehachapi Corridor (2012 Commuter Rail Study)	$231,300,000
Commuter Rail	Delano, McFarland	Metro/Airport, Delano Corridor (2012 Commuter Rail Study)	$317,800,000
Light Rail	Bakersfield	Metropolitan Bakersfield Light Rail System (2012 Long Range Transit Plan)	$4,000,000,000
High Speed Rail	Kern, L.A. County	Northwest of Bakersfield to Palmdale (potential *early* initial operating segment from Madera to Palmdale Metrolink Service)	$20,000,000,000
		Sub-total	**$29,087,700,000**

TABLE 5.2 - Unconstrained Program of Projects Continued

Beyond 2046 - Freight rail

Project	Location	Scope	YOE Cost	Project ID
Intermodal hub	Delano	RailEx Expansion Phase 3 (Draft SJV Interregional Goods Movement Plan IGM)	$20,000,000	
Intermodal hub	Shafter	Shafter Inland Port Phases 2 & 3 (Draft SJV IGMP)	$60,000,000	
shortline rail	Delano, Shafter, McFarland	Shortline Rail Rehabilitation and Gap Closure (Draft SJV IGMP)	$100,000,000	
shortline rail	Bakersfield	SJVR - Expand Bakersfield Yard Capacity (Draft SJV IGMP)	$250,000,000	
shortline rail	Arvin, Tejon, Buttonwillow	SJVR - Shortline Rail Improvments (Draft SJV IGMP)	$100,000,000	
shortline rail	Mojave	Mojave - Airport Rail Access Improvements (Draft SJV IGMP)	$3,000,000	
		Sub-total	**$533,000,000**	

Beyond 2046 - Active Transportation

Project	Scope	YOE Cost	Project ID
Future long-range non-motorized updates for bicycle and pedestrian related infrastructure may indicate a greater need for capital improvements. During the life of this plan, current expectations may be met as outlined in recent long-range bike and pedestrian studies and reflected in Table 5.1. Should these expectations change in the future this plan will be updated.			
	Sub-total	**$0**	

(ACTIVE TRANSPORTATION PROJECTS ARE FOUND IN TABLE 5.1)

Beyond 2046 - Aviation

Airport	Scope	YOE Cost	Project ID
Bakersfield Municipal	Capital Improvements	$5,698,350	
California City Municipal	Capital Improvements	$4,799,107	
Delano Municipal	Capital Improvements	$1,170,000	
Elk Hills - Buttonwillow	Capital Improvements	$0	
Inyokern	Capital Improvements	$16,645,000	
Kern Valley	Capital Improvements	$5,215,000	
Lost Hills - Kern County	Capital Improvements	$0	
Meadows Field	Capital Improvements	$54,633,336	
Mojave Air and Space Port	Capital Improvements	$102,341,722	
Poso - Kern County	Capital Improvements	$460,000	
Shafter - Minter Field	Capital Improvements	$8,280,000	
Taft	Capital Improvements	$2,052,000	
Tehachapi Municipal	Capital Improvements	$9,860,000	
Wasco - Kern	Capital Improvements	$0	
	Sub-total	**$211,154,515**	

TABLE 5.2 - Unconstrained Program of Projects Continued

Major Highway Improvements

Project	Location	Scope	YOE Cost	Project ID
Beyond 2046 - Major Highway Improvements				
Interstate 5	Kern	From Fort Tejon to Rt 99 - widen to ten lanes	$86,000,000	KER08RTP027
Interstate 5	Kern	Grapevine interchange - construct new interchange / relocate weigh station	$176,000,000	KER18RTP004
Interstate 5	Kern	Laval Road - interchange improvements	$4,000,000	KER18RTP005
Interstate 5	Kern	7th Standard Rd Interchange - reconstruct	54,000,000	KER08RTP028
Route 14	Kern	Purdy Rd - interchange & grade separated overpass at UPRR Xing	60,000,000	KER22RTP008
Route 14	Kern	Silver Queen / Backus / Dawn Rd - grade separated overpass at UPRR Xing	120,000,000	KER22RTP009
Route 33	Maricopa	Welch St to Midway Rd - widen to four lanes	88,000,000	KER08RTP029
Route 43	Shafter	7th Standard Rd to Euclid Ave - widen to four lanes	37,000,000	KER08RTP030
Route 46	Wasco	I-5 to Jumper Ave - widen to four lanes	118,000,000	KER08RTP031
Route 46	Wasco	Jumper Ave (North) to Rt 43 - widen to four lanes	130,000,000	KER08RTP079
Route 46	Wasco	Rt 46 @ BNSF - construct grade separation	39,500,000	KER08RTP119
Route 46	Kern	Near Lost Hills at Interstate 5 - upgrade and widen interchange	130,000,000	KER08RTP033
Route 46	Wasco	Rt 43 to Rt 99 - widen to four lanes	70,000,000	KER08RTP032
Route 58	Kern	Rosedale Highway - I-5 to Rt 43 - widen to four lanes	31,000,000	KER08RTP038
Route 58	Bakersfield	Future Rt 58 from I-5 to Heath Rd at Stockdale Hwy - construct new freeway	500,000,000	KER08RTP114
Route 58	Tehachapi	Dennison Rd - construct interchange	33,000,000	KER08RTP036
Route 58	Bakersfield	Near General Beale Rd - new truck weigh station	11,000,000	KER08RTP034
Route 58	Kern/Tehachapi	West of Tehachapi to General Beale Rd - truck auxillary lanes / escape ramp	86,000,000	KER08RTP035
Route 58	Bakersfield	General Beale Rd - construct new interchange	54,000,000	KER08RTP037
Route 58	Tehachapi	E. Tehachapi Blvd. - Construct Interchange operational / safety Improvements	18,000,000	KER22RTP005
Route 58	California City	Business 58 OC to Edwards Air Force Base OC - convert to freeway	112,000,000	KER22RTP004
Route 65	Kern	Merle Haggard Dr to County Line - widen to four lanes	216,000,000	KER08RTP039
Route 99	McFarland	Construct new interchange at Hanawalt	88,811,000	KER18RTP001
Route 99	County/Bkfd	Rt 99 @ Minkler Spur - construct grade separation	69,000,000	KER08RTP134
Route 99	County/Bkfd	7th Standard Road to Lerdo Highway - widen to 8 lanes	90,000,000	KER18RTP003
Route 119	Taft	Rt 33 to Cherry Ave - widen to four lanes	54,000,000	KER08RTP040
Route 119	Taft	Tupman Rd to I-5 - widen to four lanes	60,000,000	KER08RTP041
Route 155	Delano	Rt 99 to Browning Rd - four lanes; reconstruct	32,000,000	KER08RTP042
Route 155	Delano	Rt 155 @ UPRR - construct grade separation	39,500,000	KER08RTP120
Route 166	Maricopa	Basic School Rd - reconstruct intersection grade	517,582	KER08RTP043
Route 178	Kern Canyon	Vineland to China Garden - new freeway	500,000,000	KER08RTP044
Route 204	Bakersfield	(Golden State Ave) Rt 99 to M St - construct operational improvements	100,000,000	KER08RTP082
Route 202	Tehachapi	Tucker to Woodford-Tehachapi Rd - widen to four lane	9,704,661	KER08RTP047
Route 223	Near Arvin	Rt 99 to Rt 184 - widen to four lanes	69,010,921	KER08RTP048
Route 223	Arvin	East Arvin city limits to Rt 58 - widen to four lanes	64,697,738	KER08RTP049

TABLE 5.2 - Unconstrained Program of Projects Continued

Major Highway Improvements

Project	Location	Scope	YOE Cost	Project ID
Beyond 2046 - Major Highway Improvements				
US 395	Johannesburg	San Bdo County Line to Rt 14 - widen to four lanes	244,000,000	KER08RTP050
Southern Urban Corridor	Bakersfield	I-5 to Rt 58 - new facility	$610,000,000	KER08RTP074
Santa Fe Way	Bakersfield	Hageman to Los Angeles Ave - widen to four lanes	127,238,885	KER08RTP051
Eastern Urban Corridor	Bakersfield	Rt 58 to Morning Drive - construct new facility	200,000,000	KER08RTP078
Beale Road	Bakersfield	L St/Beale @ BNSF - construct grade separation	69,000,000	KER08RTP127
Q Street	Bakersfield	Q St @ UPRR near Golden State Hwy - construct grade separation	59,000,000	KER08RTP136
Comanche Drive	Cnty/Bkfd	Comanche Dr. @ UPRR - construct grade separation	59,000,000	KER08RTP123
Olive Drive	County/Bkfd	Olive Dr. @ UPRR - construct grade separation	69,000,000	KER08RTP129
Renfro Road	County/Bkfd	Renfro Rd @ BNSF - construct grade separation	59,000,000	KER08RTP130
California City Blvd	California City	Rt 14 east six miles - widen to four lanes	22,000,000	KER08RTP052
Twenty Mule Team Rd	California City	California City Blvd to Rt 58 - widen to four lanes	21,565,913	KER08RTP053
North Gate Road	California City	California City Blvd to North Edwards - construct new four lane road	60,384,555	KER08RTP054
Woollomes Ave.	Delano	Rt 99 - widen bridge to four lanes; reconstruct ramps	134,000,000	KER08RTP056
Garces Highway	Delano	Interstate 5 to Rt 99 - widen to four lanes	288,983,230	KER08RTP057
Cecil Ave.	Delano	Wasco Pond Rd to Albany St - widen to four lanes	17,800,000	KER08RTP055
Kimberlina Road	Kern / Wasco	Kimberlina Rd @ BNSF - construct grade separation	59,000,000	KER08RTP132
Red Apple Rd	Kern	Tucker Rd to Westwood Blvd - widen to four lanes	4,313,183	KER08RTP058
Sierra Way	Kern	Lake Isabella at South Fork Bridge - reconstruct bridge	51,758,190	KER08RTP059
Frazier Park	Kern	Park and Ride facility near Frazier Park Blvd	12,939,548	KER08RTP060
Wheeler Ridge Rd	Kern	I-5 to Rt 223 - widen to four lanes	129,395,476	KER08RTP061
K Street	Kern	Mojave - extend K St to Rt 14	12,939,548	KER08RTP063
Kratzmeyer Road	Kern	Kratzmeyer Rd @ BNSF - construct grade separation	59,000,000	KER08RTP128
Airport Drive	Kern	Airport Dr. @ UPRR - construct grade separation	69,000,000	KER08RTP131
Rosamond Blvd	Kern	Rosamond Blvd @ UPRR - construct grade separation	69,000,000	KER08RTP133
K Street	Kern / Mojave	K St @ UPRR - construct grade separation	69,000,000	KER08RTP135
Elmo Highway	McFarland	Elmo Hwy @ UPRR - construct grade separation	69,000,000	KER08RTP124
Dennison Road	Tehachapi	Green St/ Dennison Rd @ UPRR - construct grade separation	69,000,000	KER08RTP121
Teh. Willow Springs Rd	Tehachapi	Rt 58 to Rosamond Blvd - widen to four lanes	150,961,389	KER08RTP064
Valley Blvd	Tehachapi	Tucker Rd to Curry St - widen to four lanes	23,722,504	KER08RTP065
Kern Ave.	McFarland	Pedestrian bridge at Rt 99 - reconstruct	5,391,470	KER08RTP066
Mahan St	Ridgecrest	Inyokern to South China Lake Blvd - widen to four lanes	32,348,869	KER08RTP067
Richmond Rd	Ridgecrest	E Ridgecrest Blvd - widen to four lanes	6,469,774	KER08RTP068
Bowman Rd	Ridgecrest	China Lake to San Bernardino Blvd - reconstruct	4,313,183	KER08RTP069

TABLE 5.2 - Unconstrained Program of Projects Continued

Major Highway Improvements

Project	Location	Scope	YOE Cost	Project ID
Beyond 2046 - Major Highway Improvements				
S. China Lake Blvd	Ridgecrest	Rt 395 to College Heights - reconstruct	$36,662,052	KER08RTP070
Lerdo Highway	Shafter	Lerdo Hwy / Beech Ave @ BNSF - construct grade separation	69,000,000	KER08RTP125
Burbank Street	Shafter	Burbank St @ BNSF - construct grade separation	59,000,000	KER08RTP126
7th Standard Rd	Shafter	I-5 to Santa Fe Way - widen to four lanes	90,576,833	KER08RTP072
Zachary Rd	Shafter	7th Standard Rd to Lerdo Hwy - widen to four lanes	34,505,460	KER08RTP073
North Urban Corridor	Shafter	I-5 to SR 65 - Burbank Street Alignment - construct new highway	500,000,000	KER18RTP002
West Urban Corridor	South metro	Taft Hwy to I-5 - extend facility	100,000,000	KER08RTP075
West Urban Corridor	North metro	7th Standard Rd to Rt 99 -extend facility	100,000,000	KER08RTP076
		Sub-total	**$7,099,011,961**	

Beyond 2046 - Local Streets and Roads

Project	Location	Scope	YOE Cost	Project ID
Various Locations	Region	Bridge and street widening; reconstruction; signalization	$500,000,000	
		Sub-total	**$500,000,000**	

Beyond 2046 - Summary of Unconstrained Projects

Program Category		Totals
Major Highway Improvements	$	7,099,011,961
Local Streets and Roads	$	500,000,000
Transit	$	29,087,700,000
Active Transportation	$	-
Aviation	$	211,154,515
Grand Total	$	36,897,866,476

Projects reflected in the Kern COG 2022 Regional Transportation Improvement Program and Interregional Transportation Improvement Program submittal are consistent with the goals and policies of the 2022 Regional Transportation Plan and Sustainable Communities Strategy.

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FREIGHT MOVEMENT ACTION ELEMENT

See the Land Use Action Element – Highway/Road Land Use Actions; Land Use Action Element – Rail/Transit Land Use Actions; Land Use Action Element – Global Gateways Land Use Actions; Land Use Action Element for freight movement proposed actions. See Chapter 4, Sustainable Communities Strategy, for further discussion on sustainable land use decisions relative to freight movement.

Efficient freight transportation is critical to the economic health of the Kern region. As one of the prime agricultural regions in the nation, the intra-county road linkage of goods to processing plants, and the intercounty linkage of goods to other regions, manufacturers, and shipping ports is essential tradeable sectors and the associated economic benefits. In 2017, Kern County for the first time advanced to the number one agricultural producing county in the nation and is the number-2 producer of oil in the lower 48 states. These industries rely heavily on bulk movement by truck, rail and pipeline.

The San Joaquin Valley is also becoming a prominent location for regional distribution centers of consumer products, providing service to coastal population centers as well as its own growing population (**see Figure 5-2**). In addition, the manufacturing and employment base of the valley is increasing. All these factors contribute to increasing demand for freight transportation by rail, truck, pipeline and air.

Existing System

Rail

As passenger rail provides a backbone service for passenger travel in congested corridors, rail freight provides a similar backbone service for transporting goods over long distances. Rail's ability to haul large amounts of cargo make for an overall low energy requirement per unit of weight when compared to truck or air transport while diverting wear and tear away from highways. The cost and labor associated with loading and unloading trains inhibit use of rail for short hauls locally and within the state.

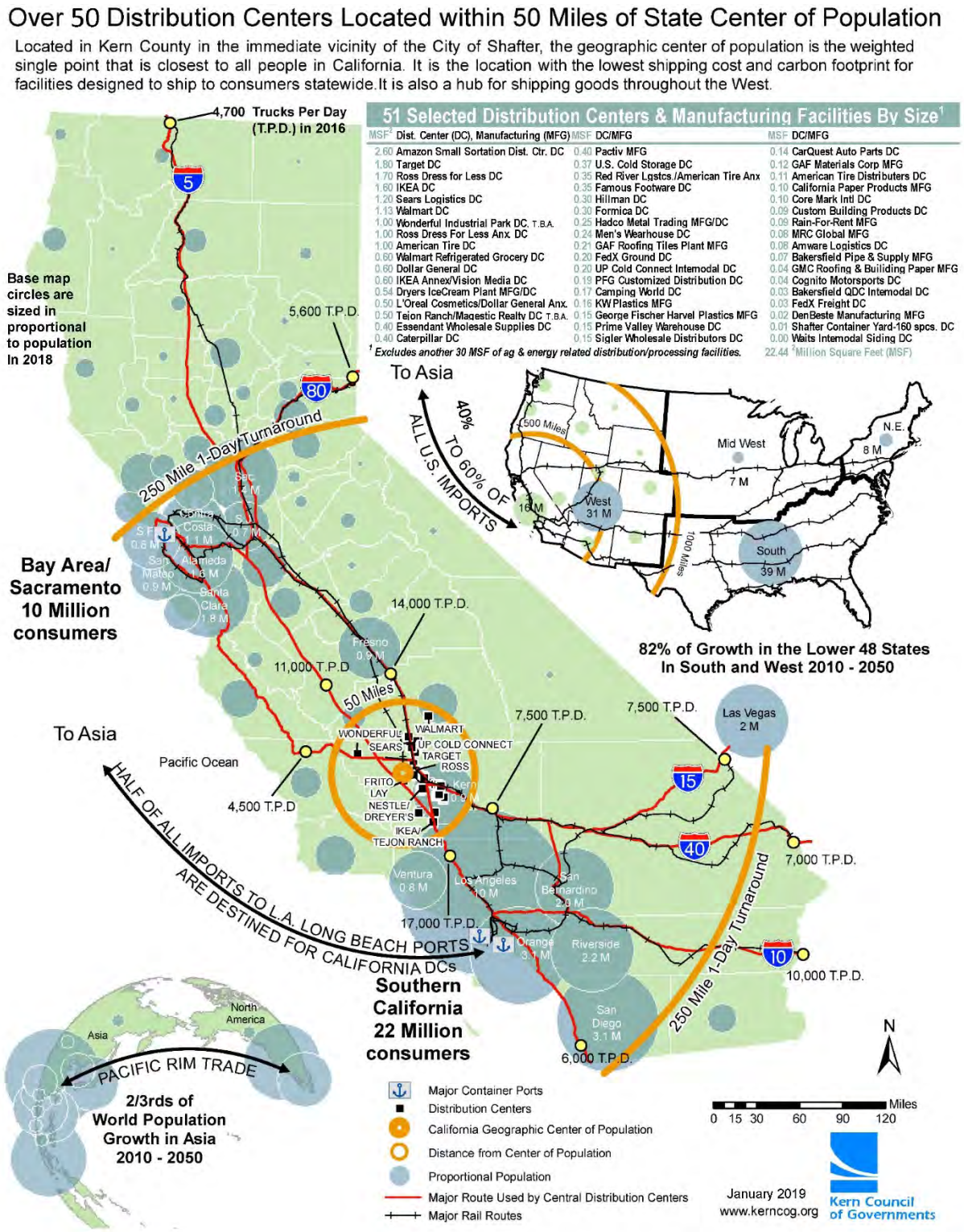
Two major class I rail companies, Union Pacific (UP) and Burlington Northern Santa Fe (BNSF), serve Kern County. UP representatives report that they operate an average of 19 trains per day through the San Joaquin Valley, carrying general freight such as petroleum products, food products, grain, and lumber. The San Joaquin Valley Railroad, a small class III railroad owned by the Genesee & Wyoming (G&W), operates a regional freight service between Tulare, Fresno, and Kern counties on leased UP and BNSF branch lines connecting outlying areas to the mainline class I carriers. They move freight comprised primarily of agricultural and petroleum products.

Most cargoes shipped by rail to and from Kern are bulk items. Rail transport provides the option of specialized rail cars such as bulk hoppers, flatbeds, refrigerated boxcars, fuel tankers, and piggyback cars. These specialized rail cars allow movement of a large variety of goods, giving rail an advantage over other transportation modes for distances over 500 miles. Transport by rail is generally less expensive for long hauls than air or truck transport; however, rail is limited by speed, fixed track, and scheduling.

Kern has one of the primary rail bottlenecks in the state. The UP/BNSF route over the Tehachapi Mountains is mostly single track. Traffic in the opposite direction must stop on sidings, and speeds are limited to 25 MPH. With the recently completed Tehachapi Pass capacity improvement, jointly funded by the State of California and the BNSF, adding/improving three more sidings, the former capacity of 35 trains per day, has now increased to 50 trains per day.

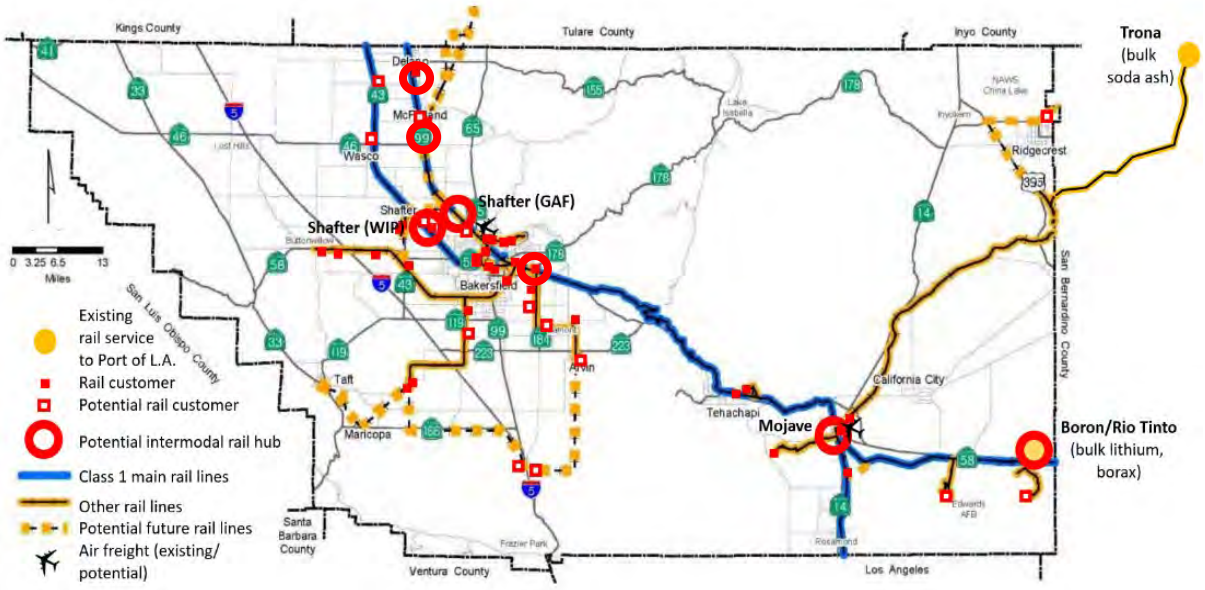
The region could benefit from increased diversion of truck shipments to rail though creation of an inland port. According to a recent SJV Air District Study, an inland port could facilitate a 70-93% reduction in emissions and a corresponding reduction in highway maintenance costs. Two key elements for the

Figure 5-2: California/West U.S. Logistics Distribution Center Cluster



success of an inland port in Kern are 1) sufficient shipping distance to warrant the cost of loading and unloading trains and 2) a supply of empty containers nearby. The planned Shafter Intermodal rail hubs (**see Figures 5-3 & 5-4**) or inland ports are ideally located approximately 300 miles by rail from the Port of Oakland and 150 miles from the Ports of L.A./Long Beach, and has a ready supply of empty shipping containers collected from the Wonderful Industrial Park (WIP), as well as multiple distribution centers located within 50 miles of the facility (**see figure 5-5**).

Figure 5-3: Kern Existing and Planned Rail Backbone Freight Network

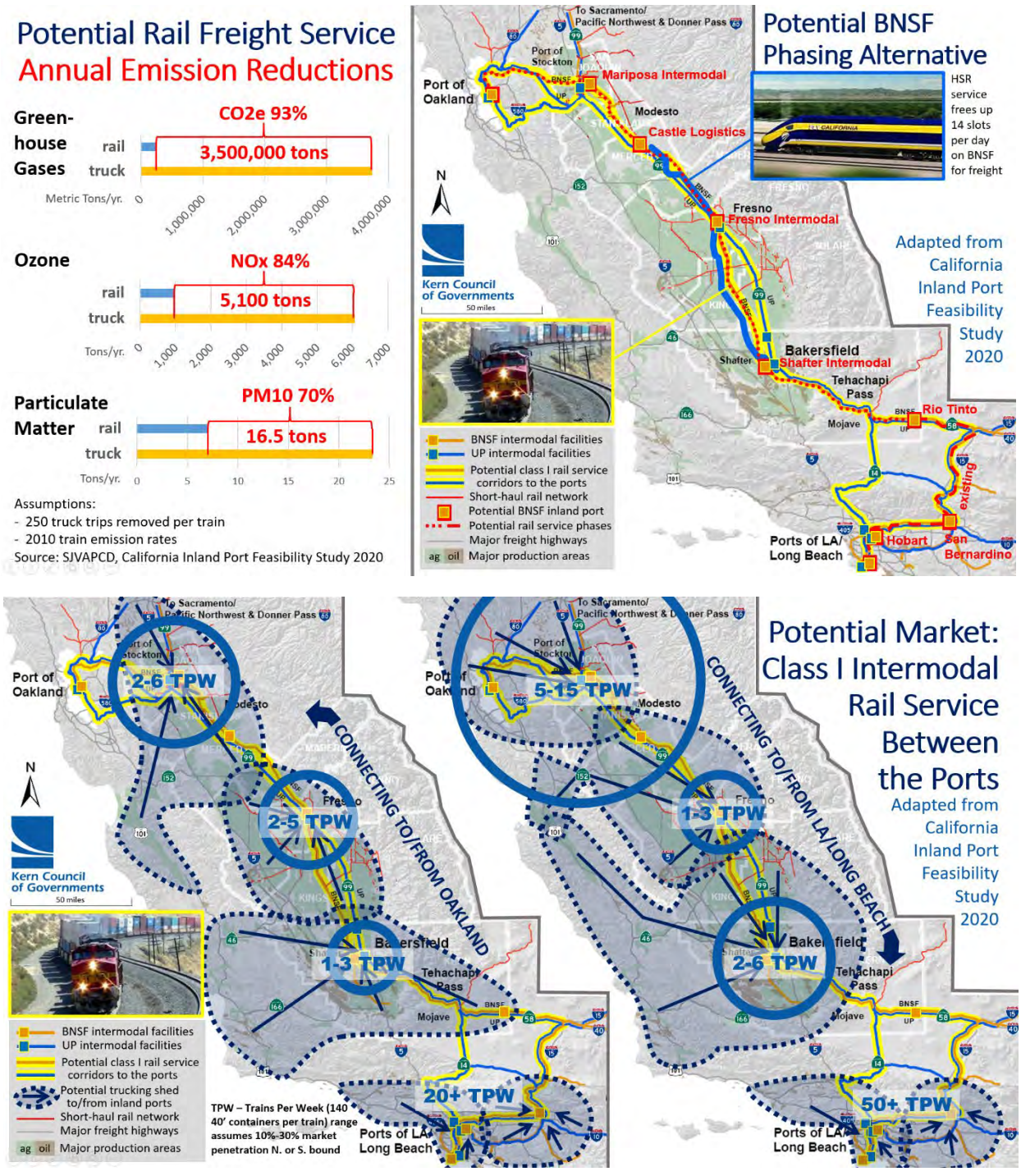


An inland port would serve as a cargo facilitation center, where a number of import/export, manufacturing, processing, packing, warehousing, forwarding, customs, and other activities could take place in close proximity or at the same site. This facility could function as an inland sorting and depository center for ocean containers transported to the inland port via truck or rail. A major issue regarding the rail facility is the need for regular rail service to the ports or back East. Based on the SJV inland port study, **Figure 5-4** denotes an estimated market for rail service of 1-3 trains per week (TPW) between Shafter and Port of Oakland, and 2-6 TPW between Shafter and the Ports of L.A./Long Beach. **Figure 5-5** illustrates the rapidly growing clusters of warehousing in close proximity to the Shafter inland ports and the geographic center of population for the state.

The City of Shafter is actively promoting two inland port locations through long range planning and investment. Early efforts are more focused on the BNSF mainline adjacent the WIP. The facility's first phase would include a container hub allowing distributors to drop empty containers at the site that other drivers can pick up. Filling empty containers has the potential to eliminate a large number of empty truck trips over the Grapevine and through the Los Angeles basin. The plan would benefit regional air quality by bringing efficiency to the logistics system in addition to creating jobs. A second facility has been discussed with the UP near the GAF Materials Corp. It is important to note that the City of McFarland has begun long range planning for an intermodal facility along the UP, and Delano has been a site for UP's refrigerated boxcar food train service for more than 10 years.

The Tejon Ranch Commerce Center (TRCC) is the site of the largest activated Foreign Trade Zone (FTZ) in California. FTZ's are sites near ports of entry where foreign and domestic merchandise considered international trade can provide important cost-savings benefits involving customs duties and other charges. Users can obtain permission from customs to move merchandise directly from the port of arrival to the FTZ

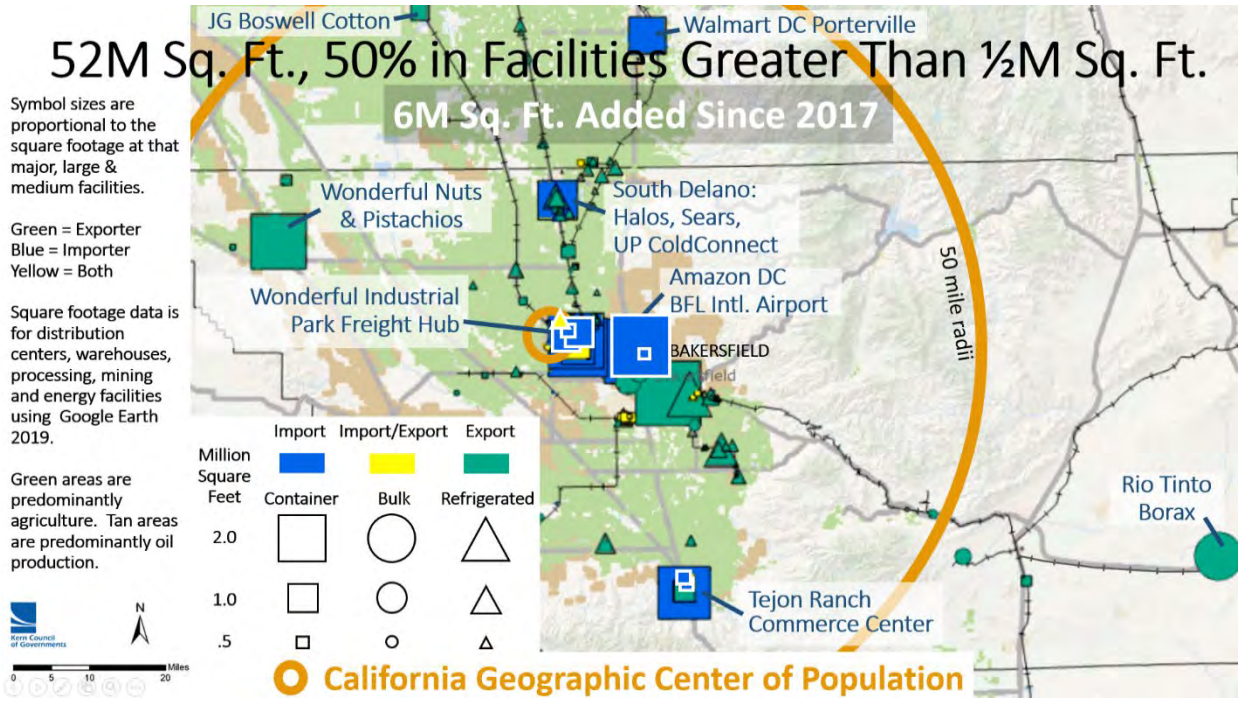
Figure 5-4: Potential Rail Freight Service Connecting the SJV to the Inland Ports



avoiding delays at congested ports. Other major intermodal rail hubs include the Delano UP Cold Connect food train service (temporarily closed in part due to competition form low trucking fuel costs); Bolthouse and Grimmway packing facilities in southeast Bakersfield; and numerous bulk shippers including expanding oil and gas refining operations that receive oil shipments from the Mid-West and send refined products as far away as New England.

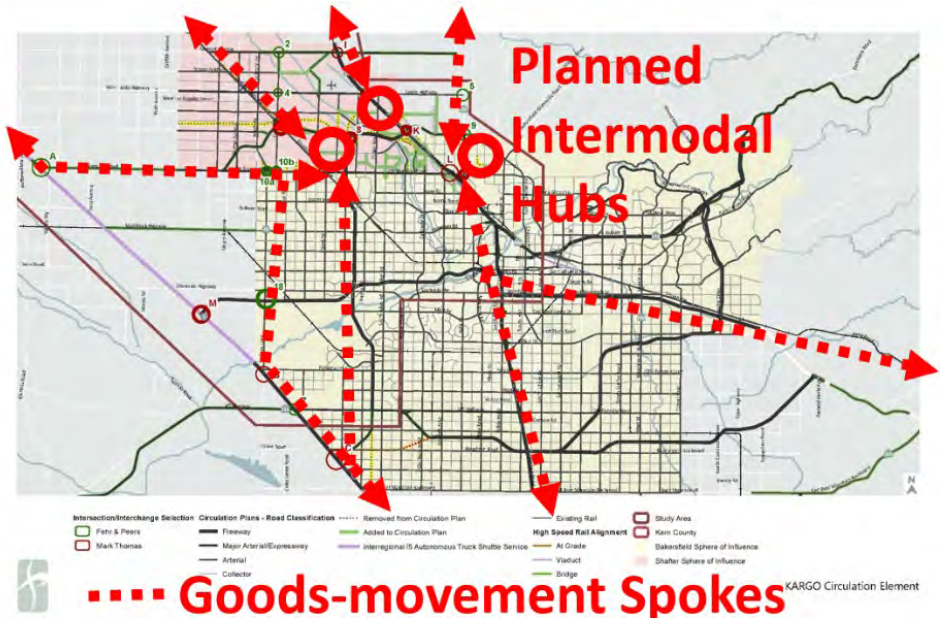
Another transfer facility worth exploring is a RoadRailer facility, where custom truck trailers designed to connect directly to rail wheelsets can easily switch from truck to rail; many RoadRailers use existing rail yards as transfer points. Kern has major existing operational rail yards in Bakersfield, & Mojave.

Figure 5-5: Kern Logistics Distribution Center Cluster



Trucks

Figure 5-6: Intermodal Truck Hub/Spoke Network



Trucking is the most commonly used mode for transporting freight; its popularity stems from its flexibility, timely delivery, and efficiency for hauling distances up to 600 miles. Trucking, however, can be more expensive than rail for longer hauls because of its higher energy costs. Trucking is also the primary mode of transport at each end of a rail haul. **Figure 5-6** demonstrates how highways serve as "last-mile" system of spokes connecting to a cluster of intermodal hubs anchoring a new TradePort

district. Comparable to the last mile road network connecting to a High Speed Rail Station. In addition, trucking is a major cause of street- and highway-surface failures, necessitating a high level of road maintenance.

…highways serve as a "last-mile" system of spokes connecting to a cluster of intermodal hubs anchoring a new TradePort district.

Heavy trucks contribute to roadway deterioration much faster than do automobiles; however, deferred maintenance and water intrusion in the roadbed continue to be additional causes of road damage. As a result, Kern County streets and highways are subject to rapid deterioration and failure. According to the American Association of Highway Officials, a fully loaded 80,000-pound truck has an impact on roads equal to the passage of approximately 9,600 cars.[1]

According to the San Joaquin Valley Interregional Goods Movement Plan completed in May 2013, in the San Joaquin Valley, trucks carry more than 90% of outbound, inbound and intraregional tonnage. Of the 425 million tons moved by truck into, out of, or within the San Joaquin Valley in 2007, more than half are classified as intraregional moves. Truck usage is to be expected in a major agricultural and energy producing region. Inbound commodities to the San Joaquin Valley account for about 29% of the non-through flows and originate in locations including the San Francisco Bay Area, Southern California, the Central Coast and from outside of California. Outbound tonnage comprises about 22% of all non-through moves, again destined for locations including the San Francisco Bay Area, Southern California, the Central Coast and from outside of California.

Major interregional highway corridors handle relatively high volumes of heavy truck traffic. According to the Interstate (I)-5/State Route (SR)-99 Origin and Destination Truck Study (October 2009), the majority of heavy duty trucks traveling on those corridors are 5-axle Double Unit (one unit is the tractor) trucks (71.2% to 90.61%). There are slight differences between fall and spring truck travel. By their very size and slower speed, trucks lead to congestion and reduced levels-of-service on rural highways and local streets. In addition, emissions from trucks, like automobiles and trains, have an adverse effect on air quality. An ever increasing array of federal, state, and air district regulations on truck emissions are continuing to improve this situation. At the Ports of L.A./Long Beach alternative fuels and electric trucks are greatly improving air quality.

While the San Joaquin Valley's major trucking corridors are centered on the north-south arteries of I-5 and SR 99, other state highways, such as SRs 46 and 58, play key distribution roles as well. As Kern County expands its population and employment base, the need for direct, high-capacity east/west truck corridors becomes increasingly crucial. Special attention must be given to the interregional routes to ensure that they remain in serviceable condition and that major reconstruction costs are minimized.

Air Freight Service

Air freight service is most commonly characterized by the fast shipment of small items of high value over long distances for the high cost. Goods movement by air is an emerging element of freight activity in the San Joaquin Valley. Statewide, 23 out of 43 commercial air carrier airports account for almost 3 million tons of freight transported by air. While air freight is a specialized transportation mode, it accounts for an estimated 33% of the export values in California.

Air carriers depend heavily on truck transportation to deliver goods for transport. A significant feature of air shipment is its dependability and very short in-transit time. Air freight has not played a large role in the Kern area, but with the continued growth of the Los Angeles basin, it is feasible that air freight carriers would

[1] Truck Weight and Its Effects on Highways https://www.gao.gov/products/109954

consider Kern a favorable alternative location. The eastern most hub in **Figure 5-6** is a potential auxiliary air-freight hub connector for Southern California.

Pipelines

Various pipelines carry natural gas, crude oil, and other petroleum products throughout Kern County. Storage, pumping, and branch lines are used to distribute those products. Southern California Edison (SCE) and Pacific Gas and Electric Company (PG&E) are responsible for the maintenance and operation of the natural gas line, while major petroleum corporations are responsible for the crude oil pipelines throughout the region. State and federal agencies regulate the use of pipelines.

Kern lies at the crossroads of many pipeline systems connecting the West Coast and the nation. This pipeline network provides opportunities for the expansion and creation of new terminal facilities. Kern is host to both natural gas and propane intermodal terminals. There are currently crude or gasoline pipeline networks connecting Kern to the Midwest. Over the past several years Kern has experienced an increase in shipments of crude oil from the Midwest to local refineries. Kern's extensive pipeline network may provide a way to translate these shipments to the major refineries in the Bay Area and Southern California.

Hazardous Material Movement

Because more than 50% of all goods transported throughout the world are hazardous to some degree, human life and property are potentially endangered. Each year, more than 4 billion tons of hazardous products and waste are transported throughout the United States. Hazardous materials are typically transported by rail or by small or large trucks but are also transported by air and pipeline.

Within the Kern region, emphasis is placed on hazardous materials routing and training of emergency personnel in the event of an accidental spill. Interstate transportation of hazardous products and waste through the Kern region on Interstate 5, SR 99 and SR 58 increases the probability of dangerous spills. The County of Kern and the City of Bakersfield maintain Hazardous Material Response Units.

Potentially adverse effects associated with transporting hazardous materials can be partially mitigated by restricting roads available to these shipments. Under California law, transportation of hazardous waste must be carried out via the most direct route over interstate highways whenever possible. Exceptions to this general rule are such occasions when it is necessary to avoid highly congested and densely populated areas.

Kings County, northwest of Kern County, is the site of a Class 1 hazardous waste facility. The facility, located at Kettleman Hills, draws trucks carrying hazardous materials from all western states. The presence of these trucks on regionally significant routes increases the probability of dangerous spills.

Hazardous shipments by rail are becoming a growing concern as well. Increased shipments of petroleum products need to be protected against spills and fire. The Kern County Fire Department has specially trained hazardous material (HAZMAT) spill responders funded by the oil industry to respond to transportation-related emergencies.

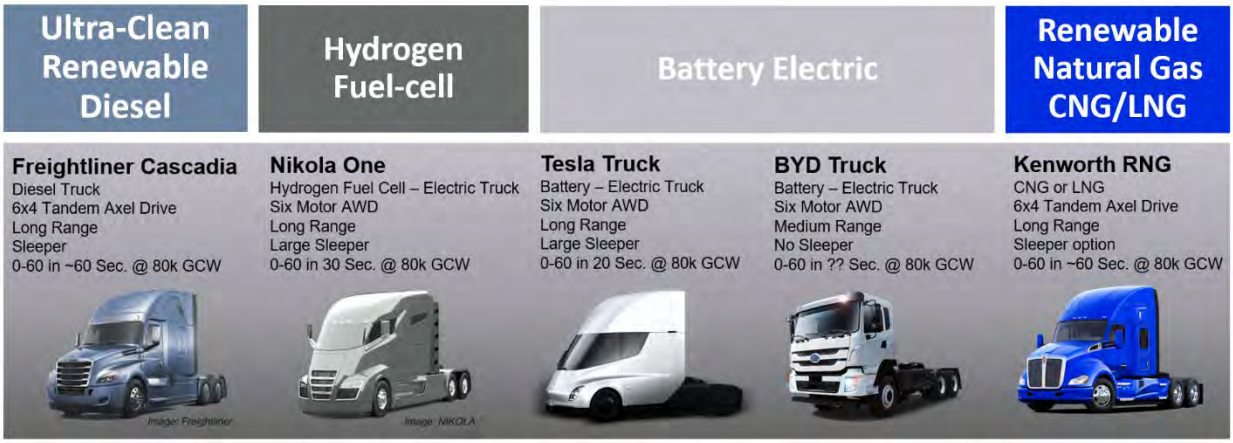
Goods Movement Studies

Kern COG staff often retains consultants to prepare studies and plans related to goods movement. The recommendations of the studies and plans are often included as policies to the RTP. The studies can be found online at: https://www.kerncog.org/goods-movement/ .

I-5 Freight ZERO Study - In 2021 and the I-5 Freight Zero Emissions Route Operation (ZERO) Study was developed by the 8-San Joaquin Valley Regional Planning Agencies and Caltrans. The objective of this

project is to prepare a feasibility study of long-distance, zero and near zero emission truck technologies for potential implementation along the I-5 corridor in the San Joaquin Valley (see **Figure 5-7**).

Figure 5-7: Emerging Cleaner Long-Haul Semi-Truck Fleet Tech

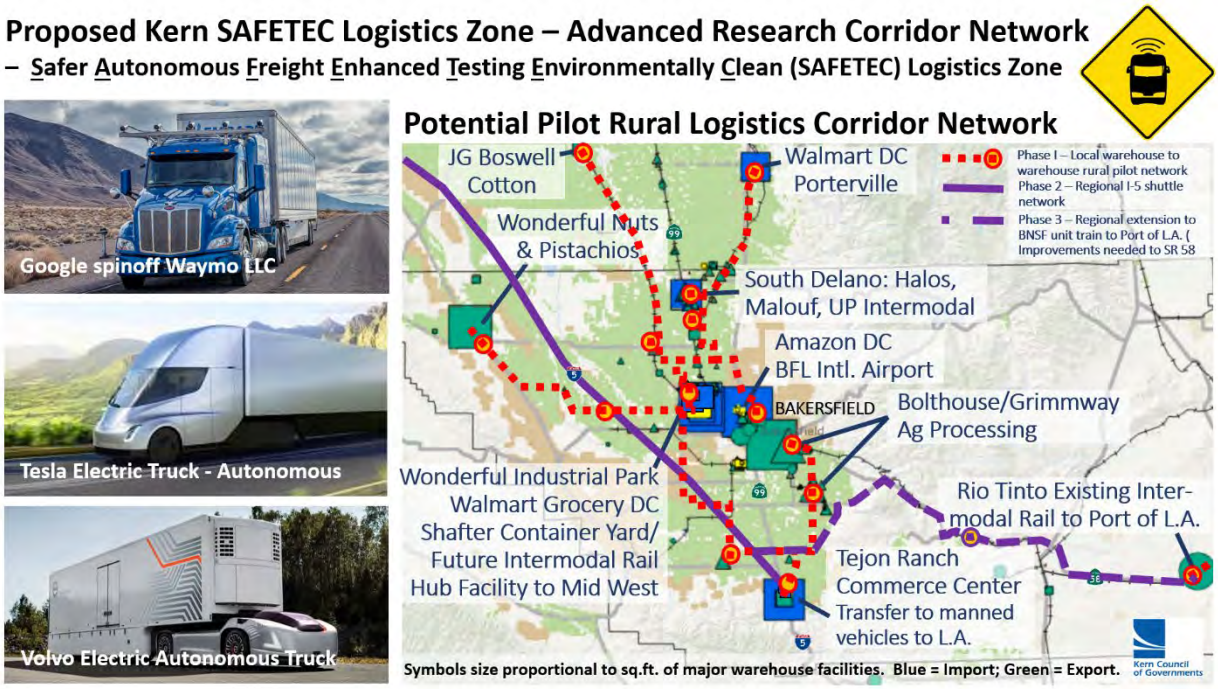


Graphic adapted from: https://seekingalpha.com/article/4127262-tesla-semi-revisited

KARGO Sustainability Study - Also in 2021, Kern COG completed the Phase I. Kern Area Regional Goods-movement Operations (KARGO) Sustainability Study. The study included four recommendations to be further explored in a Phase 2 study scheduled for completion in 2022.

- Targeted Logistics Transportation Fees
  - Logistic Mitigation Fee – Prepare a Nexus Study that would determine appropriate infrastructure needed and cost to mitigate future warehouse/manufacturing/processing facilities. A mitigation fee is usually limited to new infrastructure.
  - Mobility Fee – Also known as a VMT fee can be applied to autonomous/clean tech vehicles to assist with their fair share of the cost of maintenance of the transportation facilities they used.
- Program to Shift Goods-movement from Road to Rail
  - Rail Usage Tax Credit – The Mitigation/Mobility Fees could be offered a tax credit if a commitment is secured to ship by rail.
  - Incentive Fund - Create an incentive fund to subsidize the rail freight rate to make it competitive with trucking rates to encourage mode shift. The incentive could be designed to provide support to the railroads to offer competitive rates or an incentive could be paid directly to the company based upon the delta between the rail rate and the truck rate. This could be for a short period of time in recognition of the initial risk for employing a new mode in a company's logistics system.
- Clean Technology on Highways (see **Figure 5-7**)
  - Provide assistance applying for numerous existing programs
  - Create a loan program to purchase clean tech
  - Revision to building codes
    - Require Electric Charging Stations and new warehouse/manufacturing facilities
    - Incentives for electric charging
- Next Generation Industrial TradePort District- Provide for phased incremental testing of emerging goods movement technology such as clean tech, autonomous trucks and warehouses/manufacturing & processing, mining and agriculture to foster higher paying jobs in the region. Kern is ideally suited for these technologies because of its status as a world leader in pioneering drone technology at military bases in East Kern, clean energy, and energy and agriculture production and processing. The **Figure 5-8** infographic provides more detailed information on the autonomous aspects related to the phased TradePort District.

Figure 5-8: KERN Next Generation TradePort District – Phased Autonomous Truck Test Zone



Inland Port Feasibility Studies - In 2020, the San Joaquin Valley Air Pollution Control District completed the Inland Port Feasibility Analysis. The Phase I. KARGO study included an appendix about an inland port in Kern (see **Figure 5-4**). A recommendation of the study is to focus first on the development of the TradePort District as an interim step to the establishment of the inland intermodal rail goods movement port in Kern. The California Inland Port Study recommends the establishment of an Inland Port joint power authority to study the connections to the port and points east by rail further. The eight San Joaquin Valley Regional Planning Agencies are working on a follow-up Inland Port Feasibility Study with the State.

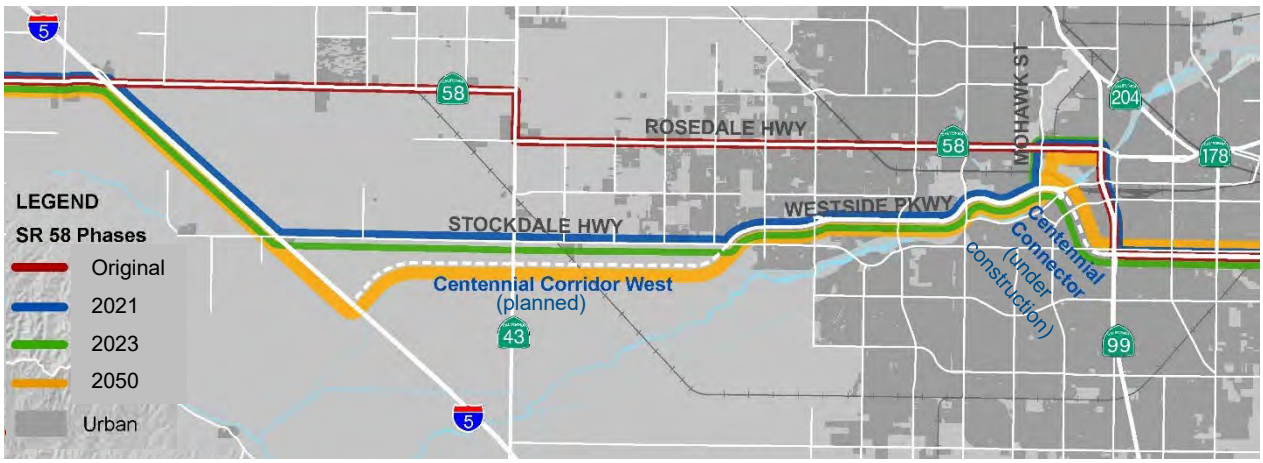
Other Goods Movement Studies - In 2017, Kern COG completed two goods movement studies in coordination with the San Joaquin Valley Transportation Planning Agencies. The first one was the I-5/99 Goods Movement Study which looked at options for moving goods through the SJV. The second study was the San Joaquin Valley Goods Movement Sustainable Implementation Plan (SJVGMSIP). Key recommendations for the 8-county region included:

- Identifying and recommending further analysis on connecting corridors including SR-58;
- Identifying projects that may be available for construction in the next 5 years;
- Identifying Intelligent Transportation System solutions for the corridor;
- Identifying operational improvements for goods movement in the region; and
- Identifying truck platooning along the I-5 corridor.

Specifically, the I-5/99 Goods Movement study identified two major corridor-to-corridor projects that would improve goods movement flow statewide. The first is the completion of the SR-58 Centennial Corridor Project. **Figures 5-8 & 9** illustrate how the third phase of the Centennial project when completed in 2021 will shave 12 miles and 7 traffic signals off the average truck trip between the North Valley/Bay Area and I-40 corridor, potentially reducing thousands of vehicle miles traveled and emissions per year.

Figure 5-9: Major Goods Movement Corridors Thru the San Joaquin Valley

Figure 5-10: Four Phases of SR 58 Centennial Goods Movement Corridor Connecting I-5 to SR



Additional studies found at https://www.kerncog.org/goods-movement/ demonstrate that trucking dominates SR 58, SR 99, and I-5 corridors. On the SR-58 segments near I-5, SR 14, and US 395, trucks accounted for 29% to 52% of the traffic. On segments of I-5 and SR 99, trucks made up 30% and 40% of the traffic. On SR 58, 56% of the trucks were from out of state, and on I-5/SR 99 only 15% were from out of state, with 57% destined for Southern California. It is important to note that 12% of containers on SR 58 were empty, and 18% on I-5/SR 99 were empty, indicating that there may be some opportunities to reduce deadheading in these corridors. When freight trucks haul full containers to and from delivery locations, shipping costs are cut by as much as 40%.

Needs and Issues

Logistics, agriculture, food processing, manufacturing, energy production, mining, and refining provide a stable base to the economy of Kern County and are dependent on the goods movement infrastructure. Population and economic growth pressures have resulted in increased traffic congestion on the rural roadways that facilitate the "farm to market" goods movement. This congestion affects the safe and timely delivery of fresh produce to market and processing plants.

The evolving freight movement industry has introduced the concept of "just-in-time delivery," which replaces warehouses with freight haulers. With just-in-time delivery, the efficient and timely movement of freight along highways and railways becomes ever more essential to the region's economic growth and development.

Figure 5-4 demonstrated that hauling freight by rail is 10 times more energy-efficient than shipping by truck. Preserving and expanding rail use for goods movement will help both regional and environmental goals for the region. Efforts should focus on the development of intermodal rail terminals and the preservation of businesses along the short rail lines to ensure continued use of the short-haul rail system.

Kern COG is working with the Central California Rail Shippers/Receivers Association (CCRSRA), San Joaquin Valley Railroad (SJVR) and other rail service providers in the region, and the Kern Economic Development Corporation to find ways to maintain and increase the use of the short-haul rail lines for freight in Kern County. Strategies may include better communication and coordination with the stakeholders as well as the development of public/private partnerships for financing improvements.

Clean, Autonomous Rail Vehicle Technology

In 2021, Kern COG staff saw a presentation from Parallel Systems about a battery powered system for moving shipping containers on rail, safer and cleaner than conventional railroad technology. The company is currently performing a pilot test of the technology outside of Savanah, GA.

Short Haul Rail Abandonment Issue

In 2010, Kern COG hired Wilbur Smith Associates to conduct the Phase 1 Kern County Rail Study, followed by the Phase 2 Study completed in the summer of 2012. The studies stemmed from a growing concern about the abandonment of short-haul rail lines. During the 1990s, the Eastern Sierra/Lone Pine subdivision connecting the rail spur with China Lake Naval Air Weapons Center was abandoned by Union Pacific (formerly Southern Pacific) as far south as the Trona Railway. In addition, two segments of the old Southern Pacific rail line heading north out of the county to the Port of Oakland were abandoned at about the same time as Southern Pacific (SP) was acquired by UP. In 2009, the federal Surface Transportation Board (STB) approved the third abandonment of a 30-mile segment of the old SP line in Tulare County from the Kern County line, several miles east of Delano, to Porterville.

The Central California Rail Shippers/Receivers Association has concerns that similar abandonments in Kern might happen for two reasons: (1) increasing tariffs and fees by the rail providers, (2) lack of use by the business along the route. Lack of use may be partially caused by high railroad tariffs and fees that make it cheaper to ship by truck, or price transport costs beyond what the market can bear, forcing curtailment or closure of the business. After two years of non-use, the STB can approve an abandonment request by the railroad service provider. When rates for scrap metal are high, the risk of rail abandonment increases considerably. The Phase 2 Study determined that a 12.5-mile segment of the Arvin Subdivision is likely to be abandoned.

The studies analyzed alternative uses for rail right-of-way which could help preserve the rail corridor. Although some former rail corridors have been preserved with rails to trails projects, such as in downtown Taft, in many cases preventing abandonment altogether is preferable. Once the rail line is removed,

highway at-grade crossings can be very expensive to rebuild and mitigate, mainly since the public is no longer accustomed to looking for trains at the road-crossing locations. Some regions are maintaining short-haul lines through a public/private partnership, where the public entity owns the rails and leases their use to a private entity. Others are considering the preservation of the line for future passenger service as a feeder rail system for the high-speed rail system. Additional alternatives include right-of-use agreements, where the extra right-of-way on either side of the rail can be used for multi-use trails, roads, and express bus lanes.

In 2013, the SJVR was acquired by Genesee & Wyoming Railroad (G&W). The new ownership has reached out to the CCRSRA and its members and alleviated some of the local shippers/receivers' concerns about the curtailment of short-haul rail service. This issue remains critical to the achievement of regional transportation and air emission goals.

Greater coordination and integration of the various freight transportation modes are becoming increasingly important. Limited resources and intense pressure on existing transportation systems have brought broad-based support for intermodal transportation systems. Kern COG promotes public/private cooperation between modes to increase goods movement efficiency while maintaining a reasonable highway level of service.

Proposed Actions

Near-Term, 2022–2026

- Convene an annual freight movement stakeholders group for coordinating preservation and expansion efforts such as: Coordinate preservation and expansion efforts; Encourage communication between short-line rail operators, shippers, and economic development agencies; Explore options for potential uses of the southern portion of Arvin Subdivision as identified in the Kern County Rail Study Phase 2; Explore the potential to retain freight rail service on the southern portion of the Arvin Subdivision.

- Coordinate with SJVR, Tejon Ranch Company, and other potential area shippers/users, area economic development agencies, and the Central California Rail Authority; Explore rail intermodal, transfer facility, and alternative transfer options for the region.

- Maintain liaison with Southern California Association of Governments and all San Joaquin Valley Councils of Government for efficient coordination of freight movement between regions and counties.

- Construct truck climbing lanes on the West grade of SR 58 over the Tehachapi Mountains to improve safety near the Cesar Chavez National Monument.

- Develop the rural trucking network, avoiding populated areas to minimize impacts to both disadvantaged and all communities.

- Program safety-related infrastructure improvements such as passing lanes, roundabouts, and widening of high volume truck routes such as Seventh Standard Road, SR 46, SR 43 in response to growing freight movement activities in the area.

- Continue development of the BNSF & UP intermodal freight hubs in/near Shafter, as well as the BFL International Airport freight hub, into a TradePort District with a network spoke system of connecting truck access routes. Participate in state planning for a system of inland ports.

- Continue development of the Delano and McFarland UP intermodal rail freight shipping facilities, including last-mile truck access infrastructure.

- Research Targeted Logistics Transportation Fees such as: 1) Logistic Mitigation Fee – Prepare a Nexus Study that would determine appropriate infrastructure needed and cost to mitigate future warehouse/manufacturing/processing facilities; 2) Mobility Fee – Also known as a VMT fee can be applied to autonomous/clean tech vehicles to assist with their fair share of the cost of maintenance of the transportation facilities they used.

- Explore Development of a Program to Shift Goods-movement from Road to Rail through: Rail Usage Tax Credit – The Mitigation/Mobility Fees could be offered a tax credit if a commitment is secured to ship by rail; Incentive Fund - Create an incentive fund to subsidize the rail freight rate to make it competitive with trucking rates to encourage mode shift. The incentive could be designed to provide support to the railroads to offer competitive rates or an incentive could be paid directly to the company based upon the delta between the rail rate and the truck rate. This could be for a short period of time in recognition of the initial risk for employing a new mode in a company's logistics system.

- Develop Clean Trucking Technology on Highways: Provide assistance applying for numerous existing programs; Create a loan program to purchase clean tech; Revision to building codes by requiring Electric Charging Stations and new warehouse/manufacturing facilities and incentives for electric charging.

- Explore Development of a Next-Generation Industrial TradePort District: Provide for phased incremental testing of emerging goods movement technology such as clean tech, autonomous trucks, and warehouses/manufacturing & processing, mining, and agriculture to foster higher-paying jobs in the region.

- Explore the development of a containerized intermodal rail service in East Kern that provides access to the ports of LA by connecting with the daily Rio Tinto bulk train to the port of LA.

Long Term, 2027–2046

- Widen State Route 184 to four lanes to improve safety for increasing agricultural trucking activity.

- Widen Wheeler Ridge Road to four lanes and/or create a parallel expressway on a new NW/SE diagonal alignment from roughly SR 223/Rockpile Rd to Wheeler Ridge Rd/David Rd to improve safety and provide a gap-closure tying I-5 to SR 58 south of Arvin and delay need for the planned South Beltway.

- Construct a new SR 58 freeway through Metropolitan Bakersfield from existing segments freeway SR 58 continuing West to I-5 and upgrade expressway portions East to SR 395.

- Expand rail service to existing distribution centers throughout the County.

PUBLIC TRANSPORTATION/SHARED MOBILITY ACTION ELEMENT

See the Land Use Action Element – Rail/Transit Land Use Actions for proposed actions related to rail and public transportation modes. See Chapter 4, Sustainable Communities Strategy, for further discussion on sustainable land use decisions relative to rail and public transportation modes.

Existing Transit Services

Within Kern County, existing public transportation services are anchored by connections to Amtrak and Metrolink passenger rail service, with feeder service connections to public transit, and other private carriers such as Greyhound. Transit service in the region uses a modified pulse schedule that is timed to connect to passenger rail service in Bakersfield, Lancaster, and Santa Clarita. Local and regional public transit is available within and between sixteen Kern County communities and has been experiencing some challenges. From 2015 to 2018 public transit services in Kern County saw a 10% increase in passengers from 7.5 million to 8.3 million passengers. However, from the 2018 peak, public transit riders in Kern dropped 17% to 6.9 million passengers. Potential causes of these recent challenges included an improving economy and lower fuel prices after 2018 that allow more people to afford their own vehicles. In addition, the response to the pandemic accelerated the decline in the last 3 quarters of 2020 (**Table 5-4**). Also, there appears to be a relationship between shared mobility technology using private smart phone application services (i.e. Uber, Lyft, Waze, etc.) that may be affecting transit ridership. Kern is addressing this issue with new studies that are helping to navigate through these new transit challenges. The following is an overview of Kern's transit service providers.

Transit service in the region uses a modified pulse schedule that is timed to connect to passenger rail service in Bakersfield, Lancaster and Santa Clarita

Kern Transit (KT), operated by the County of Kern, provides local Dial-a-Ride service in the unincorporated communities of, Lamont, Kern River Valley, Frazier Park, Rosamond, and Mojave. In addition, the County has agreements with several small cities to share the cost of providing transit service in county areas surrounding incorporated, i.e., Delano, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. KT also provides the following intercommunity services:

- Route 100: Bakersfield – Tehachapi – Mojave – Rosamond – Lancaster (Metrolink)
- Route 110: Bakersfield – Shafter – Wasco – McFarland – Delano
- Route 115: Bakersfield – Shafter – Wasco – Lost Hills
- Route 120: Bakersfield (Amtrak) – Taft
- Route 130: Bakersfield (Amtrak) – Frazier Park – Santa Clarita (Metrolink)
- Route 140: Bakersfield – Lamont – Arvin (north route)
- Route 145: Bakersfield – Lamont (south route)
- Route 150: Bakersfield (Amtrak) – Lake Isabella
- Route 227: Lake Isabella – Inyokern – Ridgecrest
- Route 230: Mojave – Inyokern – Ridgecrest
- Route 240: Mojave – Boron
- Route 250: California City – Mojave – Rosamond - Lancaster

CalVans is a public vanpool service that serves Central California. At the July 19, 2012, Kern COG Board meeting, the Transportation Planning Policy Committee approved a request from CalVans to become a participating member of its board through an addendum to a Joint Powers Authority. In 2017 CalVans operated 31 vanpools in Kern County.

Golden Empire Transit (GET) was formed in 1973 and is the primary public transportation provider for the Bakersfield Urbanized Area. GET operates 16 fixed routes with a fleet of 69 buses in maximum service. The service area within .75 miles of a fixed-route is approximately 111 square miles, and the District population is 500,977. Seventy-seven percent of GET's population resides within Bakersfield city limits,

and the remainder is in the unincorporated Kern County areas, including Oildale, Greenfield, Fruitvale, Greenacres, and Rosedale. GET-A-Lift provides complementary paratransit service for Americans with Disabilities Act (ADA)-eligible persons within the GET service area for those who are physically unable to use the fixed-route service. Elderly and disabled services are also provided by the Consolidated Transportation Service Agency (CTSA)

GET has determined that within Metropolitan Bakersfield, the east and southeast areas exhibit the highest service potential. This analysis is based on population density, income, auto ownership, and age. Other areas with high transit potential are portions of Oildale and central Bakersfield. The lowest potential rider areas include portions of the southwest and northwest.

Table 5-3 summarizes public transportation services operated by Kern County, with a description of services provided by each rural public transit provider, including days of operation and type of service provided.

Transit ridership in Kern County showed a decline during FY 2012–2015 as shown in **Table 5-4**. Ridership for GET, KT, and Delano account for 97% of all transit riders in Kern. The three agencies combined have experienced an 11% decrease in transit ridership in the past three years.

Table 5-3: Public Transit Operators Within Kern County

Operator	Area Served	Service Type	Days of Service	Fare Structure	
				Regular	Discount
Arvin	Arvin, Lamont Tejon Industrial Complex	Dial-a-ride	Mon-Fri	$1.00 $2.00	$.75 seniors, disabled & youth 5–15
California City	California City	Dial-a-ride	Mon-Fri	$1.70	$1.00 seniors, disabled, children under 4'9"
CTSA	Metro Bakersfield	Dial-a-ride	Mon-Fri	$2.00	–
Delano	Delano and adjacent unincorporated area	Fixed route Dial-a-ride	Mon-Sat	$1.75 $2.50	$.1.00 seniors/disabled $.75 students 5 and under
McFarland	McFarland	Dial-a-ride	Mon-Fri	$1.00	$.50 seniors, disabled, students
Eastern Sierra Transit Authority	Eastern Sierra Transit Authority and adjacent unincorporated area	Dial-a-ride	Mon-Sat	$2.50	$1.25 seniors, disabled
Shafter	Shafter & adjacent unincorporated area	Dial-a-ride	Mon-Fri	$1.50 $1.25	$1.25 seniors, disabled
Taft	Greater Taft (City, Maricopa, Taft, Taft Hts, South Taft, Ford City)	Fixed route Dial-a-ride	Mon-Fri	$2.50	$1.25 (seniors, disabled, students)
Tehachapi	Tehachapi & unincorporated adjacent Golden Hills area	Dial-a-ride	Mon-Fri	$1.00 (City-County trips)	$.75 seniors, disabled, children
Wasco	Wasco and adjacent unincorporated area	Dial-a-ride	Mon-Fri	$2.00	$1.00 (seniors, disabled, youth)
Kern Transit	Bkfd-Frazier Park	Intercity	Mon-Sat	Varies with origin and destination	
	Bkfd-Lake Isabella	Intercity	Mon-Sat	$3.00	$1.50
	Bakersfield-Taft	Intercity	Mon-Sat	$3.00	$1.50

Operator	Area Served	Service Type	Days of Service	Fare Structure	
				Regular	Discount
	Bkfd-Tehachapi	Intercity	Mon-Sun	Varies with origin and destination	
	Buttonwillow-Bkfd	Intercity	Tue, Thu	$3.00	$1.50
	Bkfd-Lamont	Intercity	Mon-Sun	$2.00	$1.00
	Lost Hills/Wasco	Intercity	Thu, Sat	$2.00	$1.00
	E. Kern Express (Bkfd, Keene, Tehachapi, Mojave Rosamond, Lancaster)	Intercity	Mon-Sun	Varies with origin and destination	
	N. Kern Express (Bkfd-Delano)	Intercity	Mon-Sun	Varies with origin and destination	
	Mojave-Cal City-Eastern Sierra Transit Authority	Intercity	Mon Wed Fri	Varies with origin and destination	
	Kern River Valley	Dial-a-ride	Mon-Sat	Varies with origin and destination	
	Kern River	Fixed route		$2.00	$1.00
	Boron	Deviated fixed route	Wed	$3.00	$1.50 seniors, disabled & youth
	Kern River	Dial-a-ride	Mon-Sat	$1.00	$.75 seniors, disabled & youth
	Frazier Park	Dial-a-ride	Mon-Sat	$3.00	$1.50 seniors, disabled & youth
	Lamont	Fixed route	Mon-Sat	$3.00	$1.50 seniors, disabled & youth
	Mojave	Dial-a-ride	Mon-Sat	$2.00	$1.50 seniors, disabled & youth
	Rosamond	Dial-a-ride	Mon-Sat	$2.00	$1.50 seniors, disabled & youth
GET	Metro Bakersfield	Fixed route	Daily	$1.65	$.80 seniors & disabled
GET-A-Lift	Metro Bakersfield	Dial-a-ride	Daily	$3.00	--

Table 5-4: Passengers Transported by Kern County Transit Operators

Operator	2015	2016	2017	2018	2019	2020
Arvin	65,585	87,161	68,905	79,275	84,592	61,757
California City	14,441	15,609	14,360	15,263	16,772	12,218
CTSA	46,385	39,539	48,247	46,015	43,687	33,145
Delano	162,482	155,161	118,386	101,679	127,812	58,722
GET & GET-A-Lift	5,509,080	5,519,926	5,218,850	6,435,284	6,255,973	5,324,571
Kern Transit	617,412	596,902	501,174	418,708	392,572	410,656
Maricopa	2,651	2,502	1,945	1,810	1,096	942
McFarland	27,700	23,922	27,700	19,072	15,544	9,048
Eastern Sierra Transit Authority	975,040	1,141,636	1,203,954	1,075,092	1,123,670	880,546
Ridgecrest	12,691	13.629	13,705	12,151	11,540	9.186
Shafter	30,662	29,576	31,502	33,494	34,235	22,581

Taft	42,360	38,194	28,832	34,998	36,720	36,726
Tehachapi	7,058	5,243	4,637	6,368	5,730	4,385
Wasco	20,047	17,507	25,239	25,597	25,297	18,805
Totals	7,533,264	7,686,507	7,307,436	8,304,806	8,175,240	6,883,288

Sources: Annual Report of Financial Transaction-Transit, 2015 – 2020; Transit Operators State Controllers Report

Important Accomplishments

Golden Empire Transit District

In 2019-2020, GET's fixed-route and GET-A-Lift operation ridership was 5,324,591 riders. GET operates 16 fixed routes with large, 40-passenger busses, including 2 rapid routes with 15-minute headways and 3 express routes. GET has made a commitment to improving Kern County's air quality by purchasing compressed natural gas (CNG) buses. In 2006, GET became one of the first large bus transit fleets in the nation entirely fueled by natural gas. In 2019, GET established a "geo-fenced" on-demand curb to curb micro-transit pilot GET On-Demand service (see **Figure 5-11**). GET has installed bike racks on all buses to facilitate intermodal trips, providing an ancillary improvement to air quality. In 2021, GET will begin testing electric buses and buses fueled by hydrogen to further reduce Green House Gas (GHG) emissions from its fleet. In partnership with IKEA and Tejon Ranch, GET initiated an express route between downtown Bakersfield and the Tejon Industrial Complex in 2008. A permanent park-and-ride lot for this service has been established in the Greenfield area. GET has installed an automatic vehicle location (AVL) system with a global position system (GPS) tracking system that allows riders to phone an automated service that reports when the next bus will arrive at any designated GET bus stop.

In 2006, GET became one of the first large transit fleets in the nation entirely fueled by natural gas.

Figure 5-11: Golden Empire Transit District - High Tech On-Demand Micro-Transit Service

Consolidated Transportation Service Agency

North of the River Recreation and Park District (NOR) was designated as the Consolidated Transportation Service Agency (CTSA) in 1999. CTSA uses Transit Development Act and Federal Transit Administration Section 5310 funds to purchase, maintain, and operate vans and buses. CTSA provides low-cost transportation service for seniors 60+ and disabled community members. Services are available Monday through Friday for medical appointments, senior activities, grocery shopping, and other essential trips. CTSA is a demand-response transportation program and provides door-to-door service within Metropolitan Bakersfield.

In response to a ridership drop from 2000 to 2003, and later in 2004, CTSA made several service improvements including wheelchair accessibility on 100% of its fleet and the hiring of additional drivers. Over the past three years, CTSA's ridership has improved by 8.1% and is currently delivering a healthy 15.2% farebox return (10% is required by Transportation Development Act regulations). A 2018 update to the Coordinated Human Services Transportation Plan that includes CTSA service is available online at: https://www.kerncog.org/public-transportation/ .

Kern Transit (KT)

Since 1981, KT has provided a vital inter-city transportation link to Amtrak in Bakersfield, and Metrolink in Lancaster and more recently Santa Clarita. In addition, KT provides – six local demand response (Dial-A-Rides), 122 fixed-route services, and a medical Dial-A-Ride in Bakersfield where customers are able to access employment, medical appointments, education, shopping, and social needs. KT has implemented state and federal grants to acquire items such as 3030 new buses (representing half of its fleet) over the past seven years, installed electronic fare boxes in all of its vehicles, and introduced touch-free mobile ticketing available on all smart phone. Future projects include a transit center in Mojave with a park and ride lot; a climate controlled, indoor waiting area; and a two-bay maintenance facility.

In early 2002, KT joined with Inyo Mono Transit, now called Eastern Sierra Transit Authority (ESTA) to provide transit service so KT users can connect in Ridgecrest, to points north, including Lone Pine, Independence, Bishop, and Mammoth. The need for this intercity route was brought about by the cancellation of Greyhound's commercial intercity service along the US 395 corridor, which was suspended in August 2001. Communities and cities in the eastern Sierra, north of Mojave, were left without frequent and effective public or commercial service upon the demise of the Greyhound service.

ESTA is critical to meeting the transportation needs of people living and traveling along US 395 and SR 14. It provides the vital linkage to existing public and commercial transportation services currently serving the counties of Kern, Los Angeles, Inyo, and Mono, including demand-response services operated by Eastern Sierra Transit Authority, California City, Mojave, and Rosamond; Antelope Valley Transit Authority and Metrolink in Lancaster/Palmdale; Santa Clarita Transit in Palmdale and Santa Clarita communities; intercity service to Bakersfield with connections to Greyhound and Airport Valet; Amtrak; and connections to regional air service in Inyokern and Bakersfield.

Amtrak San Joaquin Service Improvements

The State-supported Amtrak San Joaquin service presently extends 362 rail miles between Oakland and Bakersfield and 314 miles between Sacramento and Bakersfield. Six round-trip trains operate daily, and three of these train sets are stored overnight in Bakersfield. Bakersfield represents both the end of the line for the current rail service and the stepping-off point for further travel to Southern California and Nevada. Growing demand for rail service on the San Joaquin line prompted Caltrans to add a second train from Stockton to Sacramento in March 2003.

In FY 2018-19, the Bakersfield station handled 426,056 passengers (boardings and alightings) and was the busiest Amtrak station on the San Joaquin route. However, only 123,947 passengers began their travel

from Bakersfield, the remaining 302,109 traveled on to southern California and beyond. FY 2018–2019, the San Joaquin route remains the sixth busiest corridor in the country, with 1,076,454,000 riders.

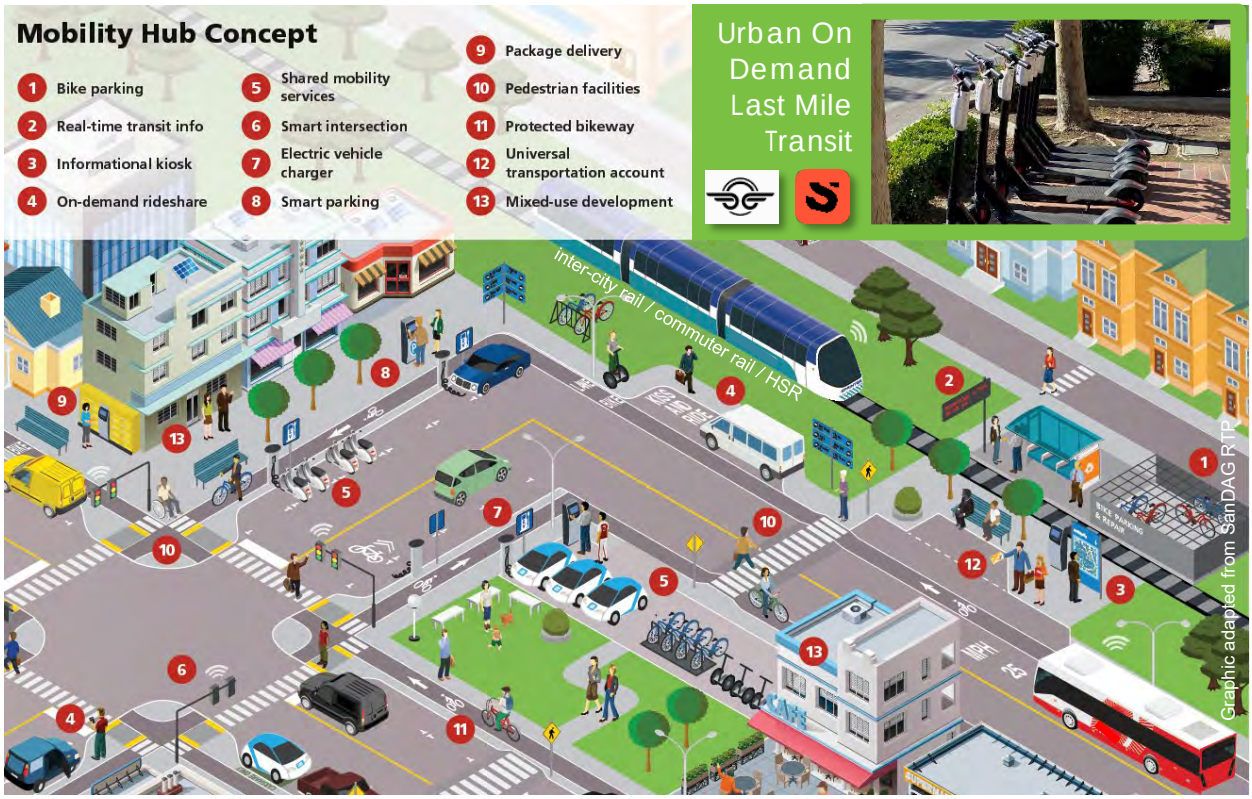
To protect the existing San Joaquin Rail Service and to promote its improvement, local and regional agencies on the San Joaquin Corridor (Bakersfield, Fresno, Modesto, Stockton, Sacramento, and Oakland) sponsored and supported Assembly Bill 1779 (AB 1779). This bill enabled regional government agencies to form the San Joaquin Joint Powers Authority (SJJPA) to take over the administration and management of the existing San Joaquin Rail Service from the State. AB 1779 was passed by the Legislature on August 30, 2012, with bipartisan support, and was signed by Governor Brown on September 29, 2012. The governance/management of the San Joaquin Rail Service was transferred to the SJJPA on July 1, 2015.

AB 1779 requires the SJJPA to protect the existing San Joaquin Rail Service and facilities and seek to expand service as warranted by ridership and available revenue. The provisions of AB 1779 require the state to continue to provide the funding necessary for service operations, administration, and marketing. Caltrans Division of Rail will remain responsible for the development of the Statewide Rail Plan and the coordination and integration between the three state-supported intercity passenger rail services.

Mobility Hubs – Car Share/Bike Share/eBikes/eScooters are Here!

Cal State University Bakersfield has established a free bike-share program for students and employees call Runner Ride with over 30 bikes. It is the first of multiple micro mobility hub efforts in the region. City of Bakersfield has developed a downtown on-demand eBike-share program with Spin (a subsidiary of Ford Motor Company). They are providing 125 electric assist bikes and have the option to provide additional micro-mobility modes with up to 10 micro-mobility charging hubs. Bird on-demand eScooters are also available downtown Bakersfield and clustered by high use areas. On-demand EV Car share is also

Figure 5-12: Mobility Hubs – Shared Mobility Services at SCS Transit Priority Place Types



available in the outlying dis-advantaged communities (DAC) of Arvin, Lamont, and Wasco. The City of

Bakersfield is adding electric charging in public parking areas throughout the city to help eliminate range anxiety. For example, solar powered vehicle charging spaces have been added to the Bakersfield Amtrak station as the first phase to develop a mobility hub, with plans to add a Spin micro-mobility hub and eBike charging station using the same solar power. **Figure 5-12** is an example of what these emerging mobility hubs could ultimately look like. Note that the Transit Priority Place Types identified in chapter 4 provide ideal locations for these transit oriented development mobility hubs.

Transit Needs and Issues

Limited Transit Dollars

Financial resources for public transportation are limited while demand for those resources continues to increase and this has been made worse due to the COVID shutdown. Fortunately, the Federal CARES is providing operating funds to help mitigate the loss in funding. Traditional public transportation revenue sources do not support the increasing need for public mass transportation to help mitigate population increases, clean air mandates, and trip reduction programs.

The expansion of public transportation services in the County is predicated on an aggressive financial plan. GET's budget has increased annually as the system responds to increasing consumer demand. The financial core to subsidize public transit services in the Transportation Development Act's (TDA) Local Transportation Fund (LTF). These funds are derived from the County's portion of the local sales and use tax or .25 percentage points of the 7.25% (8.25% in Arvin, Bakersfield, Delano, Ridgecrest, and Wasco) sales and use tax rate. Kern COG apportions these taxes to public transit throughout Kern County. In addition, the TDA authorized the state legislature to budget for State Transit Assistance Funds (STAF) by means of allocating a portion of the sales and use tax on gasoline.

Chapter 6 – Financial Element identifies several new sources that may be dedicated toward transit. Table 6-1 identifies 32% of all funding in this plan going toward transit, high occupancy vehicle, passenger rail, aviation, and other uses. These sources include LTF, farebox, local agency funds/developer impact fees, State Transportation Improvement Program, State Transit Assistance Account, Congestion Mitigation, and Air Quality Program, Federal Transit Administration (Sections 5307, 5310, and 5311), federal Stimulus funding, as well as other revenue streams.

Short-Range Transportation Development Plans

Transportation Development Plans (TDPs) for Kern transit agencies are usually updated every five years and are used as planning tools focusing on short-term transit needs and improvements. TDPs provide recommendations for improving existing services, identify the transit agencies' roles and responsibilities for better coordination of transit services, and identify possible future transit expansion or revision.

GET's Short-Range Transit Plan guides routine decisions associated with operations and maintenance. This document covering a five-year period is updated annually.

A five-year TDP was prepared for the rural transit operators of Kern County in 2020. The TDPs identified the following potential recommended strategies as summarized:

- **Promote vanpools** by creating community vanpool programs that target workers at major job centers including farmworker vanpools including employer-sponsored shuttles and rural vanpool programs;
- **Create partnerships with ridesharing and taxi companies** with wheelchair accessible vehicles including introducing a pilot program involving subsidised/discounted rideshare or taxi trips to/from key transit hubs to close First and Last Mile gaps, including consideration of partnerships between healtchcare providers, ridesharing companies, and taxi companies with wheelchair accessible vehicles;

- **Introduce/expand electric vehicle carshare program** including service anchored at low-income populations;
- **Introduce a volunteer driver program**, including a volunteer driver program to serve ambulatory riders with disabilities;
- **Consider partnering with door-through-door service providers**;
- **Create an inter-network transfer subsidy program** with regional transit providers;
- **Create a commute shuttle partnership with colleges** and other higher-education or technical campuses for a campus.

In June of 2015, Kern COG and the City of Delano agreed to prepare a long-range transit plan for the City's transportation system. Kern COG staff provided transportation modeling data and public transportation service advice. The plan was completed in late 2017.

Long-range recommendations for Delano's transit system are included below:

- Maintain current route structure;
- Make design improvement along Cecil Avenue and Garces Highway to enable relocation of stops to these arterials;
- Maintain Saturday services as a weekend loop;
- Begin a trial service expansion to serve commuters better;
- Modify/Expand existing routes to enhance access to developing areas;
- Expand or transfer Bakersfield service;
- Implement reduced-fare transit vouchers;
- Provide real-time information system (to increase ridership);
- Transition CNG fueled vehicles to plug-in hybrid or battery electric vehicles;
- Amend zoning to allow transit-supportive development;
- Increase community awareness of DART services;
- Explore vanpools as a supplement to, or substitute for, some service; and
- Consider ridesourcing for first/last mile access to transit.

The City of Delano will implement the recommendations above as they deem appropriate.

Senior/Mobility-Disabled Public Transportation

The senior and mobility-disabled populations in Kern County have limited access to public transportation. Differing fare structures, trip priorities, and limited service hours inhibit the coordination of efforts among operators of senior and disabled transportation. Kern COG staff carefully monitors annual unmet transit needs public hearing results, attends member agency fairs and events to collect transit needs data, and holds its own unmet transit needs public hearing. Also, Kern COG schedules regular meetings for its Social Services Transportation Advisory Committee to support existing transportation systems that operate to serve elderly and disabled residents in the Kern region.

Recent Transit Mobility Planning Activities

Miocar - Shared-Use Mobility Services in Rural Disadvantaged Communities in California's San Joaquin Valley: Pilot Project

Kern COG partnered with the 7 other San Joaquin Valley COGs and the UC Davis National Center for Sustainable Transportation on a grant from the California Air Resources Board to look at emerging shared mobility solutions (such as Uber, Lyft, and Waze) to help stem the decline in transit ridership and improve

service to disadvantaged communities. Since the completion of the study,[2] the partnership has grown to include the San Joaquin Valley Air District and has been awarded a $2.1 million grant to implement a shared-use mobility pilot project in several disadvantaged communities in the region.

Shared-use mobility services largely serve major metropolitan areas. However, increasingly officials, who represent rural communities, want to know whether these types of services may be able to provide more cost-effective access to rural residents than is currently possible by fixed-route and dial-a-ride transit services. Many of these officials must contend with low farebox recovery rates that threaten transit funding and subsequent cutbacks in transit services that are often strongly opposed by constituents.

In this study, the cost-effectiveness of existing inter-city transit services in rural disadvantaged communities in the San Joaquin Valley (California) is compared to hypothetical ridesharing and carsharing services. The results show significant potential to reduce transit costs and reinvest those cost-saving to expand shared mobility services.

The cost-effectiveness analysis is supplemented with reviews of existing shared-use mobility pilots and consultations with experts in shared mobility and local transportation planning. The result is one of two shared-use mobility pilot concepts now being rolled out in Kern and Tulare Counties.

Figure 5-13: Public Shared Mobility Services in Disadvantaged Communities

The pilot has resulted in a follow-on grant to continue operating and expand the public service marketed as Miocar in the South Valley (see **Figure 5-13**), implementing carsharing and ridesourcing in affordable housing complexes in the Lamont-Arvin and Wasco communities of Kern County. The development density of selected locations supports walk access to carsharing for residents in the affordable housing complexes and surrounding neighborhoods. Ridesourcing would be introduced to provide first and last-mile access to transit and carsharing when residents can't walk to these services. Ridesourcing would also provide direct access to destinations when it is not possible to complete an essential trip with transit or carsharing. Carsharing and ridesourcing would be subsidized to ensure that the services are affordable. It is anticipated that this program will produce significant savings from reduced dial-a-ride service costs that can be used for other sustained operations.

Making Downtown Bakersfield Project – High Speed Rail Station Area Vision Plan

In 2018, the City of Bakersfield completed the first vision plan in the State for the high speed rail station. The station is location at F Street and Golden State Ave (see **Figure 5-14**). The plan includes projects, programs and policies that make transit, walk, and cycling more attractive than driving to the station including a mobility hub at the future station. The plan's traffic study in Appendix B calls for a Business Access Transit (BAT) lane on Chester Ave, and California Ave where BRT currently operates. The following are some of the transit related recommendations from the traffic study:

[2] Shared-Use Mobility Services in Rural Disadvantaged Communities in California's San Joaquin Valley http://sjvcogs.org/wp-content/uploads/2017/09/Final-Report-Transit-Alternatives.pdf 2017

Figure 5-14: Bakersfield HSR Station Area Plan (SAP) Vision Calls for Mobility Hub

- Funding for improvements to nearby bus stops (e.g., seating and shelters).
- Federally authorized pre-tax deductions for transit passes, vanpools, and bicycle commuting costs.
- Subsidized transit passes for employees (note: Golden Empire Transit does not currently have an employer-based transit pass program, so the City would need to work with GET to create one).
- A "parking cash-out" program in which employees would be paid to avoid use of on-site parking.
- A "guaranteed ride home" program in which employees who took transit or other alternative modes to work would be offered a limited number of fully-subsidized taxi rides home after hours.

GET Long-Range Plan

GET, in partnership with Kern COG, implements the Metropolitan Bakersfield Transit System Long-Range Plan. The plan documents the relationship between population growth, transit ridership demand, and current operations. It also addresses emerging intracity transit system needs and addresses connectivity between rural areas and major regional transportation facilities such as the Amtrak train station and Meadows Field. A goal of the plan is to implement GET's new vision statement: "GET…doing our part to improve mobility and create livable communities by becoming every household's second car."

The GET Long-Range Plan, adopted in April 2012, provides the following three principles and concepts. These principles and concepts provide a framework for evaluating existing built and policy conditions in the region and ways to make improvements in the future.

- **Support transit use at the local level and on a regional scale.** Potential transit ridership and multimodal opportunities should be considered in planning new growth areas, developing land-use policies for existing developed areas, and planning for major infrastructure investments. The focus

should be on improving the form of the region, with particular emphasis on enhancing pedestrian activity in and around downtown Bakersfield and other potential sites such as adjacent to California State University, Bakersfield (CSUB).

- **Focus development and infrastructure on key cores and corridors.** Transit ridership will be highest when it effectively serves key origins and destinations. Transit becomes an attractive alternative to the automobile when it is accessible, convenient, and efficient.

- **Design streets and new developments to foster street activity and encourage transit use.** Streets are the centers of activity for transit-oriented districts; they are the civic spaces where people walk to transit and support the public life of the districts. Street activity can be generated by increased land-use intensity and through-street designs that provide comfortable access for all modes of travel.

The GET Long Range Transit Plan uses a phased approach that is already transforming the Metropolitan Bakersfield Transit System on routes 21 & 22. The Near-term plan became operational in October 2012, implementing the rapid bus network through the core areas with headways less than 15 minutes and stops spaced at least ¼ mile apart. The Mid-term plan began Bus Rapid Transit (BRT) implementation 2-years ahead of schedule in 2018 with the conversion of the rapid bus network to high quality BRT service with the implementation traffic signal preemption, real-time online travel info, and cell phone ticket purchasing though Token Transit. The BRT system is also benefitted by the new on-demand "last mile" curb to curb connecting service to the BRT. The Long-term plan expands the system further and increases headways throughout the system with a thinning of the less frequent routes and their replacement with on-demand service. Portions of the BRT system may become the future light rail system for Metropolitan Bakersfield once ridership levels warrant such an investment. GET and Kern COG are planning to update the Plan in the over the next couple of years.

Portions of the BRT system may become the future light rail system for Metropolitan Bakersfield.

Metropolitan Bakersfield Transit Center Study

In 2015, Kern COG partnered with Golden Empire Transit District to prepare a *Metropolitan Bakersfield Transit Center Study.* The study's long-term recommendations were to consider acquiring property at the following locations for future transfer stations: Panama Lane and Highway 99, Mt. Vernon Avenue and Highway 178, and Niles and Mt. Vernon. Each of these sites was considered for its potential to provide transit-oriented development (TOD).

GET Five-Year Information Technology Strategic Plan

GET has made the following technology improvements since 2012 – In 2012, driver work runs were created (Runcuts) for the first time using computer software (Fleetnet). Also, in 2012, GET introduced an online Human Resources (HR) application process that allows applicants to apply for open positions using the GET website as well as the GET office using an information kiosk. Finally, in 2012, GET upgraded its security surveillance to increase performance and recording times at all locations. In 2013, all GET paratransit vehicles were equipped with the CAD/AVL/PIS system. Using the CAD/AVL/PIS system, Get-a-Lift service is operated via an automated dispatch. In 2014, the new GPS tracking system (Connexionz) was installed on all buses, providing on-time performance data as well as specific data for boardings, alightings, lift, and bike rack use. The system provides real-time information for the public. In 2016, GET completed a five-year information technology strategic plan. In 2017, GET purchased software (UTA) for reporting ridership data from the automated passenger counters (APC) installed on all buses. Also introduced to GET service in 2017, GET linked its service payment system to the Token Transit mobile application for pass purchases. Since KT is also linked to Token Transit, riders may seamlessly purchase rides on both KT and the GET service using public transit throughout Kern County. In 2020, GET purchased Optibus software to quickly optimize service schedules, develop multiple service scenarios, and accurately assess the business implications of any service change

Delano Long Range Transportation System Plan

On September 18, 2017, Delano Transit completed a Long-Range Transportation System Plan that provided recommendations to improve the service performance. The recommendations addressed concerns about the systems' Transportation Development Act (TDA) farebox ratio (the ratio between fare revenues divided by total operating cost – Delano is a small urbanized area and is required to generate a twenty percent farebox ratio), changes in bus stops to improve speed and connectivity, and modification of the systems' hourly and weekday service to meet anticipated future population growth.

Kern Transit Bakersfield Service Analysis

KT completed a study of its services, the Bakersfield Service Analysis, adopted in June 2012, in response to the GET Metropolitan Bakersfield Transit System Long-Range Plan. That plan recommended a series of changes to GET's fixed-route service, which have several implications for KT service. The primary objectives of the KT analysis were to determine whether KT might be able to take advantage of the GET changes to (1) improve service for its own customers and (2) reduce operating costs.

Eastern Sierra Public Transportation Study

Completed in June 2005, the Eastern Sierra Public Transportation Study focused on public transportation services in Mono, Inyo, and eastern Kern counties. The study represented a comprehensive effort to address short-term interregional transit demands, identify strategies to enhance intra-regional mobility, and present a preliminary feasibility analysis of longer-term passenger rail service between Mammoth Lakes and the Los Angeles region. Given the varied geography, sparse populations, and long distances that buses must travel, the study found that transit operations through the Eastern Sierra region provide exceptionally good coverage. Nearly all communities within the study area have some level of transit service, offering basic mobility to meet some travel demands.

Regional Rural Transit Strategy

Kern COG initiated a study to evaluate alternatives to its current network of rural transit services. A project advisory committee representing transit providers and social services throughout Kern County, inaugurated this effort, the Regional Rural Transit Strategy (RRTS), in spring 2017. The RRTS inventoried existing public transit services in rural Kern County, identified possible alternatives to existing public transit services, and recommended strategies to improve the rural Kern County public transit system. The report provided the following as areas of focus:

- Identify alternatives that would improve the overall quality of transit service in Kern County;
- Identify alternatives to traditional transit addressing Kern County's regional rural mobility needs;
- Develop coordination alternatives that realize an improvement over the way transit is currently operated;
- Review, identify, and discuss alternative administrative and oversight models for transit services in Kern County;
- Create a strategy for increasing the visibility and importance of transit in Kern County; and
- Create partnerships between transit and non-transit organizations in addressing Kern County's transit needs.

The final RRTS produced recommendations for alternative methods of countywide public transit service focusing on improving efficiency, effectiveness, and cost savings. A cost benefit analysis was performed as part of the updates to each TDP.

High Occupancy Vehicle/Bus Rapid Transit Study

Kern COG initiated the High Occupancy Vehicle/Bus Rapid Transit (HOV/BRT) Study to examine the long-range feasibility of implementing HOV lanes and/or BRT services (in the form of freeway-based express bus or arterial-based BRT) within the Bakersfield metropolitan area and surrounding portions of Kern County. The analysis, results, and recommendations developed through this study are incorporated into the 2022 RTP in Chapter 4, Sustainable Communities Strategy (SCS).

The objectives of this report are to document the study process, which included a review of existing and future baseline transportation conditions within Kern County and an assessment of the performance, benefits, and potential impacts of HOV and BRT improvements within the county.

The study recommends projects or programs that merit further consideration and additional study to provide more detail in terms of travel benefits, costs (capital and operations), and implementation time frames. The analysis completed for this study is conceptual in nature and focuses on identifying need and feasibility. More detailed corridor-level studies of specific projects and recommendations would be necessary prior to the implementation of any of the concepts identified in this report.

Commuter Rail Feasibility Study

Kern COG initiated the Commuter Rail Feasibility Study, completed in July 2012, to examine a set of alternatives for providing commuter rail service within the Bakersfield metropolitan area and surrounding portions of Kern County, as well as within the eastern region of the county. The study concludes that some commuter rail service in Kern warrants further study, including extension of Metrolink from Lancaster north to Rosamond/Edwards AFB, and the addition of one or more Amtrak stops in north/west Bakersfield.

The study effort includes the review and summary of previous studies and reports that have identified potential transportation, land use, and commuter rail development planning in Kern County. The report builds on the existing and forecasted future demographic conditions within the county, as well as presents example commuter rail case studies throughout the United States for comparison purposes.

Six potential commuter rail corridors are examined in the study, utilizing existing freight rail corridors. The objective of this study is to identify corridors that may be feasible for future commuter rail service, along with potential station locations that would serve these corridors. This study is intended to lay the groundwork for more detailed future study efforts that would define operational characteristics and costs at a greater level of detail within the corridors determined to be feasible.

Some commuter rail service in Kern warrants further study, including extension of Metrolink from Lancaster North to Rosamond/Edwards AFB, and addition of one or more Amtrak stops in North/West Bakersfield.

This study included extensive involvement and input from Kern COG staff, as well as members of the study steering committee. This committee included representatives from Caltrans, Kern County, GET, the California High-Speed Rail Authority, City of Bakersfield, City of Delano, Fresno Council of Governments, County of Los Angeles, Altamont Commuter Express, and Southern California Regional Rail Authority.

High-Speed Rail Project

Established in 1996, the California High-Speed Rail Authority is charged with planning, designing, constructing, and operating a state-of-the-art high-speed train system. The proposed system stretches from San Francisco, Oakland, and Sacramento in the north—with service to the Central Valley—to Los Angeles and San Diego in the south. With bullet trains operating at speeds up to 220 mph, the express travel time from downtown San Francisco to Los Angeles would be approximately 2½ hours. Intercity travelers (trips between metropolitan regions) along with longer-distance commuters would enjoy the benefits of a system

designed to connect with existing rail, air, and highway systems. Approximate 20% of the planned phase I. system lies within Kern County. When implemented, Western Kern will be served by the Bakersfield station while East Kern will be served by the Lancaster station.

Proposed Public Transportation Actions

Near Term, 2022–2026

- Promote vanpools by creating community vanpool programs that target workers at major job centers including farmworker vanpools including employer-sponsored shuttles and rural vanpool programs;
- Create partnerships with ridesharing and taxi companies with wheelchair accessible vehicles including introducing a pilot program involving subsidised/discounted rideshare or taxi trips to/from key transit hubs to close First and Last Mile gaps, including consideration of partnerships between healtchcare providers, ridesharing companies, and taxi companies with wheelchair accessible vehicles;
- Introduce/expand electric vehicle carshare program including service anchored at low-income populations;
- Introduce a volunteer driver program, including a volunteer driver program to serve ambulatory riders with disabilities;
- Consider partnering with door-through-door service providers;
- Create an inter-network transfer subsidy program with regional transit providers;
- Create a commute shuttle partnership with colleges and other higher-education or technical campuses for a campus;
- GET should decrease emphasis on timed connections at transit centers by providing greater frequency;
- Promote use of new transit centers at New GET transit centers at CSU Bakersfield (begin construction in 2020); and Bakersfield College;
- Promote faster crosstown trips through; new express routes; new “Rapid” routes; or direct routes;
- Continue fine tuning KT scheduling; stop placement; and route reconfiguration;
- KT should consider supplementing or replacing low volume fixed routes with shared mobility options such as Miocar;
- GET should consider supplementing or replacing low volume/low frequency routes with their new On-Demand shared mobility service;
- Continue discussions with the Southern California Regional Rail Authority regarding the extension of Metrolink from Lancaster to Rosamond; Initiate discussions with the State regarding replacement of Amtrak San Joaquin service between Bakersfield and Wasco with a local commuter rail service;
- Monitor advancement of the California High-Speed Rail (HSR) project;
- Provide education on Federally authorized pre-tax deductions for transit passes, vanpools, and bicycle commuting costs;

- Promote subsidized transit passes for employees;
- Promote "parking cash-out" program in which employees would be paid to avoid use of on-site parking;
- Promote a "guaranteed ride home" program in which employees who took transit or other alternative modes to work would be offered a limited number of fully-subsidized taxi rides home after hours;

Long Term, 2027–2046

- Promote HSR funding of improvements to nearby transit stops/centers/mobility hubs;
- Continue phased improvements to the GET Bus Rapid Transit and express routes;
- Improve GET Crosstown service connecting one side of Bakersfield to the other;
- Improve GET Circulator services within neighborhoods or around outlying areas of Bakersfield;
- Continuation of GET Express routes and connecting outlying strategic employment centers;
- Truck climbing lane along eastbound SR 58 to provide safer inter-city transit service;
- Continue ramp metering/diamond lane program at urban freeway ramps;
- Research peak period only Business Access Transit (BAT) or High Occupancy Vehicle (HOV) lanes on congested arterials;
- Consider converting BRT corridors to light rail transit when ridership warrants;
- Consider additional peak period HOV/transit lanes on freeways;
- Continue pursuing an extension of Metrolink from Lancaster to Rosamond and commuter rail service in to replace Amtrak in the SJV portion of Kern.
- As HSR proceeds to construction; Identify preferred corridor to connect Bakersfield and Delano with commuter rail/HSR feeder service; Identify potential funding for commuter rail operations; Work with local transit providers to connect riders to commuter rail/HSR; Reassess feasibility of commuter rail in various corridors.

ACTIVE TRANSPORTATION ACTION ELEMENT

See the Land Use Action Element – Highway/Road for bicycle and pedestrian proposed actions. See Chapter 4, Sustainable Communities Strategy, for further discussion on sustainable land use decisions relative to bicycle and pedestrian travel modes.

Kern County is especially well suited for active transportation such as biking and walking. According to the Kern COG statistically valid 2020 Community Survey, 21 percent of residents reported a commute time of 10 minutes or less. The climate and terrain of the region is favorable for active transportation, with many clear, dry days and moderate temperatures. For short trips, biking and walking can serve as an alternative to the automobile. Because these modes are non-polluting and energy efficient, it is an element in the region's multimodal transportation system that leads to a more efficient transportation network.

This section focuses on bicycle and pedestrian travel facilities with an emphasis on complete streets. Residential developments are often within walking distance of commercial centers; however, design considerations should allow for ready ingress/egress of subdivisions. Mild weather, coupled with safely designed sidewalks and paths, can make walking an enjoyable activity.

Existing Systems

Bicycle facilities generally fall into three distinct categories: Class I, and variations of Class I bike facilities are the first category. Class I facilities are paved right-of-way for exclusive use by bicyclists, pedestrians, and those using non-motorized modes of travel. Class II bike lanes are defined by pavement striping and signage used to allocate a portion of a roadway for bicycle travel. Several jurisdictions have variations on Class II facilities, which provide optional striping scenarios to allow on-street parking. Class III facilities include sign markings for bicycle routes. There are no pavement markings. The County also has a Class III variation that provides a 4-foot delineated shoulder and bicycle route signage in rural areas.

Accomplishments Since 2012

Kern is rapidly accelerating active transportation/complete streets expenditures. In 2014, as part of the first Regional Transportation Plan with a Sustainable Communities Strategy (SCS), Kern COG forecasted $37.5M available over the next 24 years. In the first 7 years since the first SCS was adopted, the Kern region has funded twice the amount of active transportation projects that were anticipated over the 24 year life of that Plan. This is largely due to aggressive local government efforts going after new bike and pedestrian grant programs, with over half of the funding coming from the Caltrans Active Transportation Program (ATP). Kern COG led the development of a long-range, holistic active transportation plan for creating walkable and bicycle-friendly environments in the cities and unincorporated areas of Kern County. Context-sensitive solutions were sought that reflect the distinctive character and needs of the various communities, large and small, throughout the region.

In the first 7 years since the first SCS was adopted, the Kern region has funded twice the amount of active transportation projects that were anticipated over the 24 year life of that Plan.

The County and several jurisdictions had recently completed bicycle, pedestrian, trail and other planning efforts that support pedestrian and bicycle safety for people of all ages and abilities. The Kern Region Active Transportation Plan published in January 2018 built on this momentum, helping communities focus efforts and successfully obtain funding to implement improvements.

Through an extensive review of existing conditions and comprehensive community and stakeholder outreach, the Active Transportation Plan established a regional vision complemented by stand-alone recommendations for each jurisdiction and unincorporated area. User-friendly maps and prioritized projects

provide a clearly defined implementation strategy, enabling communities to put their respective plans into action.

Kern County Bicycle Plan and Complete Streets Recommendations

In October 2012, Kern COG adopted the Kern County Bicycle Master Plan and Complete Streets Recommendations, which provided recommendations for both constructed and planned bicycle facilities in the unincorporated portion of Kern County. The Complete Streets Recommendations looked at the integration of bike, pedestrian and transit facilities into the transportation system.

City of Bakersfield Bicycle Transportation Plan

In November 2013 the Bakersfield City Council approved the City of Bakersfield Bicycle Transportation Plan. The City of Bakersfield Bicycle Transportation Plan guides the future development of bicycle facilities and programs in the City. The recommendations in this Plan will help the City create an environment and develop programs that support bicycling for transportation and recreation, encourage fewer trips by car and support active lifestyles.

In transportation planning, more emphasis is being placed on “soft” solutions to transportation control and traffic congestion. The trend toward solving traffic issues without resorting to the expansion of highway and freeway facilities has taken hold over the last decade. Kern County has many notable success stories were more effective management of the existing transportation system has reduced or eliminated the need for costly and disruptive expansions. The Kern Region Active Transportation Plan (2017), the Kern County Bicycle Master Plan and Complete Streets Recommendations (2012), and the City of Bakersfield Bicycle Transportation Plan (2013) documents are incorporated by reference as a part of the 2022 RTP.

Needs and Issues

Maintenance Issues

Maintaining bicycle and pedestrian facilities has always been a challenging issue for local agencies. Roadway maintenance backlogs in nearly every jurisdiction are increasing annually. As the roadway network expands, maintenance efforts and pavement conditions fall further behind. Commitments for investments into new bicycle and pedestrian facilities cannot guarantee a continuing revenue source for upkeep, particularly for bicycle paths on separate rights-of-way. Rather than diminishing bicycle improvements; however, new funding sources or ways to deal with maintenance should be pursued.

Public Support

For a number of reasons, bicycling has not realized its full potential as a transportation mode within the Kern region. The reasons are primarily related to (1) ease of short-distance travel via automobile; (2) lengthy distances between residences and work sites; (3) relatively inexpensive and widely available sources of automobile fuel; (4) lack of shower and/or locker facilities at employment centers; and (5) a general aging of the population, which may reduce the number of persons who are inclined to take bicycle trips.

General attitudes toward bicycling also present issues. Many area residents do not view cycling as a real transportation mode. These attitudes can be attributed to factors such as:

- Many urban roads do not provide adequate shoulders, causing some cyclists to ride within the flow of traffic.
- Lack of adequate bicycle facilities, such as lockers or alternative means of securing a bicycle.
- Decentralization of employment centers, residential areas, and retail facilities.

- Lack of knowledge regarding the benefits of bicycling.

Motorists are occasionally unwilling to share the roadways with bicycles, and this may lead to antagonistic situations in the street. Education regarding the transportation system must include cyclists, pedestrians, motorists, and transit passengers.

Current Planning Activities

Current bicycle and pedestrian planning activities in the Kern region include implementing the Kern Regional Active Transportation Plan and the Kern County Bicycle Master Plan and Complete Streets Recommendation and promoting more pedestrian and bike uses throughout the county as an alternative to driving. The Kern region has also undertaken the several recent active transportation/complete street activities since the last Regional Transportation Plan.

2021 Clean Mobility Options Needs Assessment for Disadvantaged Communities

The study is seeking input form 13 disadvantage communities on clean mobilities options such as bike share and the interest in the use of electric bicycles. The project is being coordinated with the outreach for the 2022 RTP. The resulting needs assessment will make the region eligible for California Air Resources Board Clean Mobility options program funding.

2020 Bakersfield High Speed Rail Bike Network and Pedestrian Study

The study developed three documents: 1) Downtown Bakersfield Pedestrian Access to Transit Plan; 2) Low Stress Bikeway Network in the Vicinity of Bakersfield High-Speed Rail Station; 3) Central Valley Passage Long Distance Route. All three studies incorporate active transportation/complete street strategies approaching the Bakersfield High Speed Rail Station.

Caltrans District 6 & 9 Bicycle Plans and Complete Street Facilities

In addition to the Kern COG 2018 Active Transportation Plan, Caltrans districts 6 & 9 have created Bicycle Plans for their state routes.

Proposed capital bicycle and pedestrian projects for the 2022 Regional Transportation Plan are listed in Table 5-1. Bicycle plans for the region can be viewed online at https://www.kerncog.org/bicycle-plans/ .

Proposed Active Transportation Actions

Near Term, 2022–2026

- Encourage COG member jurisdictions to implement their adopted local bicycle plans and to incorporate bicycle facilities into local transportation projects;
- Continue to seek funding for bicycle and pedestrian projects from local, state, and federal sources;
- Continue to seek funding to maintain existing bikeway and pedestrian facilities;
- Promote the purchase and construction of bicycle racks and lockers for Kern County multimodal stations;
- Promote the inclusion of bike tie-downs and racks on commuter trains and buses;
- Fund updated bicycle plans for incorporated cities;

- Fund a Pedestrian Facilities Plan for the County of Kern as well as incorporated cities;

- Investigate the connectivity between Off-Road Vehicles and Non-motorized transportation uses, especially in areas with high concentrations of Off-Road Vehicle use such as the Indian Wells Valley and the California City area; and

- Explore the possibility of the establishment of “Cabana” (covered) parking and information kiosks at Off-Road Vehicle trail heads, especially in the Indian Wells Valley and the California City area.

Long Term, 2027–2046

Periodically update the Kern Regional Active Transportation Plan;

- Continue to seek funding for bicycle and pedestrian projects from local, state, and federal sources;

- Continue to seek funding to help maintain existing bikeway and pedestrian facilities;

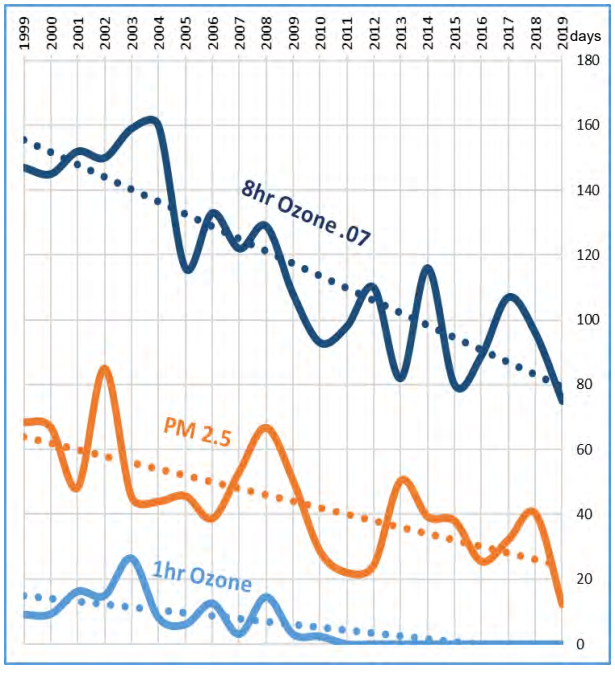
- Promote development of revitalized, walkable/bikeable neighborhoods with easy access to transit; paving/controlling dust from streets and shoulders; and improve street intersections that facilitate bicycle travel; and

- Investigate the connectivity between Off-Road Vehicles and Non-motorized transportation uses, especially in areas with high concentrations of Off-Road Vehicle use such as the Indian Wells Valley and the California City area.

TRANSPORTATION AIR EMISSIONS REDUCTION ACTION ELEMENT

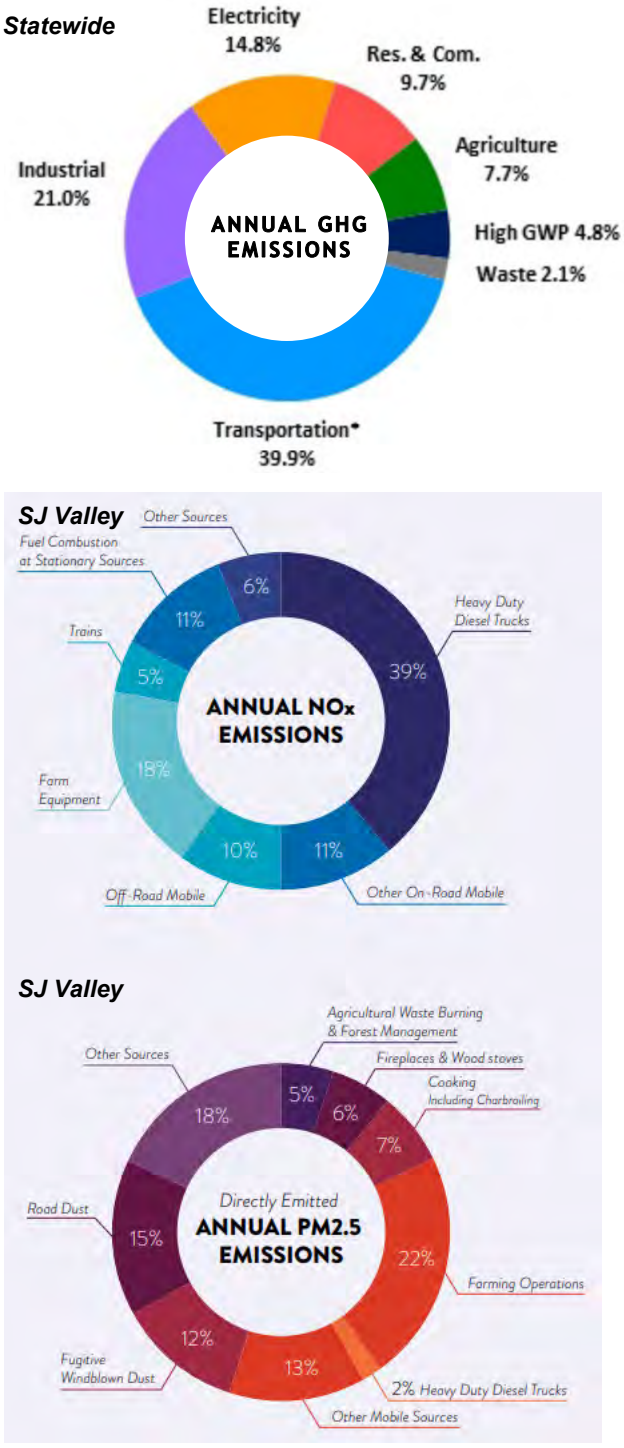
The Transportation sector includes the movement of people and goods by cars, trucks, trains, ships, airplanes, and other vehicles. The majority of greenhouse gas emissions from transportation are carbon dioxide (CO_2) emissions resulting from the combustion of petroleum-based products, like gasoline, in internal combustion engines. The largest sources of transportation-related greenhouse gas emissions include passenger cars and light-duty trucks, including sport utility vehicles, pickup trucks, and minivans. These sources account for over half of the emissions from the transportation sector which makes of 40% of state GHG emissions (see **Figure 5-15**). The remainder of greenhouse gas emissions comes from other modes of transportation, including freight trucks, commercial aircraft, ships, boats, and trains, as well as pipelines and lubricants. California's state laws and regulations (such as AB 32) have set goals for reducing California's GHG air emissions. These efforts aim to reduce GHG emissions to 1990 levels by 2020 - a reduction of approximately 30 percent.

Figure 5-16: 1999-2019 Observed Days Exceeding Federal Air Standards in Kern (Pre-COVID travel/commute patterns)



Note: In this graph, lower ozone and PM 2.5 numbers are equivalent to better air quality. No monitoring data available for GHG. Source: CARB iADAM data 2019.

Figure 5-15: 2018 Air Emissions by Economic Sector



Source: CARB, California GHG Emissions 2000-2018; SJVAPCD 2019-20 Annual Report to the Community

According to the air quality monitoring system, the Federal Clean Air Act has helped reduce harmful air days by a minimum 46 percent from 1999 to 2019 (see **Figure 5-16**). Over the past two decades efforts have eliminated harmful exposure to Carbon Monoxide, and the 1 hour Ozone standard, and have led to the reduction of harmful pollutants such as Ozone, Particulate Matter, Nitrogen Oxide, Sulfur Dioxide, Lead and air toxics. With the transportation sector accountable for a significant portion of these air emissions, reduction efforts must target mobile source activities including on and off-road vehicles, public transit, freight, and rail movements.

Existing System

Air emissions reduction activity in the Kern Region has been carried out by national, state, regional and local entities since the early 1990s. Many are multi-agency efforts, including the U.S. Environmental Protection Agency, US Dept. of Energy, Federal Highways Administration, Federal Transit Administration, California Air Resources Board, California Department of Transportation, California Energy Commission, San Joaquin Valley Air Pollution Control District (APCD), Eastern Kern APCD, Kern Council of Governments and its local member agencies. **Figure 5-17** is a summary of emission reduction efforts.

Figure 5-17: Transportation Air Emissions Reduction Efforts in the Kern Region

National

- Corporate Average Fuel Economy (CAFÉ) Standards
- Fuel Pricing
- Locomotive Idling Reduction
- Locomotive Replacement or Repowering
- Transportation Construction Equipment Reductions

State

- AB 118 – Air Quality Improvement Program
- AB 2766 – Motor Vehicle Fee Program
- CalStart
- Cap and Trade Program
- Clean Diesel
- Clean Vehicle Rebate Project
- High-Occupancy Vehicle Facilities
- Incident management/Kern 511 Traveler Information
- Inspection & Maintenance Programs
- Moyer Program
- Park-and-Ride Facilities
- Shifting/Separation Freight Movements
- Signal Synchronization and Roadway Intersection Improvements

Regional

- CalVans Vanpool Program
- Commute Kern TDM Programs/Incentives
- Diesel Engine Retrofits Incentive Program
- Drive Clean Rebate Program
- IdleAIR Idling Reduction Facilities
- Project Clean Air (PCA)
- REMOVE II Programs
- Retirement/Replacement of Heavy-Duty Trucks Incentives Program
- Rule 8061 (SJVAPCD) Unpaved Road Dust Mitigation
- Rule 9310 (SJVAPCD) School Bus Fleets: Retirement/Replacement of Buses
- Rule 9410 (SJVAPCD) Employer-Based Trips Reduction (eTRIP)
- Rule 9510 (SJVAPCD) Indirect Source Review: Infill Incentive Zone Transportation Impact Fee Land Use Strategies.
- Valley Clean Air Now (CAN)

Local

- Bicycle/Pedestrian Projects and Programs
- GET Online Trip Planner Transit Marketing, Information, and Amenities
- New/Expanded/Increased Transit Services
- Road Paving & Street Sweeping

Over two decades of air emission reduction efforts at the national, state, regional, and local levels have produced significant improvements to our nation's air quality. The Kern region has an extremely unique geographic landscape and makeup consisting of two air basins – the San Joaquin Valley and Eastern Kern Air Basins. Of the main criteria pollutants identified in the National and State Ambient Air Quality Standards, both Ozone and Particulate Matter currently hold a status of nonattainment within the Kern region. To continue along a successful path for reducing these harmful pollutants, new and innovative strategies must be implemented in the Kern region to further achieve healthy air quality and meet national and state criteria pollutant standards.

Transportation Control Measures

Transportation Control Measures (TCM) have received a high level of attention since the passage of the state and federal Clean Air Acts and congestion management legislation. As a result, air quality planning areas for the entire San Joaquin Valley, Mojave Desert, and Indian Wells Valley have been designated as nonattainment for harmful pollutants such as ozone and particulate matter 2.5 and 10. According to the state and federal Clean Air Acts, the worst nonattainment areas must ensure that "all feasible measures" be implemented to reduce harmful air emissions. Goals identified in the 2022 RTP, including livability and sustainability, focus on carrying out these requirements to achieve standards for healthy air quality. The most typical and successful Transportation Control Measures include improved public transit, traffic flow improvements and high occupancy vehicle lanes, shared ride services, pedestrian/bicycle facilities, and flexible work schedules. For a complete discussion of Transportation Control Measures being implemented in Kern, see the most recent adopted Federal Air Quality Conformity Analysis document available at: https://www.kerncog.org/conformity/ . The 2022 RTP includes a combined public review process for the Conformity Analysis and is adopted by joint resolution that includes the conformity document.

Needs and Issues

Recent polls show that air quality has been ranked one of the primary concerns for Kern's residents, especially those in the San Joaquin Valley portion of the County. Kern County is home to some of the most challenging air pollution problems in the United States. The American Lung Association "State of the Air 2021" report found continued improvement in air quality for ozone and year-round particulate pollution. Bakersfield is the only city in the report of the worst 25 cities that improved to its best ever, yet it is still 3rd worst in the nation. The unique topography, weather patterns and growing population of Bakersfield and Kern County complicate this public health issue. It's not just poor lung health that affects our citizens, it's a sedentary lifestyle. Obesity is a nationwide health problem. According to a 2016 study by the Centers for Disease Control and Prevention, 25 percent to less than 30 percent of the adult population in California is considered obese.

Table 5-5: Most Polluted Counties to Live In – American Lung Association 2021

Ozone Ranking	State	County
1	CA	San Bernardino
2	CA	Riverside
3	CA	Los Angeles
4	CA	Kern
5	CA	Tulare
6	CA	Fresno
7	AZ	Maricopa
8	CA	Nevada
9	CA	San Diego
10	CA	Placer
11	CA	Kings
12	UT	Salt Lake
12	CO	Jefferson
14	CA	Stanislaus
15	CA	El Dorado

PM Ranking	State	County
1	AK	Fairbanks North Star
2	CA	Fresno
3	CA	Kings
4	CA	Kern
5	CA	Stanislaus
6	CA	San Joaquin
7	CA	Siskiyou
8	WA	Yakima
9	CA	Merced
10	MT	Lewis and Clark
11	MT	Ravalli
12	WA	Okanogan
13	CA	Madera
13	CA	Plumas
13	MT	Lincoln

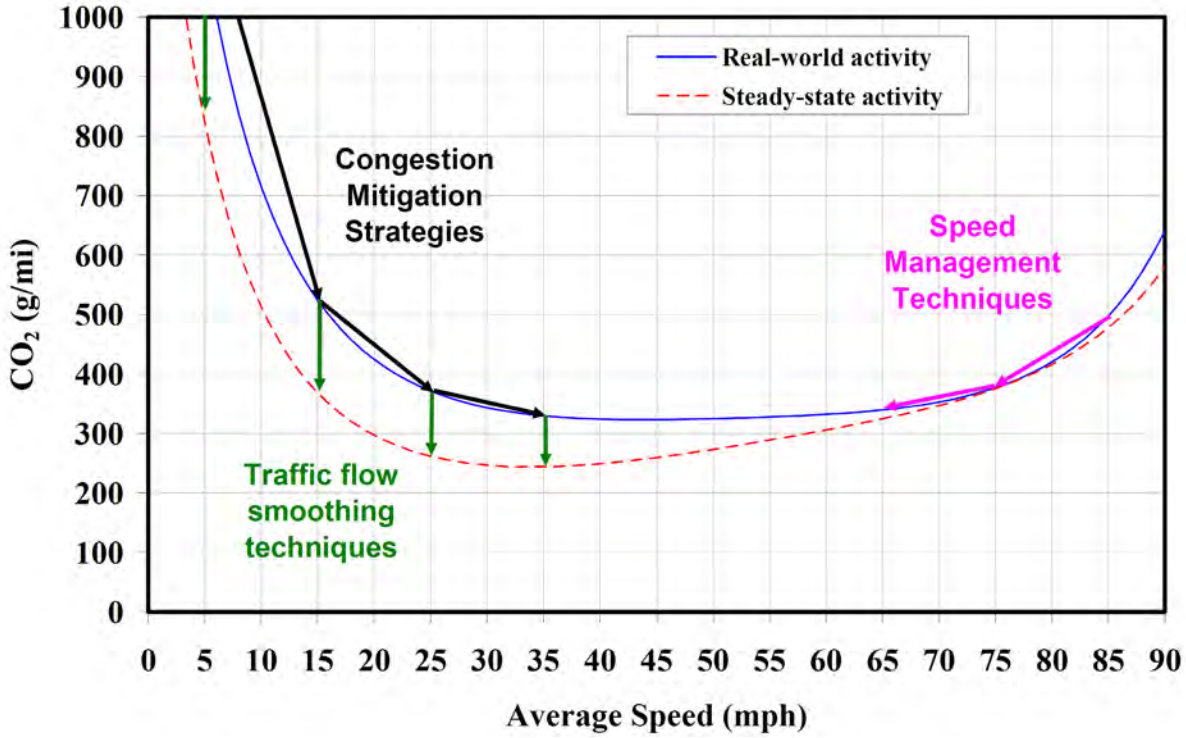
Annual PM Ranking	State	County
1	CA	Kern
2	CA	Kings
3	CA	Tulare
4	CA	Fresno
5	CA	Plumas
6	CA	San Bernardino
7	OR	Jackson
8	AK	Fairbanks North Star
9	OR	Klamath
10	CA	Riverside
10	CA	Stanislaus
12	MT	Lincoln
13	CA	San Joaquin
14	AZ	Pinal
15	CA	Los Angeles

In addition to the air quality benefits of more sustainable growth patterns, focusing future development around more mixed use, walkable neighborhoods can help to reduce high rates of respiratory health problems and obesity that affect Kern County residents. Planning for and providing residents with safe and practical options for walking, biking and transit can boost daily physical activity proven to improve health and lessen the impacts of a wide range of chronic diseases, depression and other mental health issues. In response to the Kern RTP Outreach activities and comments provided by the general public at Kern COG's workshops, reducing unhealthy air emissions is a primary objective of the 2022 RTP. Reducing ozone and particulate matter emissions as outlined in the San Joaquin Valley Air Pollution Control District's attainment plans presents a major challenge. Several issues must be weighed:

- Cost Effectiveness – Maximizing funding is a critical component to successfully achieving air quality goals and standards. It is crucial for air emission reduction efforts to consider cost effectiveness, which is defined as the cost per ton of emissions reduced. Cost effectiveness is weighed by considering factors such as pollutant(s) for which the area is in nonattainment, precursor pollutants of concern, relative size of pollutant inventories, and the existing sources and level of control measures in place. However, cost effectiveness does not always reflect directly on the overall effectiveness of the project.

- Reduce Congestion – **Figure 5-18** illustrates that reducing traffic congestion at slow speeds while enforcing speed limits on freeways can significantly reduce harmful criteria pollutants. Maintaining smooth flowing traffic on surface streets and freeways can reduce CO2 emissions as much as 12%. Kern COG's congestion management program action element (discussed later in this chapter), in conjunction with local traffic impact fees, has helped keep Kern's traffic flowing at the optimum speeds of 25 to 60 MPH as the region continues to grow. Continued investment in traffic signal synchronization is a major priority for Kern COG's Congestion Management and Air Quality Improvement Program (CMAQ) funding. In 2012 Kern COG completed a Project Delivery Policies and Procedures document that outlines the process for Kern's member agencies to take in order to benefit from major funding sources. The document is updated on an as needed bases and funding programs evolve.

Figure 5-18: Vehicle CO_2 Emissions by Speed
Source: Barth/Boriboonsomsin, 2008



- Diesel Emission & Idling Reduction Efforts – According to the National Clean Diesel Campaign (NCDC) the five best practices to reduce emissions from diesel activities are retrofits, engine replacement, vehicle replacement, operational strategies, and introducing clean fuels. As part of the 2005 Energy Policy Act, the Diesel Emissions Reductions Act (DERA) was created offering a significant source of funding for clean diesel projects. State and regional efforts from the Air Resources Board (ARB) and San Joaquin Valley Air Pollution Control District (SJVAPCD) offer programs such as the Hybrid and Zero Emission Truck and Bus Voucher Incentive Project (HVIP) which helps offset costs for truck replacement and engine retrofitting. Recently in California, the On-Road Heavy Duty Diesel Vehicles

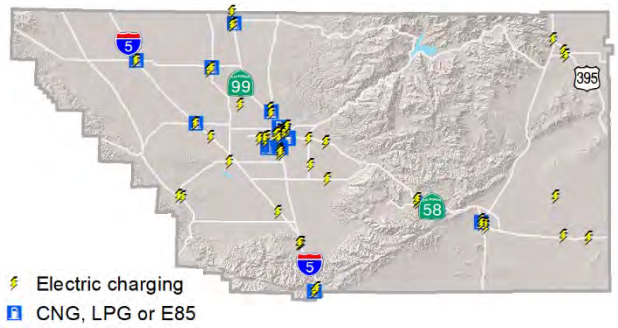
(In-Use) Regulation has been set into place which says by 2023 nearly all trucks and buses will need to have 2010 model year engines or equivalent.

Another significant effort of diesel emission reduction comes from the EPA's Smartway Technologies Program that supports technologies in idle reduction, aerodynamics, low rolling resistance tires, and retrofits. This effort is clearly exercised in the Kern region with IdleAIR's truck stop facility. IdleAIR allows truckers to rest their diesel engines and auxiliary power units while being provided with heating, cooling, electricity, and other at-home commodities inside their trucks.

- Off-Road Mobile Source Emissions – As part of California's Central Valley, the Kern region is highly influenced by the presence of agricultural land uses. Off-Road emissions created from the agriculture and construction industries contribute to particulate matter (PM), nitrogen oxide (NOx), and volatile organic compound (VOC) emissions. Efforts from the USDA's Natural Resource Conservation Services (NRCS) and the SJVAPCD have led to the replacement and retrofit of nearly 1,400 tractors. In conjunction with the NRCS, the Valley Air District has funded approximately $43 million of these valley wide efforts to improve off-road emissions.

- Alternative-Fuel Fleets – Diesel exhaust still has a toxicity component that may warrant continued conversion of fleets, especially school buses. In 2007, California Executive Order S-01-07 established the Low Carbon Fuels Standard with a goal to reduce carbon emissions 10% by 2020. Also, in 2007 the Energy Independence Act set the goal to produce 36 billion gallons of renewable fuel blended into transportation fuel nationwide. The State of California is investing $100 Million per year on alternative fuels technology including electric plug-in, hydrogen fuel cell, and natural gas. Fueling infrastructure is critical for the success of alternative fuels in the region (**Figure 5-19**). With nearly $1.4 million in funding, the SVAPCD helped UPS deploy 50 hybrid electric delivery trucks in the San Joaquin Valley, and on a more local level, GET successfully converted its fleet of over 100 buses to compressed natural gas (CNG).

Figure 5-19: Alt. Fuel/Charging Locations



- Reduce Vehicle Miles Traveled -– A major long-range challenge in nonattainment areas is controlling offsite (indirect source) emissions generated from housing and commercial development in the region. Kern COG's transportation model indicates that each new household generates an average of 60–70 daily vehicle miles traveled. As new gasoline-electric hybrids and zero emission hydrogen-fuel-cell vehicles become commonplace, ozone-related emissions from transportation sources may someday be negligible. However, as passenger vehicle travel increases, so does particulate matter and fugitive dust produced by moving vehicles. New housing developments need to fully mitigate their indirect source impact to air quality, especially for particulate matter. The San Joaquin Valley is the only region in the nation with an Indirect Source Review (ISR) rule (Rule 9510, SJVAPCD) in place that creates incentives for new development to reduce offsite emissions.

Proposed Actions

Near Term, 2022 – 2026

- Maintain air quality coordination Memorandum of Understanding (MOU) with the San Joaquin Valley Metropolitan Planning Organizations, San Joaquin Valley Air Pollution Control District, Eastern Kern Air Pollution Control District, and Caltrans Districts 6 and 10.

- Improve public transit by lowering transit fares and subsidies;

- Increase alternative-fuel fleets – work closely with private and public entities to support the conversion of alternative-fuel vehicles;

- Encourage ridesharing and voluntary employer-based incentives – programs such as Commute Kern's Guaranteed Ride Home program and SJVAPCD's Rule 9410 – eTRIP both promote ridesharing that will immensely reduce vehicle miles traveled, ultimately reducing harmful air emissions;

- Traffic flow improvements/railroad grade separations;

- Bicycle and pedestrian travel – construct class I, II, and III bicycle paths, accompanied with striping and signage;

- Promote development of revitalized, walkable/bikeable neighborhoods with easy access to transit; Paving/controlling dust from streets and shoulders and improve street intersections that facilitate bicycle travel;

- PM_{10} efficient street sweeping – SJVAPCD Rule 8061: Paved and Unpaved Roads implements the usage of specific street sweepers that target the reduction of PM_{10} emissions within urbanized street networks;

- Identify funding options for Congestion Mitigation Air Quality Improvement Program (CMAQ), AB 2766 Motor Vehicle Emissions Reductions Program, and other sources that fund air emission reduction;

- Identify all Reasonably Available Control Measures (RACM) for ozone and all Best Available Control Measures (BACM) for PM_{10} by Kern COG's member agencies;

- Special presentations and workshops for member agencies on transportation-related control measure strategies for air pollution emissions as new standards, technology, and funding opportunities evolve; and

- Media campaigns promoting the various air emission reduction measures listed above.

Long Term, 2027 – 2046

- High Occupancy Vehicle (HOV) lane additions as well as ramps and metering improvements: Centennial Corridor and Westside Parkway provide room to accommodate HOV;

- Add "missing links" (streets) to roadway network that reduce out-of-direction travel: Centennial Connector will provide a major free-flow traffic connector that will improve air quality by reducing stop-and-go truck travel on local arterials. The Hageman Flyover Project will provide another east/west connection over SR 99 to downtown Bakersfield central business district; the Mohawk Street extension provides an extension from Rosedale Highway south that connects to Truxtun Avenue accessing downtown Bakersfield;

- Carpool programs – By 2042 a fleet of over 500 vans will be utilized and maintained for vanpooling; and

- Flextime programs – Offsets the traditional work hours of 8 a.m. to 5 p.m., ultimately reducing traffic congestion during peak periods.

- Park and Ride Facilities – provide 1,500 vehicle spaces;

- Public Electric Vehicle Charging Infrastructure – provide 4,000 vehicle spaces;

INTELLIGENT TRANSPORTATION SYSTEMS ACTION ELEMENT

See Chapter 4, Sustainable Communities Strategy, for further intelligent transportation systems information.

Intelligent Transportation Systems (ITS) apply advanced information processing, communications, vehicle sensing, and traffic control technologies to the surface transportation system. The objectives of ITS are to promote more efficient use of the existing highway and transportation network, increase safety and mobility, and decrease the environmental impacts of congestion. The Federal Highway Administration sponsored the preparation of Early Deployment Plans (EDPs) to identify ITS application opportunities.

The EDP's primary focus for the Kern County region was the maximization of safety, traffic flow, and efficiency in both rural and urban areas. It presented an integrated, multimodal, phased strategic plan to address the surface transportation needs and problems of the Kern region through the use of ITS. By preparing the EDP, Kern County was in a position to take advantage of federal and other funding opportunities and implement various components of ITS.

The objectives of ITS are to promote more efficient use of the existing highway and transportation network, increase safety and mobility, and decrease the environmental impacts of congestion.

Kern COG was the lead agency for this study, with key participation from Caltrans District 6 and the Caltrans New Technology and Research Program, as well as various cities and transportation agencies within the Kern region. The overall goal of Kern's ITS EDP was to develop a multiyear strategic deployment plan that would result in a well-balanced, integrated, intermodal transportation system. Transportation needs that have the potential of being addressed by ITS technologies were identified and ITS elements that would be beneficial, cost-effective, and implementable were evaluated. The strategic plan facilitated the integration and coordination of ITS applications valley- and statewide in conjunction with other EDPs conducted throughout California.

2018 ITS Plan for the Kern Region

A comprehensive update of the countywide EDP had not been completed since 1997. In the interim, Kern metropolitan area agencies made significant investments in the planning, design, and implementation of ITS for the surface transportation and transit networks. During that timeframe, stakeholder priorities and needs changed along with new advances in technology. There is an expectation, documented in the 1997 EDP and Architecture, that investment in ITS strategies will continue with a focus at the local level. At the same time, it's important that investments be made in reliable technologies that deliver proven benefit in a cost-effective manner. Toward this end, Kern COG lead the countywide 2018 ITS Plan for the Kern Region to direct ITS investments throughout the county over the next twenty years and beyond.

The ITS planning process is much like any other transportation planning activity, with the primary difference being the focus on technological solutions. One of the primary areas of emphasis of ITS planning is the extensive involvement and participation by the stakeholders of the region. This is especially important to ensure interagency systems integration, address potential institutional issues early, and to provide the necessary education and awareness of advanced technology transportation solutions.

In development of the 2018 ITS Plan for the Kern Region, Kern COG coordinated with stakeholders on an inventory survey of existing ITS elements, a needs assessment, consideration of new ITS strategies, and discussion of ITS architecture. In 2017, the U.S. Department of Transportation released the latest version of the National ITS Architecture framework, now known as Architecture Reference for Cooperative and Intelligent Transportation (ARC-IT) as well as the supporting software Regional Architecture Development for Intelligent Transportation (RAD-IT) to guide the planning and deployment of ITS. The program facilitates the ability of jurisdictions to operate collaboratively and to harness the benefits of a regional approach to

transportation challenges. The 2018 ITS Plan for the Kern Region reflects the latest ITS architecture so that stakeholders will be able to deliver federally funded ITS deployments.

Kern's ITS Vision, Goals, and Objectives

The principal vision for the 2018 ITS Plan for the Kern Region is that through community ITS investment, coordination and data sharing between transportation agencies, travel in Kern is safe and efficient. The ITS Plan used two approaches to identify ITS goals and objectives that would support the ITS vision. The first approach was to identify broad, high-level goals and objectives. The second approach was to directly incorporate goals and objectives from other relevant local and regional sources, such as the regional transportation plan. As part of the development of the ITS Plan, the stakeholders reviewed and accepted the following ITS goals and included objective statements that focus on different aspects of the same overall issue or concern:

- Reduce traffic congestion
- Reduce the number, severity and duration of accidents and incidents
- Improve transportation and transit planning operations
- Promote the efficiency, safety, convenience, and use of alternative travel modes
- Minimize the environmental impacts of transportation
- Improve the mobility of people and freight; maximize the efficiency and cost effectiveness of the existing and future transportation system

ITS Strategies

The 2018 ITS Plan for the Kern Region provides guidance to stakeholders on the planning, development, and funding of ITS projects. The listing of projects is identified in the ITS Plan in the form of "ITS strategies." The project sequencing section of the ITS Plan balances what projects are feasible to implement within the short-term, medium-term, and long-term timeframes. Long-term projects include areas that are still under development nationally. Project sequencing provides a phasing plan that recognizes that there are some projects that need to occur before others, to be effective in operations. The ITS Plan also recognizes that planned projects do not necessarily all have to occur within the scope of the timeframe identified but rather are dependent on regional need, project readiness, and the capacity to deploy. Implementation of the ITS strategies will make transportation throughout Kern County safer and more efficient for travelers.

The 2018 ITS Plan for the Kern Region was approved by Kern COG on June 21, 2018, and is incorporated within the 2018 RTP by reference. The plan was federally accepted July 9, 2018.

San Joaquin Valley ITS Plan

Using a federal planning grant, the eight San Joaquin Valley counties formed an ITS committee focused on solving transportation problems within the region. The vision for the San Joaquin Valley ITS Strategic Deployment Plan is to enhance the quality of life, mobility, and environment through coordination, communication, and integration of ITS technology for the Valley's transportation systems. The ITS plan includes major local elements developed by each of the eight counties. The plan coordinates architecture, standards, institutional issues, and provides a framework for deploying ITS projects.

The San Joaquin Valley Intelligent Transportation Systems Strategic Deployment Plan was adopted by Kern COG in November 2001 and is incorporated within the RTP by reference. The plan was federally approved January 8, 2002.

San Joaquin Valley ITS Architecture Maintenance Plan

While the San Joaquin Valley Regional ITS Architecture is included in the San Joaquin Valley ITS Strategic Deployment Plan, it is considered a process that will be maintained, revised, and validated as needed. The architecture is a set of rules that facilitates the building of systems and allows these systems to communicate and inter-operate when built. Changes to the Regional ITS Architecture, such as new ITS regional needs, plans and priorities, projects, scope, and stakeholders, will be documented through updates to the Deployment Plan. The San Joaquin Valley ITS Architecture Maintenance Plan, including revised management procedures, was adopted by Kern COG on April 21, 2005, and is incorporated within the 2022 RTP by reference. The plan was federally accepted July 14, 2005.

Proposed Actions

Short- and Long-Term Actions, 2022–2046

- Continue stakeholder outreach;
- Demonstrate the benefits to member agencies of the Regional Transportation Planning Agencies and Metropolitan Planning Organizations;
- Mainstream ITS into program and project prioritization;
- Mainstream and update regional architecture; and
- Form public/private partnership task force (on project-by-project basis).

CONGESTION MANAGEMENT PROGRAM ACTION ELEMENT

Federal Title 23 CFR § 450.322 - Congestion management process in transportation management areas, requires all urbanized areas larger than 200,000 in population are to have a Congestion Management Program (CMP), System, or Process. Kern COG has chosen to continue referring to its congestion management activities as a program. The federal Congestion Management Process requirements are similar to the optional California requirements; in fact, the CMP was largely modeled after the California program. Both processes are structured around the identification and monitoring of a system, the establishment of performance standards, and the identification and correction of congestion. The CMP was developed through an open public process in 1991 under state guidelines. Since 1998, the CMP has been included as a subsection of the Regional Transportation Plan Action Element. In 2005, the CMP became federally mandated.

The program is an effort to more directly link land use, air emissions, transportation, and the use of new advanced transportation technologies as an integral and complementary part of this region's plans and programs.

The Final Rule for the Federal Management and Monitoring Systems defines an effective Congestion Management Program as a systematic process for managing congestion that provides information on: (1) transportation system performance, and (2) alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs.

Pursuant to California Government Code Section 65089(a), Kern COG was designated as the Congestion Management Agency in 1991, by the majority of the cities representing the majority of the population and the Kern County Board of Supervisors. Kern COG consists of representatives from the eleven incorporated cities and two representatives from the County of Kern. The Golden Empire Transit District, Joint Planning Policy Board, and Caltrans are ex officio representatives on the Agency Board. The Congestion Management Agency is responsible for developing, adopting, and updating a CMP. The CMP is updated as part of the Regional Transportation Plan every four years. The program is developed in consultation with, and cooperation of, regional transportation providers, local, state, and federal governments, including the California Department of Transportation, and both the Eastern Kern and San Joaquin Valley Air Pollution Control Districts.

In 2009, the California Resources Agency revised the CEQA Guidelines, including the Environmental Checklist Form. The new guidelines expand the definition of traffic congestion to include consideration of impacts to transit, bike, and pedestrian modes, as well as the consideration of travel demand measure strategies.

Because the CMP can be amended and updated as frequently as annually, it can be modified to reflect local conditions in traffic congestion and transportation funding. This document fulfills the statutory requirements for the CMP as required under state law and for the Congestion Management Program under federal law.

Purpose

The purpose of the CMP is to help ensure that an efficient transportation system is developed that relates population growth, traffic growth and land use decisions to transportation system level of service (LOS) performance standards and air quality improvement. As discussed in the Transportation Air Emissions Reduction Action Element of this document, smooth, uncongested traffic flow can provide significant improvements to our air quality. The program is an effort to more directly link land use, air quality, transportation, and the use of new advanced transportation technologies as an integral and complementary part of this region's plans and programs.

Local jurisdictions are required to:

- Use consistent level of service methodologies, performance standards, and travel forecasting techniques.

- Adopt and implement a land use analysis program, which includes acting as a responsible agency for traffic impact studies as part of environmental documentation.

- Participate in annual monitoring activities, maintain acceptable performance levels on the system, or if necessary, designate individual segments or intersections deficient through adoption and submission of a deficiency plan to Kern COG. Deficiency plans may be submitted through the environmental review process as part of the traffic study.

- Adopt Transportation Demand Management mitigation and monitoring program prior to their CMP conformity findings in a deficiency plan or traffic study.

Failure of a local jurisdiction to fulfill these responsibilities could engender loss of federal gas tax funding. According to the 2008 Federal Highway Administration Guidebook on the Congestion Management Process for Transportation Management Agencies greater than 200,000 population and in federal nonattainment areas, “no Federal funds may be spent for capacity-expanding projects unless they come from a CMP”.

Contents

The CMP includes the following six elements:

- Land Use Impact Analysis: An established process where Kern COG, in consultation with its member agencies, evaluates the impacts of proposed local land use decisions on Kern County's transportation system, including an estimate of the costs associated with mitigation requirements. This process employs the existing CEQA agency review process.

- Multimodal Performance Standards: Determine how much traffic, during peak hours, is acceptable on state freeways, highways, and major streets within Kern County. These standards do not replace adopted city or county traffic goals, which generally establish more stringent standards. In addition, identify frequency and routing of bus service, and coordinate transit service provided by separate operators throughout Kern County.

- Regional Traffic Model: Predict level-of-service exceedances, prioritize the Capital Improvement Program, and analyze the impacts of land use on the CMP network. Kern COG maintains the regional traffic model for evaluation of congestion performance measures in the RTP and as a key input to local and regional traffic studies.

- Transportation Demand Management: Describe programs to promote alternatives to single-occupant vehicle travel. These include such activities as carpools, vanpools, transit, bicycles, park-and-ride lots, and intelligent transportation system technologies. These programs will improve air quality in the region and help meet the goals of the Air Quality Attainment Plans, as well as climate change goals. Often, environmental documents include Transportation Demand Management strategies (TDMs) and Transportation System Management strategies (TSMs). Kern COG, Caltrans, and local governments should incorporate TDMs/TSMs as part of their Transportation Plans, Circulation Plans, transportation studies, and corridor studies, as appropriate.

- Capital Improvement Program (CIP): Establish transportation improvements that can be expected to improve traffic conditions over a minimum of seven years. This program has been developed to make the best use of the funds currently available. The CIP is developed and maintained by Kern COG with public and member agency input.

- Deficiency Plan: Project leads prepare a plan of remedial actions when a roadway level of service standard is not maintained on the designated Congestion Management roadway system. The plan may be addressed in a stand-alone traffic impact study or as part of the environmental document. A Corridor System Management Plan (CSMP) may be prepared by Kern COG to identify actions along congested corridors and systems for inclusion in traffic impact studies.

In addition to these components and as a part of the process of developing and monitoring the program, the local government agencies and Caltrans are required to develop and maintain a traffic data base for use in a countywide model and to monitor the implementation of the program elements. This database requirement may be fulfilled through participation in the Kern COG regional traffic count program.

Along with state-level requirements, federal transportation funding legislation requires each state to develop and implement a transportation Congestion Management Process that will be incorporated into the regional planning process, comply with the intent of the federal requirement, and be considered a part of Kern County's CMP. The program identifies areas where congestion occurs or may occur, identifies the causes of the congestion, evaluates strategies for managing/mitigating congestion and enhancing mobility, and develops a plan for implementation of the most cost-effective strategies. Strategies regarding congestion management include:

- Transportation demand management measures.

- Traffic systems management operations improvements (i.e., signal coordination, freeway service patrol, real-time traffic conditions online, etc.).

- Measures to encourage high-occupancy vehicle (HOV) use.

- Enhanced mobility measures that provide a congestion relief valve in corridors that are not affected by the peak period congestion (i.e., arterial-based peak-period transit/HOV lanes or light rail).

- Congestion pricing.

- Land use management and activity/transit-oriented center strategies.

- Incident management strategies.

- Application of ITS technology.

- Addition of general purpose (mixed flow) traffic lanes.

- Other mitigation that allows for mobility through congested corridors for modes other than single-occupant vehicles, including non-motorized bike and pedestrian trips.

Advances in telecommunications technology and networks provide an additional opportunity to further mitigate congestion by reducing the need for travel both within the region and between regions. To an extent, these telecommunications advances are occurring within the private sector without public sector initiatives. However, Kern COG is evaluating a potential public sector role.

Monitoring and Implementation Process

To ensure the CMP is being implemented, the cities and county provide the Congestion Management Agency considerable information annually, primarily in the form of technical data, as well as policy and planning summaries, including the following:

- Traffic Level of Service: Each city, the county, and Caltrans must provide peak-hour traffic counts and level of service calculations on their designated streets and intersections. As participants on the Kern Regional Transportation Modeling Committee, these agencies oversee a regional traffic count program and travel demand forecasting program administered by Kern COG.

- Local Traffic Models: Kern COG is required to approve any traffic models used by the cities and the county to evaluate impacts of proposed land use development on the transportation system. After the model has been initially approved by the Congestion Management Agency, only changes to the model will need to be submitted.

- Land Use Database: Kern COG is required to establish and maintain a uniform land use database for the development and monitoring of the program. All current and future land use projections must be included in the database. Any changes to the land use database must be submitted to Kern COG.

- Local Capital Improvement Program: The program includes a minimum seven-year Capital Improvement Program to maintain or improve the level of service on the CMP network and transit performance standards, and to mitigate regional transportation impacts identified through the program's land use analysis element.

- Performance Monitoring: Kern COG is required to update the level of service for the Congestion Management System network as well as system wide congested travel statistics using the Kern COG regional travel demand model.

Designated Regional Transportation System

The purpose of defining the CMP network is to establish a system of roadways that will be monitored in relation to established level-of-service standards. At a minimum, all state highways and principal arterials must be designated as part of the Congestion Management System of Highways and Roadways. Kern County has 18 designated state highways. The roads selected as principal arterials by the Congestion Management Agency serve interregional traffic traveling between state highways and also complete gaps in the congestion management network.

California Government Code Section 65089(b)(1)(A) requires that the Congestion Management Agency establish a system of highways and roadways that includes all of the state highways and principal arterials. Once a roadway is included in the network, it cannot be removed. All new state highways and principal arterials must be included in the system. If in the future, however, an existing segment of state highway is replaced by a new alignment, the new alignment would be added to the congestion management network while the old alignment would be dropped from the network.

Figures 5-19 and **5-20** provides a graphic display of the Congestion Management System of highways and roadways. A listing of state highways and principal arterials on the designated Congestion Management System is provided below.

Congestion Management Program System

Highways

Interstate 5	SR 155
SR 14	SR 166
SR 33	SR 178
SR 43	SR 184
SR 46	SR 202
SR 58*	SR 204
SR 65	SR 223
SR 99	U.S. 395
SR 119	

*The Westside Parkway, new Centennial Connector and a portion of Stockdale Highway will be added to the CMP system when the designation of SR 58 moves from Rosedale Highway to those routes, potentially by 2020.

Principal Arterials

China Lake Boulevard – SR 178 to Route 395

Rosamond Boulevard – Tehachapi-Willow Springs Road to SR 14

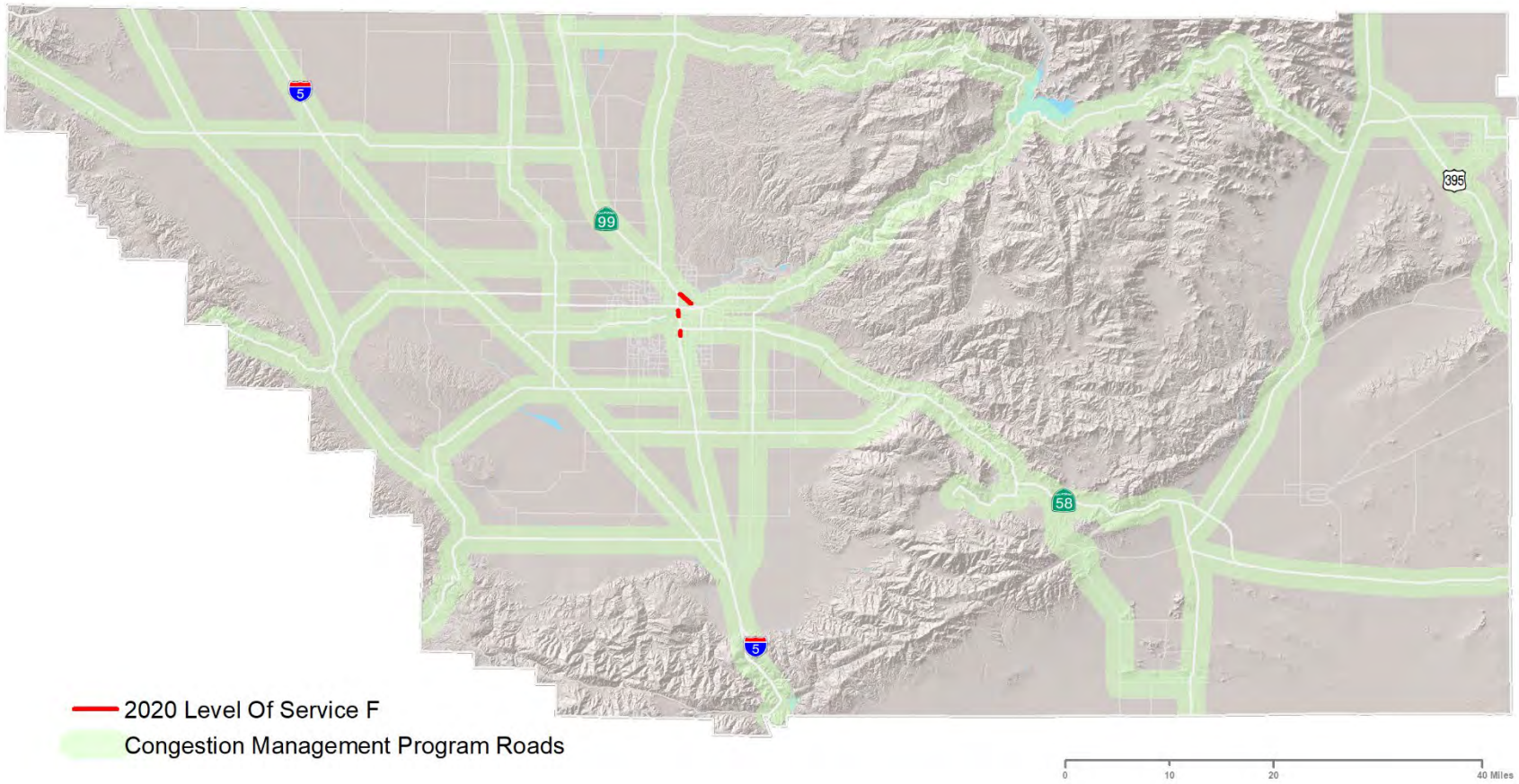
Seventh Standard Road – SR 99 to Interstate 5

Tehachapi-Willow Springs Road – SR 58 to Rosamond Boulevard

Wheeler Ridge Road – Interstate 5 to SR 223

Figure 5-20: Metropolitan Bakersfield Congestion Management Program Corridors

Figure 5-21: Kern County Congestion Management Program Corridors



Level of Service Standards

The purpose of this section is to establish level of service standards for the Congestion Management road network in Kern County. California Government Code Section 65089(b)(1)(B) requires that level of service standards be established at no worse than LOS E, or LOS F if that is the current level of service.

Level of service, according to the Transportation and Traffic Engineering Handbook, is a "qualitative measure that represents the collective factors of speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs provided by a highway facility under a particular volume condition." Level of service is ranked from A to F, with A being best and F being worst (see **Table 5-6**).

Table 5-6: Levels of Service

Level of Service A	Free flow: no approach phase is fully used by traffic and no vehicle waits longer than one red indication. Insignificant delays.
Level of Service B	Stable operation: an occasional approach phase is fully used. Many drivers begin to feel somewhat restricted within platoons of vehicles. Minimal delays.
Level of Service C	Stable operation: major approach phase may become fully used and most drivers feel somewhat restricted. Acceptable delays.
Level of Service D	Approaching unstable: drivers may have to wait through more than one red signal cycle. Queues develop but dissipate without excessive delays.
Level of Service E	Unstable operation: volumes at or near capacity. Vehicles may wait through several signal cycles and long queues form upstream from intersection. Significant delays.
Level of Service F	Forced flow: represents jammed conditions. Intersection operates below capacity with several delays that may block upstream intersections.

Jurisdictions are encouraged to incorporate multimodal level of service standards as appropriate for each community facility type, place type and corridor type as recommended in the latest Highway Capacity Manual update. The 2012 and 2019 updates to the project selection criteria include consideration of highway, bike and pedestrian level of service. To refer to the Kern COG Project Delivery Policies and Procedures please use the following link (under Policies and Procedures): https://www.kerncog.org/policies/ .

Adopted Level of Service Standards

One of the most important elements of the congestion management process is to establish traffic level of service standards to decide how much traffic, during peak hours, is acceptable. LOS is a way of measuring the amount of traffic congestion.

Level of service E has been established as the minimum system-wide LOS traffic standard in the Kern COG Congestion Management Plan. Those roads currently experiencing worse traffic congestion have been accepted at their existing traffic level of LOS F. By so doing, cities and the county will not be penalized through loss of gas tax funds for not meeting the new CMP LOS E standard. Existing LOS F locations are listed below.

- Portions of SR 99 in Central Bakersfield
- Portions of SR 204 – Airport Dr to F Street

Projects along one of the existing LOS F segments, with 1 or more peak-hour trips (or as required by the most recent Caltrans Guide for the Preparation of Traffic Impact Studies), shall include a deficiency plan for the affected corridor segments as part of the traffic study for the project's environmental document or as a separate stand-alone deficiency plan for the affected corridor.

Overall, the number of congested segments has dropped since the last travel demand model validation. The three segments that remain LOS F, have already had Corridor System Management Plan (CSMP)/deficiency plan completed for the SR 58 corridor for which these segments are covered by the CSMP by direct connection (SR 99) or are parallel route within the corridor (SR 204). The CMP assumes that recently completed capacity increasing improvements will operate better than LOS F until the next transportation model update indicates that the segment has been degraded to LOS F again. The model update validation uses observed traffic data from the annual traffic monitoring program. In addition, projects currently underway on SR 58, SR 99 & SR 204 are anticipated to relieve congestion before then next CMP analysis. These routes are under the grace period for requirement of a CSMP/deficiency plan and have capacity, multimodal, congestion pricing and other improvements already planned in this RTP. All other deficiencies are off the CMP network and do not require a deficiency plan.

In addition to the LOS standards of the CMP, some cities and the County of Kern have adopted policies to help maintain their own LOS standards. In most cases, these local policies are aimed at maintaining LOS C. The standards in this CMP are not intended to replace local policies by allowing greater congestion; they serve a very different purpose. The locally adopted LOS standards are tied to the cities' and county's authority to approve or deny development, require mitigation measures, and construct roadway improvements. The level of service standard is a locally and federally required planning tool to be used in the development review process. Failure to meet the local standard does not have direct negative federal financial impacts.

In 2017, California Office of Planning Research released new guidelines that govern how CEQA is used to address congestion as required by SB 743. LOS has now been replaced with VMT as the primary method to measure traffic impact under CEQA in California. The CMP is a federally required process, and the new guidelines continue to allow for LOS analysis on state routes and to comply with local ordinances and federal requirements. The CMP is not affected by SB 743.

Mitigating Deficiencies

The Deficiency Plan is similar to a CSMP or TCR. The deficiency plan section of the traffic study should analyze affected portion of the CMP network and parallel corridors as appropriate. A grace period is being provided until Kern COG and/or Caltrans completes the CSMP or TCR for all the congested segments in the Congestion Management network.

- Multimodal Analysis – The modes analyzed should be dependent on the place type. For example, in most cases rural intercity travel need not look at pedestrian facilities. The plan should provide mitigation and a monitoring program to offset impacts to all modes through incident and demand management strategies.

- Corridor Analysis – Corridor impacts to a mode may be mitigated by providing capacity on a parallel facility. For example, an impacted facility may lack pedestrian and bike facilities; however, a parallel bike/pedestrian path within the corridor could offset this deficiency. In addition, impacts to transit buses stuck in the same traffic congestion as single-occupant vehicles could be mitigated by the provision of a transit/HOV lane in the congested travel direction during peak periods. Additional mitigation for congestion could be through the provision of a freeway service patrol to rapidly clear traffic accidents during peak periods.

- Multimodal Circulation Plans – As required by AB 1358 effective January 2011, at the next regularly scheduled update, local circulation plans should consider other modes and methods for assessing

service. In addition to the road network, circulation plans should include bike, pedestrian, and transit networks. The bike/pedestrian/transit networks should provide for transit-oriented development centers that could serve as transfer points and nodes for future express and/or regional service. The centers also should provide a connected network linking to future high-speed rail and passenger rail stations. These centers should be reflected in the Land Use Element of the General Plan with higher densities and a mix of land uses that make for a vibrant pedestrian-oriented destination.

- Funding Mitigation – Funding for mitigation may be phased as part of the mitigation monitoring program. Developer-funded mitigation would be timed with the completion of phases that created the impacts. Other funding sources could include local and regional traffic impact fees, a transportation sales tax measure, and the Kern Motorist Aid Authority DMV fee for freeway service patrols and traveler assistance 511 services. A Corridor System Management Plan could be prepared by Kern COG to assist with the development of the cost/benefit analysis.

- Congestion Pricing – On major freeway and highway facilities, HOV lanes, bus lanes, and toll lanes can be used to fund new capacity for single-occupant vehicle traffic. At the national level, odometer-based tolling is being considered to fund and maintain infrastructure that supports goods movement activity. Variable parking costs can also be used as a strategy to reduce congestion during peak periods.

- Grace Period – Member agencies are not required to prepare a deficiency plan or traffic study as required under this section until Kern COG or Caltrans completes the Corridor System Management Plan or Transportation Concept Report for the deficient segments on the CMP system.

Congestion Management Agency Role

Under the State CEQA Guidelines, the Congestion Management Agency monitors a countywide level of service standard and withholds federal gas tax funds if the standard is not met or mitigated. Local agencies often establish more stringent level of service requirements as part of the circulation plans. The CMP standard is not viewed as being in conflict with locally adopted LOS standards that are more stringent.

It is the Congestion Management Agency's responsibility to ensure that all cities and the county are following the CMP. Of particular importance is the establishment of traffic counts and regional traffic modeling. Kern COG completes one coordinated and comprehensive review of current LOS traffic data with each RTP update; each city and the county is evaluated in the same manner. Through the Kern Regional Traffic Count Program, the cities, county and Caltrans undertake traffic counts on their roads annually. Use of recent peak-hour traffic counts as a basis for traffic forecasting eliminates much of the "guesswork" and ensures that the review is based on actual traffic conditions.

Provisions include:

- All roadway segments on the Congestion Management network shall maintain a level of service of E or better;

- Any roadway segments on the Congestion Management network that are operating at a level of service worse than E on the adoption of the first CMP shall be required to prepare a deficiency plan as part of the traffic study for a proposed development. The plan shall provide mitigation through transportation system management and travel demand management strategies and/or capacity for other modes such as transit and HOV that is not affected by the slower speeds of congested single-occupant vehicle travel. The plan shall provide mitigation along the congested portion of the corridor if mitigation of the affected CMP network links is not feasible; and

- The CMP will assume that a recently completed capacity increasing improvement will operate better than LOS F until the next transportation model update indicates that the segment has been degraded to LOS F again, as indicated by observed traffic counts.

Conformance Monitoring

This section identifies specific conformance monitoring procedures to determine if the local jurisdictions are complying with the traffic level of service standards, the interim transit frequency, routing, and coordination requirements, adoption and implementation of the program to analyze the impacts of land use decisions on the Congestion Management System, and compliance with the Transportation Demand Management/Trip Reduction Element.

California Government Code Section 65089.3(a) states, "The agency (CMA) shall monitor the implementation of all elements of the CMP. Annually, the agency shall determine if the county and the cities are conforming to the Program, including, but not limited to, all of the following:

- Consistency with levels of service and performance standards, except as provided in subdivisions (b) and (c);

- Adoption and implementation of a transportation demand management/trip reduction ordinance; and

- Adoption and implementation of a program to analyze the impacts of land use decisions, including the estimate of the costs associated with mitigating these impacts.

Determination of Nonconformance

If, pursuant to the annual traffic monitoring process, the Congestion Management Agency finds that a local jurisdiction is not conforming to the provisions of the CMP, the Agency shall hold a noticed public hearing for the purpose of determining conformance. Further, the Agency shall notify the nonconforming jurisdiction in writing of the specific areas of nonconformance. A nonconforming jurisdiction may appeal the determination of nonconformance for the purpose of scheduling a re-hearing before the Agency within 100 days of the initial notice of nonconformance.

The nonconforming jurisdiction shall have 90 days from the date of the receipt of the written notice of nonconformance to come into conformance with the CMP, in accordance with Section 65089.4(a). If the nonconforming jurisdiction has not come into compliance with the CMP, the Congestion Management Agency shall make a finding of nonconformance and shall submit the finding to the California Transportation Commission and the State Controller.

In accordance with Government Code Section 65089.4(b), the State Controller will withhold apportionments of funds required to be apportioned to that nonconforming jurisdiction by Section 2105 of the Streets and Highways Code, until the Controller is notified by the Agency that the city or county is in conformance. If, within the 12-month period following the receipt of a notice of nonconformance, the Controller is notified by the Agency that the city or county is in conformance, the Controller shall allocate the apportionments withheld pursuant to this section to the city or county.

If the Controller is not notified by the Congestion Management Agency that the city or county is in conformance pursuant to paragraph (2), the Controller shall allocate the apportionments withheld to the Agency. The Agency shall use the funds apportioned for projects of regional significance that are included in the Capital Improvement Program required in Section 6.8 of this document. The funds may also be used for projects identified in a deficiency plan that has been adopted by the Agency. The Agency cannot use the funds for administrative or planning purposes.

Appeals Process

A local jurisdiction found to be in nonconformance with a provision of the CMP may file a written request of appeal within 90 days of the date of the receipt of the written notice of nonconformance. Within 100 days of receipt of the written notice of appeal from a local jurisdiction previously found to be in nonconformance, the Congestion Management Agency will schedule a noticed public hearing for the purpose of reconsidering the finding of nonconformance.

Within 60 days of the date the appeal is filed, the local jurisdiction filing the appeal may submit information pertaining to the written notice of nonconformance. After the public hearing on the appeal of the finding of nonconformance is concluded, the Congestion Management Agency will:

- Notify the local jurisdiction that, because of the information considered at the appeal hearing, the finding of nonconformance is being withdrawn; or

- Notify the California Transportation Commission and the Controller's Office that the local jurisdiction has not come into conformance with the CMP.

REGIONAL STREETS AND HIGHWAYS ACTION ELEMENT

See the Land Use Action Element – Highway/Road Land Use Actions for further discussion on sustainable land use decisions relative to highways and roads.

A system of safe and efficient highways, streets, and roads is essential to the movement of people, vehicles, and goods in and through Kern County. Public vehicles, private automobiles, and commercial shippers all share the same transportation network. Providing a system of state and federal highways and regionally significant arterials that can meet this variety of needs is critical to the plan's goal of enhancing the quality of life for Kern County's residents.

The new project selection criteria incorporate livable community strategies into the prioritization elements for projects of regional significance.

In 2012, Kern COG adopted new SB 375-enhanced project selection criteria, which will be used for all future calls for projects. The new project selection criteria includes livable community strategies into the prioritization elements for projects of regional significance. This is an important step for the region in that it helps to implement Chapter 4 Sustainable Communities Strategy by allowing projects that incorporate sustainable strategies to score higher for funding consideration. Additionally, complete streets elements were incorporated into the project selection criteria and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program to prioritize and select new projects.

Existing Streets and Highways System

Streets and highways relevant to this element are the state and interstate highways in the county. These projects are federally funded and/or considered "regionally significant." This element also recognizes principal arterials as important to the movement of goods and people in the region. Interstate highways in Kern County relevant to the 2022 RTP include Interstate 5 (I-5) and US Highway 395.

The following roadways are also relevant to this plan:

- State Route 14 (Midland Trail and Antelope Valley Freeway)
- State Route 33 (Westside Highway)
- State Route 43 (Central Valley Highway)
- State Route 46 (Famoso Highway)
- State Route 58 (Rosedale Highway/Mojave Freeway)
- State Route 65 (Porterville Highway)
- State Route 99 (Golden State Highway)
- State Route 119 (Taft Highway)
- State Route 155 (Delano Woody Highway)
- State Route 166 (Maricopa Highway)
- State Route 178 (Crosstown Freeway/Kern River Canyon Road/Isabella Walker Pass/Inyokern Road)
- State Route 184 (Weedpatch Highway/James Throne Memorial Highway)

- State Route 202 (Cummings Valley Road)
- State Route 204 (Golden State Avenue/Union Avenue)
- State Route 223 (Bear Mountain Boulevard)

Major Accomplishments

Achievements related to the region's network of highways, streets, and roads are depicted below. The following major state highway projects are under construction or completed:

- 24th Street improvement – State Route 178 from State Route 99 to M Street – Bakersfield
- Calloway Drive grade separation – Bakersfield
- Challenger Drive Extension – Tehachapi
- Coffee Road grade separation – Bakersfield
- Hageman Road grade separation at Santa Fe Way
- Morning Drive improvements – Bakersfield
- Seventh Standard Road widening – three segments in Shafter, Bakersfield, and the County
- Seventh Standard Road widening from Santa Fe Way to State Route 99
- Seventh Standard Road grade separation at Santa Fe Way
- West Eastern Sierra Transit Boulevard – widening
- Westside Parkway – Bakersfield
- White Lane – bridge widening in Bakersfield
- State Route 14 – widening from Mojave to California City
- State Route 46 phases 1-3 – west Kern County
- State Route 46 phase 4 – west Kern County
- State Route 46 – widening west of Interstate 5 to the county line
- State Route 58 – Mojave Freeway
- State Route 58 (Mojave Freeway) – frontage road
- State Route 58 widening – Cottonwood Road to State Route 99 - Bakersfield
- State Route 58 Rosedale Hwy widening – Allen Road to State Route 99 - Bakersfield
- State Route 58 Centennial Corridor – Bakersfield

- State Route 99 Widening – Wilson Road to State Route 119 - Bakersfield
- State Route 99 – widening in Bakersfield
- State Route 99 – widening near Delano
- State Route 119 phase 1 – Cherry Ave to Tupman Rd
- State Route 178 at Fairfax Road – new interchange
- State Route 178 at Morning Drive – new interchange
- State Route 178 – widening near Oak Street – Bakersfield
- State Route 178 Widening from Vineland Road to east of Miramonte Drive – Bakersfield
- State Route 202 – new bridge near Route 58 at Tehachapi

The following regionally significant roadway projects are undergoing necessary environmental review, right-of-way acquisition, and/or design work:

- Centennial Connector - Bakersfield
- State Route 14 – west of Eastern Sierra Transit Authority
- Hageman Road extension – Bakersfield
- 7th Standard Road Hwy 43 to Santa Fe Way (partial environmental completed)

Figure 5-22: Metro Bakersfield Transit, Bike and Highway Projects – Completed/Under Construction 2014-2020

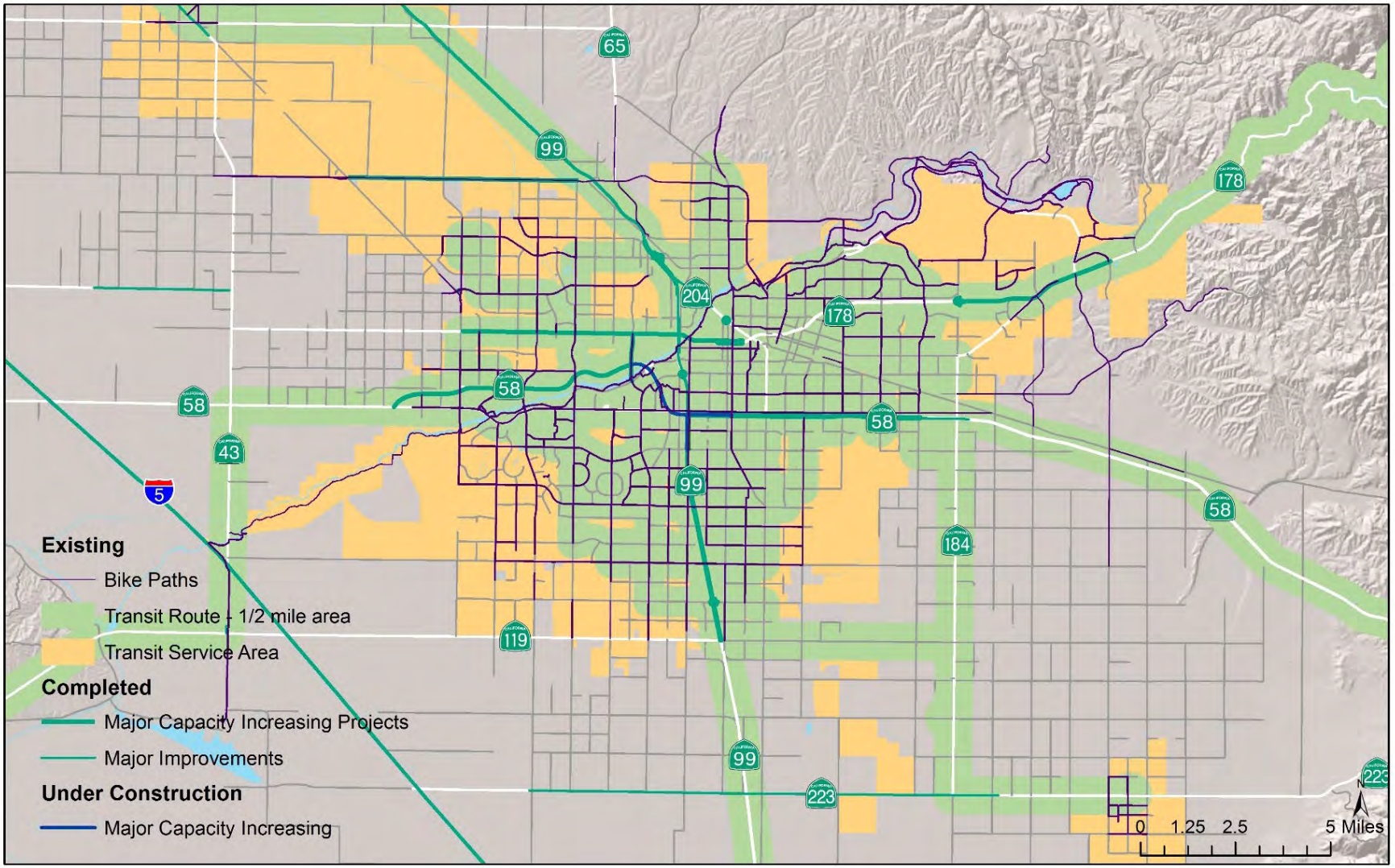
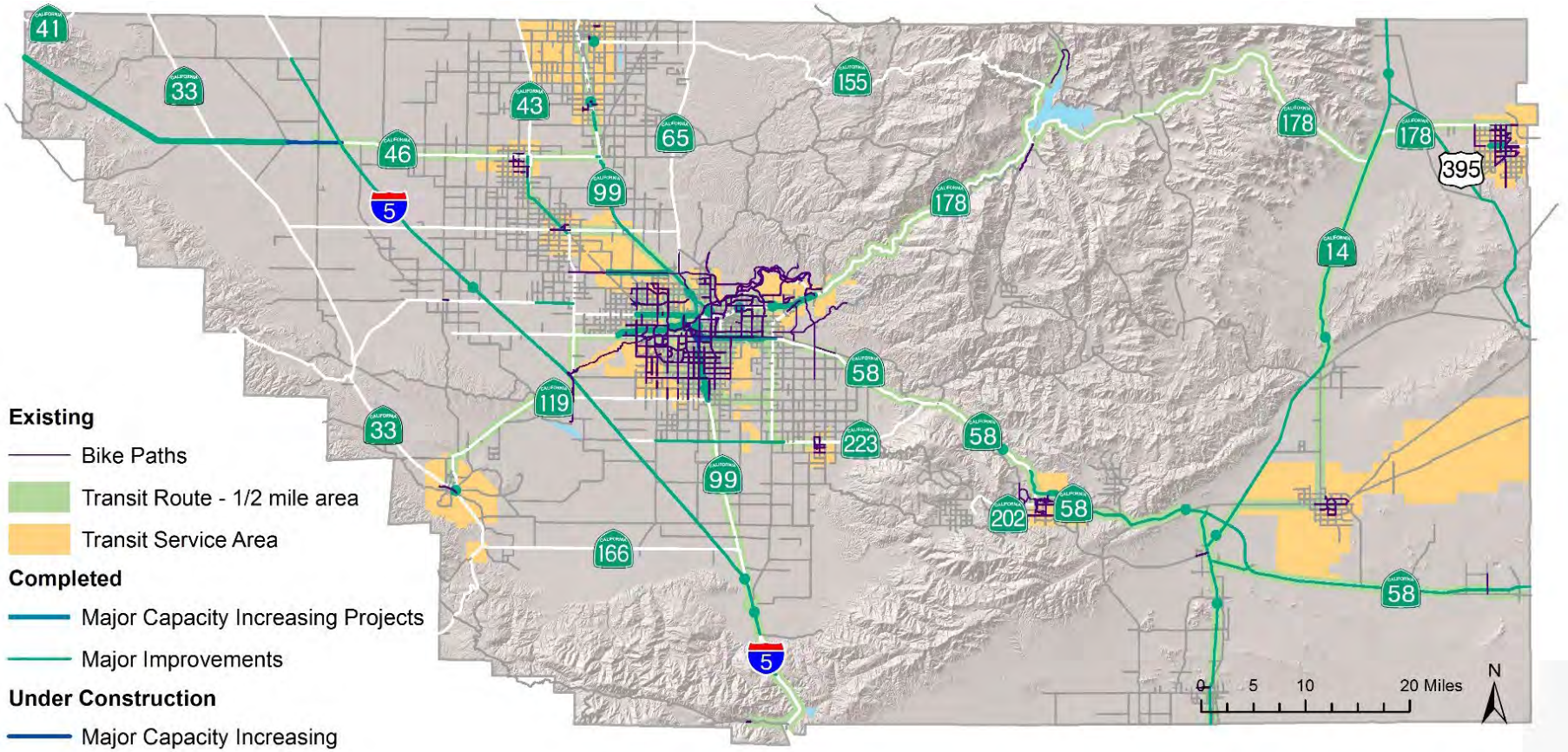


Figure 5-23: Kern County Transit, Bike and Highway Projects – Completed/Under Construction 2014-2020



Needs and Issues

Maintenance Needs

Maintaining the local transportation infrastructure is of critical importance for the entire region. Based on extensive input for development of this RTP, maintaining the roads are the public's top transportation priority (Appendix C - Public Outreach Results). The 2016 California Statewide Local Roads Needs Assessment states: "The conditions of California's local streets and roads are rolling off the edge of a cliff. On a scale of zero (failed) to 100 (excellent), the statewide average Pavement Condition Index (PCI) has deteriorated to 65 ("at risk" category) in 2016". The chart below represents the deterioration of Kern's roads since 2008 when the Statewide Assessment began.

Based on extensive input in development of this RTP, maintaining roads is among the public's top transportation priorities.

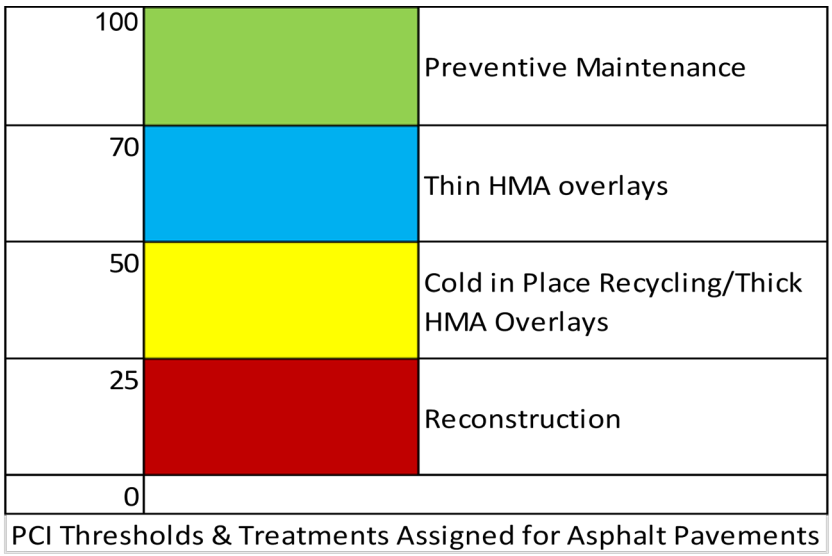
Table 5-7: Kern County Pavement Condition Index (PCI) – Local Roads

Center Line Miles	Lane Miles	Area (sq. yd.)	Average Weighted PCI						
			2008	2010	2012	2014	2016	2018	2020
5,725	12,615	117,170,333	66	63	64	64	63	63	65

It is more cost effective to apply preventive maintenance treatments and extend a facility's life than to reconstruct once it has completely failed. Funds to handle the backlog of needs simply have not been available. Funding from the federal gas tax has traditionally been used to support the maintenance of these facilities; over time, however, gas tax revenues have failed to keep up with inflation.

California took steps to provide funding for street and road maintenance when Senate Bill 1, the Road Repair and Accountability Act of 2017, was signed into law on April 28, 2017. This legislative package invests $54 billion over the next decade to fix roads, freeways and bridges in communities across California and puts more dollars toward transit and safety. These funds will be split equally between state and local investments.

Figure 5-24: Thresholds and Treatments



Maintenance of highways also requires considerable investment. State highway maintenance and safety project expenditures are generally funded as part of the State Highway Operation and Protection Program (SHOPP), which do not require local matching dollars. The California Department

of Transportation (Caltrans) prepares a 10-year SHOPP for the rehabilitation and reconstruction of all state highways and bridges that recognizes the growing inventory of deferred maintenance needs.

Table 6-1 (Chapter 6, Financing Transportation) provides a revenue forecast for local, state, and federal funding and includes a specific revenue forecast for the maintenance of state highways in the Kern region. All other funding sources for local maintenance and transit operations are combined by funding type in the table. Figure 6-1 provides a general overview of financial resources expected for local road rehabilitation, state highway rehabilitation, and transit operations and maintenance. Financing assumptions include an increase in funding for maintenance from a variety of potential national, state and local sources actively being explored.

Bakersfield Federal Demonstration Project – Thomas Roads Improvement Program (TRIP)

The TRIP program for Metropolitan Bakersfield began implementing a highway transportation network that was identified in federal legislation. The highway system focused on three major freeway and expressway corridors: Central System, West, and North. These facilities are built in phases, which may initially be constructed as expressways and upgraded to freeways as future demand requires. The facility will include right of way for a future high occupancy vehicle lane (HOV).

Level of Service

Implementation of the 2022 RTP will result in improvements to existing transportation systems and will meet required regional transportation needs. Proposed street and highway programs are aimed at reducing existing traffic, improving safety, and resolving other circulation conflicts. Implementation of planned improvements to the street and highway network, improvement of county airports, provision of mass transportation services and facilities, identification of additional bikeways and pedestrian improvements, and improved transportation systems that accommodate goods movement will have beneficial effects on a region-wide basis.

Level of service (LOS), according to the Transportation and Traffic Engineering Handbook, is a “qualitative (performance) measure that represents the collective factors of speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operation costs provided by a highway facility under a particular volume condition.” LOS measurement is used to assess the regionally significant system of streets and highway facilities. Proposed projects for the highway system use LOS values to determine and rank the type and number of transportation projects necessary to accommodate current and expected future growth.

LOS values range from A to F representing various levels of traffic flow from free flow for A to stop-and-go gridlock traffic for F. Additional variations for LOS values are based on the road type; interrupted traffic flow facilities that include stop signs and signals have a modified version for LOS steps. Uninterrupted traffic flow facilities would include freeways and other highway facilities that do not have fixed traffic elements such as stop signs or signals.

LOS values are integrated with Kern COG’s transportation model by assessing final traffic volumes against specific capacity values. These volume-over-capacity values are then related to LOS values based on accepted industry standards for transportation models. The transportation model network reflects capital improvements from Table 5-1 and resulting traffic volumes. Figures 5-17 and 5-18 reflect “build” scenario LOS values because the network includes the Constrained Capital Improvement Program. Figures 5-19 and 5-20 reflect the “no build” scenarios in that the network only reflects current system improvements, while future growth values are used to generate future vehicle miles traveled without the proposed improvements.

Figure 5-25: Kern County Traffic Congestion – 2046 Build Scenario

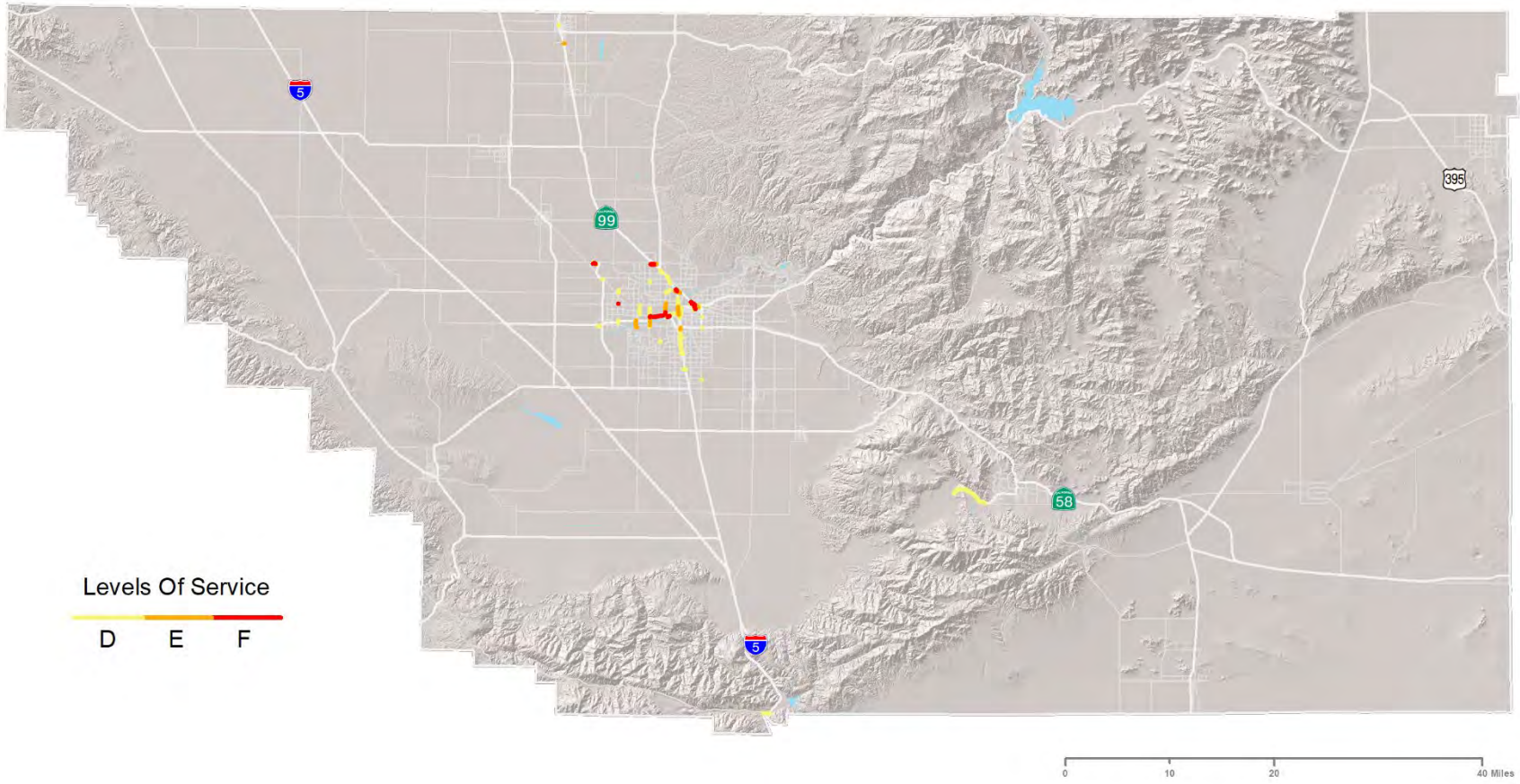


Figure 5-26: Metro Bakersfield Traffic Congestion – 2046 Build Scenario

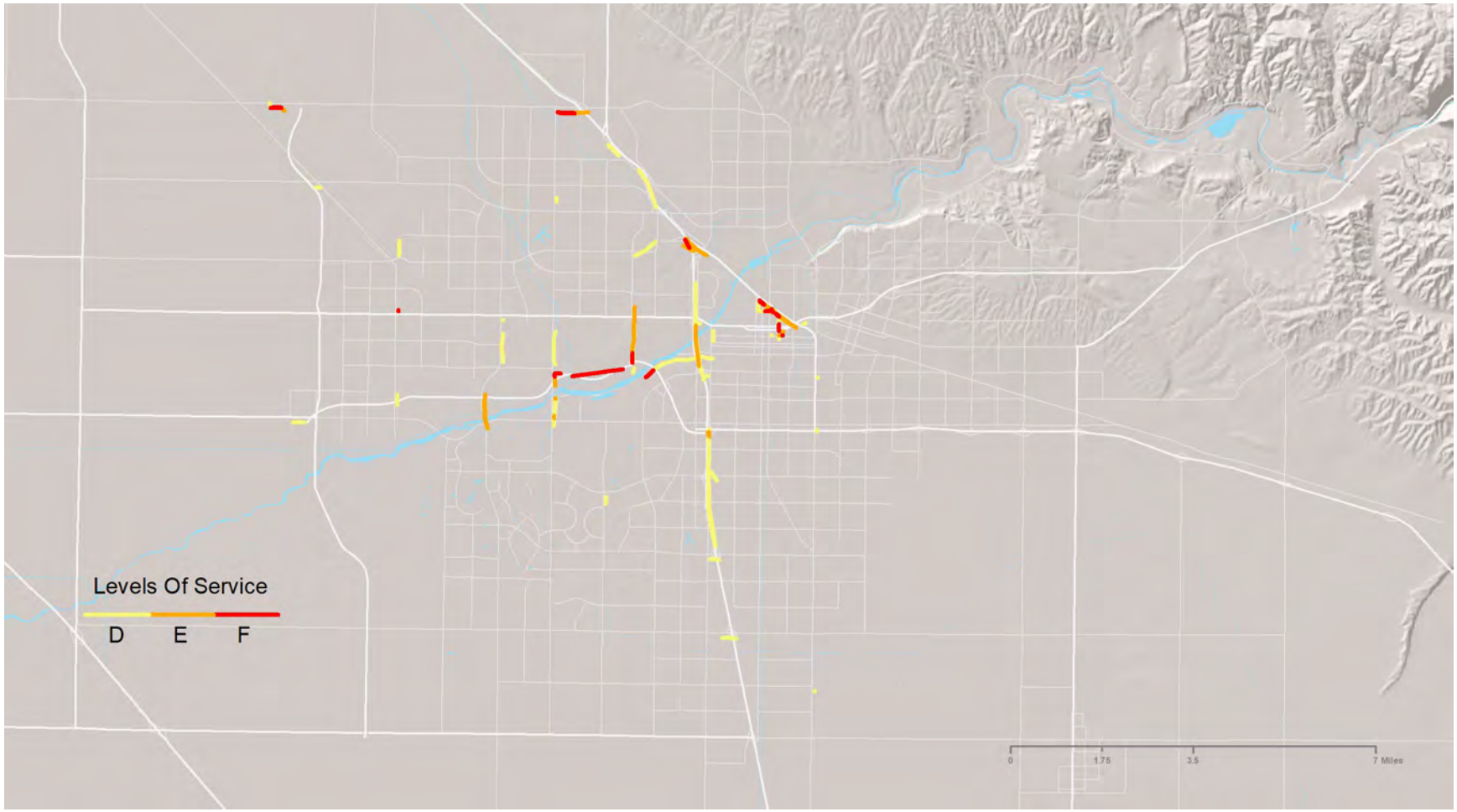


Figure 5-27: Kern County Traffic Congestion – 2046 No Build Scenario

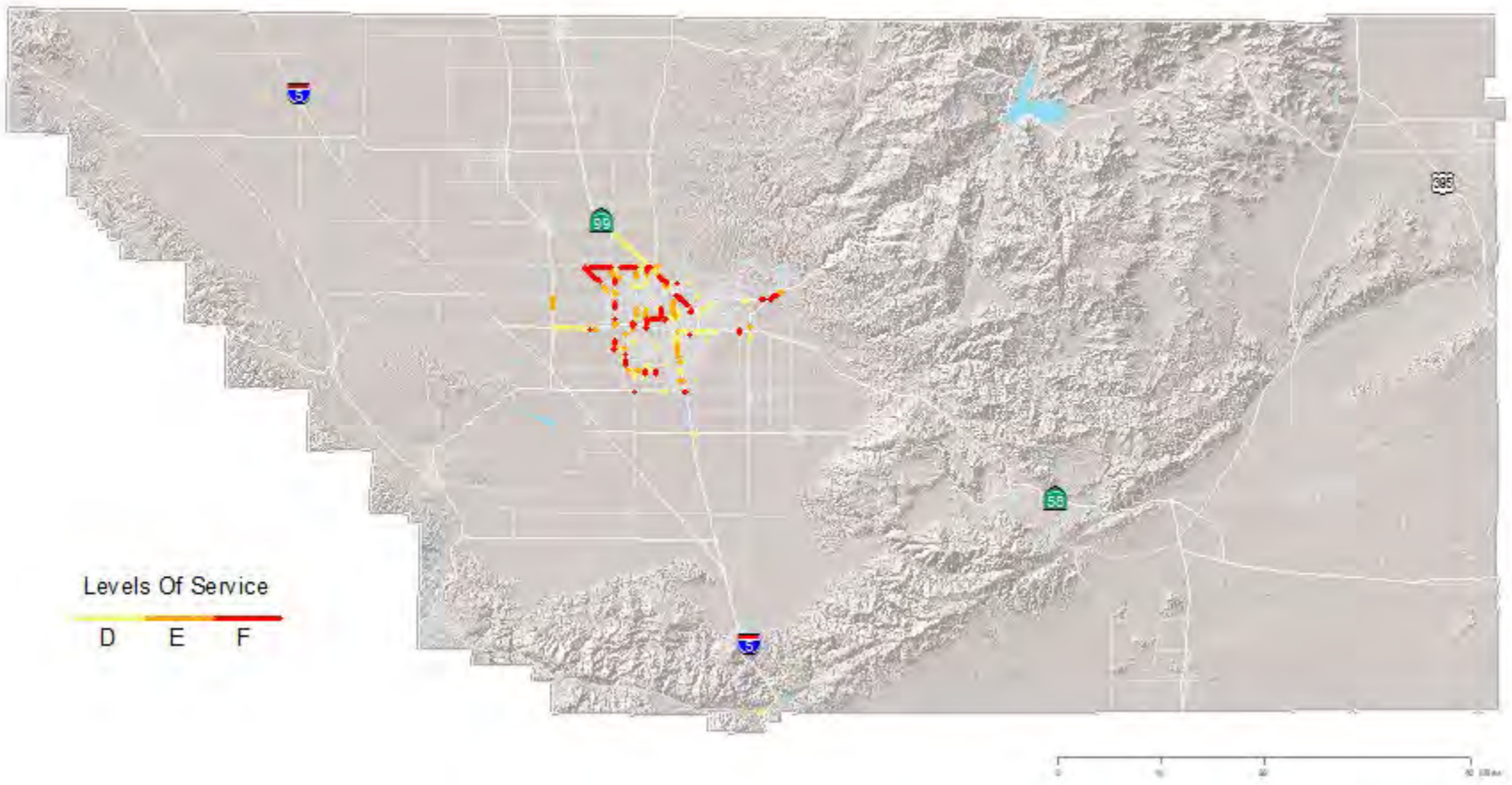
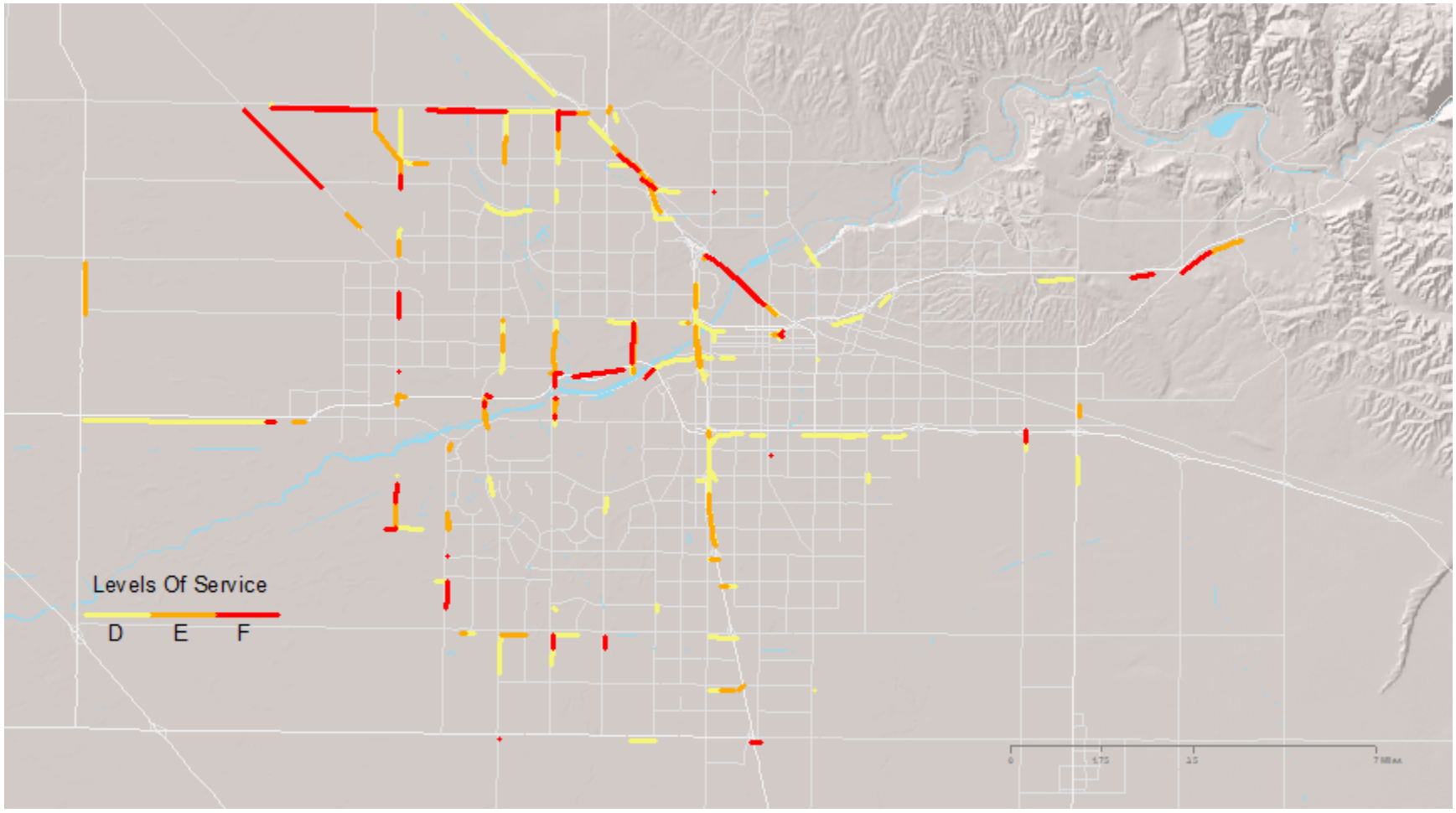


Figure 5-28: Metro Bakersfield Traffic Congestion – 2046 No Build Scenario



Regional Transportation Impact Fees (TIFs)

Kern COG continues its studies regarding the possibility of raising the fees levied on new development to maintain transportation infrastructure. Continued funding shortfalls highlight the need to investigate all possible revenue sources. Kern COG prepared the Southeast Kern Transportation Impact Fee Nexus Study to assess impacts and benefits of an impact fee for that portion of Kern County. Several TIF programs were put in place as a result of the study. The Rosamond TIF is $1,461 per new housing unit, while Tehachapi's TIF is $4,772 per new residential unit. Wasco adopted a TIF of $685 per new housing unit. The Metropolitan Bakersfield TIF assesses nearly $13,000 on every new housing unit built within the city or unincorporated areas. Both the Metropolitan Bakersfield and Tehachapi ordinances created a core area with a fee almost 40% less than the rate charged to development on the community periphery, the intent being to encourage infill development.

Both the Metropolitan Bakersfield and Tehachapi ordinances create a core area with a fee almost 40% less than the rate charged to development on the community periphery, the intent of which is to encourage infill development.

Figure 5-29: Transportation Impact Fees – Per Single Family Housing Unit

Jurisdictions	outlying / core area
Metro Bakersfield / County	$12,870 / $7,747
Tehachapi /County	$ 4,772 / $2,952
Rosamond-Willow Spr.	$ 1,461 / $1,461
Wasco	$ 685 sliding scale
McFarland	$ 8,194 / $8,194
Delano	$ 4,345 / $4,345

Other TIF studies will be performed for other sub-regions of the county to establish the relationship between needed infrastructure improvements associated with new development. Ultimately it is up to each local jurisdiction to determine if an impact fee warrants adoption.

Interregional Partnership Planning

Kern COG embarked on three interregional partnership efforts. The Eastern California Transportation Planning Partnership with the regional planning agencies of Kern, San Bernardino, Los Angeles, Inyo and Mono counties. Executive Directors and staff from all member agencies meet frequently to discuss transportation and economic development projects of mutual benefit. Of particular interest are multimodal transportation plans for US Highway 395 and the SR 14 and 58 corridors, including truck movement studies.

The Executive Directors and staff from the 8 COGs that contain portions of the San Joaquin Valley meet monthly and adopt an annual work program and apply for grants and coordinate regional projects. In addition, two board members from each of the 8 COGs make up the San Joaquin Valley Policy Council that meets quarterly.

The partnership between Kern COG and San Luis Obispo COG is governed by an agreement focused on improving the SR 46 corridor. The partnership successfully leveraged state choice funding for this corridor.

Kern COG fosters a continuing partnership with the Southern California Association of Governments through periodic meetings to address transportation projects and programs of mutual interest, potential funding sources and legislative priorities.

Roads and Streets Monitoring

On an ongoing basis, Kern COG collects data and monitors roadway conditions throughout the county for road and street maintenance purposes. This effort includes providing input to the Federal Highway Administration Highway Performance Monitoring System, as well as conducting traffic counts and vehicle occupancy counts at various locations in the county. When requested by the individual jurisdictions, Kern COG will undertake an analysis of Pavement Management Systems within Kern County as well as a cumulative analysis of pavement conditions and recommendations for addressing funding issues.

Pavement Management Systems are used by incorporated cities to develop better ways to measure serviceability and life cycles, and are used to determine the most appropriate time to rehabilitate pavement, what the most cost-effective method is, and what the cost will be to maintain a roadway system at a desirable condition.

Proposed Capital Improvements

As described above, the2022 RTP includes all of the Metropolitan Bakersfield TIF projects, as well as regionally significant street and roadway improvements identified by other Kern COG member jurisdictions. In addition, state highway projects, coordinated and prioritized locally, are a significant component of the Capital Improvement Program. These highway projects are also coordinated with Caltrans Districts 6, 9 and 10.

Proposed Regional Streets and Highways Actions

Near Term, 2022–2026

Work with Caltrans, COG member agencies, and other interested parties to prepare environmental studies, right-of-way acquisitions, and design engineering work to:

-
- State Route 58 – initiate pre-construction phase for truck-climbing lanes (Safety);
- Provide input to neighboring regions' transportation studies and projects for corridors that have significance to the Kern region. In particular:
- Participate in San Bernardino County's study for the US Highway 395 corridor, and SR 58.
- Participate in implementing the SR 99 Business Plan with the 7 other counties in the San Joaquin Valley.
- Participate in implementing the SR 46 improvements with San Luis Obispo County. (Safety)
- Participate in regular meetings with Southern California Association of Governments to coordinate projects along I-5, SR 14 and SR 58 corridors;
- Maintain Regional Traffic Models to aid in traffic and air quality analyses;
- Prepare a systems-level planning analysis of various transportation system alternatives using multimodal performance measures;

- Pursue ground access improvements for Meadows Field;
- Local Governments consider pursuing alternative funding sources such as regional and individual TIFs where justified as a necessary means to address transportation needs; and
- Implement the capital improvements for highways, regional roads, and interchanges for this time period.

Long Term, 2027–2046

- Maintain existing roadway infrastructure;
- Implement as appropriate and feasible the recommendations of completed transportation planning studies;
- Pursue and implement the recommendations from earlier transportation planning studies;
- Implement capital improvements for highways, regional roads, and interchanges for this time period; and
- Review and revise countywide transportation impact fees.

AVIATION ACTION ELEMENT

See the Land Use Action Element – Global Gateways Land Use Actions for proposed actions related to air travel and connectivity. See Chapter 4, Sustainable Communities Strategy, for further discussion on sustainable land use decisions relative to air travel and connectivity.

Kern County's airports address a variety of local and regional services. The aviation system connects the traveling public and freight and cargo movers with California's major metropolitan airports. Additionally, Kern's airports serve the US military directly or in an auxiliary fashion. Many of the airports also support local farmers, police and medical services and provide recreational opportunities. Together, the airports provide a viable mobility option for the county's residents and businesses.

Kern County's aviation system includes 14 publicly owned airports.

Existing Aviation System

Kern County's regional airport system includes a diverse range of aviation facilities. It is comprised of seven airports operated by the Kern County Department of Airports, four municipally owned airports, three airport districts, two privately owned public-use airports, and two military facilities. Scheduled air carrier and commuter airline service is provided at Meadows Field, which serves Metropolitan Bakersfield and surrounding communities.

General aviation needs are served by public use airports, both publicly and privately owned, throughout the county. These serve the full range of business, agriculture, recreation, and personal aviation activities.

Kern County's aviation system includes 14 publicly owned airports that are open for use by the general public:

- Meadows Field
- Elk Hills/Buttonwillow
- Kern Valley Airport
- Lost Hills Airport
- Poso Airport
- Wasco Airport
- Taft Airport
- Bakersfield Municipal Airport
- California City Municipal Airport
- Delano Municipal Airport
- Tehachapi Municipal Airport
- Mojave Air/Spaceport
- Inyokern Airport
- Shafter Minter Field

Characteristics of Kern County's public access airports vary significantly, from size and number of operations to their types of activities and to their expected growth and impact on their local economies. As a group, the airports combine a range of services designed to meet the passenger, business, agricultural, recreational, and emergency service needs for the region.

County of Kern Airports

Meadows Field, located on 1,107 acres 4 miles northwest of central Bakersfield, is classified as a commercial service primary airport under the National Plan of Integrated Airport Systems. This facility serves both commercial and general aviation needs for Bakersfield and the southern San Joaquin Valley region.

The airfield consists of two parallel runways and associated taxiways. The main runway (12L/30R) was extended over Seventh Standard Road to a length of 10,857 feet in 1987. This is a Category I Instrument Landing System runway with a medium intensity approach lighting system with runway indicator lights, precision approach path indicators, and a medium-intensity runway lighting system.

The master plan allows for the construction of a third runway (east of the existing runways) to meet any resulting air freight capacity expansion.

Established in 1927, Meadows Field was the first airport in the Bakersfield area. By 1930, the airport handled over 12,000 passengers and close to 7,000 operations annually. When the recession occurred, Meadows Field experienced a significant decrease in enplanement numbers from 173,737 in 2006 to 100,433 in 2016. American and United provide non-stop passenger service to Denver, Phoenix, and San Francisco. One-stop flights are also provided to hundreds of domestic and international destinations.

Meadows Field is an active general aviation airport with numerous Kern-based corporations using the facility for their operations. General aviation is served on approximately 35 acres both northwest and southwest of the terminal area. A full range of fixed-base services is available.

Air cargo operations for the Kern region are conducted primarily at Meadows Field, with a projected increase in activity from 964 tons in 1995 to an anticipated 1,700 tons by 2030. Federal Express, DHL/Airborne, and UPS currently provide air cargo service from Meadows Field. While the potential for air cargo growth has not been fully studied, initial assessment does not preclude establishment of domestic or international air cargo services at Meadows Field. As Los Angeles region airports reach saturation, Meadows Field should be considered a prime contender for increased air freight shipment. The Meadows Field Airport Master Plan addresses the need for a land use plan that would consider reserving adequate runway frontage to develop a dedicated air cargo facility. Additionally, the master plan allows for construction of a third runway (east of the existing runways) to meet any resulting air freight capacity expansion.

Elk Hills/Buttonwillow Airport serves seasonal agricultural aircraft and personal aviation needs of western Kern County. It is located near the intersection of I-5 and SR 58, a highway-oriented commercial area.

The airport has a 3,260-foot unlighted runway, paved aircraft tiedown space for twelve aircraft, and ten automobile parking spaces. Existing land use in the vicinity of the airport is agriculture.

Kern Valley Airport serves commercial, recreational, and occasional fire suppression activities in the Lake Isabella/Kern River Valley area, and is on lease from the US Forest Service. The airport is located south and east of the community of Kernville, with other nearby communities, including Wofford Heights, Lake Isabella, Bodfish, Mountain Mesa, Onyx, and Weldon. Outdoor recreation is the prime attraction in this region, and aviation activity continues to increase.

The airport has a 3,500-foot runway and 30 aircraft tiedowns, 15 hangar spaces, and parking for 20 automobiles. Other facilities include gasoline sales, a fixed-base operator, and a restaurant. The airport is situated on 51.5 acres leased from the National Forest Service; a Forest Service firefighting base is adjacent to the airport on 3.5 acres.

Existing land use includes a small residential area northeast of the airport, farm and rangeland to the east and south, and Lake Isabella on the west. A fly-in campground is available on the west side of the airport.

Kern County Department of Airports completed an Airport Master Plan for Kern Valley Airport in 2005. Short-term airport improvements recommended in the master plan include constructing a 500-foot unpaved overrun for Runway 35; relocating the northern portion of the parallel taxiway; installing an Automated Weather Observation Station; and other service-related improvements. Long-term improvements include

widening and extending the runway, widening the parallel taxiway, widening the connector taxiway, and land acquisition to accommodate these projects.

Lost Hills Airport serves local and regional agricultural, business, and personal aviation needs in northwestern Kern County and is located near the intersection of I-5 and SR 46. This intersection is developing as a highway-oriented commercial area. SR 46 is the primary access to the central coast area from the southern San Joaquin Valley. The airport is an important base for agricultural aircraft operating over the area's extensive cropland.

The airport currently has a 3,020-foot runway, 12 aircraft tiedowns, and four hangar spaces. Existing land use around the airport is predominantly agriculture, with a small residential area northwest of the runway. The community of Lost Hills is west of the airport.

Kern County Department of Airports completed an Airport Master Plan for Lost Hills Airport in 2005. Short-term airport improvements recommended in the master plan include installation of an Automated Weather Observation System. Long-term airport improvements include installation of precision approach path indicators for both ends of the runway; provision for a Global Positioning System–based instrument approach procedure; extension of the existing runway; and construction of a full-length parallel taxiway.

Poso Airport, located approximately 20 miles north of Bakersfield, is used primarily for agricultural and training aircraft. The airport is also used for recreational purposes in conjunction with drag racing events at an adjacent paved strip. Poso has a 3,000-foot runway and 20 aircraft tiedowns. No other services or facilities are available. Adjacent land use is agricultural, with a small highway-oriented commercial development to the northwest of the airport.

Taft Airport serves business and personal aviation needs for the City of Taft and southwestern Kern County, an area of intensive oil production and processing. While significant demand has been voiced for an airport in this region, the existing facility has been considered insufficient for some years. The runway heading is poorly oriented to wind direction, the runway gradient exceeds FAA standards, and insufficient land is available for improvements. Kern County is evaluating available options for improving the airport. The existing runway is designated as Runway 7-25. While published as 3,550 feet long by 60 feet wide, it is currently only 3,284 feet between runway thresholds. Adjacent land uses consist primarily of oilfield activities to the north, east, and south, with the City of Taft to the west.

Wasco Airport serves agricultural, business, and personal needs for the area around the City of Wasco. The airport is located 1 mile north of Wasco and 22 miles northwest of Bakersfield. The airport is an important base for agricultural aircraft operations. It has a 3,380-foot runway, 36 aircraft tiedowns, six shelters, 11 T-hangars, and four hangar spaces. The main runway has a medium-intensity runway lighting system, and the airport has a beacon. Existing land use in the vicinity of the airport is agricultural.

Kern County Department of Airports completed an Airport Master Plan for Wasco Airport in 2005. Short-term airport improvements include rehabilitation of the aircraft parking pavement; purchase of land or acquisition of aviation easements northeast of the airport to accommodate future runway/taxiway extension; installation of an Automated Weather Observation System; and installation of precision approach path indicators for both ends of the runway. Long-term airport improvements include extension of the runway/taxiway to 3,900 feet, installation of taxiway lights, installation of runway end identifier lights, provision for a global positioning system-based instrument approach procedure, and other projects designed to improve service to airport users.

Municipal Airports

In addition to the airports operated by Kern County, four airports are owned and operated by municipalities located in three geographic subregions of the county: San Joaquin Valley, Southern Sierra/Tehachapi Mountains, and Mojave Desert. In the Valley, the Cities of Bakersfield and Delano operate municipal

airports. The City of Tehachapi operates a municipal airport in the mountain area, and California City Municipal Airport is located directly west of that desert community.

Bakersfield Municipal Airport serves business, personal, and recreational aviation needs in the Bakersfield metropolitan area. The airport completed an ambitious development program, including land acquisition, and construction of a 4,000-foot runway, associated taxiways, and support facilities. Bakersfield Municipal Airport is located in southeast Bakersfield, approximately 1.5 miles south of SR 58 and about 2 miles east of SR 99.

Existing land use in the vicinity of the airport consists of industrial to the west and north, low-density and rural residential to the northeast and east, and rural/agricultural to the east and south. Planned land use for the area adjacent to the airport, as depicted in the Casa Loma Specific Plan, continues the current pattern, with some extensions of industrial activity into undeveloped areas.

California City Municipal Airport is used for various general aviation activities, especially recreational aviation. The airport is located northwest of California City approximately 8 miles east of SR 14 and 2 miles north of California City Boulevard. The airport consists of a single 6,035-foot runway with medium-intensity runway lighting and a 5,010-foot parallel taxiway. Two dirt glider landing strips and a parachute drop zone are located 0.75 mile south of the airport. Existing land use in the immediate area is predominantly undeveloped desert, with developed portions of the city east of the airport.

Delano Municipal Airport serves business, personal, and recreational aviation activity in the north-central part of the county. Extensive crop-dusting and helicopter operations, as well as ultra-light activities, are accommodated at this airport. The airport is located just east of SR 99 approximately 2 miles southeast of central Delano. Existing facilities consist of a main runway that is 5,650 feet long. The main runway has medium-intensity runway lights and precision approach path indicators on both ends. A displaced threshold on the secondary runway with 4,010 feet is available for aircraft landings.

Existing land use consists of mixed urban uses to the northwest; a golf course and park area to the northeast; industrial uses to the east and south; and SR 99 to the west.

Tehachapi Municipal is a general aviation airport providing business, personal, and recreational aviation services. The airport is located between SR 58 and Tehachapi Boulevard. The airport is also adjacent to the Burlington Northern Santa Fe/Union Pacific Railroad, but a railroad spur into the airport is not currently available. Existing airport facilities include a 4,035-foot runway equipped with low-intensity lighting and precision approach path indicators, as well as displaced thresholds, on both ends of the runway.

Existing land uses consist of industrial to the west, east, and south, urban residential to the south, and SR 58 on the north. North of the freeway is developing as primarily commercial and office, including the community post office and a new hospital**.**

Airport Districts

Three airport districts operate in Kern County; each is organized as a special district, with a board of directors and an airport manager. Minter Field is located within the City of Shafter. East Kern and Indian Wells airport districts are in eastern Kern County.

Indian Wells Airport District/Inyokern Airport serves the China Lake Naval Air Weapons Station, the community of Inyokern, and the City of Ridgecrest. It also serves local general aviation needs for personal, business, and recreational flying. Several fixed-base operators provide services at the airport. The airport is located northwest of the small community of Inyokern.

Existing facilities consist of three runways, the longest of which is the 7,344-foot Runway 15-33. This runway and Runways 2-20 (6,275-foot length) and 10-28 (4,153-foot length) are equipped with medium-

intensity runway lights and precision approach path indicators on Runways 20 and 33. Displaced thresholds are located on both ends of Runway 15-33 and Runway 20.

Although Inyokern does not have a scheduled airline service operating at this time, it is in negotiations with an airline service to introduce new scheduled airline service. A new scheduled airline operator may begin operations as early as 2018.

A fixed-base operator currently provides aircraft maintenance and flight instruction service. The airport provides both automated and full-service jet fueling. Federal Express and United Parcel Service currently provides air cargo service, moving over 500 tons annually. Other activities at Inyokern include based and itinerant soaring activity, film production, and Sheriff's Department search and rescue activities. The airport hosts annual air shows and drag races.

In 2004 the Mojave Air/Spaceport became the first FAA approved civilian space port, and is home to the manufacturing and flight testing of Virgin Galactic's Spaceship One and Spaceship Two, the first manned civilian re-useable spacecraft.

East Kern Airport District/Mojave Air/Spaceport currently offers fixed-base operator facilities for airport users from Edwards Air Force Base, Rosamond, Mojave, Tehachapi, California City, and Boron. The airport serves as a civilian flight test center for business, military, civil, and home-built aircraft being developed for testing. It also serves as a base for modification of major military and civilian aircraft. The airport is located northeast of the community of Mojave and is within 1 mile of SR 14 and SR 58. A rail spur from the Union Pacific Railroad leads into the airport. In 2004 the Mojave Air/Spaceport became the first FAA approved civilian space port, and is home to the manufacturing and flight testing of Virgin Galactic's Spaceship One and Spaceship Two, the first manned civilian re-useable spacecraft.

Existing airport facilities include a 12,500-foot runway and two crosswind runways. The longest runway is equipped with high-intensity runway lights while the 7,040-foot runway is equipped with medium-intensity runway lights. The third runway is 4,900 feet long but has no lighting.

Existing land use in the vicinity consists of mixed urban use to the east and south in the community of Mojave, industrial and highway commercial uses to the northwest, and undeveloped desert to the north and east. The airport itself includes a substantial area devoted to aviation-related industrial uses.

Minter Field Airport District/Shafter Airport serves general aviation activities at the junction of SR 99 and Lerdo Highway. Minter Field has two main runways and one crosswind runway. Runway 12/30 is 4,520 feet long, has both Very High Frequency Omni-directional Range non-precision and global positioning system-based instrument approaches, and is equipped with a precision approach path indicator and landing lights.

A third runway serves as a general aviation crosswind landing alternative. One of the benefits this runway offers is to allow student pilots the opportunity to practice crosswind approaches and departures.

Minter Field is surrounded primarily by agricultural uses with a commercial area and industrial uses to the south. The airport owns 3 miles of rail spur connected to the Union Pacific Railroad and is served directly by KT.

Military Aviation Facilities

China Lake Naval Air Weapons Station (NAWS) and Edwards Air Force Base (EAFB) are located in an area referred to as "the R-2508 complex," which is used for the advancement of weapons systems technology and tactical training. The R-2508 complex consists of several restricted airspace areas; it is approximately 110 miles wide and 140 miles long, and covers approximately 20,000 square miles in eastern

Kern, San Bernardino, Los Angeles, Ventura, Tulare, and Inyo counties. However, the nature of operations conducted within this airspace creates a flight hazard to non-military aircraft.

In addition to NAWS and EAFB, other military installations use this air space, including Fort Irwin Military Reservation near Barstow, Air Force Plant 42 at Palmdale, and Lemoore Naval Air Station.

Needs and Issues

Demand

In general, demand for aviation services appears to be met within Kern County. Most of the capital improvement projects for Kern County airports focus on maintenance of existing runways and taxiways with an occasional need to improve navigational aids. However, Kern County Airports' staff is working toward qualifying Meadows Field as a reliever airport for Los Angeles International Airport.

Given aviation forecasts for Los Angeles International Airport, at some time over the next 20 years, air traffic for the region may reach saturation. Shafter Airport, Delano Municipal, and Bakersfield Municipal have all recently invested in aboveground automated fueling systems to reduce staff cost and improve fueling service hours to local and non-based pilots. Over the next 5 to 10 years, Kern County airports along with airports across the nation, will be investing in navigational equipment designed to allow instrument approaches using global positioning system technology.

Airport Ground Access/Intermodal Connectivity

Regional passenger air service and its intermodal connectivity to ground transportation systems is a key federal transportation planning goal. Just as land use should be designed to take maximum advantage of the existing transportation infrastructure capacity, the transportation infrastructure should also be designed to maximize access to key intermodal passenger hubs such as regional airports, transit and rail. Existing transportation infrastructure includes one regional airport with passenger service in Kern County. Meadows Field is the primary regional facility for Metropolitan Bakersfield and the southern San Joaquin Valley.

The terminal at Meadows Field provides good access to SR 99 via Seventh Standard Road, and improvements to this access route are scheduled in the Federal Transportation Improvement Program. The potential for Meadows Field to serve as an overflow facility for Southern California's air traffic may create the need for improvements to ground access. Improvements to Airport Drive, Snow Road, Merle Haggard Drive, and SR 65 near the airport may be necessary. Better connectivity with the existing Amtrak station in downtown Bakersfield and the high-speed rail could result in the need for a transit shuttle, bus rapid transit, light rail, or spur connection between downtown Bakersfield and the airport. The Metropolitan Bakersfield Transit System Long-Range Plan envisions extension of a bus rapid transit route to Meadows Field between 2021 and 2025.

Ground access to Inyokern Airport is adequate for the foreseeable future. The potential for air taxi service to smaller airports could increase traffic at these facilities. Corporate jets are increasingly using the Internet to pick-up additional travelers headed in the same direction and provide a supplemental funding source for their operation. This capability to book a small aircraft while in flight has transportation planners speculating that a whole industry of air taxi providers using satellite global positioning system (GPS) navigation could provide point-to-point service, increasing the use of small airports. If this were to occur, an increased demand for vehicle/transit/rail access to existing smaller airports may result. Efforts must be made to preserve and maintain access to all civilian airports in the region and expand that access as needed.

Airport Land Use

Over the past decade, former agricultural areas in Kern County have been developed for residential, commercial or industrial use. Since many of the region's public access airports are in agricultural areas or

on the urban fringe, much of the new growth is moving closer to the airports. Assuring that the areas around Kern County's airports are devoted to compatible uses has become a more challenging task in this environment of growth pressures.

Noise issues are generally a function of urban encroachment in the vicinity of an airport. In Kern County, virtually all airports were originally developed in areas that were some distance from other development. Frequently, the very success of the airport served as the catalyst for adjacent development. Since the purpose of an airport is to facilitate the take-off and landing of aircraft, and since aircraft make noise, conflicts over noise are an early indicator that an airport is facing the broader issue of urban encroachment.

Noise contours maps have been prepared through various programs for all of the airports in Kern County, using the FAA Integrated Noise Model. For the more active airports, the noise analysis has been part of preparing an Airport Master Plan. Noise contours were also prepared for airports as part of various Airport Land Use Commission studies. A Comprehensive Land Use Plan has been prepared that includes land use analysis, noise contours, airspace plans and layout plans for all Kern County airports.

Recent Aviation Planning Activities

Kern County Department of Airports opened the Meadows Field William M. Thomas Air Terminal northwest of the former terminal in February 2006. The building is designed to be expandable to meet future air service demands. The building currently accommodates up to six jet-boarding gates and can be expanded to add six additional bridges. The terminal has also been designed to allow another wing to be constructed that would accommodate an additional 12 jet-boarding gates. Ground area to accommodate additional parking facilities is reserved.

The Department of Airports anticipates the following activities over the near-term:

- Complete renovations to the Customs and Borders Office (former terminal);
- Market Meadows Field for international air cargo service;
- Upgrade the lights and signs for Runway 30R; and
- Undergo environmental review and project approvals for the Meadows Field, Wasco, Lost Hills and Kern County Airport Master Plans.

In June 2004, East Kern Airport District/Mojave Airport became the first civilian airport to be certified as an inland spaceport by the Federal Aviation Administration. Later the same year, aircraft manufacturer Scaled Composite launched their first sub-orbital aircraft from Mojave Airport, ushering in the age of privately-owned manned space programs.

In 2008, with input from County of Kern Planning Department, eastern Kern agencies, and stakeholders, the Governor's Office of Planning and Research completed its Joint Land Use Study (JLUS) for R-2508 (Edwards Air Force Base, China Lake Naval Air Weapons Station, and the surrounding military operation area). The purpose of the JLUS is to reduce potential conflicts while accommodating growth, sustaining the economic health of the region, and protecting public health and safety. The JLUS committee meets biannually to review those JLUS projects that have been implemented and strategize on researching possible resources to implement remaining projects.

Homeland Security

Following the events of September 11, 2001, the Department of Homeland Security made airport security a top funding priority. Meadows Field and Inyokern Airport constructed security fences and staffed security checkpoints to improve passenger-boarding security and reduce threats of terrorism.

Proposed Actions

Near Term, 2022–2026

- Work with Meadows Field and Inyokern Airport to obtain funding from the state and federal governments for their respective development programs;
- Work with local and regional transit providers to increase alternative mode ground access options at Meadows Field;
- Assist Meadows Field with planning related to high-speed rail connections;
- Work with public airports to increase their access to state and federal funds; and
- Work with the JLUS committee to implement planning activities listed in the JLUS for R-2508 airspace (China Lake Naval Air Weapons Station and Edwards Air Force Base).

Long Term, 2027–2046

- Continue to work with the public access airports to increase their access to state and federal funds;
- Update the Regional Transportation Plan to be consistent with the California Aviation System Plan, and regional aviation systems plans, as necessary;
- Implement the Action Plan of the Central California Aviation System Plan;
- Participate in master plan updates for various Kern County airports; and
- Implement planning actions and strategies listed in the JLUS for R-2508.

SAFETY/SECURITY ACTION ELEMENT

Federal law specifies that MPOs will develop a metropolitan planning process that provides for consideration of projects and strategies that will increase the security of the transportation system for motorized and non-motorized users. Kern COG is committed to promoting increased safety, and the performance measures of the Regional Transportation Plan include safety as a critical factor.

Kern COG's commitment to public safety includes a safety performance measure as a critical factor in the Regional Transportation Plan.

California's Strategic Highway Safety Plan (SHSP) is a statewide, comprehensive, data-driven effort to reduce fatalities and serious injuries on public roads. The SHSP is updated regularly to ensure continued progress and meet changing safety needs.

The new updated SHSP (2020-20242024) includes the following:

- Increases the focus on reducing the number of severe injuries and the rate at which severe injuries occur in each 100 million vehicle miles travelled;
- Measures the cost effectiveness of improvements;
- Develops strategies and actions to address the more difficult problems:
  - Repeat DUI offenders
  - Breath test refusals
  - Drug-impaired driving
- Identifies the locations of fatalities and severe injuries;
- Identifies areas with high-risk factors for potential crashes;
- Includes tribal roads;
- Creates improvements to rail-highway crossings;
- Involves even more safety stakeholders from across the state;
- Involves the public to create a culture of traffic safety;
- Coordinates with other safety statewide plans, including California Transportation Plan, California Freight Plan and Highway Safety Plan; and
- Improves the speed of data results.

Recent Planning Activities

Golden Empire Transit District's Vision and Planning Guidelines

In December 2010, the GET Board of Directors adopted the following Vision Statement:

> *"GET…doing our part to improve mobility and create livable communities by becoming every household's second car."*

In addition to the Vision Statement, the Board also adopted a number of Planning Guidelines:

- Services should be designed in a manner which maximizes the seamless connectivity between all routes, modes, and systems. In this context, seamless means that the passenger should not be discouraged from making a trip because of perceived barriers related to: (1) physical connections, (2) timed transfers, (3) fare payment, or (4) information services;

- The system-wide transit operating speed (as measured by total Annual Revenue Miles divided by Total Annual Revenue Hours) should increase each year, or at the very least, should never drop below the 2010 baseline;

- Transit service should be designed in a manner that allows it to have a meaningful impact on regional air quality and support achievement of greenhouse gas reduction targets;

- Transit should be designed in a manner that supports healthy lifestyles by fostering a pedestrian- and bicycle-friendly environment;

- Transit service should be financially sustainable over all time periods; and

- Transit planning should be conducted in collaboration with cities and the County in order to integrate transit and land use planning decisions.

General Transit Planning Principles

In addition to the GET Board Guidelines, a number of general fixed-route transit best practices were applied in development of the service plans:

- Service productivity (cost-effectiveness) and coverage must be balanced in a way that reflects local values;

- Devote a fair share of resources to corridors featuring transit-supportive land use and demographic patterns;

- Whenever possible, routes should have trip-generating "anchors" at both ends;

- Routes should be as direct as possible;

- Avoid creating large one-way loops; and

- Avoid requiring out-of-direction travel, especially in the middle of routes.

Transportation Security

Policies and Recommendations

Kern COG's Transportation Security Plan 2022–2046 provides an action plan and constrained policies detailing nine measures that the agency will undertake in regional transportation security planning.

1. Kern COG should help ensure the rapid repair of transportation infrastructure critical in the event of an emergency.

a. Kern COG, in cooperation with the state agencies, should identify critical infrastructure needs necessary for emergency responders to enter the region, the evacuation of affected facilities, and the restoration of utilities.

b. Kern COG, in cooperation with the California Transportation Commission (CTC), Caltrans, and the federal government, should develop a transportation recovery plan for the emergency awarding of contracts to rapidly and efficiently repair damaged infrastructure.

2. Kern COG should continue to deploy and promote the use of intelligent transportation system technologies that enhance transportation security.

   a. Kern COG should work to expand the use of ITS to improve surveillance, monitoring, and distress notification systems and to assist in the rapid evacuation of disaster areas.

   b. Kern COG should incorporate security into the regional ITS architecture.

   c. Transit operators should incorporate ITS technologies as part of their security and emergency preparedness and share that information with other operators.

   d. Aside from developing ITS technologies for advanced customer information, transit agencies should work intensely with ethnic, local, and disenfranchised communities through public information/outreach sessions, ensuring public participation is used to its fullest. In case of evacuation, these transit-dependent persons may need additional assistance to evacuate to safety.

3. Kern COG should establish transportation infrastructure practices that promote and enhance security.

   a. Kern COG should work with transportation operators to plan and coordinate transportation projects, as appropriate, with the Department of Homeland Security grant projects to enhance the regional transit security strategy (RTSS).

   b. Kern COG should establish transportation infrastructure practices that identify and prioritize the design, retrofit, hardening, and stabilization of critical transportation infrastructure to prevent failure in order to minimize loss of life and property, injuries, and avoid long-term economic disruption.

4. Kern COG should establish a forum where policymakers can be educated and regional policy can be developed.

   a. Kern COG should work with local officials to develop regional consensus on regional transportation safety, security, and safety/security policies.

5. Kern COG will help enhance the region’s ability to deter and respond to acts of terrorism and human-caused or natural disasters through regionally cooperative and collaborative strategies.

   a. Kern COG should work with local officials to develop regional consensus on regional transportation safety, security, and safety/security policies.

b. Kern COG should encourage all Kern COG elected officials to be educated in the National Incident Management System (NIMS).

c. Kern COG should work with partner agencies and federal, state, and local jurisdictions to improve communications and interoperability and to find opportunities to leverage and effectively use transportation and public safety/security resources in support of this effort.

6. Kern COG should enhance emergency preparedness among public agencies and with the public at large.

   a. Kern COG should work with local officials to develop regional consensus on regional transportation safety, security, and safety/security policies.

   b. Kern COG should work to improve the effectiveness of regional plans by maximizing the sharing and coordination of resources that would allow for proper response by public agencies. Kern COG should encourage and provide a forum for local jurisdictions to develop mutual aid agreements for essential government services during any incident recovery.

7. Kern COG will help to enhance the capabilities of local and regional organizations, including first responders, through provision and sharing of information.

   a. Kern COG should work with local agencies to collect regional GeoData in a common format and provide access to the GeoData for emergency planning, training, and response.

   b. Kern COG should develop and establish a regional information sharing strategy, linking Kern COG and its member agencies for ongoing sharing and provision of information pertaining to the region's transportation system and other critical infrastructure.

8. Kern COG should provide the means for collaborating in planning, communication, and information sharing before, during, or after a regional emergency.

   a. Kern COG should develop and incorporate strategies and actions pertaining to response and prevention of security incidents and events as part of the ongoing regional planning activities.

   b. Kern COG should offer a regional repository of GIS data for use by local agencies in emergency planning and response, in a standardized format.

LAND USE ACTION ELEMENT

See Chapter 4, Sustainable Communities Strategy, for further information on sustainable land use.

Land use is one of the most important factors in effective transportation planning to preserve the region's economic, environmental, and equitable sustainability. While Kern COG does not have jurisdiction over land use planning, the agency promotes and encourages dialogue among stakeholders involved in the land use decision-making process, through city and county General Plan actions, the environmental process and the RTP outreach process.

Land use affects all transportation modes; however, some transportation facilities are more dependent on land use decisions than others. To rank the importance of land use decisions for transportation-related infrastructure, planners can consider the number of site opportunities to accommodate a particular facility or land use. The more site opportunities, the easier and cheaper it is to find a place to move the facility. **Figure 5-30** illustrates a potential hierarchy or priority for placing transportation facilities based on site opportunity.

Figure 5-30: Hierarchy for Transportation-Related Land Use Decisions

As an example, in transportation planning, airports have a very limited number of sites where they can be located. They require a large area and must be located away from steep terrain as well as residential development. If development encroaches on an airport the use of that facility can be greatly curtailed or even closed, negatively affecting the region's economy and payback on the original investment in that facility. Another example of this hierarchy can be the location of local streets. When a subdivision is designed the positioning of the streets is often adjusted to optimize the layout of the residential lots. Local streets have many site opportunities or options to best fit the surrounding uses. In terms of transportation related land use decision, the positioning of local streets is not as important as the location of major transportation infrastructure investments such as airports or other global gateways.

This action element covers transportation planning priorities from a land use perspective. The discussion is organized using the suggested hierarchy in **Figure 5-28**, focusing on the uses with the fewest number of site opportunities first. Each transportation category discussed below (global gateways, rail/transit, and highways/roads) will also focus on the need to preserve locations for intermodal connectivity and viability, ensuring the RTP goals are met. In addition, this action element will not override local land use public decision making and will respect private property rights.

Global Gateways Land Use Actions

See the Aviation Action Element section above for further discussion on air travel.

Inland Ports

Landlocked Kern County has no seaports; however, it is closely linked to international trade through the ports of Los Angeles/Long Beach and Oakland/Stockton. The Kern region has infrastructural and economic connections to two of the world's largest international trade gateways. During past economic booms, as much as one-third of all waterborne freight container traffic at U.S. ports was handled by the twin ports of Los Angeles and Long Beach. Los Angeles/Long Beach port freight headed for destinations outside of Southern California are estimated to account for 75% of total container traffic (Leachman & Associates LLC, Port and Modal Diversion for SCAG, 2005). Fifty-seven percent (57%) of all trucks on SR 99 and I-5 are heading to or from Southern California; of those, 18% are empty shipping containers being transported to or from the ports (Kern COG, I-5/SR 99 Origin and Destination Truck Study, October 2009).

The City of Shafter is developing an inland port hub with the ability to gain synergy from the combining of import loads destined for distribution centers in Shafter and Kern County with the export agricultural needs of the Southern San Joaquin Valley. The City of Shafter (a rural area) is located within 300 miles of over 40 million people in some of the United States most urban areas and provides the unique opportunity to maximize efficiency, produce jobs, and create wealth while reducing the impact to the environment. It is unparalleled in providing multiple economic and environmental benefits for California. The City of Shafter has invested in technology with a 30+ mile state-of-the-art fiber optic communications network and has recently completed the construction of over 17,500 feet of rail track capable of handling entire unit trains from the class-one railroad Burlington Northern Santa Fe (BNSF).

Rail access to the ports provides sustainable economic, environmental, and equitable opportunities for a region and is the highest land use concern related to transportation facilities in Kern County. In 2009, The Wonderful Company produced a white paper that estimated the inland port facility would bring $1.2 billion per year in financial benefits to the state and region, and would provide 31,800 permanent jobs at the Port of Oakland and in Shafter by 2030. In addition, the project could provide $3.4 billion in state and local tax revenue over the next 20 years. By shipping products to the port via rail rather than by truck, the facility would reduce 5 tons per day in nitrous oxides (NO_x) and 471 tons per day in carbon dioxide (CO_2) emissions, making this project one of the biggest transportation source reductions for air quality and climate change emissions in the state. From a land use perspective, preserving rail and truck route connections to this vital state hub, and preventing encroachment of sensitive land uses near the facility, is of primary concern for regional sustainability.

The Tejon Ranch Commerce Center sits at the southern gateway to Kern County, an area of California already home to major distribution centers for IKEA, Famous Footwear, Dollar General, Caterpillar, Loreal and many others. Sitting directly on Interstate 5, it is the area's best location, with fully-entitled land for development of up to 20 million square feet of new warehouse and industrial space.

Tejon Ranch Company and The Rockefeller Group opened the Outlets at Tejon in August 2014. The upscale 320,000 square-foot outdoor shopping center has more than 70 retailers on 43 acres. The center is located on Interstate 5, at Wheeler Ridge Rd near the base of the Grapevine in Kern County. The Outlets benefit from favorable regional demographics, with 3.2 million people living within an hour's drive and approximately 65 million travelers passing by the location annually.

The permitted development at TRCC includes the potential for 20 million square feet of industrial and 4.8 million square feet of commercial use. To date the development of TRCC has created over 4,000 jobs and at full build-out, TRCC will provide for over 6,000 jobs and significant financial benefits to the state and region.

Tejon Ranch Commerce Center is part of an expanded 1,093-acre Foreign Trade Zone (FTZ), which allows users to move merchandise directly from port of arrival to the FTZ, avoiding delays at congested ports. IKEA is utilizing Foreign Trade Zone benefits at Tejon Ranch Commerce Center. Tejon Ranch Commerce Center is the site of the largest activated Foreign Trade Zone (FTZ) in California. FTZ's are sites near ports of entry where foreign and domestic merchandise considered international trade can provide important cost-savings benefits involving customs duties and other ad valorem taxes. Users can obtain permission from Customs to move merchandise directly from the port of arrival to the FTZ avoiding delays at congested ports. Tejon Ranch Commerce Center is strategically located proximate to major transportation routes and are within 50 miles of the geographic center of population for the state making the location ideal for serving both Northern and Southern California as well as the regions to the east.

To complement Tejon Ranch Commerce Center and the Outlets at Tejon, Grapevine at Tejon, a new sustainable master planned community located adjacent to the Tejon Ranch Commerce Center calls for 12,000 residential units and 5.1 million square feet of commercial space. The community will provide residential opportunities for the thousands of workers currently employed at businesses within the Tejon Ranch Commerce Center reducing employment related vehicle miles traveled. The community will be designed in a way that promotes water efficiency, walkability, bike-ability and key retail and commercial uses within close proximity to residential areas. It is planned that the community will be developed over the next 20 years.

Airports

Airports have a few more site opportunities than seaports but encompass large areas when the surrounding affected land uses are considered. This is especially true when considering expansion potential of an airport. This section covers the importance of maintaining and expanding air freight and air passenger service for sustainability of the region, and the need to protect these facilities from encroachment by sensitive land uses.

Air Freight

As Asia and the southwestern United States continue to grow, air freight is anticipated to steadily increase once economic recovery is realized. Anticipated increases in time-sensitive cargo have made air freight from Asia a booming business. Southern California is focusing its expansion of air freight capacity at the Southern California Logistics Center (formerly George Air Force Base) in Victorville. However, the facility's 3,000-foot elevation makes it costlier to fly out of than lower altitude facilities because lower air density requires greater fuel consumption on takeoff, especially during the summer.

Kern County's main airport is Meadows Field, adjacent to the northern edge of Bakersfield. At 500 feet elevation, the facility requires less fuel to ascend with a full load and lies on the most direct path from Southern California to Asia (see **Figures 5-29** and **5-30**). Meadows Field has the fifth longest runway in California and has recently added international service capability. A third runway and cargo terminal are planned. Meadows Field has good highway connectivity to Ventura, Los Angeles, and San Bernardino counties through I-5 and State Routes 99 and 58. Meadows Field is also within 6 miles of the Shafter intermodal facilities and is connected by existing rail spurs to both Burlington Northern Santa Fe and Union Pacific railroads.

Mojave Airport in eastern Kern County also serves as an operational air freight facility within the county. The primary focus of this airport is as a civilian flight test center, and it is the only FAA-recognized private spaceport in the nation. The facility provides an intermodal transfer facility with the goal of handling two flights per day. Freight service may increase if it does not affect the primary research role of the facility.

Preservation of these facilities is essential. Protecting these facilities from residential and other conflicting encroachments should be one of the highest priorities for land use decision-makers. Moving the facilities is

cost prohibitive and would likely reduce the strategic advantage the existing locations have with regard to proximity to Asia, as well as connectivity to highway and rail facilities.

Figure 5-31: Great Circle Route Between Southern California and Asia HTTP://GC.KLS2.com/

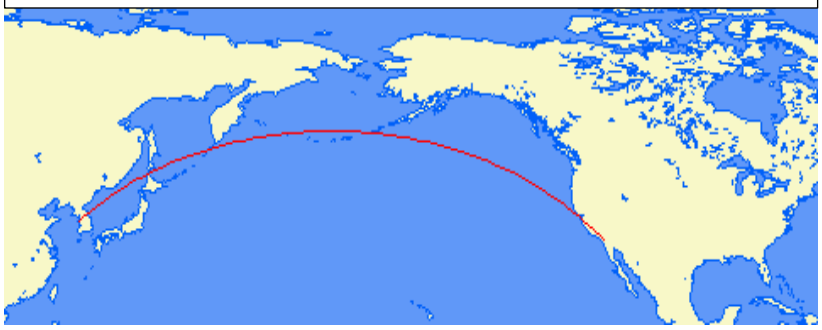
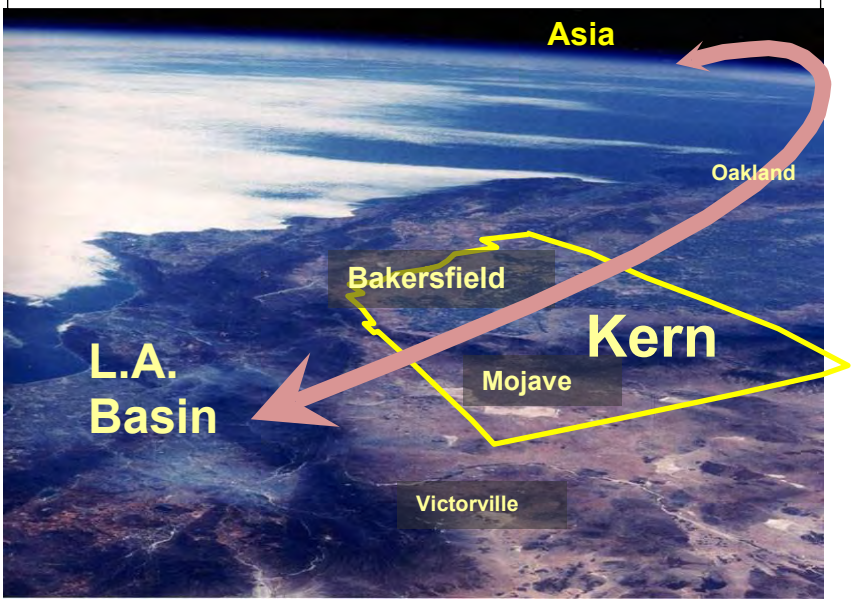


Figure 5-32: Kern County Great Circle Route Between Southern California and Asia



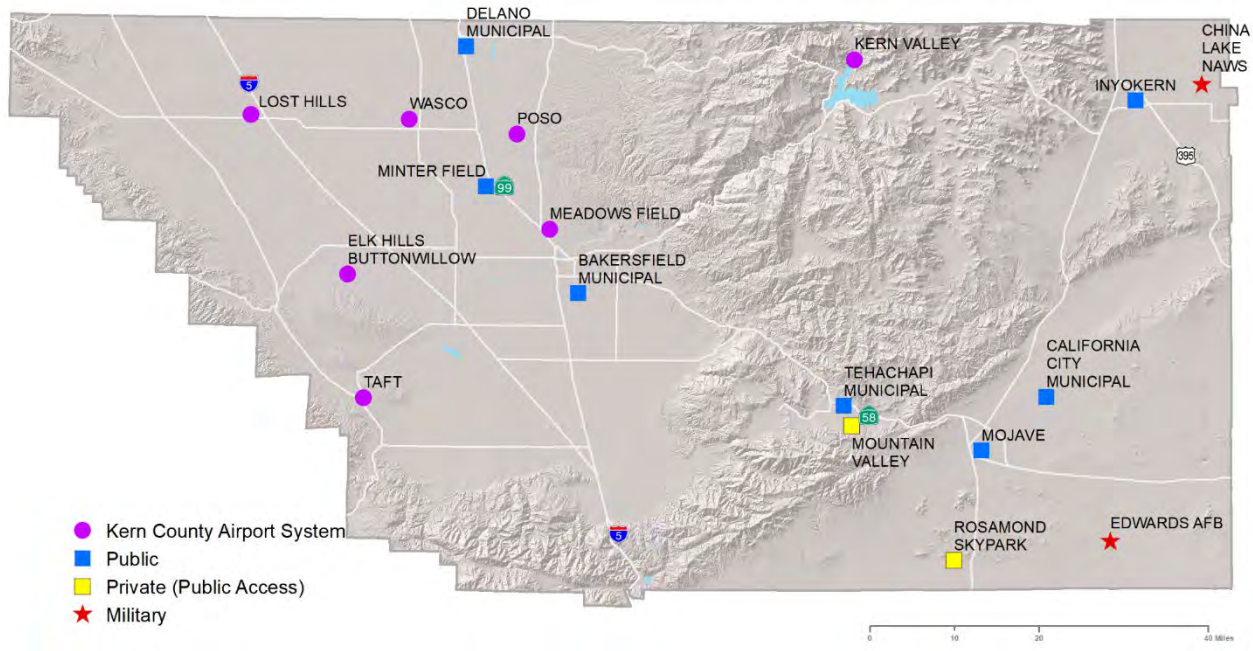
Air Passenger Service

As with air freight, the Los Angeles Basin's runway capacity to handle air passenger service will not be able to meet demand, even with the planned Palmdale International Airport. The Southern California Association of Governments' overall plan to sustain its region's growth in air passenger demand is to link the region's airports with high-speed rail. This would allow the more congested airports to ferry passengers to and from outlying airports where additional capacity is available. The goal is to create an integrated airport system for Southern California that allows users to fly into one airport, catch transit or a train, and fly out of another airport with no more than a 30- to 90-minute layover. Meadows Field should be linked into the reliever network of airports through the California High-Speed Rail (HSR) network. Approved by California's voters in 2008, high-speed rail would likely accelerate the connectivity of Meadows Field to Palmdale, Burbank, and Los Angeles International Airport (LAX). Currently, high-speed rail is planned to link downtown Bakersfield and Union Station in downtown Los Angeles. An express bus transit route between LAX and Union Station already exists. Similar transport between downtown Bakersfield and Meadows Field would also be needed to provide seamless high-speed rail service. Once this connection is established, Meadows Field will become a "front door" to Southern California for passenger travel from Asia.

At less than 50% capacity, Meadows Field is the most underused full-service civilian airport in Southern California. The County of Kern completed construction of a jet terminal in early 2006 to handle planned expansion, and the former terminal is currently unoccupied and has been remodeled as an international airport facility. The accessibility and relative lack of congestion between Kern and Ventura, Los Angeles, and San Bernardino Counties would make this facility a prime location for travel to and from Asian destinations. To accommodate proposed lengthening of runways to the northwest of Meadows Field, future circulation plans should consider realignment of SR 65 to the west.

The emerging trend for air-taxi/business jet charter service provides potential business for smaller airport facilities throughout the Kern region (see **Figure 5-33**). The ability of a business traveler in a rental car to book an air taxi or business jet while the jet is in flight, and rendezvous with the jet at a nearby airport, could transform activity at smaller airports. Development of a system of small, very light jet-capable airports with good freeway access could relieve congestion at overcrowded regional hub airports. It could also put most of California within a 30-minute point-to-point jet flight from Kern County. Facilities such as Bakersfield Municipal Airpark and general aviation airports in California City, Inyokern, Delano, Shafter, Wasco, Tehachapi, Taft, Mojave, Kern Valley, Buttonwillow, Lost Hills, Rosamond, and Famoso should be preserved for potential expansion to this type of service. The need for rental car and restaurant facilities at these locations, as well as runway expansion to a minimum of 5000 feet, should be recognized as a long-term goal.

Figure 5-33: Potential Air Taxi Jet Charter Facilities



To preserve these facilities, local General Plans and concomitant land use decisions must assume that local airports may expand and runways will be lengthened. Even the smallest facility should be planning for expansion to air taxi service. Protecting these facilities from encroachment by sensitive land uses will help provide the economic engine and infrastructure to encourage job growth.

Conflicting Land Uses – Setback Distances

Preserving global gateways from encroachment by incompatible land uses is critical to the economic and environmental viability of the region. The encroachment of sensitive land uses upon inland ports and airports can greatly limit the use of such facilities and eventually force their closure. Cities and the county address land use compatibility issues in their respective General Plans and implementing ordinances, and together with the CEQA process have the means to conduct health risk assessments, air quality analysis and noise assessments to establish standards and conditions that are applicable to each local land use jurisdiction's situation. **Table 5-8** provides advisory recommendations for suggested setback distances that would limit exposure to harmful air pollution. (These are rough estimates and should be used only when no other data or local study is available.)

Table 5-8: Air Quality Recommendations on Siting New Sensitive Land Uses Such as Residences, Schools, Daycare Centers, Playgrounds or Medical Facilities

Source Category	CARB Advisory Recommendations
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within 1 mile of a rail yard, consider possible siting limitations and mitigation approaches.
Distribution Centers, Truck Stops	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Consider the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.

Source: California Air Resources Board, Air Quality and Land Use Handbook http://www.arb.ca.gov/ch/landuse.htm

Noise sources should also require proper setbacks when siting future transportation facilities or when considering mitigation such as increased insulation and sound walls. Each jurisdiction is responsible for maintaining an Airport Land Use Compatibility Plan with specific information on siting land uses adjacent to each airport. **Table 5-9** provides some advisory recommendations when no other information is available.

Table 5-9: Noise Recommendations on Siting New Sensitive Land Uses Proximate to Airports

Source Category	Advisory Recommendations
Regional Airports, Commercial/Air Freight	Avoid siting new sensitive land uses within 10,000 feet of planned and existing runway approaches and 2000 feet on either side. LAX has CNEL 65dB extending 5 miles beyond the runway and up to 1 mile laterally along the departure path. Within 14,000 feet in any direction of a runway observe appropriate height restrictions based on conical surface.
Local Airports, Very Light Jet/Air Taxi Service	Avoid siting new sensitive land uses within 5,000 feet of planned and existing runway approaches and 1000 feet on either side. Within 14,000 feet in any direction of a runway observe appropriate height restrictions based on conical surface. Local airports that may one day serve as air taxi service ports should have expansion plans increasing runway length to a minimum of 5,000–7,000 feet subject to local studies to accommodate very light jet air taxi service.

Source: Kern Council of Governments, Kern County Airport Land Use Compatibility Plan, amended March 2004

Global Gateways – Land Use Actions

Near Term, 2022–2026

- Facilitate the Shafter Rail Terminal and the Wonderful Industrial Park by programming infrastructure to service rail and truck traffic that may be generated by the facility;

- Use the California Environmental Quality Act review process to inform stakeholders and decision makers on the impacts of sensitive land use developments near vital transportation infrastructure necessary to handle increasing air traffic and international cargo, as well as increasing port activity;

- Work with the Kern County Department of Airports and local planning departments to preserve existing airports from encroachment by sensitive land uses to strategic global gateways;

- Implement the Directions to 2050 Growth principles vision for economic vitality by planning and programming infrastructure to provide connectivity to air traffic and international cargo facilities;

- Coordinate with the County of Kern, City of Bakersfield, and City of Shafter on the proposed expansion of Meadows Field in the County of Kern Airport Master Plan; and

- Coordinate with the Southern California Association of Governments, the Metropolitan Transportation Commission, and the ports to minimize impacts of port activity through Kern County.

Long Term, 2027–2046

- Monitor progress toward implementing regional principles developed by the Directions to 2050 visioning process consistent with local general plans;

- Coordinate with the Kern County Department of Airports, municipalities and airport districts to establish intermodal connectivity for rail, trucking, transit, and passenger vehicles; and

- Work with Kern Economic Development Corporation to promote logistics and aerospace job opportunities in Kern County.

Rail/Transit Land Use Actions

See the Freight Movement Action Element and Public Transportation Action Element sections for further discussion on rail freight transport and public transportation modes.

Rail and transit provide the highest-volume corridors for movement of goods and people in and through a region. These facilities require seamless connectivity. If these connections are degraded or broken by incompatible or competing land uses, the system can become less effective or even threatened with elimination. Preservation of rail and transit facilities is the next highest transportation land use priority after global gateways.

Rail Freight

Not only is connection to the ports vital, but connections with switching yards to out-of-state destinations are a primary function of the rail system. In 2008, a facility opened in Delano, consolidating most of the perishable shipping activity in the southern San Joaquin Valley. The facility hauls refrigerated box car units between Delano and Albany, New York, in six days, where they are distributed to East Coast grocery store chains. The facility was acquired by UP in 2017 and marketed as UP Cold Connect. The service is temporarily closed due to competition from trucking and low diesel fuel costs.

Bulk hauling specialty oil products from several oil refineries and gas plants in the region travel the network of short-haul rail facilities to out-of-state customers via the Bakersfield freight yards. Preservation of Kern's short-haul rail network, operated by the San Joaquin Valley Railroad, is a key priority.

Along the national class 1 rail system, the Tehachapi Pass provides passage of goods between the Port of Oakland and the all-weather southern route through the Rockies, to Texas and Chicago. With the recently completed Tehachapi Pass capacity improvement project jointly funded by the State of California and the BNSF, the 35 trains that could pass through the summit daily, has now increased to 50 trains per day.

Other rail freight includes bulk mining in Trona and Boron. Eastern Kern County is the source for half of the world's supply of borates. Rio Tinto (formerly U.S. Borax) ships five unit trains a week from Boron to a company-owned facility at the Port of Long Beach. Like many shipper/receivers that use short-haul rail, Rio

Tinto may not be able to afford to ship by truck. Loss of short-haul rail service could mean curtailment or closure of the operation. Preserving short-haul rail means preserving the Kern region's economy.

Preservation of freight rail corridors in Kern is essential to promoting the principles of the Directions to 2050 visioning process. Strategies such as public/private partnerships and leveraging passenger rail service to preserve the short-haul system should be considered. Shipping freight by rail is ten times more energy-efficient than by truck, making preservation and expansion of rail freight vital to both the preservation of natural resources and development of a sustaining economy and strategic employment place types.

Passenger Rail/Public Transit

Like freight rail, passenger rail and public transit have limited site opportunities and are highly dependent on surrounding land uses. It is important that investment in these modes follow land use decisions that support such investment. This section covers rail and transit priority place types, transit-oriented design, and carefully planned parking facilities that promote transit use and that could be considered in the next update of a jurisdiction's circulation plan.

Transit Oriented Land Use Concepts – Passenger rail and transit are dependent on where the population is located. **Figures 4-9** and **4-10** of the Sustainable Communities Strategy Chapter 4 illustrate Transit Priority and Strategic Employment Place Types for Kern. Rather than showing large areas of planned urban growth, the maps show existing, planned and potential places where future transit and passenger rail service investment might occur based on existing variances in adopted General Plan intensities. In addition, the maps illustrate how transit investment would coordinate with these existing and planned place types.

Transit viability is closely linked to land use density and intensity within a region. Before World War II, land uses in most communities were focused on walkability and streetcar accessibility. Most communities in the Kern region have an urban core based on these concepts. The historic pre-WWII Bakersfield downtown was very walkable and accessible via a streetcar system. The Southern Pacific passenger train station on Baker Street in Old Town Kern (East Bakersfield) was connected to the Santa Fe train station in downtown Bakersfield on F Street by an electric trolley that ran along 19th Street from 1901 to 1942. Suburban explosion since WWII has spawned a low-density development pattern that results in a heavily subsidized, underused transit service.

As Metropolitan Bakersfield has grown, it has loosely developed around a network of auto-oriented retail centers illustrated in the Centers Concept map from the Metropolitan Bakersfield General Plan. Transit connectivity between the centers in the northwest are hindered by a 3-mile-wide low-density oil production and refining complex on the northwest side of the Kern River. The result is poor transit service from the rapidly growing northwest to the rest of Metropolitan Bakersfield. A ring of centers now exists around this industrial area, including Downtown/Westchester, California Avenue, The Marketplace/CSUB, Northwest Promenade, and Rosedale Highway/SR 99. Each of these centers covers a large area that often lacks a central focal point or pedestrian pocket for concentrating urban transit access, requiring a car to get from one store to another within the centers. Beyond this ring of centers, potential new centers are planned in outlying areas.

Transit oriented development can play an important role in outlying communities and rural areas as well. However, the techniques must be scaled down to fit the lower intensity land uses. Service to outlying areas lack the ridership to warrant frequent service. The importance of connecting services via dial-a-ride local circulator bus service can increase the service area for riders in outlying communities. Vanpooling can play an important role in providing service to strategic employment areas in outlying communities as well. The public unmet transit needs process helps ensure that transit needs in rural and urban areas that are reasonable to be met, are provided service.

The following are a suggested list of tools and concepts available to the local land use authorities.

Existing Tools and Concepts

Reduced Impact Fees for Core Area Development – To encourage gradual infill development, in 2003 the City of Bakersfield and the County of Kern jointly adopted a two-tiered traffic impact fee for Metropolitan Bakersfield. The fee in the "core area" is almost half of the $12,870 per house in the "non-core area." The City of Tehachapi also adopted a reduced fee for core area development. The core area is primarily the older built-out portions of the community that have the infrastructure in place. The logic behind the lower core area fee is that housing in these areas should not have to pay as high a fee because the transportation infrastructure is already in place. The result is a fee structure that promotes infill and increased densities in areas with readily available bus transit, bike, and pedestrian access.

Indirect Source Review (ISR) Rule – The San Joaquin Valley Air Pollution Control District has enacted the ISR rule, requiring new development to pay a fee for mitigating air quality impacts. All or a portion of the fee can be waived if a developer includes strategies that improve air quality, such as walkable design, bike paths, better access to transit, etc.

High-Speed Rail Station Area Planning – The City of Bakersfield Economic and Community Development Department is already planning intensification of land uses around the proposed high-speed rail station in downtown Bakersfield. Plans include the addition of 600 housing units and the Mill Creek pedestrian parkway that connects shops, restaurants, offices and housing to the downtown high-speed rail station site.

Blueprint/Directions to 2050 Principles in General Plan – The City of Maricopa has incorporated the Blueprint/Directions to 2050 Principles into its General Plan such as enhancement of existing assets, and compact walkable development.

Healthy Communities – The City of Delano adopted a new element to its General Plan called the Health and Sustainability Element. The new element includes goals and policies designed to strategically form a community that provides a healthy and sustainable environment for its residents.

Climate Change Policies – The City of Taft is incorporating emission reduction policies that relate to climate change in its General Plan update. The City of Delano adopted a Climate Action Plan which includes a range of measures to reduce GHG emissions from a variety of sources throughout the City as well as a Municipal Energy Action Plan for City facilities.

Form-Based Code General Plan – The City of Tehachapi developed and adopted one of the first citywide form-based code General Plans in the nation. The plan focuses on the architectural design of a community and encourages infill and development in the central community with transit access.

Complete Streets in Circulation Elements – Effective in 2011, AB 1358 required General Plan Circulation Elements to include transit systems, bike systems, and pedestrian facilities in addition to automobile circulation networks. According to Government Code Section 65302(b)(2)(A) and (B), with the next substantial revision to a jurisdiction's General Plan Circulation Element, the jurisdiction must incorporate a multi-modal network with complete street techniques for safe and convenient travel for all users, including public transit users in the rural, suburban, and urban context of the General Plan. Circulation Plan update guidelines are available at http://opr.ca.gov/docs/Update_GP_Guidelines_Complete_Streets.pdf .

Specific Plan Lines - In addition, Kern has already made extensive use of specific plan lines to preserve right-of-way for future highway corridors. Local land use plans can consider other strategies to preserve transit centers and corridors. Specific plan lines can be developed that identify transit-oriented centers, corridors, and boulevards to allow for gradual higher-capacity transit modes as land use densities warrant.

New Tools and Concepts

Transit More Responsive to Peak Period Demand Changes - A major advantage of transit over single-occupant vehicle facilities, such as freeways, is that transit is more economical when a corridor reaches capacity. The cost to add a bus or another railcar along a corridor as congestion increases is considerably less expensive than adding right-of-way for another roadway lane; the bus is only needed during peak periods, making it more efficient than providing a travel lane that is underused 90% of the time.

Phased Transit Capacity Intensification – As transit-oriented place types gradually develop, eventually sufficient land use intensity will be available to support increased capacity modes such as express bus service, bus rapid transit and, eventually, commuter/light rail. In 1997, the MTIS developed a sketch plan for a commuter rail network connecting Metro Bakersfield to outlying communities. As part of the Metro Bakersfield Long Range Transit Plan completed in 2012, commuter rail service using existing spur lines to link with the high-speed rail station in Bakersfield was studied. A gradual phasing of transit-capacity intensification needs to be brought online carefully, to match the gradual land use intensification. **Table 5-10** illustrates the progressive steps along a local, intercity, or interregional corridor as it becomes sufficiently used to support higher-capacity transit modes.

Table 5-10: Phased Transit Capacity Intensification

Fixed-Route Transit

Bus Rapid Transit

Commuter Rail

High-Speed Rail

LOCAL	INTERCITY	INTERREGIONAL
Rural (Village/Neighborhood) Transit Capacity Phase		
Dial-a-Ride/Senior Transit/Rideshare/Taxi/Vanpool	Regional Transit (KRT) /Senior Transit/Feeder Bus	Regional Transit (KRT) /Rail Feeder Bus/ Greyhound
Suburban (Town/Community) Transit Capacity Phases		
Dial-a-Ride/Senior Transit/Taxi/etc.	Regional Fixed Route (KRT)	Rail Feeder Bus
Fixed Route Bus(GET)/Circulator Bus	Rail Feeder Bus/Greyhound	Passenger Rail Service (Amtrak)
Express Bus/Bus Rapid Transit (BRT)	Intercity Commuter Rail (Metrolink)	
Commuter Rail/Light Rail (Metrolink)		
Urban (Metro) Transit Capacity Phases		
Shuttle Bus/Circulator Bus	Rail Feeder Bus	Passenger Rail Service
Fixed Route Bus (GET, DART)	Intercity Commuter Rail (Metrolink)	High-Speed Rail
Bus Lanes/Mixed Carpool Lanes		
Express Bus/Bus Rapid Transit (BRT)		
Rail Feeder Bus		
Commuter Rail/Light Rail (Metrolink)		

Source: Adapted from the Transportation and Land Use Coalition (TALC)

The Bay Area Transportation and Land Use Coalition (TALC) suggests an evolving transit strategy that promotes the concept of Express Bus/Bus Rapid Transit (BRT) as an interim step between fixed bus routes and higher-capacity modes such as light rail. BRT is an evolving term for a host of sophisticated technologies including articulated buses, auto drive technology, and traffic signal green-light extension used on both bus-only and mixed-flow lanes. The Federal Transit Administration offers the following definition of BRT:

Bus rapid transit (BRT) is a combination of facility, systems, and vehicle investments that convert conventional bus services into a fixed-facility transit service, greatly increasing their efficiency and effectiveness to the end user.

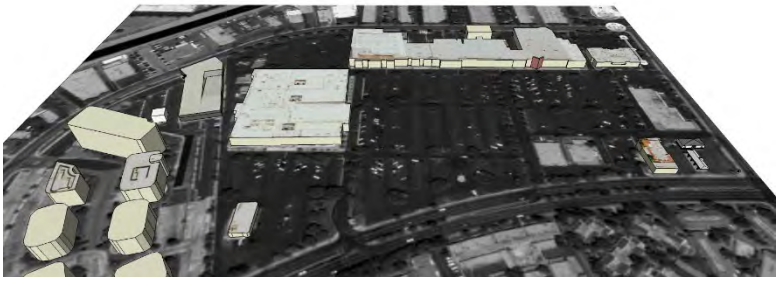
The TALC strategy focuses on a planned and evolving intensification of transit-oriented development destinations for use as BRT stops. TALC's strategy of phased transit mode intensification, as the centers and corridors infill and ridership increase, allows the transit fare box revenue to drive the building and gradual intensification of the transit facilities along the corridor. **Table 5-10** illustrates the evolving progression from rural to suburban to urban transit usage as the land use intensifies and the ridership warrants higher-capacity transit modes.

TALC suggests that infill land development around the transit centers should gradually drive the intensification of transit infrastructure. As new low-density suburban development occurs, a phased land use plan can provide areas for the future densification and infill with more intense urban uses around a transit center. This might include reserving areas for future commercial, mixed use, and more compact housing options.

Parking and Transit-Oriented Development – Detailed transit-oriented development standards that include the concept of phased land use intensification around transit centers can be found in *The Next American Metropolis: Ecology, Community, and the American Dream* (Calthorpe 1993). The design guidelines include "surface parking redevelopment" e.g., "Land devoted to surface parking lots should be reduced through redevelopment and construction of structured parking facilities. The layout and configuration of the surface parking lots (near transit centers) should accommodate future redevelopment; design studies showing placement of future buildings and parking structures should be provided."

Figure 5-34: Bakersfield-California Avenue Shopping Center Existing/Potential

Existing



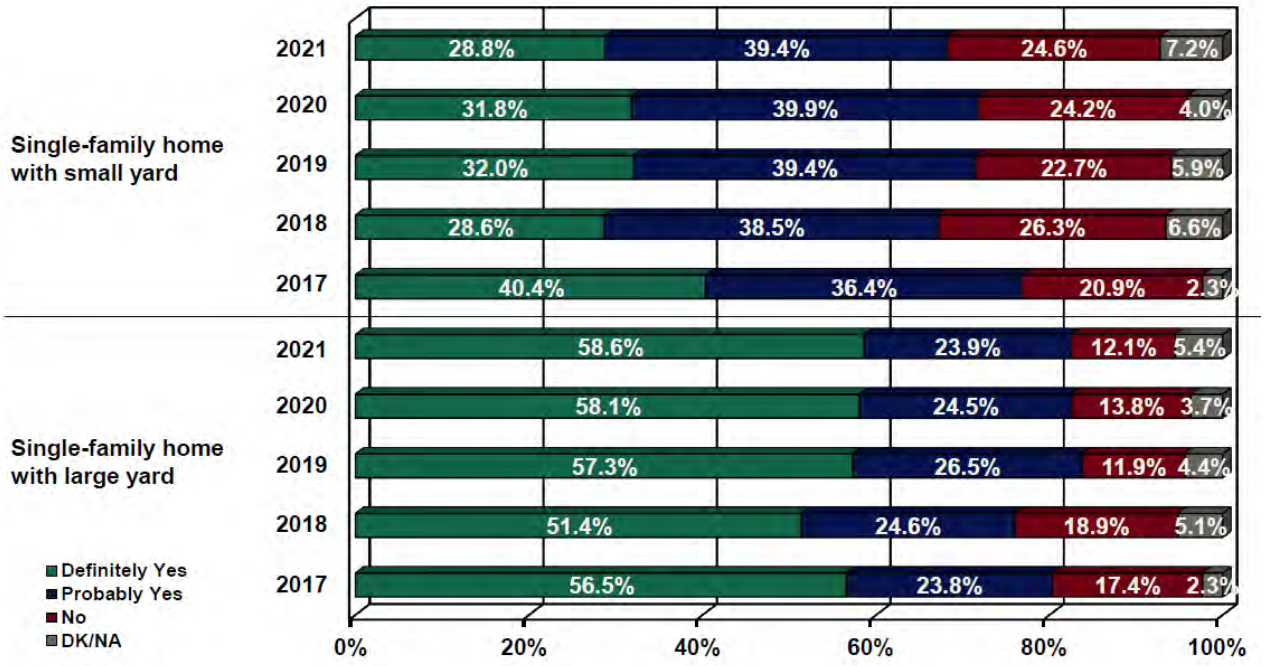
Potential

Parking structures are expensive and have limited applicability for most rural and suburban centers. However, one of the more effective opportunities to intensify low-density development around transit-oriented development centers is to control parking configuration. **Figure 5-34** is an example of many older retail centers with large parking areas that only fill up two times a year—the day after Thanksgiving and the day after Christmas. Implementation of other parking concepts, such as joint use parking by office, carpooling, retail, entertainment, churches, and mixed-use residential, can provide a more efficient and consistent usage of parking on weekdays, weekends, and evenings. Greater pedestrian and transit use allow a reduction in parking near transit centers by 15% to 25%. Parking for carpoolers, and access for bicyclists and transit commuters, requires additional consideration in this process.

Parking costs can also be used to promote development of a major transit center. Charging for parking creates a disincentive for people to drive to the center, encouraging them to take transit, carpool, bike, or walk. In Old Town Pasadena, proceeds from the parking fees and meters were used to finance pedestrian street improvements that transformed a blighted downtown into a vibrant destination, which boosted the area's businesses and created a transit-oriented infill node for the new Gold Line transit station at Mission Park. Parking costs used to fund local projects that benefit those paying them are referred to as user-based fees. User-based fees for all forms of transportation expenditures are becoming more common and would have to be heavily relied upon to implement transit-oriented development.

Market Driven Housing Choices - Recent surveys and studies suggest a shift in the market demand for housing. Since 2009, Godbe Research conducted annual statistically valid community surveys of 1,200 people. **Figure 5-35** provides information from the 2021 Community Survey and compares the information to the 2017, 2018, 2019, and 2020 surveys. Since the last RTP we have seen range in interest in single family homes with large years remain around 60-80%, while interest homes with small yards have fallen off from a range 40-70% in 2017 to a range of 30-70% in 2021. Note that the inverse of these ranges could indicate the minimum range of interest in multi-family housing at around 20-40% but if could be as high as 70% making the unlikely assumption that those who don't want a small yard only want multi-family housing.

Figure 5-35: Kern Housing Preference 2021 Community Survey



Proposed Rail/Transit-Related Land Use Actions

Near Term, 2022–2026

- Acknowledge city and county adopted General Plans and amendments and the related California Environmental Quality Act (CEQA) review process to inform stakeholders and decision makers on the impacts of sensitive land use developments near vital transportation infrastructure necessary to handle increasing local, intercity, and interregional transit use;

- Work with GET, KT, other local transit providers, and local land use planners to preserve existing and future transit opportunities from the encroachment of low-density land uses around transit-oriented development centers;

- Implement the long-range 2022 RTP in partnership with member agencies to preserve near- and long-term transportation infrastructure, thus promoting the gradual intensification of transit use only when market demand for compact land uses increases;

- Encourage the adoption of General Plan circulation elements that address transit, bike, and pedestrian modes. Consider specific plan lines and form-based codes where appropriate to implement transit improvements along designated transit corridors that connect transit-oriented development centers;

- Expand transportation choices and transit usage by providing market-driven housing choices that include more compact and mixed land uses within walking distance to transit centers;

- Identify and space transit-oriented, village, town, and suburban/community centers a minimum of 1 to 4 miles apart or as determined in adopted city and county General Plans and subsequent amendments;

- Provide convenient and safe walking and bike paths to a fixed transit hub at each development center;

- Allow reduced parking requirements near transit centers that have alternative modes of access such as walking and bike paths, circulator buses, etc.;

- Coordinate with GET on implementation of traffic signal green-light extension technology as a first step toward implementation of Bus Rapid Transit and peak period bus/carpool lanes on arterial streets; and

- Coordinate with GET, KT, and the Kern County Department of Airports to improve intermodal connectivity between transit systems and Meadows Field.

Long Term, 2027–2046

- Monitor progress toward implementing principles developed by the Directions to 2050 outreach process;

- Promote more compact and mixed-use centers along major transit corridors where appropriate to support more intense transit options such as Bus Rapid Transit and light rail as areas urbanize;

- Land uses should be mixed both horizontally and vertically where appropriate. Vertical mixed use, with ground-floor retail in developed areas and activity centers as identified through land use plans, can increase the vitality of the street and provide people with the choice of walking to desired services;

- More important for Bakersfield, mixing uses horizontally can prevent desolate, single-use areas and encourage increased pedestrian activity; scale of use and distance between uses are important to successful horizontal mixed-use development;

- Support and enhance transit priority and strategic employment place types. These areas have a strong impact on transportation patterns as the major destinations. They are generally characterized by their regionally important commercial, employment, and service uses. To make these places more transit-supportive, they should be enhanced by land use decisions that locate new housing and appropriately scaled retail and employment uses to diversify the mix, creating an environment that maximizes transportation choice;

- The cities and the county should be encouraged to provide land use intensities where appropriate at levels that will promote use of transit and support pedestrian and bicycle activity. A general threshold for transit-supportive residential uses is 10 to 15 units per acre within ½ mile of a high-frequency transit stop (15 min. headways or less). This density can be lower, however, if the urban environment supports easy pedestrian/bike access to transit. Nonresidential uses with a floor area ratio (FAR) of 0.5 provide a baseline that can support viable transit ridership levels. Local land use plans should provide flexibility to maximize the intensity of development in transit priority place types to be more responsive to changing market conditions; and

- The cities and the county should be encouraged to provide parking requirements (and parking provisions) compatible with compact, pedestrian, and transit-supportive design and development. Requirements should account for mixed uses, transit access, and the linking of trips that reduce reliance on automobiles and total parking demand.

Highway/Road Land Use Actions

See the Regional Streets and Highways Action Element, Public Transportation Action Element, Freight Movement Action Element, and Active Transportation Action Element sections above for further discussion on facilities and connectivity.

See Chapter 4, Sustainable Communities Strategy, for further discussion on sustainable highway/road facilities and connectivity.

While roads and highways have considerably more flexibility in siting than air, rail, or transit modes, roads provide interconnectivity to all other modes. At these intermodal connection points, road and highway land use decisions are considerably less flexible because of the limited number of site opportunities. Preserving intermodal connections, while ensuring the capacity necessary to minimize congestion, is a major concern for land use planning. When siting roads and highways, local planners rely on special transportation studies and circulation plans. The following are some ideas that planners might consider implementing to encourage sustainable roads and highways within the Kern region.

Road and Highway Grid

A rule of thumb is that highways and freeways in urban areas should be spaced 3 to 6 miles apart. Recent specific plan line adoptions around Metropolitan Bakersfield have resulted in a beltway system that will be more than 7 miles from the next parallel freeway facility. As new housing is built on the urban fringe, residents may strongly object to new freeways being constructed near their homes, thus potentially driving the beltway system further out; the arterial circulation system in the interior would suffer increased congestion as a result. Parallel arterials halfway between two parallel freeways that are spaced too far apart would be servicing greater loads than six-lane arterials can absorb because they must carry additional traffic that the freeway system is too distant to service.

Figure 5-36: Central Bakersfield's Interrupted Arterial Grid

The Central Bakersfield arterial network can be characterized as a high-volume, interrupted grid pattern (**Figure 5-36**). While many regions provide a four-lane arterial grid, Metropolitan Bakersfield is fortunate to have a six-lane arterial network that is laid out on roughly 1-mile intervals with curvilinear deviations from the section line grid. However, the arterial system is interrupted by a series of railroad corridors, freeways, canals and a river, resulting in greater than 1.5-mile gaps between arterials. A level of service degradation can be anticipated where arterials are spaced at greater than 1-mile intervals. The decision to allow the lower-density arterial spacing avoided building costly bridges, as well as further arterial segments on the urban fringe where future traffic volumes would be expected to be low. As new entitlements were approved beyond these locations, congestion levels increased in these areas.

In addition to arterial spacing, spacing of freeway interchanges has resulted in increased traffic congestion levels. Ming Avenue, White Lane, and Panama Lane, at State Route 99, were all spaced 1.5 miles apart when the highway was designed to rural specifications in these areas. Now that the region has urbanized, heavy traffic congestion is common at all three interchanges.

Irregular spacing of arterials can make it more challenging to synchronize traffic signals in more than one direction. Arterials with signals at irregularly spaced collectors and entrances to shopping centers further complicate traffic signal coordination efforts. A collector network that directs local traffic to and from the arterials commonly deviates from the grid layout in the newer suburbs, hindering traffic signal synchronization.

The silver lining of having an imperfect arterial grid is that it results in higher levels of congestion that may promote the use of transit and other modes. However, bus transit is often stuck in the same traffic congestion. Transit service needs to provide a congestion free alternative to get around during peak periods if it is to be a viable alternative to automobile travel. Providing alternatives such as light rail and bus lanes during peak travel periods ensure that transit provides a congestion free alternative to single-occupant vehicle travel.

Bus and Carpool Lanes

One of the most efficient uses of high-occupancy vehicle (HOV), low-emissions vehicle (LEV) lanes is to provide priority access to express bus service. The sight of buses speeding past congested traffic can be a strong inducement for commuters to take advantage of transit, helping to relieve congestion and extending the service capacity of a freeway by providing an alternative means to get through a congested corridor.

In October 2005, Caltrans analyzed the congested portions of State Routes 58 and 99 in Metropolitan Bakersfield. The findings indicated that, for the most part, HOV lanes would not provide much additional congestion relief over mixed-flow lanes. This is primarily a result of the relatively short commutes, making the time savings differential less significant. However, the incorporation of an express bus or BRT service that uses the HOV lane can greatly improve the performance of transit ridership. Northbound SR 99 through Metropolitan Bakersfield was identified as feasible for implementing an HOV lane; however, building a carpool lane in just one direction is not much of an incentive for carpooling. The cutoff for feasibility in the study was 400 vehicles per peak hour of travel to 1800 vehicles per lane. SR 99 southbound had a higher

level of vehicle occupancy in the study—sufficiently high that a 2+ person vehicle per lane facility would become saturated. Use of congestion pricing or increasing the capacity to 3+ during peak periods could combat the saturation problem. No funding was identified in the study for financing the HOV lanes; however, federal Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds and the Air District's new Indirect Source Review (ISR) fee may be eligible for an express bus/HOV/LEV lane.

In 1994, HOV lanes for the Westside Parkway and Downtown Parkway (now called the Centennial Corridor south) were studied as part of the facility's Tier 1 Environmental Impact Report. Modeling showed that the facility would carry less than 2 vehicles per minute, a third of the traffic necessary to make the facility run efficiently by 2015. However, analyzing a much longer horizon indicated that eventually the facility could benefit from an HOV/LEV/bus lane as it became more congested. The source of the congestion is a high level of new entitlements approved on the fringe of the metropolitan area. Incorporating an express bus and future HOV/bus lane into freeways that will eventually become congested is an essential traffic relief valve for an expanding metropolitan area.

Some regions have developed carpool lanes on arterial streets (**Figure 5-37**). In Seattle, on some arterials, the right lane is reserved as a business access and transit (BAT) lane. The lane may be used for turning right into or out of parking lots and at intersections, or by a bus. The BAT lane configuration allows the bus service to get through when the arterial is congested. Buses are allowed to travel through the intersection in the BAT lane. A BAT lane also allows for carpools, vanpools, and emergency vehicles to get through when traffic is backed up.

Figure 5-37: Business Access and Transit (BAT) Lanes

At its September 18, 2012, meeting, the Kern COG board acted to join the CalVans Board to provide input to increase vanpool services in Kern County. Currently, CalVans operates 65 vanpools in Kern County equaling a reduction of vehicle miles traveled (VMT) in Kern of 1.7 million miles. Kern COG and CalVans estimate a possible 200 vanpools may be in operation in Kern and reduce VMT by 5.2 million miles.

Park-and-Ride Locations

Park-and-ride locations should be planned at the terminus of an express bus/BRT/light rail line and near major intermodal facilities such as freeway interchanges, airports, and regional rail. As the metropolitan area expands, new TOD centers will be established beyond the former terminus. At that point, the former terminus can begin to intensify and infill, likely converting the park-and-ride facility into parking for additional office and commercial activities. Currently, a large number of informal park-and-ride areas have been established at commercial centers throughout Bakersfield. They support vanpools that go to the prisons, oil fields, and other outlying resource employment areas surrounding Metropolitan Bakersfield. Facilitating the expansion of vanpooling is important to the region's goals.

Freight Mobility on Highways and Roads

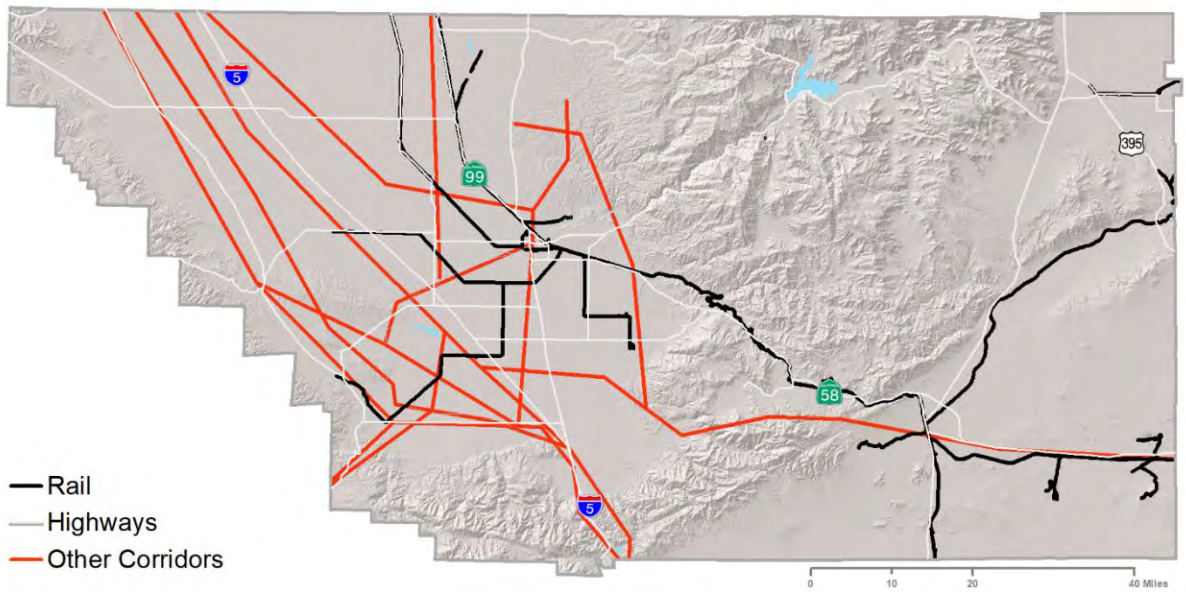
Closely tied to the region's economic and environmental goals, truck freight mobility along highways is highly dependent on land use decisions. For this discussion, freight mobility is divided into three separate areas:

- Interregional through-county, or "primary" goods movement;
- Freight destined/originating locally, or "secondary" goods movement;
- Local freight delivery such as Federal Express/UPS, or "tertiary" goods movement.

Primary Goods Movement

Of the primary or through-county goods movement, pipelines handle more tonnage than all other modes combined (**Figure 5-38**). These privately-operated facilities allow the inexpensive movement of liquid and gas products. In addition to relieving a tremendous tonnage of equivalent truck and rail traffic, the pipelines have terminals that transfer cargo to rail and truck. It is these intermodal points that have the greatest effect on the existing transportation infrastructure and need to be protected from conflicting land uses. The propane gas terminal near Taft is one example of this type of facility, and the Alon Oil Refinery terminal on

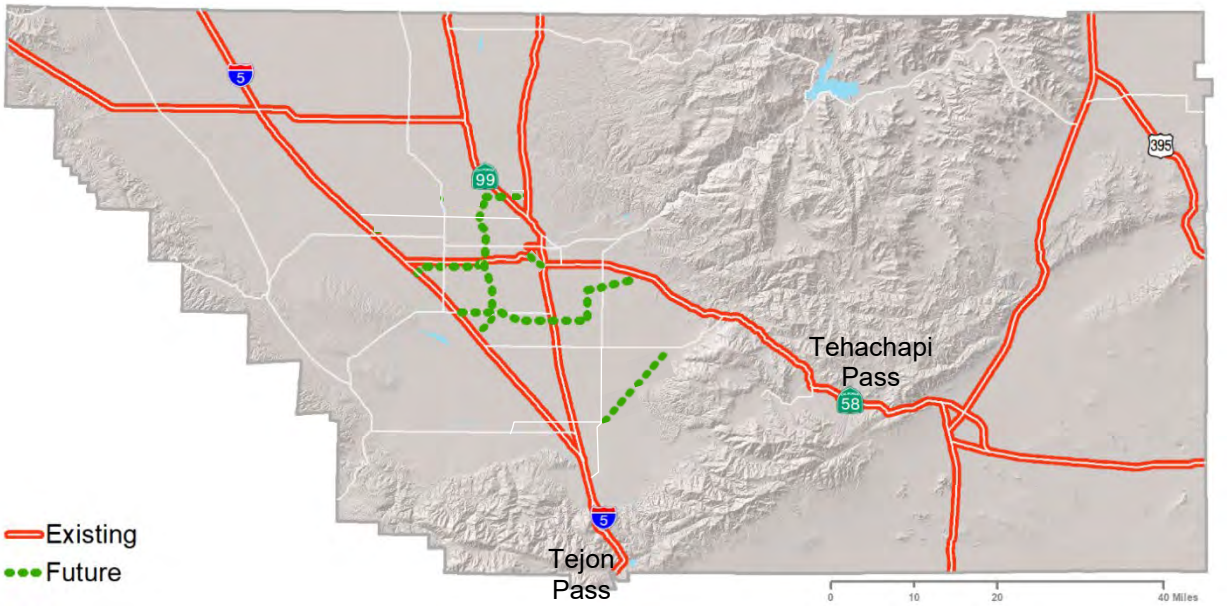
Figure 5-38: Primary Goods Movement Corridors: Truck, Rail, Other



Rosedale Highway is a distribution point for oil products by truck. Golden Bear, San Joaquin, and other local refining facilities also ship oil products that originated from the local and regional pipeline networks in the region.

Kern lies at the crossroads for much of the trucking goods movement throughout the state. **Figure 5-38** shows the State Highway system that passes through the county. The Tejon and Tehachapi passes are major bottlenecks for trucking and rail. Preservation of these corridor passes for goods movement is critical to Kern County's and California's economic health. Forecasted growth along these corridors is expected to increase dramatically over the next several decades. While Caltrans has proposed additional truck passing lanes through the mountain passes, the number of lanes that can fit in the narrow canyons through the passes is limited.

Figure 5-39: Primary Truck Goods Movement Facilities: Existing and Future



Options to increase capacity through these passes include adding truck toll lanes that use congestion pricing to create an incentive for trucks to travel at off-peak times. Another option is the double tracking of the rail line over the Tehachapi Pass. This alternative would greatly increase the capacity of the corridor while reducing truck emissions by as much as tenfold. Coordinating the financing of all truck-lane facilities and double tracking the rail corridor could result in more efficient goods delivery to Southern California.

In other areas of the county, congestion on State Routes 99 and 58 through Metropolitan Bakersfield is impeding primary freight traffic though the region. A system of corridors surrounding Metropolitan Bakersfield will help relieve traffic in the Metro core. Shown on **Figure 5-39** as red and green lines, these facilities should be considered heavily traveled truck routes, and land use along these corridors should be tolerant of existing and growing future truck traffic.

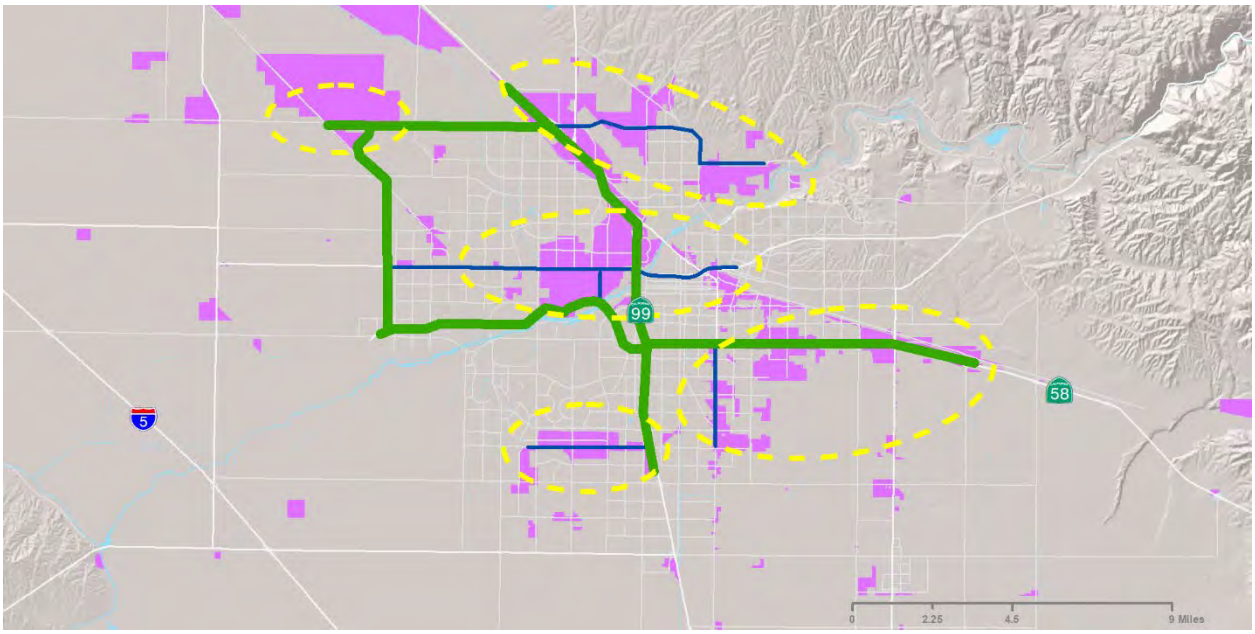
Secondary Goods Movement

Secondary goods movement focuses on transport of goods that originate or are destined locally. Secondary goods shipments tend to originate from industrially zoned areas. Metropolitan Bakersfield has five major industrial activity areas that generate freight movement; these areas are shown on **Figure 5-38**. Connecting these areas is a series of internal arterials and collectors that must handle high volumes of truck traffic. **Figure 5-41** shows these facilities as dark blue lines. The yellow dashed areas are the industrial districts. The thicker green lines are a network of major arterials and freeways that connect these districts with each other. The industrial district north of Bakersfield is located at the Wonderful Industrial Park.

Transporting goods along these corridors requires special turning -radius considerations for longer truck trailers. National Surface Transportation Assistance Act truck routes must be able to handle trucks up to 53 feet in length and require special median design to accommodate the larger turning radii. The maintenance of truck routes needs to be accommodated to promote the region's economic and environmental goals.

Connections from these industrial districts to the primary or regional goods movement corridors on State Routes are critical. The primary goods movement network in Metropolitan Bakersfield is becoming heavily congested. Development of additional primary goods movement corridors, as a system of beltways around Metropolitan Bakersfield, will help to relieve some of this congestion.

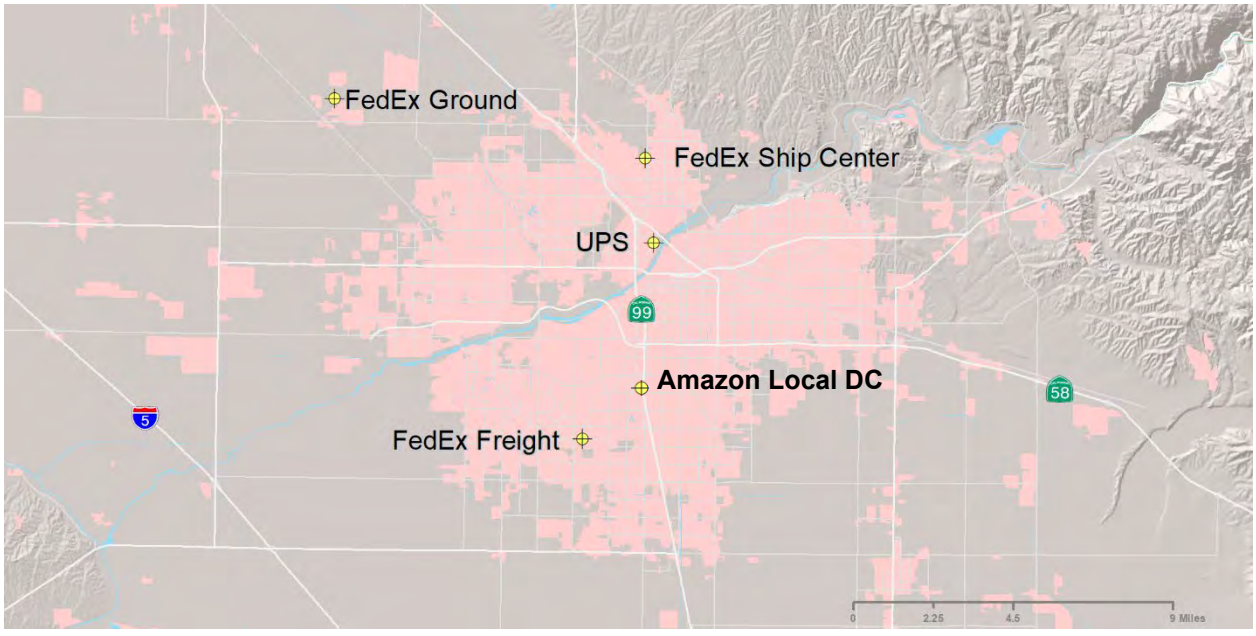
Figure 5-40: Secondary Goods Movement Facilities Connecting Industrial areas Bakersfield



Tertiary Goods Movement

Tertiary goods movement is the distribution of goods locally. Facilities such as Federal Express and UPS use the entire local street network for delivering goods and services (see **Figure 5-40**). It also includes other goods movement such as grocery and retail store deliveries. Delivery service is a rapidly expanding sector for goods movement as Internet shopping becomes more prevalent. Amazon has recently opened two distribution

Figure 5-41: Tertiary Goods Movement Nodes



centers, and is developing a third local facility and has plans for a second one. Providing adequate capacity and siting for these tertiary goods movement activities is critical for the economic viability of the region

Proposed Road/Highway-Related Land Use Actions

Near Term, 2022–2026

- Continue to use the CEQA review process to inform stakeholders and decision-makers on the impacts of sensitive land use developments near vital transportation infrastructure;
- Work with member agencies to preserve existing and future road and highway rights-of-way from the encroachment of sensitive land uses;
- Implement the long-range 2022 RTP in partnership with member agencies to preserve near- and long-term transportation infrastructure that promote the preservation of goods movement routes and facilities;
- Encourage the adoption of general plan circulation elements with specific plan lines as appropriate to preserve goods movement corridors and high frequency transit corridors; and
- Provide for all types of truck-related goods movement along truck-route corridors.

Long Term, 2027–2046

- Monitor progress toward implementing regional principles developed by the Directions to 2050 outreach process;
- Promote land use along freight corridors that are compatible with goods movement traffic;
- The transportation and circulation framework should define compact districts and corridors that are characterized by high connectivity of streets to not overly concentrate traffic on major streets and to provide more direct routes for pedestrians, good access to transit, and streets that are designed for pedestrians and bicycles, as well as for vehicles;
- New residential developments should include streets that provide connectivity. Cul-de-sacs and walls around communities are especially challenging for providing effective pedestrian and bike access to public transit;
- Transit improvement projects should be targeted at areas with transit-supportive land uses (existing and planned) in and around key destinations and projects that can increase pedestrian activity;
- Streets should be designed to support use by multiple modes, including transit, bicycles, and pedestrians, through proper scaling and provision of lighting, landscaping, and amenities. Amenities must be designed to provide comfortable walking environments;
- Buildings should be human scaled, with a positive relationship to the street (e.g. entries and windows facing onto public streets, and appropriate articulation and signage);
- The impact of parking on the public realm should be minimized by siting parking lots behind buildings or screening elements (walls or landscaping). Buildings should be close to the road so parking can be located on the side or in the rear; and

- Relax roadway level of service (LOS) standards in high-priority transit corridors. In high-demand, high-capacity transit corridors—specifically, the Lines 1 and 2 Rapid alignments identified in the Short-Term Plan, where service is proposed to be upgraded to bus rapid transit—it may be desirable, even necessary, to reduce minimum standards for intersection LOS. There has been some discussion already of site-specific relaxations of the existing City of Bakersfield standard of LOS C related to adjacent transit-oriented developments. If traffic lanes along major arterials such as Chester Avenue and California Avenue were to be set aside for exclusive use by transit vehicles, congestion might result at some locations, exceeding the existing threshold for mitigation. In these cases, mitigation could be pursued, but it might not always be possible or even desirable to implement typical mitigation such as additional turn lanes, as such measures can sometimes impinge on the pedestrian realm or even adjoining properties. In these instances, policymakers would be faced with a decision: accept somewhat higher levels of traffic congestion at these locations or accept less robust transit-priority treatments. It should be noted that minimum roadway level of service standards in many urban areas are LOS D, or less in some cases

Land Use Decisions Outside Kern County

Land use decisions in neighboring jurisdictions can greatly impact Kern's regional transportation system, as is being experienced at the northern end of the San Joaquin Valley. Spillover development from coastal areas will be a primary driver for development in the Kern region. However, the percentage commuting to Los Angeles County from 1990 to 2000 remained unchanged at 3% of the total households in Kern, indicating that the main wave of urbanization has yet to reach this county. Kern COG and the Southern California Association of Governments (SCAG) meet periodically to discuss interregional planning issues such as land use, transportation strategies, and regional housing needs. Recent meetings have been held to discuss the proposed Centennial new town development on Tejon Ranch property south of the Kern County line near Interstate 5 and State Route 138. Kern COG provides modeling on the transportation impacts of this development to the Kern region. In addition, Kern COG has agreements in place with the San Joaquin Valley metropolitan planning organizations and the four-county Eastern Sierra Transportation Planning Partnership.

Proposed Actions

Near Term, 2022–2026

- Encourage land use decisions by member agencies that promote pedestrian, bike, and transit-oriented mixed-use and infill development;
- Continue to review and comment on environmental documents and their identified transportation impacts, recommending pedestrian, bike, and transit-oriented development strategies;
- Promote increased communication with neighboring jurisdictions on interregional land use issues;
- Coordinate regularly with SCAG on interregional land use and transportation planning issues;
- Coordinate with the San Joaquin Valley Metropolitan Planning Organizations on interregional land use and transportation planning issues; and
- Coordinate with the Eastern Sierra Transportation Planning Partnership on interregional land use and transportation planning issues.

Long Term, 2027–2046

- Encourage land use decisions by local government member agencies that promote pedestrian, bike, and transit-oriented mixed-use and infill development;

- Where appropriate, encourage local government agencies to plan for high-density, pedestrian-oriented transit hubs that support the current and planned investment in alternative transportation modes such as bus transit;

- Encourage higher densities by member agencies necessary for the Regional Housing Needs Allocation Plan;

- Promote land use patterns that support current and future investments in bus transit and that may one day support passenger rail alternatives;

- Re-evaluate feasibility of commuter rail alternatives and intermodal connections with implementation of the GET Long-Range Transit Plan and in light of potential high-speed rail service;

- Promote increased communication with neighboring jurisdictions on interregional land use issues;

- Coordinate regularly with SCAG on interregional land use and transportation planning issues;

- Coordinate with the San Joaquin Valley Metropolitan Planning Organizations on interregional land use and transportation planning issues;

- Coordinate with the Eastern Sierra Transportation Planning Partnership on interregional land use and transportation planning issues; and

- Continue coordination activities with the San Luis Obispo and Santa Barbara COGs on interregional land use and transportation planning issues for State Routes 33, 41, 46, 58, and 166.

CHAPTER 6 FINANCING TRANSPORTATION

Regional transportation plans must include a financial element that identifies monetary resources to implement the plan (23 USC 134(h)(2)(B)). This Chapter serves as the Financial Element to fulfill the federal requirement that the 2022 RTP be financially constrained (i.e., budgeted) and provides a cost analysis for implementing the program of projects included in the Strategic Investments (Action Element). It describes the financial situation that will exist between FY 2022 and FY 2046, the implementation period for this 2022 RTP.

FINANCIAL ANALYSIS PROCESS

The Kern Council of Governments (Kern COG) has estimated revenues that are reasonably expected to be available from known federal, state, local, and private sources of transportation funding to implement the proposed projects. Each year, Kern COG is responsible for selecting and prioritizing transportation projects for the allocation of millions of dollars in funding. These responsibilities involve programming federal, state, and local transportation funds, each of which may have different requirements, limitations, and schedules.

Projecting revenues and expenditures over this length of a planning period is difficult at best. The analysis relies partly on historical funding patterns from state and federal sources, though effort has been made to account for new methods of allocating state transportation funds since the passage of Senate Bill 45 (Government Code Chapter 622), effective January 1, 1998. In addition, the year of expenditure must be considered when estimates for capital projects are developed; this is required by the federal surface transportation act.

Even for existing funding sources, understanding and implementing the complex array of local, state, and federal programs is not easy. Some of the programs rely on allocations, others on apportionments, and others are matching programs. Different combinations of apportioned, allocated, or matched dollars from local, state, and federal sources can be applied to one project. Many of the projections included in the 2022 RTP rely on simplified financial assumptions upon which programming assumptions are then based.

The comparison of revenues and expenditures are not an exact budget, but rather a forecast of future financial conditions for the FY 2022-2046 planning period covered by this RTP.

For additional information please refer to Chapter 1.

REVENUE PROJECTION ASSUMPTIONS

The 2022 RTP financial plan identifies forecasted revenues and expenditures approaching $11.5 billion for capital and operations and maintenance, for all modes. Approximately $6.7 billion is identified to support the region's capital transportation investments. About $4.8 billion is designated for operations and maintenance of the current and future system. The plan includes a constrained revenue forecast of local, state, and federal sources that are considered reasonably available over the life-span of the 2022 RTP. Financially constrained projects reflected in Table 5-1 are matched with expected revenue summarized in Table 6-1 and based on revenue streams considered by the region to be reasonably available. Approximately 88% of these revenue streams are based on traditional and past revenue streams, while about 12% are considered reasonably available anticipating future changes to local and regional policies and revisions to state and federal transportation legislation.

Approximately $1.3 billion of the $11.5 billion revenue estimate is based on revenue streams considered reasonably available to regions in the future as a result of: (1) adjustments to state and federal gas tax rates based on historical trends and recommendations from two national commissions (National Surface Transportation Policy and Revenue Study Commission and National Surface Transportation Infrastructure Financing Commission); (2) leveraging of local sales tax measures; (3) potential national freight

program/freight fees; (4) future state bonding programs; (5) mileage-based user fees; and/or (6) other potential new revenue sources such as federal earmarks. A similar conservative assumption was made in prior RTPs with the approval of federal review agencies.

For the Kern region, each of these funding concepts has a varied weight of opportunity; they are all options that have been under discussion by state and federal legislators for many years and are currently considered reasonably available by larger regional agencies in California. While no one item should be considered a silver bullet for a smaller region such as Kern, collectively, and based on a very conservative estimate, Kern considers several to be reasonably available revenue streams during the life of the plan.

The conservative estimate of $1.3 billion is based on a combination of newer financing opportunities coming into play during the life of this plan. As such, these revenue streams are collectively listed in Table 6-1 and included as "Other Revenue" in the Revenue Summary for the financially constrained element of this plan. No one item is selected, since Kern's transportation history is mostly dependent on transportation impact fees, other local bonding, and local, state, and federally legislated transportation bills including earmarks and appropriations. In the past several years, state and federal discretionary transportation funding opportunities have turned to performance-based outcomes for the project selection process. In 2012, the Kern region implemented a project selection policy that supports revenue leveraging and performance-based selection criteria to support livable communities and complete streets concepts. Presented below is justification for Kern's "Other" revenue assumptions.

- Kern COG has updated its project selection policy and guidance document to direct its priorities toward projects that support livable communities and complete streets goals.

- Improvements to the gas tax structure, odometer-based taxes, federal freight-related programs, and other identified programs will collectively serve to develop consistent and sustainable funding streams not currently enjoyed by most regions or states. Reforms in these areas would benefit not only the Kern region but all regions in the state and nation.

- Kern projects constrained by the addition of $1.3 billion focus on the areas of operations and maintenance and expanded services to transit, maintenance of streets and roads, and the further implementation of projects that support livable community concepts and complete streets.

- Regional highway capacity projects in Kern include a serious need for safety improvements to many lane miles of two-lane "conventional" highways that could be much safer with four lanes and shoulders/pedestrian improvements.

- Currently waning funding levels for projects of regional significance would be bolstered by state and federal excise tax reform and afford the opportunity for Kern to deliver identified projects that improve safety and increase mode choices.

- The plan does not recommend the use of future revenue streams to add capacity projects, but Kern COG understands that these projects will require a sustainable revenue stream brought on by state and federal reforms to the gas tax to sustain core assumptions to deliver these projects.

- Kern COG has taken steps to move toward integrating safety priorities of capacity needs with cost-effective operational improvements that cost less but provide safety benefits.

- Ongoing outreach to Kern residents indicates a resounding priority to maintain our streets and roads, improve non-motorized opportunities, improve transit, and keep our highways safe.

The assumptions below represent revenue streams considered reasonably available over the last several transportation acts.

- **National Highway System (NHS) and Surface Transportation Program (STP) dollars** are combined with State Highway Account (SHA) dollars to fund the State Transportation Improvement Program (STIP). Total funding available for STIP is apportioned as county shares. The STIP is then divided into two funding groups: (1) the Regional Improvement Program (RIP), which programs 75% of STIP funding; and (2) the Interregional Improvement Program (IIP), which programs the remaining 25%. Of the IIP funding, only 10% can be used in urban areas; the rest is for rural highway projects and other programs, such as rail.

- **County-share estimates to fund state highway projects** and other projects of regional significance are based on California Department of Transportation (Caltrans) projections of Kern County's share and are projected over a 20-year period. Inflation rates were not applied for revenue projections. The first five years of revenue estimates assumed current Federal Transportation Improvement Program (FTIP) project funding plus an additional $30 million. The second five years assumed a RIP rate of $30 million per year for five years and $10 million per year from the discretionary IIP source. The final 10 years assumed $30 million for RIP and $10 million for IIP per year.

- **Year-of-expenditure project estimates** shown in Tables 5-1 and 5-2 are constrained by reasonably available revenue estimates outlined herein. Year-of-expenditure is defined as the anticipated fiscal year that construction would begin. A statewide annual average of 3% for expected inflation was applied to these estimates.

- The assumption for the **State Highway Operations and Protection Program (SHOPP) funding** projection was to calculate the last five years of SHOPP projects based on the FTIP.

- Safety Program dollars were allocated in four distinct programs: **Highway Bridge Program (HBP), Highway Safety Improvement Program (HSIP), Safe Routes to School (SRS), and Local (Section 130) At-Grade Crossing**. These were averaged over the last five years and extrapolated based on FTIP analysis. No inflation factors were applied.

- For the **Regional Surface Transportation Program**, annual apportionments were averaged and projected over 20 years. Inflation factors were not applied.

- For the **Congestion Mitigation and Air Quality Improvement (CMAQ) Program**, annual apportionments were averaged and projected over 20 years. Inflation factors were not applied.

- The **Bakersfield and Rosamond Transportation Impact Fee programs** are based on residential, commercial, and industrial development but are difficult to predict. For the Rosamond Impact Fee, an average was determined to have been collected over the last several years, while the Bakersfield impact fee was calculated based on the latest fee schedule. Amounts were then projected linearly with growth and inflation factors applied.

- **FTA Funding Section 5307 (Urbanized Area Formula Apportionments for Transit)** was projected using annual inflation and growth factors and past FTIP programming.

- **FTA Funding Section 5309 (New Starts/Major Investments for Transit)** was projected using annual inflation and growth factors and past FTIP programming.

- **FTA Funding Section 5310 (Elderly and Disabled Persons Transit)** was projected using annual inflation and growth factors and past FTIP programming.

- **FTA Funding Section 5311 (Non-Urbanized/Rural Transit Assistance)** was projected using annual inflation and growth factors and past FTIP programming.

- **Local Transportation Fund (LTF)** was projected using annual inflation and growth factors and past FTIP programming.

- **Active Transportation Program (ATP)** The Active Transportation Program is a state program which combines state and federal funding. The federal program is called Transportation Alternatives (TA). While there is an MPO pass-through (formula distribution) for the ATP, a significant amount of the program is discretionary. The projection for this revenue source uses the FTIP average of awarded projects over the last several cycles.

- **Community Development Block Grants (CDBG)** – A small percentage (5%) of improvements from these grants were directed toward normal non-motorized improvements, including bicycle lanes and sidewalks.

- **Tax Credit Incentives** – Also a community development revenue stream, a similar assumption was made as with the CDBG grants, assuming that any new or reconstruction has and would require improvements to roadways and sidewalks contiguous to upgraded or new property construction.

- **SB 1 –** Senate Bill 1, the Road Repair and Accountability Act of 2017, was signed into law on April 28, 2017**.** The newly adopted state gas tax is expected to introduce approximately $500 million or more of new revenue to the Kern region for use on streets and roads maintenance. There are several discretionary components to the newly formed funding program and Kern projects could be advanced as a result of those programs perhaps exceeding the $500 million estimate. SB 1 is a 20-year program.

The assumptions below represent newer goals and policies that the Kern region will rely on to deliver an additional 12% of the program.

- **State and Federal Gas Excise Tax Adjustment to Maintain Historical Purchasing Power** – Additional $0.15 per gallon gasoline tax imposed at the state and federal levels starting in 2017 and continuing to 2024 to maintain purchasing power.

- **Mileage-Based User Fee (or equivalent fuel tax adjustment)** – Mileage-based user fees would be implemented to replace gas taxes—estimated at about $0.05 (in 2011 dollars) per mile starting in 2025 and indexed to maintain purchasing power.

- **Private Equity Participation** – Private equity share as may be applicable for key initiatives (e.g., toll facilities). Freight rail package assumes railroads' share of costs for mainline capacity and intermodal facilities.

- **Freight Fee/National Freight Program** – A national freight program was approved as part of the FAST Act. Federal formula for funding the national freight network was developed for discretionary programs throughout the nation.

- **Bond Proceeds from Local Sales Tax Measures** – Issuance of debt against existing sales tax revenues in Kern County.

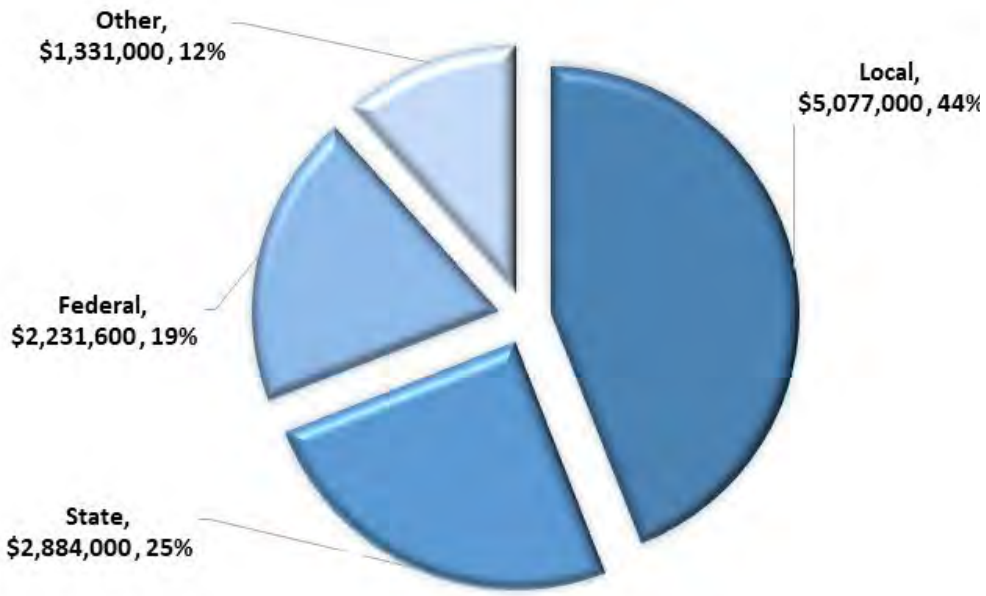
- **E-Commerce Tax** – Although these are existing revenue sources, they generally have not been collected. Potentially, e-commerce tax revenue could be used for transportation purposes, given the relationship between e-commerce and the delivery of goods to California purchasers.

- **State Bond Proceeds, Federal Grants, and Other Financing for California High-Speed Rail Program** – State general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008; federal grants authorized under the American Recovery and Reinvestment Act and High-Speed Intercity Passenger Rail Program; potential use of qualified tax credit bonds; and private sources.

REVENUE SOURCES

Revenues identified in the 2022 RTP financial forecast are those that have been provided for the construction, operation, and maintenance of the current roadway, transit, and airport systems in the Kern region. Baseline revenues include existing local, state, and federal transportation funding sources. As **Figure 6-1** and **Table 6-1** summarize, revenue forecasts for the Kern region are estimated to be approximately $11 billion for the RTP period. Revenue levels identified in Table 6-1 reflect reasonably available funding and include estimates for funding programs used over the last several years.

Figure 6-1: Transportation revenues 2022-2046 ($ x 1,000)



Approximately $4.8 billion of the $11.5 billion in expected revenue is for the operation and maintenance of the countywide transportation system. The remaining $6.7 billion is dedicated to capital improvements for all modes over the 24-year period of this plan.

Local Revenue

Funding from local sources contributes nearly one-half of the revenues to this RTP. Major contributions to local revenue include Local Transportation Funds (10%), bus transit fare box (1.5%), and other local funding such as developer fees and general funds (27%).

One potential source of local funding for Kern County is a transportation impact fee (TIF). Outside Metropolitan Bakersfield, most developments currently do not pay a fair-share impact fee to offset the costs of constructing regional street or highway improvements. The impact fee is designed to collect the difference between the cost of the new roads attributable to new development and the amount of gas tax revenues that the new development will produce for the County or cities to use in road construction. Kern COG has undertaken a series of studies to assess the potential for future TIF programs within unincorporated county areas and small cities. Several small cities have implemented new TIFs, including

Table 6-1: Revenue Forecast 2022-2046 ($ X 1,000)

Table 6-1 Revenue Forecast 2022-2046 ($ X 1,000)								
Funding Source	Total Revenue	Overall Percent	Transit, HOV, Aviation & Other		Roads & Highways		Pedestrian & Bicycle	
			Capital	O & M	Capital	O & M	Capital	O & M
Local Sources								
Cal Vans - Private Funds	$ 192,000	1.67%	$ 48,000	$ 144,000				
Local - General Funds - streets and roads maintenance	$ 400,000	3.47%				$ 320,000		$ 80,000
Local Transportation Funds	$ 1,205,000	10.46%	$ 301,000	$ 904,000				
Bus Farebox	$ 171,000	1.48%		$ 171,000				
Local Agency Funds/Developer Fees/Regional Fees/Other	$ 3,109,000	26.98%	$ 37,000		$ 2,937,275		$ 134,725	
Subtotal	**$ 5,077,000**	**44.06%**						
State Sources								
SB 1	$ 546,000	4.74%		$ 80,000		$ 438,000	$ 28,000	
STIP (Regional and Interregional)	$ 1,125,000	9.76%	$ 140,000		$ 985,000			
State Transit Assistance (STA)	$ 460,000	3.99%	$ 100,000	$ 360,000				
State Highway Operation and Protection Program (SHOPP)	$ 750,000	6.51%				$ 700,000	$ 50,000	
State Aid to Airports	$ 3,000	0.03%	$ 3,000					
Subtotal	**$ 2,884,000**	**25.03%**						
Federal Sources								
Regional Surface Transportation Program	$ 210,000	1.82%				$ 190,000		$ 20,000
Transportation Alternatives Program / Active Transportation Program / Safe Routes to School	$ 37,500	0.33%					$ 37,500	
Congestion Mitigation and Air Quality Program	$ 197,500	1.71%	$ 60,000		$ -	$ 68,750	$ 68,750	
Local Assistance (HES, HBRR, Sec.130, Emergency Relief)	$ 82,000	0.71%				$ 82,000	$ 6	
Federal Aid to Airports	$ 45,000	0.39%	$ 22,500	$ 22,500				
FTA Section 5307 (Transit – metro)	$ 97,500	0.85%	$ 24,375	$ 73,125				
FTA Section 5310 and 5311 (Transit – senior/disabled/rural)	$ 22,500	0.20%	$ 5,625	$ 16,875				
Recovery Act - High Speed Rail	$ 1,500,000	13.02%	$ 1,500,000					
State/Federal Demonstration / Other	$ 39,600	0.34%	$ 9,600		$ -		$ 30,000	
Subtotal	**$ 2,231,600**	**19.37%**	$ 2,251,100	$ 1,771,500	$ 3,922,275	$ 1,798,750	$ 348,981	$ 100,000
Other Sources - Revenue Streams during life of RTP								
May be derived from the following: Cap and Trade Revenue E-Commerce Freight Fee / National Freight Program Future State Bond Proceeds Odometer-based user fee Self-help sales tax State Federal Excise Tax on Fuel	$ 1,331,000	11.55%	$ 95,000	$ 156,000	$ -	$ 700,000	$ 150,000	$ 230,000
Mass Transportation - expansion of transit system	$ 120,000	1.04%	$ 60,000	$ 60,000				
Mass Transportation - Commuter Rail	$ 211,000	1.83%	$ 115,000	$ 96,000				
Highway Safety; Streets and Roads and Maintenance	$ 850,000	7.38%				$ 700,000		$ 150,000
Non-motorized system Countywide Capital & Maintenance	$ 150,000	1.30%					$ 31,000	$ 80,000
Subtotal	**$ 1,331,000**	**11.55%**						
Total	$11,523,600	100.00%	$ 2,346,100	$ 1,927,500	$ 3,922,275	$ 2,498,750	$ 498,981	$ 330,000
Total of Capital Revenue	**$ 6,767,356**	100%	20.4%	16.7%	34.0%	21.7%	4.3%	2.9%
Total of O & M (Operations and Maintenance	**$ 4,756,250**		37.1%		55.7%		7.2%	

Tehachapi, McFarland, Delano, Shafter, and Wasco. The County of Kern has adopted a new TIF for the greater Tehachapi area, and the County will continue to review growing unincorporated areas and develop identical programs when appropriate.

State Revenue

State funding sources constitute about 25% of the total 24-year transportation budget. Most of these monies come from the State Transportation Improvement Program (10%) and the State Highway Operation and Protection Program (7%). State Transit Assistance funds make up 4% while the newly introduced SB 1 funding adds an additional 5%.

In April 2017, Senate Bill 1 the Road Repair and Accountability Act was signed into law. The administration estimates this legislation will increase state revenues for California's transportation system by an average of $5.2 billion annually over the next decade. Kern County is estimated to receive over $546 million over the life of this RTP, a 4% increase in total transportation funding. Two thirds of the funding is slated for road repairs while the rest is focused on transit, freight, bike and pedestrian improvements. The program is primarily funded by a 12-cent per gallon gas tax increase as well as other tax and fee increases; the funding mechanism will bring in less revenue over time. As the state goals to increase low and zero emission vehicles are implemented, the amount of annual revenue from gas tax is anticipated to decrease significantly after the first 20 years. A portion of the SB 1 includes a fee on electric vehicles but only accounts for about 3% of the total revenue from the act. Still, in the near and mid-term of this plan the act provides a much needed source of transportation funding.

Federal Revenue

Approximately 19% of the transportation funds for the 2022 RTP program of projects come from federal funding sources. For purposes of discussion in this document, the STIP and SHOPP programs were considered as state revenue programs; however, their funding is approximately 80% federal highway funds or 40% of the estimated state revenues discussed above. Federal Transit Administration dollars constitute approximately 1% of all RTP funds. These funds are generally used to support transit capital and operating needs. Federal sources also include flexible funding programs such as the Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement (CMAQ) Program, and Transportation Alternatives (TA). In the 2022 RTP, STP, CMAQ, and TA programs total approximately 4% of anticipated funds. The remaining programs are for safety projects and aviation funding.

Federal revenue estimates in **Table 6-1** are consistent with federal fund estimates resulting from the passage of the Fast Act. Project programming of regionally significant projects and revenue estimate information is consistent with the latest four-year STIP fund estimate adopted by the California Transportation Commission (CTC) for use in the development of the 2022 STIP.

Since its enactment, Caltrans has distributed information with regard to annual estimates for use in the programming of new transportation projects. Also included in the table are SAFETEA-LU federal earmarks from Sections 1301, Projects of National and Regional Significance; Section 1302 – National Corridor Infrastructure Improvement Program; and Section 1701 – High Priority Projects Programming, totaling $720 million. These earmarks are considered a one-time revenue opportunity and are not extended throughout the 24-year life of this document.

BASELINE EXPENDITURES

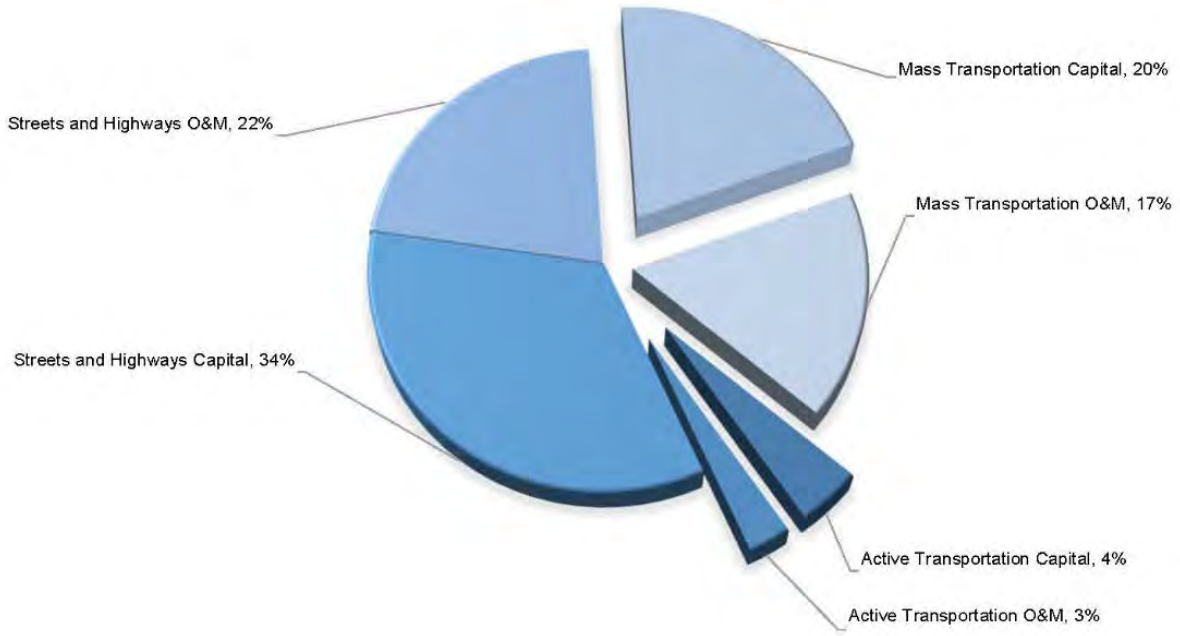
Given the 2022 RTP's baseline cost estimate of $11.5 billion, **Figure 6-2** illustrates the mode split for the region. The data show that about 56% of the region's baseline costs are dedicated to street and highway improvements and maintenance. Thirty seven percent (37%) of expenditures are for transit, HOV and rail capital needs, operations and maintenance. The remaining 7% of RTP expenditures are for transportation improvements including active transportation projects, complete streets, aviation capital improvements and maintenance.

Financial Constraint Demonstration

Kern COG has assembled a comprehensive inventory of the transportation revenue programs currently in use by all governmental entities (federal, state, and local) and has projected these revenues primarily based on historical averages over the life of the RTP. Financial revenue projections are based on the best available data from existing sources (i.e., Federal Highway Administration, Caltrans, Kern COG historical

programming data, member agency information). **Table 5-1** reflects capital projects that are constrained to revenue estimates in **Table 6-1**.

Figure 6-2: Investments by Mode 2022-2046 ($ x 1,000)
2/3rds for Maintenance, Transit & Active Transportation



Funding Shortfall of $36.8 Billion

To further assess the region's financial outlook, baseline revenues were matched against a program of projects that have been divided into two groups: constrained and unconstrained. The Unconstrained Program of Projects (**Table 5-2**) lists projects considered necessary for development of Kern County's transportation infrastructure but for which funding cannot be reasonably expected within the time frame of this RTP. This comparison clearly indicated that the Kern region will experience funding deficits to operate, maintain, and rehabilitate its existing transportation system over the 2022 RTP time frame. While the shortfall is shown in **Figure 6-3** as approximately $36.8 billion, it is actually much greater because some projects do not as yet have actual cost estimates. Such projects as high-speed rail improvements and grade-separation projects (over- and under-crossings) do not have identified funding. Some grade separations have been included as components of street widening projects, while others are stand-alone projects. Costs will vary based on right-of-way purchase in addition to construction costs. A baseline cost estimate on the order of an additional $8 million per project for grade separation projects could be added to the $6.8 billion identified shortfall.

The extensive list of unconstrained projects, including regionally significant highway improvements, interchanges, regional roadway improvements, rail and bus service, railroad grade crossings, transportation control measures, and deferred roadway maintenance, paints a vivid picture of Kern County's need for additional revenue. Funds to support operations and maintenance—whether it be street and highway, bus and rail, or transportation demand management programs—are the most difficult to find. Historically, the Kern region has relied heavily on local monies for these operating funds.

Figure 6-3: Investment Shortfalls

Operating funds for streets and road maintenance have been available traditionally through gas taxes, Transportation Development Act (TDA) funds, and flexible federal transportation funds; however, TDA funds in support of street and road maintenance projects are not expected to continue. With increasingly fuel-efficient vehicles and the rising cost of gasoline, revenues from gas taxes are not expected to increase at more than a nominal rate.

For transit, some relief is available in the form of operating subsidies, which the FAST Act has increased moderately. No alternative funding source has been identified to augment these funds. Thus, the Kern region's shortfall could easily double over the amount of constrained funding.

Future Revenue Shortfalls for Transportation Maintenance and Expansion

Problem: Federal Energy/Environmental Policies Impact Transportation Funding for Maintenance and Expansion – The recent increase of supplemental gas tax funding sources, such as toll roads in Southern California, sales tax measures, and transportation impact fees on new development, may be symptomatic of a much larger issue. Federal transportation, energy, and environmental policies are linked by the use of federal tax law involving motor fuels to advance national objectives. However, these tax policies are often debated and decided on separately, resulting in policies that sometimes contradict goals and objectives in other policy areas.

In 1956, the federal Highway Trust Fund was established to ensure that America would have a "pay-as-you-go" system for funding needed highway and bridge improvements. The principle was: The more you drive or use the roads, the more you pay to build and maintain them. Congress, in its 2004 transportation-funding bill, reaffirmed this principle. However, current public investment in road, bridge, and mass transit improvements financed by highway user fees is not sufficient to maintain the system's physical condition and has left local governments scrambling to find alternative funding sources to fund their transportation infrastructure. Two specific issues exacerbate this funding situation: less tax revenue generated as a result of improved fuel economy and gas tax revenues allocated to promotion of alternative fuels.

Cause: Improved Fuel Economy Reduces Highway Trust Fund Revenue – Since the 1970s, vehicle manufacturers have struggled to meet federal requirements for fuel economy. While improvements to fuel economy allow more travel on the overall transportation system, lower tax revenues generated per mile of travel result in increased wear and tear on the system. From 1970 to 2000, the average vehicle fuel economy (for all cars and trucks) has improved 42% (from 12 miles per gallon (mpg) to 17 mpg). If today's vehicle fleet had remained at 12 mpg, gas tax revenues would be $46 billion higher than the recent rate of $110 billion per year (federal, state, and local). If this trend continues over the next 30 years, the potential loss in gas tax revenue per vehicle mile traveled could drop by a third, furthering problems in maintaining the system. The vehicle manufacturers' commitment toward providing more fuel-efficient gasoline-electric hybrids, the promise of hydrogen fuel cell technology, and increased fuel costs that motivate consumers to purchase these vehicles will likely accelerate this trend. A more fuel-efficient national vehicle fleet is a worthy national policy to reduce dependence on foreign oil, but a mechanism is needed to preserve the nation's transportation infrastructure investment.

Cause: Use of Gas Tax Revenue to Promote Alternative Fuels/Modes – In addition to highway maintenance and expansion, small portions of the gas tax are used for programs like deficit reduction and improved air quality. The Congestion Mitigation and Air Quality Improvement (CMAQ) Program uses 3% of federal gas tax funds to reduce transportation-related emissions in areas that do not attain federal clean air standards. Projects using CMAQ funds are required to demonstrate a reduction in emissions, usually by reducing gasoline/diesel fuel consumption through the use of alternative fuels. Many of the projects result in a reduction in gas sales and subsequent loss of tax revenue. CMAQ is an effective program that provides funds to help clean the air in nonattainment areas and has only a relatively minor impact on gas tax revenue; however, it is one of many instances of federal energy and environmental policies affecting the "pay-as-you-go" policy of the transportation systems.

Possible Solution: Toll-based System and Congestion Pricing

Many revenue mechanisms are being considered to augment the gas tax. They include gas tax increases, sales tax measures, transportation impact fees on new development, and tolls. One system to consider for augmenting or replacing the current flat rate gas tax system has been implemented for trucking in Europe. The Swiss version of the system uses satellite global positioning systems (GPS) technology and tachometer data that is uploaded to the Internet to create a travel log for calculating a toll fee based on where the vehicle has traveled. Alternative transportation funding mechanisms would provide incentives to carry out national policies for cleaning the air and conserving fuel while reducing deterioration of the existing transportation infrastructure and providing increased capacity where needed. A variable toll rate based on weight per tire is an example of an incentive that would promote the reduction of wear and tear on the highway system. With such a variable rate, trucking companies might consider adding more axles to reduce per tire weight (and subsequent road wear) to reduce their toll fees.

With a toll-based system, congestion pricing also becomes an option. Trips in heavily congested areas during peak hours could also be billed a higher toll to fund increased transportation capacity and provide an incentive for drivers to seek alternative modes at these times.

Implementing a toll-based system would have some significant hurdles. The public often views tolls as double taxation; that is, tolls being paid in addition to the gas tax. In addition, toll plazas are not viewed as convenient. However, a toll-based system for trucks could eliminate the passenger vehicle subsidy for maintenance of highways created by truck travel. Eighty percent of the wear and tear on the nation's roads is attributed to heavy trucks while they only account for approximately 20% of the total fuel tax revenue and 8% of the total vehicle miles traveled. Despite this, in Southern California, the trucking industry is advocating incentives such as using the toll funds to build commercial "all-truck" toll facilities. The advantage to the trucking industry is that the lanes could be built to allow heavier loads and longer train sets (triple trailers) that cannot currently operate in California. In the interim, local governments will have to focus more on local funding sources to make up the funding shortfall in the face of ever-increasing vehicle use and congestion.

Possible Solution: Mileage-Based User Fee (or Equivalent Fuel Tax Adjustment)

Another possible solution is mileage-based user fees could be implemented to replace existing gas taxes. Analysis assumed $0.05 (2011 dollars) per mile starting in 2025 and indexed at a rate of 2.5%.

Advancements in technologies enabling greater use of electric or alternative fuel vehicles will continue to impact gas tax revenues. The US Energy Information Agency forecasts that fuel efficiency for all light-duty vehicles will steadily increase, from an average weighted mpg of just over 20 in 2008 to nearly 29 in 2030. The fuel efficiency of freight trucks also is expected to improve, although at a slower rate, from an average weighted mpg of about 6 in 2008 to nearly 7 in 2030. These forecasts assume there is no major paradigm shift in vehicle fuel technology, such as affordable electric cars or hybrid heavy-duty trucks. It also assumes no shift will occur in public policy or public attitudes that encourage people to reduce their long-term travel habits or shift to more efficient vehicles more quickly. Given the growing concern about climate protection and fuel price volatility, however, such changes are likely to compromise the long-term viability of the current fuel tax.

Southern California Association of Governments (SCAG) projections indicate that the total number of vehicle miles traveled in the SCAG region will increase by about 16% by 2035. The National Surface Transportation Infrastructure Financing Commission also predicts an increase in vehicle miles traveled (VMT) nationwide. The Financing Commission evaluated a combination of short- and long-term factors, identifying that short-term motor fuel price volatility combined with a weak economy could have a considerable negative impact. They indicate that despite a recent national decline in VMT, travel growth nationally will resume a trajectory of about 1.5% to 1.8% per year for the foreseeable future due to factors such as population growth, economic growth, and land use patterns. Accordingly, the Financing Commission's findings and recommendations indicate that the most viable approach to efficiently fund investments in transportation in the medium to long run will be a user charge system based more directly on miles driven (and potentially on factors such as time of day, type of road, vehicle weight, and fuel economy) rather than indirectly on fuel consumed. Additionally, the National Surface Transportation Policy and Revenue Study Commission identified consistent findings and recommendations.

Numerous studies in the United States have tested approaches to charging drivers on a use basis - including in Oregon and the Puget Sound region of Washington State. A nationwide survey was conducted by the University of Iowa for the US Department of Transportation that focused on equipment for monitoring travel and methods of billing. The study involved about 2,700 vehicles in 12 locations. Participants were surveyed on their reactions to receiving two types of monthly bills: one providing aggregate data only and the other showing detailed information that included routes of travel. The study included the installation of on-board systems in six regions across the country (San Diego, Baltimore, Austin, Boise, Research Triangle in North Carolina, and eastern Iowa). The aim of the study is to design a prototype road pricing system that is reliable, secure, flexible, user-friendly, and cost-effective and to assess vehicle operators' reactions to the system.

For the SCAG region, revenue from mileage-based fees totals $148.2 billion from FY 2025 to FY 2035. This analysis assumes that mileage-based fees would replace existing state and federal gas taxes. As such, the incremental increase in revenue resulting from the transition to a more direct mileage-based charge system would generate an additional $110.3 billion, from FY 2025 to FY 2035.

- Base Year: FY 2025.
- Data Source: SCAG travel demand forecast for 2014 RTP.
- Real Growth Rate: 0.5% annually. Revenue Total: $110.3 billion (nominal dollars) - estimated incremental revenue only.

From Appendix B: Details about Revenue Sources, SCAG 2012–2035 RTP/SCS, Adopted April 2012

CHAPTER 7 FUTURE LINKS

This Chapter deals with key future trends that may affect the RTP in future cycles. Forecasting for more than 5 years can be problematic and should be updated regularly. The Future Links Chapter discusses some major game changers that need to be watched closely with each update of the RTP including:

- Corridor Preservation
- Needed Unfunded Projects and Financial Mechanisms
- Adaptive Cruise Control/Autonomous Vehicle Technology
- High Speed Rail
- Air Quality Contingencies
- Valleywide Chapter

CORRIDOR PRESERVATION

It is important to identify and preserve transportation corridors needed to expand or enhance transportation for Kern County's future growth. The Kern region's local governments will find it difficult to obtain optimal locations for these corridors unless efforts to preserve them are made early.

The American Association of State Highway and Transportation Officials (AASHTO) Report on corridor preservation states that early efforts provide the following benefits:

- Prevent inconsistent development;
- Minimize or avoid environmental, social, and economic impacts;
- Prevent loss of desirable corridor locations;
- Allow for orderly assessment of impacts;
- Permit orderly project development; and
- Reduce costs.

Ideally, planners and policymakers will begin preparing strategies for preserving corridors now as part of the long-range planning process. Planning prevents losing right-of-way that will become necessary for transportation beyond 2035. The county and cities can adopt a specific plan line to preserve open land in undeveloped and rural areas. More opportunities to capitalize on preservation are available in less urban areas, where local governments have an opportunity to obtain available land for new transportation facilities.

The first step to identify potential long-range corridors and determine that a need exists to preserve them is in the development of the General Plan's circulation element. Usually prepared as part of an environmental document, a transportation study using traffic modeling as appropriate can be performed on the ultimate buildout of a General Plan's land use element. The study would determine the need and size of the facility that would be identified in the circulation element. The process can be performed for vehicle, transit, bike, and pedestrian facilities, as well.

On state highways, a project initiation document is developed for major projects. The next step often is to preserve the right-of-way for the transportation corridor using a specific plan line adoption by the local governments involved. An environmental document and funding component is developed at that time.

The following High Emphasis Interregional Routes are identified by Kern Council of Governments (Kern COG) and the California Department of Transportation (Caltrans) as high priority corridors. These corridors are also identified as future circulation needs in the respective city or county General Plan circulation elements.

Table 7-1: High Emphasis Interregional Routes

Post-2042 Long-Range Corridors	
Corridor	**Source**
Transit/Passenger Rail Corridors	
Bus Transit Link to Mammoth/Reno	Eastern Sierra Planning Partnership
Palmdale/Rosamond/Edwards AFB Commuter Rail	2012 Commuter Rail Study
Wasco/Bakersfield/SW Bakersfield Commuter Rail	2012 Commuter Rail Study
Delano/Bakersfield/Arvin Commuter Rail	2012 Commuter Rail Study
California High-Speed Train Los Angeles to SFO Bay Area	CAHSR Authority 2012 Revised Business Plan
Intermodal Corridors	
SR 58 Centennial Corridor/Westside Parkway (SR99 to I-5 New Freeway Alignment)	City of Bakersfield; Kern County; Kern COG; Caltrans
Seventh Standard Road/North-West Intermodal Corridors	City of Bakersfield; City of Shafter; Kern County; Kern COG
West Trade Corridor	City of Bakersfield, City of Shafter; Kern County; Kern COG
UP/BNSF Rail Corridor (Bakersfield to Tehachapi) Route 58 (Bakersfield to Tehachapi)	Caltrans; Kern COG
Route 46 Highway to Expressway Conversion (Countyline to Famoso)	Kern County; City of Wasco; Caltrans; Kern COG
Kern County Trade Corridors	
South Trade Corridor	City of Bakersfield; Kern County; Kern COG
South Arvin-Taft Corridor	Kern County; City of Arvin; City of Taft; Kern COG
Rural Truck Network	Kern County; City of Shafter; Kern COG
East Trade Corridor	City of Bakersfield; Kern County; Kern COG; City of Bakersfield; Kern County; Kern COG

NEEDED UNFUNDED PROJECTS AND FUNDING MECHANISMS

Under current federal surface transportation legislation, regional transportation plans must demonstrate all proposed projects are capable of being fully funded within the RTP's time frame. This requirement has constrained regions to spotlight and prioritize high performing, cost-effective projects. This approach enables the Kern region to focus on immediate transportation priorities.

Beyond the RTP horizon year of 2046, an estimated $36.9 billion in unmet transportation needs within the Kern region for capital improvements, operation, and maintenance remain unfunded because of lack of federal, state, and local monies. Over half, $20 billion, is unfunded high speed rail construction in the Kern region. Kern COG, in cooperation and coordination with its stakeholders, maintains a list of capital projects that are financially unconstrained (see Table 5-2). Conceivably, as the future funding picture changes, some of these projects could be advanced to constrained status in future RTP updates.

Kern County is forecasted to continue experiencing growth, which will add more traffic and tax the capacities of the street and highway system. In an effort to expand needed transportation facilities before traffic congestion causes the road system to fail, Kern COG has proposed that the cities and County of Kern implement a transportation impact fee (TIF) to pay for needed transportation facility improvements. Kern COG is developing a series of sub-regional traffic impact fee studies throughout the county. At this time, Metropolitan Bakersfield, Wasco, Shafter, Delano, McFarland, Tehachapi, greater Tehachapi, and Rosamond (unincorporated) have adopted TIFs. Other communities that may have some type of additional traffic impact fee now include Ridgecrest, Arvin, California City and Maricopa. The challenge for smaller communities is that growth patterns may not support regionally significant improvements on the state highway system. All communities require developer funded traffic mitigation as part of their approval process.

Adopting a new transportation impact fee will require working closely with both the local development community and the Kern community at large to gain acceptance to fund needed rights-of-way and widening improvements to transportation facilities that are deemed deficient. Kern COG is also studying an impact fee on new warehousing in the region to support regional improvements through the Kern Area Regional Goods Movement Operations (KARGO) Sustainability Study.

Issuance of bonds to finance and deliver projects more rapidly is a common practice. Under a Federal Highway Administration program, GARVEE Bonds are being considered for some of the larger corridor projects within the Kern region. The minimum needed for GARVEE Bond projects is such that only the largest corridor projects would be eligible.

ADAPTIVE CRUISE CONTROL AND AUTONOMOUS VEHICLE TECHNOLOGY

Adaptive Cruise Control (ACC) vehicle technology may extend the life of the transportation system. The technology automatically adjusts the vehicle's speed, breaking and steering to keep a safe distance from the vehicle ahead. If 40% of the vehicles on the road have this autonomous level 3-4 technology, throughput could double, delaying the need to add lanes to existing facilities, as well as reducing emissions at traffic signals by more than 33%[1]. The technology still has numerous human factor issues that need to be resolved before the technology can be implemented successfully. Cooperative ACC (CACC) uses both the forward-ranging sensors of ACC and vehicle-to-vehicle (V2V) communication allowing for the cooperative movement of vehicles, assisting with vehicle merging and platooning. CACC use in heavy duty trucks is expected to lead to truck platooning to improve efficiency, resulting in safety improvements and lower cost per mile for truck fleets, spurring adoption. As ACC, CACC and the supporting technologies continue to emerge, policies and investments by federal, state, and local transportation agencies will continue to evolve as well.

In 2021, there are 23 car models in the market at level 2, semi-automated systems for steering, speed and/or braking

ACC and associated technologies are expected to progress toward full Automated Driving Systems (ADS) beyond 2025, when advances to fully automated safety features and highway autopilot are expected. Ultimately ADS will be able to handle the whole task of driving when desirable. Released in 2017, the U.S. Department of Transportation National Highway Traffic Administration stated, "automated vehicle technologies possess the potential to save thousands of Automated Driving Systems technology effectiveness increases when integrated with infrastructure technology. Road system

[1] Federal Highways Administration, Cooperative Adaptive Cruise Control: Human Factors Analysis 2013. https://www.fhwa.dot.gov/publications/research/safety/13045/13045.pdf , pp. 5-6.

technologies such as intersection controls are considered necessary to reap the full benefits of ADS. lives, as well as reduce congestion, enhance mobility, and improve productivity."[2]

Of the five levels of ADS in 2021, level 1, cruise control, is available on nearly all models. In 2021, there are 23 car models in the market at level 2, semi-automated systems for steering, speed and/or braking. One level 3, from Volkswagen Group, that has released "Traffic Jam Assist" in Europe that allows fully autonomous driving at speeds under 37 mph.[3] As the price goes down and the technology demonstrates acceptance, regions will need to update the highway capacities in the regional travel models. It is important to note that the Kern travel model uses a congestion feedback loop that accounts for latent demand caused when throughput capacity is increased. Corridors that are congested today may not see complete elimination of congestion if capacity were to double. For example, peak period weekend and holiday travel to southern California will likely continue to see congestion even if capacity were doubled. High volume alternative modes such as passenger rail, transit and air service are anticipated to still be needed to handle travel demands during peak periods and holidays.

HIGH-SPEED RAIL

The California High-Speed Rail Authority (CHSRA) is statutorily required to adopt a Business Plan every two years. The most recent, as of the writing of this document, is the 2020 Business Plan. With the passage of Senate Bill (SB) 862, the Legislature and Governor approved an annual appropriation of 25% of the annual Cap and Trade proceeds on a continuous basis to fund high-speed rail. The 2020 Business Plan focuses on achieving the following:

- Complete environment documents on 291 miles of the nearly 500 miles from San Francisco to Los Angeles;
- Deliver needed right-of-way parcels to the contractors to advance construction;
- Complete all critical land right conveyances, and execute the remaining third-party agreements;
- Construction will be substantially complete or underway on 83 of the 93 structures (90 percent) and 106 of 119 miles of guideway (90 percent);
- Construction Package 1: Clear remaining utility conflicts to allow existing construction to advance and move forward on the remaining 19 structures necessary to complete guideway construction; install Union Pacific Railroad bypass tracks at three major locations to allow heavy construction work along the alignment in Fresno at Ventura and Tulare Streets, the Fresno Trench and Herndon Avenue; increase daily on-site construction workers to 500;
- Construction Package 2-3: Complete nearly half (31 miles) of total guideway construction and clear the remainder for construction advancement without further delay; complete 17 structures and have all remaining structures under construction; increase daily on-site construction workers to 900;
- Construction Package 4: Increase daily on-site construction workers to 250 and complete all outstanding right of way and pre-construction to allow for unimpeded progress towards completion. This segment will be ready for track and systems work to begin in 2022; and
- Award the Track and Systems Contract and begin design to start construction in 2022.
- Lays out an approach to sequencing the Phase 1 system that will ultimately connect the San Francisco Bay Area to Los Angeles Basin via the Central Valley;

[2] U.S. Dept. of Transportation, National Highway Transportation Safety Administration. Automated Driving Systems 2.0: A Vision for Safety. 2017 https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf

[3] Autopilot Review. Cars with Autopilot in 2021. 2021 https://www.autopilotreview.com/cars-with-autopilot-self-driving/

- Describes the plan to deliver high-speed rail service connecting the Silicon Valley to the Central Valley, and offer high-speed rail passenger service between these two important economic regions within the next ten years;

- Provides a clear path for making concurrent investments in concert with regional partners and delivering early, tangible mobility and safety benefits in southern California, while building a solid foundation for the critically important passenger rail corridor that links Burbank, Los Angeles, and Anaheim;

- Commits to completing environmental clearance, and selecting alignments and station locations for the remaining sections to position the entire system to be ready for immediate construction as funds become available; and

- Provides updated capital cost estimates, showing that the projected cost of the entire system has been revised downward by $5.5 billion. This lower cost estimate comes about mainly through value engineering efforts, better operational and technical approaches to design, and a favorable bidding environment.

The overall Phase 1 cost estimate for the same scope of work described in the 2018 Business Plan is , up to $69,078 billion as a low estimate and $99,881 billion as a high estimate. To drive down initial operating costs, the Authority, working with the early train operator, has suggested beginning the Phase 1 service with a single-track service to further reduce initial capital costs. Reducing tracks and other related cost reduction strategies have reduced the low estimated costs by 10.6% and the high estimated cost by 2% (as compared to the 2018 Business Plan).

With the goal of getting a high-speed passenger rail line into operations as quickly as possible, the CHSRA evaluated how best to sequence the program. Analysis shows that the line that can be funded and built within projected sources, and initiate revenue producing operations quickly, connects the Silicon Valley (San Jose) to the Central Valley north of Bakersfield.

The CHSRA ha also adopted a goal of completing a connection between the City of Merced and San Jose as part of the initial Silicon Valley to Central Valley line. Connecting the cities of the northern San Joaquin Valley will create economic opportunities for residents of the Valley, alleviate the jobs-housing imbalance in the Bay Area that has created 2 to 3 hour commute trips, and at the same time relieve air quality concerns from vehicle miles traveled (VMT) by cars and light duty trucks.

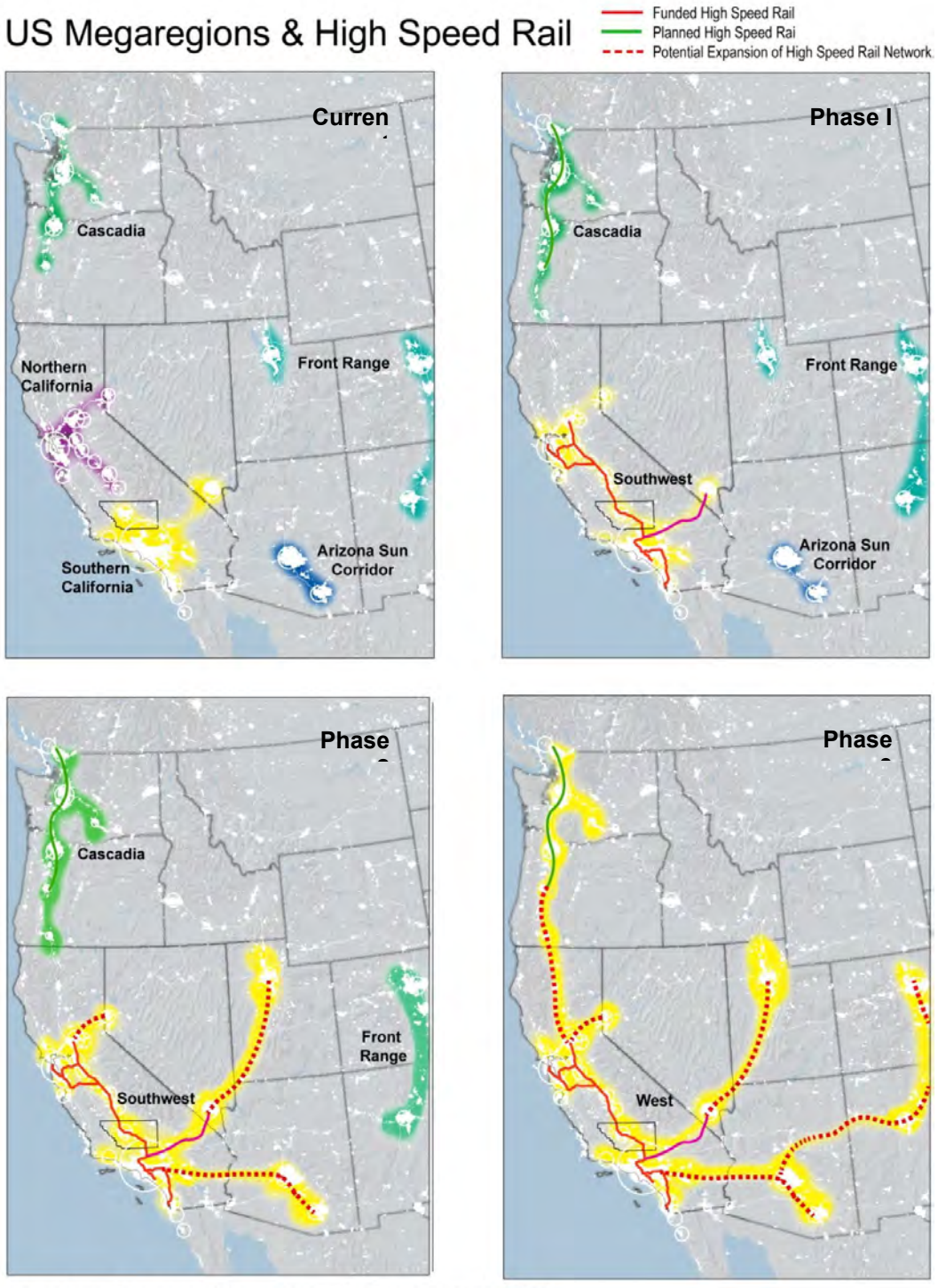
Table 7-2 shows the ridership forecast for the high-speed rail on Phase 1 of the Silicon Valley to Central Valley Line from 2033 to 2060. Figure 7-1 illustrates the future potential that HSR has in coalescing emerging megaregions. Megaregions are large-scale economic units of multiple large cities and their surrounding areas. The Regional Plan Association (www.america2050.org) has identified emerging megaregions in North America, with California currently depicted as having two separate megaregions: northern and southern. Kern County is assigned to southern California, the largest and fastest growing megaregion in the United States with over half of the west Coast's population. As HSR segments are completed, travel times between the megaregions will decrease, increasing the economic links allowing them to coalesce into a single market area, expanding economic opportunities. A 2-hour, 37-minute train ride between northern and southern California will allow businesses

Table 7-2 High-Speed Rail Ridership Forecast (in millions/year)

Ridership Level	**2033**	**2034**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**
High Ridership	17.9	36.4	41.9	50.0	52.6	55.2	58.1	61.0
Medium Ridership	12.8	27.8	32.0	38.6	40.5	42.6	44.8	47.1
Low Ridership	10.3	21.3	24.5	29.3	30.8	32.3	34.0	35.7

to have one office in both regions. Kern County, located at the center of the emerging southwest megaregion, stands to benefit significantly from high-speed rail because of its location at the center of the system.

Figure 7-1 – Connecting West U.S. Megaregions with High Speed Rail Phases



*Adapted from *The Emerging Megaregions* 2008 by Regional Plan Association

Experience in implementing HSR in other countries has found that HSR competes best at 200 to 300 mile distances. Shorter than that and automobile travel is more competitive, longer than that and airline travel is more competitive. Megaregions in the west are conveniently spaced about 300 miles apart, driving expansion of the system to connect to the largest megaregion (southern California). Other countries have also found that opening day ridership exceeded forecasts in every instance.

Terminal Impact Analysis

The City of Bakersfield, in partnership with and funding from the CHSRA, has completed a High-Speed Rail Station Area Plan (Plan) for downtown Bakersfield. The study area includes the approximate boundaries of the Kern River and 38th Street to the north, California Avenue to the south, Union Avenue to the east, and F Street to the west.

During the Station Area planning process, the City identified and analyzed opportunities and challenges in order to develop an urban design, multi-modal (pedestrian, bicycle, automobile, transit) transportation, and economic development strategy that optimizes future growth in downtown. It also addressed jobs, housing, retail, entertainment, art, cultural amenities, pedestrian and bicycle access, parking, streetscape improvements, lighting, wayfinding, open space and recreation, and sustainability.

The Plan will serves as a vision document that guides the future development of the HSR station area and greater downtown Bakersfield. The vision plan is used to pursue and leverage public and private sector funding for implementation actions, as well as create a baseline document for future planning efforts.

The downtown Bakersfield High-Speed Rail Station Area Plan, will act as a vision document that will:

1. Increase population and economic density in the urban core;
2. Support residential and commercial activity;
3. Develop under-utilized or vacant properties;
4. Connect existing activity and cultural centers;
5. Create an efficient, reliable and effective multi-modal transportation system;
6. Enhance sustainability, livability and a unique sense of place; and
7. Secure funding for identified implementation actions.

Amtrak, Golden Empire Transit, Kern Transit and Greyhound have existing facilities in the Plan area.

Potential Commuter Rail Feeder System

The State of California has invested $393 million in track and signal improvements to the San Joaquin Valley BNSF line, in exchange for permission to run six passenger trains per day. These existing slots could be used for a commuter rail service to connect the proposed High-Speed Rail Heavy Maintenance Facility with the Bakersfield High-Speed Rail Station. If 10% of the Heavy Maintenance Facility employees use the commuter service, that would provide 150 regular riders per shift. The Wasco/Metro Bakersfield commuter

rail corridor will have one million residents by 2035 and would provide a feeder rail service that could increase ridership and profitability of the high-speed rail system. Future expansion of the system to east Bakersfield, Lamont, and Arvin, as well as to Meadows Field Airport, McFarland, and Delano, was suggested in the 1997 Major Transportation Investment Study and the 2012 Kern Commuter Rail Study.

Heavy Maintenance Facility

The California High-Speed Rail Authority (Authority) issued a Request for Expression of Interest (RFEI) identifying potential sites for planned Heavy Maintenance Facilities (HMF) in January 2010. The Authority specified in the RFEI that a HMF site be located in the Central Valley along the proposed route between Merced and Bakersfield. The site would require approximately 154 acres, building footprints would encompass 631,000 to 840,000 sq. ft., and up to 1,500 employees would be needed during peak shifts.

Kern COG on behalf of the County of Kern, cities of Wasco and Shafter submitted proposals for a HMF site in Wasco south of Hwy 46 and east of the existing BNSF tracks, and two sites in Shafter north of Seventh Standard Road on both the east and west sides of the BNSF tracks. The proposed sites in Kern were recommended for continued study in the Authority's Fresno-Bakersfield Section Supplemental Alternative Analysis (May 2011), and carried forward in the Revised Fresno to Bakersfield Section EIR-EIS (November 2013). There were over ten proposals originally accepted by the Authority. Three of the five proposed sites being carried forward are located in Kern County. One of these sites is proposed to be provided to the project at no cost. The Authority has since identified an interim HMF location at the site South of Fresno.

The location of the HMF could become the center for a new industry cluster related to passenger rail manufacturing that could see rail related industries relocate to that facility providing benefits well beyond the 1,500 jobs needed to operate the HMF and the HSR system.

AIR QUALITY CONTINGENCIES

Air quality uncertainties could play a critical role in future funding linkages. In areas such as the San Joaquin Valley that may fail to attain federal clean air standards by the mandated deadlines, the federal Clean Air Act Amendments of 1990 (CAAA) can require withholding funding for capacity-increasing transportation projects, including projects funded from non-federal sources. In the San Joaquin Valley, up to $2 billion in transportation funds could be at stake. A variety of mechanisms in the CAAA can require withholding transportation funds, including highway sanctions, conformity lapses, and conformity freezes.[4] Should one of these occur, Kern COG may be required to amend its TIP and RTP to fund additional projects that are proven to reduce emissions and/or improve safety. With federal highway sanctions, the US Environmental Protection Agency would prepare a Federal Implementation Plan (FIP) that would reprogram TIP funding to projects that improve air quality and allow the region to demonstrate attainment of federal clean air standards.

Transit improvements, intermodal freight facilities, transportation-related air quality control measures, and safety projects can be exempt from federal highway sanctions, lapses, and freezes. It is prudent to consider studying these types of projects as funding becomes available, to provide local policymakers with a complete range of options should funding interruptions become imminent. Many of these project types are already funded through a mix of resources. Every effort is made to attain federal standards by identifying and implementing cost-effective methods that reduce transportation-related emissions from single-occupant vehicles.

[4] Highway sanctions, conformity lapses, and conformity freezes are mechanisms in the federal Clean Air Act Amendments of 1990 that are triggered when a region fails to demonstrate attainment of federal clean air standards by required deadlines.

VALLEYWIDE CHAPTER

Included as Appendix F, the San Joaquin Valley Regional Overview provides an interregional perspective for transportation planning throughout the San Joaquin Valley. It presents an overview of cross-jurisdictional issues facing the eight related counties and regional transportation planning agencies within Central California.

CHAPTER 8 MONITORING PROGRESS

As the designated Metropolitan Planning Organization (MPO) for the Kern region, Kern Council of Governments (Kern COG) monitors transportation plans, projects, and programs for consistency with regional plans. Kern COG also monitors the performance of the transportation system. This performance monitoring is especially important to inform the planning process for future Regional Transportation Plans (RTPs). Regional transportation problems cannot be solved until they are identified and measured.

Kern COG is required to prepare the RTP using performance-based measures that allow public officials to better analyze transportation options and trade-offs. By examining performance of the existing system over time, the MPO can monitor trends and identify regional transportation needs that may be considered in the RTP. Performance measurement helps to clarify the link between transportation decisions and eventual outcomes, thereby improving discussion of planning options and communication with the public. This may also help determine which improvements provide the best means for maximizing the system's performance within cost and other constraints.

Kern COG has developed performance measures (see Chapter 2, Transportation Planning Policies (Policy Element)) for the regional transportation system. In addition, new tools are being developed that will help Kern COG to monitor system performance over time. The Freeway Performance Measurement System (PeMS), developed by UC Berkeley in cooperation with the California Department of Transportation (Caltrans), has the ability to measure and track freeway speeds, delay, and reliability for the regional freeway system.

Transportation planning for the Kern region requires continually improved information on the condition and use of the transportation system. Special reports are prepared periodically by Kern COG to demonstrate highway infrastructure conditions and to monitor the Kern region's overall traffic movement. The Highway Performance Monitoring System (HPMS) is a federally mandated program designed by the Federal Highway Administration (FHWA) to assess the performance of the nation's highway system. Also, under the Clean Air Act Amendments of 1990, Kern COG and its member agencies are required to report periodically on vehicle miles traveled in each air basin to determine whether traffic growth is consistent with the projections on which the State Implementation Plans (SIPs) are based.

The following sections outline several significant tools used by Kern COG to monitor regional progress in advancing the 2022 RTP goals.

FEDERAL TRANSPORTATION IMPROVEMENT PROGRAM (FTIP)

As the designated MPO, Kern COG is charged with developing and maintaining the FTIP. The FTIP is a financially constrained (i.e., budgeted) multimodal transportation planning program, developed by the MPO through its member agencies and in cooperation with state and federal agencies. The basic premise of a FTIP is that it is the incremental implementation of the long-range RTP. The FTIP presents federal funding agencies with manageable components for funding long-range plans.

The FTIP is a compilation of project lists from the State Transportation Improvement Program (STIP), State Highway Operations and Protection Program (SHOPP), and other federal-aid programs. The FTIP is composed of two parts: (1) a priority list of projects and project segments to be carried out in a four-year period; and (2) a financial plan that demonstrates how the FTIP can be implemented. The financial plan is also required to indicate all public and private resources and financing techniques that are expected to carry out the program.

REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM (RTIP)

Every odd-numbered year, Kern COG prepares a Regional Transportation Improvement Program (RTIP), the short-term implementation tool for transportation goals described in this 2022 RTP.

The RTIP provides a listing of projects proposed for implementation within the Kern region during its four-year period. Transportation projects are described in detail, with funding allocated by source and fiscal year. RTIP projects are categorized according to the transportation system to which they apply, i.e., state highways, local highways/expressways, or local streets and roads. Although eligible, transit projects are not included in the RTIP, they are funded by other federal aid programs and included in the FTIP.

During each RTIP development cycle, Kern COG provides member agencies with adopted RTIP Policies and Procedures in order that Caltrans, as well as local agencies, can initiate project delivery. The policies and procedures manual defines the prioritized project candidates, which are then incorporated as the RTP's Capital Improvement Program (CIP) (see Chapter 5, Strategic Investments, Tables 5-1 and 5-2). Only after projects are included in the CIP can they then be funded and advanced as part of the RTIP.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DATABASE MANAGEMENT

Kern COG maintains its own database in order to track project status. TIP data for the Kern region is entered directly into the California Transportation Improvement Program System (CTIPS), which allows an efficient and accurate record of current programming needs. The monitoring process compares project needs with current programming as it advances. When the need arises to modify a project, or when delays are anticipated, Kern COG can recommend amendments to CTIPS.

The 2012 update to the Kern COG policy for the project selection process incorporates additional growth management and SB 375 SCS framework concepts into the project selection process.

For more information refer to Chapter 4 Sustainable Communities Strategy.

AIR QUALITY CONFORMITY MONITORING

Before federal approval of the RTP and FTIP, the federal Clean Air Act Amendments of 1990 require Kern COG to make a finding of the documents' conformity with the State Implementation Plan's air quality goals as established by the responsible air district. The Conformity Analysis for the 2022 RTP and FTIP are hereby included by reference; the relevant resolution adopting the 2022 RTP will be included in the final document. This analysis demonstrates that the criteria specified in the federal transportation conformity determination rules are satisfied by the FTIP and RTP.

Air quality conformity analysis for each pollutant was conducted for those years required by federal regulations. All analyses were conducted using the latest planning assumptions and emissions models as documented in the Conformity Analysis. The Conformity Analysis covers the planning areas illustrated on Figures 8-1 and 8-2. The local air districts monitor air quality levels in these planning areas with an extensive monitoring network. Recently, the San Joaquin Valley Air District has performed a saturation monitoring study around the Arvin monitoring site, employing 20 temporary air monitors for one season. The study was so successful that the air district is considering similar studies around all of its permanent air monitoring locations. The two air districts in Kern County are shown on Figure 8-3.

Figure 8-1: Ozone and CO Planning Areas

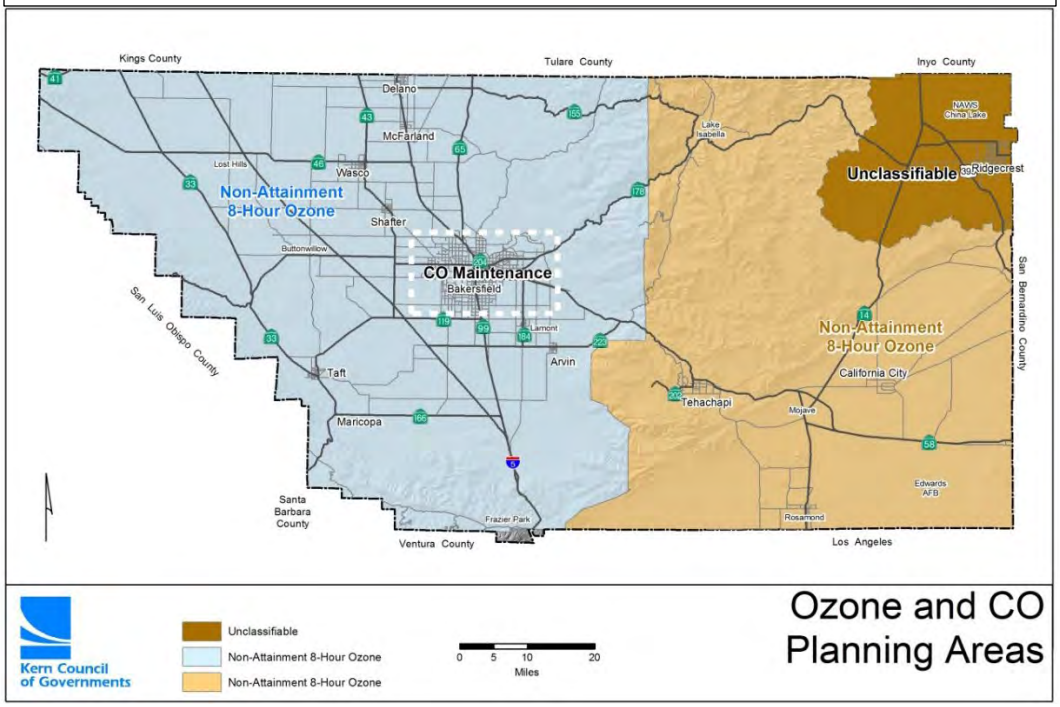


Figure 8-2: Particulate Matter Planning Areas

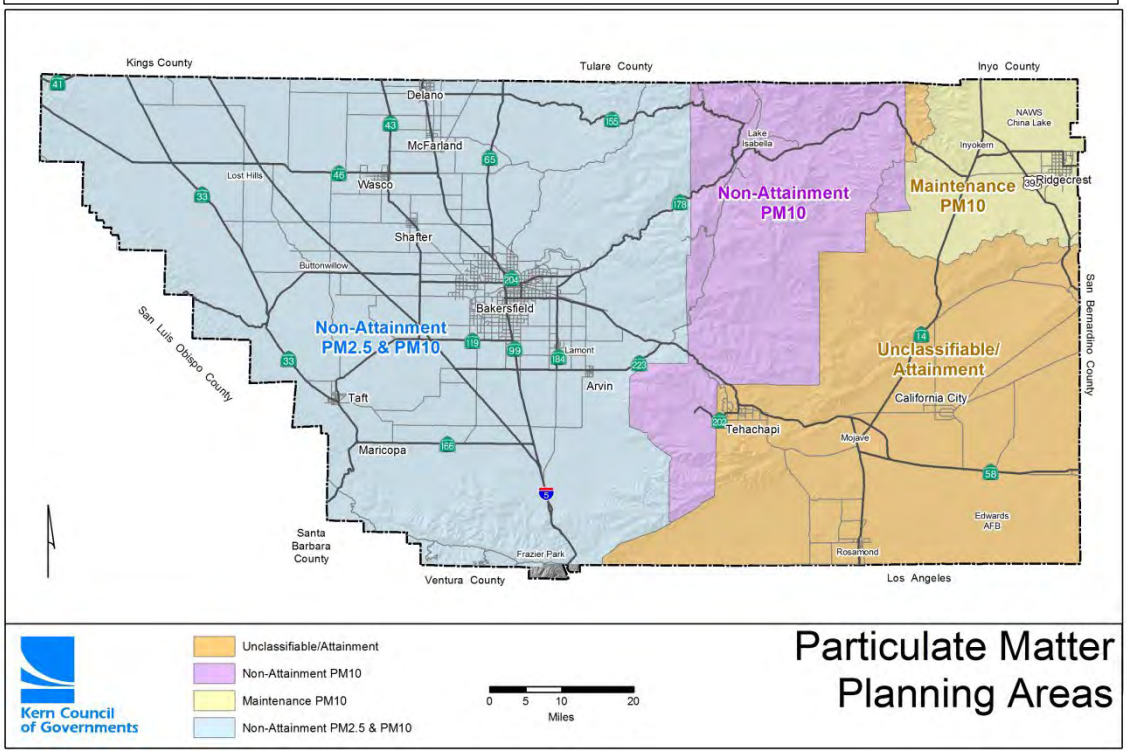
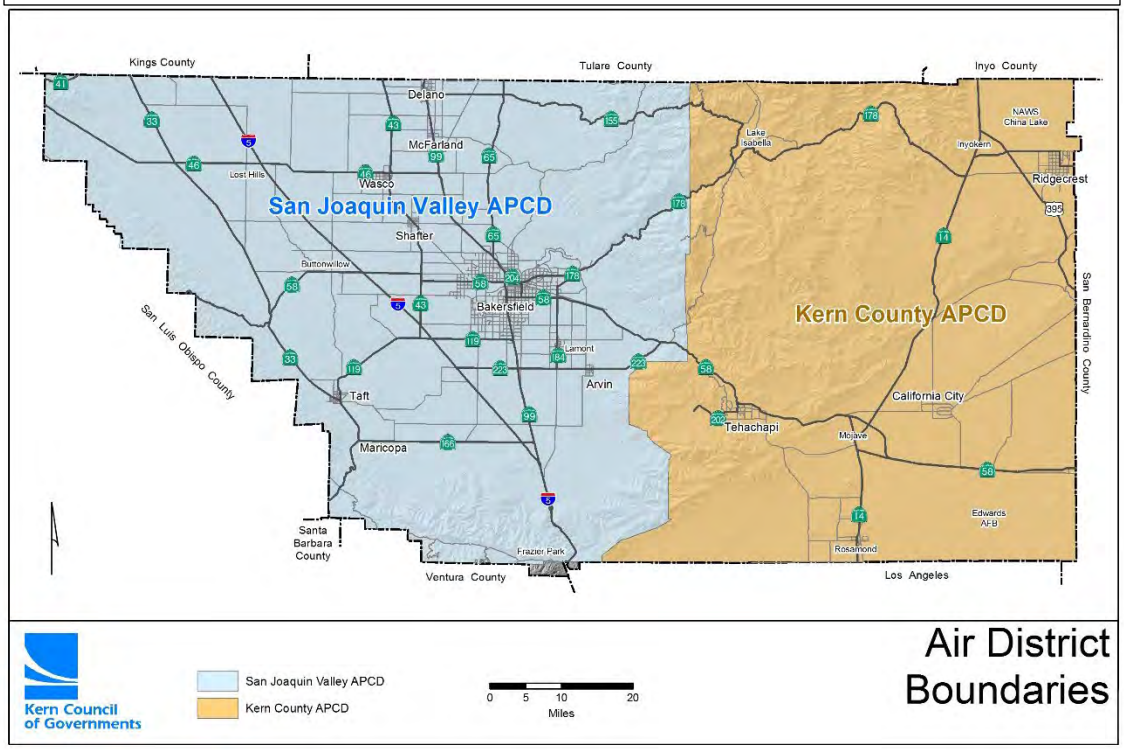


Figure 8-3: Air Pollution Control Districts that Monitor Air Quality



CALIFORNIA CLEAN AIR ACT TRANSPORTATION PERFORMANCE STANDARDS

The California Clean Air Act provides the basis for air quality planning and regulation independent of federal regulations. The act specifically requires that local air districts in violation of the California Ambient Air Quality Standards prepare attainment plans. The plans must identify air quality problems, causes, trends and actions to be taken to attain and maintain California's air quality standards by the earliest practicable date. Implementation of Transportation Control Measures (TCMs) in the 2022 RTP help to further progress toward attainment of these standards and require that they continue and expand even after all federal standards are met.

See Chapter 5, Strategic Investments, Transportation Control Measures Action Element for further information on TCMs.

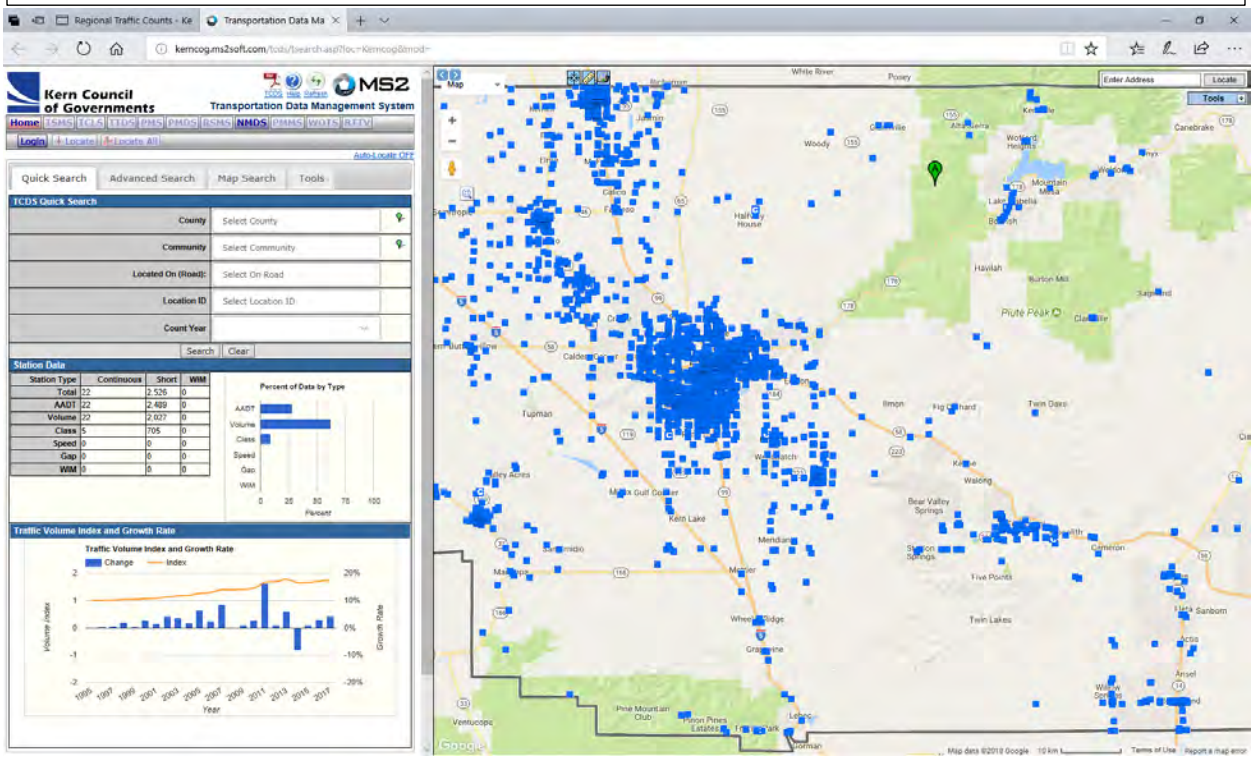
HIGHWAY PERFORMANCE MONITORING SYSTEM (HPMS) AND REGIONAL TRAFFIC COUNT PROGRAM

The HPMS is used as a transportation monitoring and management tool to determine the allocation of federal aid funds, to assist in setting policies, and to forecast future transportation needs as it analyzes the transportation system's length, condition, and performance. Additionally, the HPMS provides data to the US Environmental Protection Agency (EPA) to assist in monitoring air quality conformity and to support the *Biennial Report to Congress on the Status of the Nation's Highways.*

In California, the HPMS program is implemented annually by Caltrans. Kern COG's responsibility is to assist Caltrans in collecting data from local jurisdictions. Kern COG's responsibility also includes distribution, collection and administration of all HPMS survey packages in the Kern region.

To facilitate the HPMS program locally, Kern COG has developed an extensive regional traffic monitoring program accessible via an online map interface providing access to over 1000 count locations (Figure 8-4). The program provides regular traffic counts and Bicycle/Pedestrian counts across all jurisdictions in the region. The collected data assists in setting policies, forecasting future transportation needs, and monitoring air quality conformity. In addition to traffic counts, Kern COG is partner in the National and State Household Travel Surveys, with responses from over 2000 households in the region, and has performed truck origin and destination surveys garnering input from over 20,000 truckers.

Figure 8-4: Regional Traffic Count Program Locations



REGIONAL TRAVEL DEMAND MODEL

Kern COG maintains a regional travel demand forecast model for the Kern region consistent with the California Transportation Commission 2017 RTP Guidelines for type D regions with a population over 200,000 that are nonattainment for ozone. The model is used to forecast the demand for future transportation infrastructure by predicting future travel patterns based on such factors as locally approved General Plan land use entitlements, input from local planning departments on socioeconomic growth areas, and state and federal data sources. Some of the forecast input variables include observed and forecasted population, households, employment, school enrollment, income, traffic counts, speeds, intersection configuration, household travel characteristics, existing and planned transportation networks, etc. The model's accuracy is measured by how well it replicates the observed data. These variables are maintained for approximately 2,000 transportation analysis zones covering the 8,200-square-mile Kern region. The model underwent a major update in 2017 called the Valley Model Improvement Program 2 (VMIP2), standardizing the eight COG models in the San Joaquin Valley. Considered a modified 4-step mode choice model, the model includes a congestion feedback loop along with new improvements that make the model more sensitive to trips by housing type and vehicle availability. The 2017 model was calibrated and validated to observed data by DKS Associates under the supervision of a registered civil engineer. Full model documentation is available online at http://www.kerncog.org/category/data-center/transportation-modeling/. In 2021, the model was revalidated to 2020 observed data but is essentially the same model.

One of the primary purposes of the model is to demonstrate conformity with the federal Clean Air Act amendments of 1990 requiring substantial reductions from all pollution sources, including transportation-related mobile source emissions. Travel Demand Forecast Modeling is also used in the RTP/TIP processes, Congestion Management Program (CMP), Sustainable Communities Strategy and numerous environmental documents for locally identified projects. The CMP process provides important monitoring of any change in congested roadways in the region and the VMT tracking program also uses the model to provide communities feedback on progress toward implementing SB 375 goals. Kern COG's Regional Transportation Model provides a savings to its member agencies by avoiding duplicate, overlapping, and potentially conflicting transportation forecasts. Furthermore, the model is updated every 4 years, providing new results based on the latest observed information.

Kern COG has an open process for review and use of the travel model. This was exhibited during prior RTP cycles where Kern COG made available copies of the model to stakeholder groups. Oversight for the model is provided by the Kern Regional Transportation Modeling Committee, a sub-committee of the Regional Planning Advisory Committee made up of local government representatives and stakeholders which operates under a Memorandum of Understanding (MOU) signed by the City of Bakersfield, Caltrans District 6, the County of Kern, and Kern COG. Kern COG has adopted the following policies and procedures for maintaining the model consistent with the MOU:

1) Model Base Year Validation – Network-based travel models must be validated against observed counts for a base year from which future projections will be made:

    i. Observed counts used in base year validation shall not be more than 10 years prior to the date of a conformity determination.

    ii. Base year validation shall take place after the release of the decennial Federal Bureau of Transportation Statistics, Census Transportation Planning Package (CTPP), which is approximately four years after the date of the most recent decennial Census.

    iii. Revalidations prior to release of the next CTPP should be spaced a minimum of three years apart to allow conformity review agencies time to complete state and federal review processes and develop air quality budgets using the modeling results. A minimum of three years between revalidations is also needed to allow responsible state and federal agencies to complete their review of large environmental documents without major changes to transportation circulation modeling results.

2) Land Use Data – General Plan land use capacity data or "build-out capacity" is used to distribute the forecast county totals, and may be updated as new information becomes available, and is revised in regular consultation with local planning departments.

3) Socioeconomic Forecast Data – Countywide forecasts for households, employment, and other socioeconomic data shall be updated not less than three years from the time of the socioeconomic forecast. A minimum of three years between countywide forecast revisions is needed to allow responsible state and federal agencies time to complete their review of large environmental documents without major changes to transportation circulation modeling results. Redistribution of forecasts for sub-county areas may be made on an as-needed basis to better reflect existing General Plan land entitlements as long as countywide forecast totals remain unchanged.

4) HPMS data collection and reporting shall be performed annually in the spring and submitted to the California Department of Transportation prior to June 15.

5) Network Updates – Added as needed to the model existing, planned, and proposed future transportation facilities.

6) Transportation Analysis Zone Updates – Added as needed in response to additional networks to allow appropriate loading of trips on the network.

7) Local Scenario Modeling – Due to the scale and complexity of a countywide model, not all network links can be validated and calibrated adequately. For links that are not calibrated, an adjustment factor may be applied to future years based on how far off the model assigns trips in comparison to the actual count. In addition, alternative models may be developed for community and site specific analysis on behalf of a member agency. Local scenario models may not be used for determining air quality conformity of a project, or FTIP/RTIP and RTP project rankings.

CONGESTION MANAGEMENT PROGRAM (CMP)

State Proposition 111, passed by voters in 1990, requires urbanized areas to prepare and regularly update a CMP. Fixing America's Surface Transportation Act (FAST) updated the requirements for Transportation Management Areas. The plan shall

- Develop regional goals to reduce vehicle miles traveled during peak commuting hours and improve transportation connections between areas with high job concentration and areas with high concentrations of low-income households;

- Identify existing public transportation services, employer-based commuter programs, and other existing transportation services that support access to jobs in the region; and

- Identify proposed projects and programs to reduce congestion and increase job access opportunities.

As the designated Congestion Management Agency, Kern COG must establish a system of roadways that will be monitored in relation to established level of service standards. The goal of the CMP is to identify a regional network and work toward maintenance of level of service E or better on the highways and roads that are identified in this network.

The CMP requirement was born of the realization that large capital projects alone cannot solve congestion problems and that local land use decisions contribute to roadway congestion. Kern COG, as the designated Congestion Management Agency (CMA) for the Kern region, adopts and updates the CMP. In 2011 Kern COG added new policies in the CMP process for considering multimodal LOS and Complete Streets techniques to address existing congested areas. The CMP provides an important mechanism to monitor and ensure that growth induced congestion is addressed in a way that advances the goals of the RTP. The program is provided as a separate action element of Chapter 5, Strategic Investments.

COMMUNITY PROGRESS TRACKING AND ASSISTANCE PROGRAM

In 2014, Kern COG formalized a program designed to help local jurisdictions track their progress toward reducing vehicle miles traveled (VMT), and provide planning assistance and resources to make progress toward that goal. The program provides local communities with regular feedback on how they are doing in reducing VMT per capita to help meet our region's air quality and SB-375 goals. The program has already provided over $500,000 in planning funds to local jurisdictions so they can develop projects that qualify better under the new performance-based Project Delivery Policy and Procedures. Other resources being provided to local planners include the San Joaquin Valley Planners Toolkit available online at http://www.valleyblueprint.org/planners-toolkit.html .

INTERGOVERNMENTAL REVIEW

Under federal law, Kern COG is designated as the Area-wide Clearinghouse for review of all submitted plans, projects, and programs for consistency with adopted regional plans and policies. Regionally

significant transportation projects reviewed for consistency with regional plans are defined as construction or expansion of freeways; state highways; principal arterials; and routes that provide primary access to major activity centers, such as amusement parks, regional shopping centers, military bases, and airports, as well as high-speed rail. Any project involving transportation improvements is reviewed to determine whether such improvements are included in the regional planning process.

CONCLUSION

Monitoring progress is critical to achieving the RTP goals. As discussed above, Kern COG continues to expand its monitoring efforts through its air quality conformity monitoring, HPMS and regional traffic count program, regional travel demand model, CMP, and community progress tracking and assistance program. In addition, to these monitoring efforts, Kern COG annually performs a statistically valid quality of life phone survey of 1,200 adults to assess community priorities (as discussed in the outreach Appendix). Kern COG also performs periodic bike surveys as part of local bike plan updates. Future monitoring efforts may include pedestrian surveys and possibly railroad traffic use studies. The data and feedback obtained through these efforts provide our policy makers the tools to adjust plans in response to changing information and trends, enhancing the likelihood of attaining the RTP goals.

CHAPTER 9 GLOSSARY

Alternatives Analysis (AA) – Analysis of the engineering and financial feasibility of alternatives under consideration for major transit construction projects; this step is required before federal monies can be allocated to a project.

Accessibility – The extent to which facilities are barrier free and usable by persons with disabilities, including wheelchair users.

Active Transportation – The human-powered methods of travel, such as walking, bicycling or rolling to get from one place to another.

Air Pollution Control District (APCD) - Also referenced as the Air Quality Management District (AQMD), the APCD is responsible for emissions regulations and attainment of federal and state air quality standards in a predefined region. The APCD deals with issues such as the Employer Trip Reduction Program.

Air Quality Attainment Plan (AQAP) - Plan for attainment of the state air quality standards, as required by the California Clean Air Act of 1988. It is adopted by APCDs and AQMDs and is subject to approval by the California Air Resources Board.

Alternative Fuels - Low-polluting fuels that are used to propel a vehicle instead of high-sulfur diesel or gasoline. Examples include methanol, ethanol, propane or compressed natural gas, liquid natural gas, low-sulfur or "clean" diesel, and electricity.

Americans with Disabilities Act (ADA) - Federal civil rights legislation that prohibits discrimination against all individuals with disabilities. With certain statutory exceptions, public and private entities providing fixed route or demand responsive transportation services must acquire accessible vehicles or provide equivalent service to individuals with disabilities.

Apportionment – Federal budgetary term that refers to a statutorily prescribed division or assignment of funds. It is based on prescribed formulas in the law and consist of dividing authorized obligation authority for a specific program among transit systems.

Appropriation - Legislation that allocates budgeted funds from general revenue to programs that have been previously authorized by other legislation. The amount of money appropriated may be less than the amount authorized.

Authorization - Federal legislation that creates the policy and structure of a program including formulas and guidelines for awarding funds. Authorizing legislation may set an upper limit on program spending or may be open ended. General revenue funds to be spent under an authorization must be appropriated by separate legislation.

Automatic Vehicle Location System (AVLS) – This computerized system employs satellites and other technologies to track vehicles, such as truck fleets

Best Available Control Measures - (See Reasonably Available Control Measures (RACM))

Bus Rapid Transit – Bus-based public transport system designed to improve capacity

and reliability relative to a conventional bus system.

California Alliance for Advanced Transportation Systems (CAATS) – Public/private partnership formed to foster the development and deployment of Intelligent Transportation Systems.

California Air Resources Board (CARB) - Designated by EPA as having responsibility for the implementation of the federal Clean Air Act, State Implementation Plan, and approving air quality attainment plans as required by the State Clean Air Act of 1988. Under State law, CARB establishes state air quality standards and vehicle emissions requirements.

California Clean Air Act (CCAA) (AB 2595, Sher) - Enacted in 1988, the Act: (1) established a legal mandate to achieve California's ambient air quality standards by the earliest practicable date; (2) prescribes a number of emission reduction strategies and requires annual progress in cleaning up the air; and (3) grants authority to the state's local air pollution control districts to adopt and enforce transportation control measures (TCMs).

California Energy Commission (CEC) - Established by the State Legislature in 1974, the CEC is the State's principal energy planning and policy making organization. The CEC is charged with ensuring a reliable and affordable energy supply for the State. CEC policies are consistent with protecting the State's environment and its public health, safety, and general welfare.

California Environmental Quality Act (CEQA) - Enacted in 1970, CEQA provides the State's environmental guidelines on which land use development and management decisions are premised. CEQA specifies the State's environmental review process and applicable environmental policies.

California Highway Patrol (CHP) - Agency responsible for enforcing the State's traffic and safety laws on State highways and by contract, county roads. The CHP also jointly operates Traffic Operation Centers with Caltrans.

California Public Utilities Commission (CPUC) - Regulator of utility and transportation companies in the state that are privately owned and operated. The CPUC sets rates, regulates service standards, and monitors utility operations for safety; it does <u>not</u> regulate municipal or district-owned utilities. The CPUC also develops policies promoting competition among utilities and acts as an intermediary between the public and private utilities.

California State Department of Transportation (Caltrans) - As owner/operator of the state highway system, responsible for its safe operation and maintenance. Proposed projects for Intercity Rail, Interregional Roads, and soundwalls in the PSTIP. Caltrans is also responsible for the HSOPP, Toll Bridge, and Aeronautics programs. The TSM and State/Local Partnership Programs are administered by Caltrans. Caltrans is the implementing agency for most state highway projects regardless of program, and for the Intercity Rail program.

California Transportation Commission (CTC) - Nine-member board appointed by the Governor and confirmed by the Legislature that reviews Regional Transportation Improvement Programs (RTIPs) and the PSTIP, and forwards some transportation projects

from these programs into the State Transportation Improvement Program (STIP); this qualifies the projects for state funding. The CTC also has financial oversight of the major programs authorized by Propositions 111 and 108.

California Transportation Plan (CTP) - Long-range framework for the planning, development, operation, and maintenance of California's statewide transportation system that proposes an intermodal system which is integrated, both in form and function, and which offers mobility while supporting economic and environmental goals. The plan is multimodal, addressing all transportation modes. It outlines a series of goals, policies, strategies and recommendations drawn from State and federal transportation law.

Capital Improvement Program (CIP) - An element of the Congestion Management Program (CMP), the CIP is a seven year program of projects to maintain or improve traffic level of service and transit performance standards developed by the CMP, as well as the regional transportation impacts identified by the CMP Land Use Analysis Program, which conforms to transportation-related vehicle emissions air quality mitigation measures.

Changeable Message Signs (CMS) – Electronic signs that can change the message displayed. Often used on highways to warn and redirect traffic. Also referred to as variable or electronic message signs.

Commuter Rail - Form of passenger transportation characterized by medium distance home-to-work passenger travel, multiple ride ticketing, recurring peak-hour travel and use of high-density seating. Commuter rail uses diesel electric or overhead electrically powered locomotives. Examples are the Caltrains operated by Caltrans from San Jose to San Francisco, and GO Transit in Toronto.

Conformity – Ongoing process that ensures the planning for highway and transit systems, as a whole and over the long term, is consistent with the state air quality plans for attaining and maintaining health-based air quality standards; conformity is determined by metropolitan planning organizations (**MPOs**) and the **U.S. DOT,** and is based on whether transportation plans and programs meet the provisions of a State Implementation Plan (SIP). The conformity determination must be based on recent estimates of emissions, and such estimates must be based on the most recent population, employment, travel and congestion estimates as determined by the MPO.

Congestion Management Agency (CMA) – Kern COG serves as the countywide organization responsible for preparing and implementing the CMP. CMAs came into existence as a result of State legislation and voters' approval of Proposition 111 in 1990.

Congestion Management Program (CMP) - Multi-jurisdictional program with the goals of reducing traffic congestion, researching land use decision impacts, and improving air quality. State law requires the RTPA of every county with an urbanized area of at least 50,000 people to prepare and maintain this program.

Congestion Mitigation/Air Quality Improvement Program (CMAQ) - Funding program established by ISTEA specifically for projects and programs that will contribute to the attainment of a national ambient air quality standard. Funds are available to non-attainment areas for ozone and carbon monoxide based on population and pollution severity. The approved State Implementation Program (SIP) defines eligible projects.

Consolidated Transportation Services Agency (CTSA) - AB 120, the Social Services Transportation Improvement Act, allows county or regional transportation planning agencies to designate one or more organizations within their areas as Consolidated Transportation Service Agencies (CTSAs). The goal was to promote the coordination of social service transportation for the benefit of human service clients, including the elderly, disabled individuals, and persons of low income.

Corridor - Any major transportation route including various modes such as parallel limited access highways, major arterials, or transit lines that, while not necessarily adjacent to each other, connect significant activity centers. With regard to traffic incident management, a corridor may include more distant transportation routes that can serve as viable alternatives in the event of traffic incidents.

Council of Governments (COG) – Regional planning agency that serves a specific geographic area (e.g., Kern County) and addresses issues such as transportation, air quality, and land use. Council membership is drawn from the county, city and other government bodies within its area.

Deadhead – The movement of a transit vehicle without passengers aboard; often to and from a garage or to and from one route to another.

Demand-Responsive Transit – Non-fixed-route service using vans or buses with passengers boarding and disembarking at pre-arranged times at any location within the system's service area. Also called Dial-A-Ride (DAR).

Department of Transportation (DOT) - Federal department that includes the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and the Federal Aviation Administration (FAA). DOT is headed by the Secretary of Transportation, a cabinet-level post. Most states also have DOTs; California's is referred to as Caltrans.

Dial-A-Ride (DAR) – See Demand-Responsive Transit.

Environmental Justice – Identifying and addressing disproportionately high and adverse effects of the agency's programs, policies, and activities on minority and low-income populations to achieve an equitable distribution of benefits and burdens. This includes the full and fair participation by all potentially affected communities in the transportation decision-making process.

Environmental Protection Agency (EPA) - Federal agency, the mission of which is to "protect human health and the natural environment." It is the source agency for air quality control regulations affecting transportation.

Environmental Impact Report / Environmental Impact Statement (EIR/EIS) – Analysis of the environmental impacts of proposed land development and transportation projects. An EIR is conducted in response to the California Environmental Quality Act (CEQA) and an EIS is conducted for federally funded or approved projects per the National Environmental Policy Act (NEPA). A draft EIR or EIS (often they are prepared simultaneously) is circulated to the public and agencies with approval authority for comment. A final document is certified after public comment has been solicited and mitigations have been developed for adverse impacts.

Farebox Recovery Ratio – Measure of the proportion of operating expenses covered by passenger fares; found by dividing farebox revenue by total operating expenses for each mode, and/or systemwide.

Farebox Revenue – Value of cash, tickets, tokens and pass receipts given by passengers as payment for rides; excludes charter revenue.

Fare Structure – System set up to determine how much is to be paid by various passengers using a transit vehicle at any given time.

Federal Clean Air Act Amendments of 1990 (FCAAA) - Legislation that renews the Federal Clean Air Act and makes significant program changes. For the transportation sector, significant changes included a definition of conformity and requirement for the formulation by EPA and DOT of regulations regarding conformity, and requirements for the use and development of alternative fuels and vehicles.

Federal Highway Administration (FHWA) - Agency responsible for the approval of transportation projects that affect the federal highway system. Administratively, it is under DOT and is the sister agency of FTA.

Federal Transit Administration (FTA) - Federal Department of Mass Transportation (formerly UMTA), which is under DOT, and is the sister agency of FHWA.

Fixed Route – Transit service provided on a repetitive, fixed-schedule basis along a specific route with vehicles stopping to pick up and deliver passengers to specific locations; each fixed-route trip serves the same origins and destinations, unlike demand responsive and taxicabs.

Flexible Congestion Relief (FCR) - State funding programs for local or regional transportation projects to reduce congestion. State highway projects, local roads, and rail guideway projects are all eligible.

Flexible Funds – Federal funds that can be used for highway, transit or other transportation projects, as determined by regional MPOs and state governments. Examples of such funds are the Surface Transportation Program (STP) and the Congestion Mitigation and Air Quality (CMAQ) fund.

Fund Estimate - The STIP cycle begins with the development of a State Fund Estimate by Caltrans, which compares existing commitments against total estimated revenue expected from state and federal sources. Caltrans estimates state and federal funds "reasonably expected" in annual increments for five years (the STIP period). The calculation of existing capital program commitments is based on Caltrans' Project Delivery Report, while non-capital expenditures of operation and administration costs are estimated based on current spending and projected needs. This comparison of revenues to commitments results in an estimate of total uncommitted funds that are available for programming and prorated to each program category. The Fund Estimate is required by law to be submitted by July 15 of odd-numbered years, and to be adopted by the CTC within thirty days after submittal. CTC adopts a "Fund Estimate Methodology" to guide Caltrans in formulating the Fund Estimate.

Headway – Time interval between transit vehicles moving in the same direction on a particular route.

Heavy Rail - Heavy rail vehicles cannot operate on surface streets but must have exclusive grade protected guideways, such as subway, at surface or aerial configuration. Heavy rail vehicles can operate in pairs or trained up to ten cars and powered by third rail or overhead catenary. Heavy rail systems must have platforms for boarding passengers. A heavy rail system can carry up to 40,000 passengers per hour in each direction.

Intelligent Transportation Systems (ITS) - ISTEA established an IVHS (Intelligent Vehicle and Highway System) Program, which was subsequently modified to ITS. The program's function is to enhance the capacity, efficiency, and safety of the federal-aid highway system and to serve as an alternative to additional physical capacity. Automated highways and vehicles are one component of this approach. ITS includes development of application of electronics, communications or information processing (including advanced traffic management systems, commercial vehicle operations, advanced traveler information systems, commercial and advanced vehicle control systems, advanced public transportation systems, satellite vehicle tracking systems, and advanced vehicle communications systems) used singly or in combination to improve the efficiency and safety of surface transportation systems.

Intercity Rail - Operated by common carriers and uses fixed guideways. The service is characterized by inter-regional passenger travel provision for personal carry-on baggage, and possible use of specialized cars for food service, sleeping accommodations, checked baggage, and package express.

Intermodal - A unifying, integrated national network of travel modes emphasizing connections between modes, choices among them, and coordination and cooperation among transportation interests.

Level of Service (LOS) - A measure of congestion that compares actual or projected traffic volume with the maximum capacity of the intersection or road in question.

Light Rail - Light rail vehicles can operate as single vehicles or can be trained and frequently do operate on surface streets as well as on exclusive rights-of-way, and draw electric power from an overhead catenary system. Light rail systems can have passenger boarding at surface as in San Diego and Sacramento or from elevated platforms as in Los Angeles. Maximum capacity of a light rail system is generally regarded as 10,000 passengers in each direction.

Long-Range Transit Plan - This plan represents a long-range evaluation of transit needs and proposes recommendations for implementing long-range objectives over a 20-year timeframe. The Plan provides direction for coordinating implementation of goals and policies identified in the Plan.

Metropolitan Planning Organizations (MPOs) - Federally designated organizations for urbanized areas of greater than 50,000 population mandated to carry out transportation planning as required by ISTEA and its subsequent legislations. Kern COG is the MPO for Kern County.

Model – An analytical tool (often mathematical) used by transportation planners to assist in making forecasts of land use, economic activity ,travel activity and their effects on the quality of resources such as land, air and water.

Multimodal – Refers to the availability of multiple transportation options, especially within a system or corridor. A concept embraced by TEA-21, a multimodal approach to transportation planning focuses on the most efficient way of getting people or goods from place to place, be it truck, train, bicycle, automobile, airplane, bus, boat, foot, or even a computer modem.

National Environmental Policy Act (NEPA) - Passed by Congress in 1969, NEPA established the Council on Environmental Quality and required the preparation of environmental impact statements for federal projects. NEPA requires that an Environmental Impact Assessment (EIA) describe current conditions, identify alternative means of accomplishing the objective, enumerate the likely impacts of each alternative, identify the preferred alternative and the method used to select it, describe the impact of the selected alternative in detail, and list possible actions to minimize negative impacts of the selected alternative. See also Environmental Impact Report/Environmental Impact Statement.

National Highway System (NHS) - ISTEA established a 155,000-mile NHS to provide an interconnected system of principal arterial routes to serve major travel destinations and population centers, international border crossings, as well as ports, airports, public transportation facilities, and other intermodal transportation facilities. The NHS must also meet national defense requirements and serve interstate and interregional travel. Eligible projects include new construction, reconstruction, and rehabilitation of highways, operational improvements, mass transit projects in an NHS corridor, safety improvements, transportation planning, traffic management and control, parking facilities, carpool projects, and bicycle and pedestrian projects. In areas not meeting federal clean air standards, up to 100 percent of NHS funding is transferable to the STP upon request of the State.

Nonattainment Area – Any geographic region of the U.S. that the U.S. EPA has designated as not attaining the federal air quality standards for one or more air pollutants, such as ozone and carbon monoxide. This includes the San Joaquin Valley, the Mojave Desert Air Basin, and the Indian Wells Valley/Searles Air Basin.

Off-Peak Period – Non-rush periods of the day when travel activity is generally lower.

Operational Improvement - A capital improvement for installation of traffic surveillance and control equipment, computerized signal systems, motorist information systems, integrated traffic control systems, incident management programs, and transportation demand management facilities, strategies, and programs and such other capital improvements to public roads as the Secretary may designate, by regulation. The term does not include resurfacing, restoring, or rehabilitating improvements, construction of additional lanes, interchanges, grade separation, or the construction of a new facility at a new location.

Operating Assistance – Financial assistance for transit operating expenses (not capital costs); such aid may originate with federal, local or state governments.

Paratransit – Comparable transportation service required by the Americans with Disabilities Act (ADA) of 1990 for individuals with disabilities who are unable to use fixed-route transportation systems.

Pavement Management System (PMS) - Required by Section 2108.1 of the Streets and Highways Code, any jurisdiction that wishes to qualify for funding under the STIP must hav a PMS that is in conformance with the criteria adopted by the Joint City/County/State Cooperation Committee. At a minimum, the PMS must contain: (1) An inventory of the arterial and collector routes in the jurisdiction that is reviewed and updated at least biennially; (2) An assessment of pavement condition for all routes in the system, updated biennially; (3) An identification of all sections of pavement needing rehabilitation or replacement; and (4) A determination of budget needs for rehabilitation or replacement of deficient pavement sections for the current and upcoming biennial periods.

Peak Period – Morning and afternoon time periods when all modes of travel are highest.

Principal Arterial - The functional classification system at the federal level defines principal arterials for rural areas, urbanized areas, and small urban areas. In urbanized areas, the principal arterial system can be identified as unusually significant to the area in which it lies in terms of the nature and composition of travel. Principal arterials derive their importance from service to rural oriented traffic and/or from service for major movements within the urbanized area. The principal arterial system should carry the major portion of trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central city. Frequently, the principal arterial system will carry important intra-urban as well as intercity bus routes. In small urban and urbanized areas, this system should provide continuity for all rural arterials which intercept the urban boundary. Because of the nature of the principal arterial system, almost all fully and partially controlled access facilities will be part of this functional system; however, it is not restricted to controlled access routes. The spacing of urban principal arterials will be closely related to the trip-end density characteristics of particular portions of the urban areas.

Program – (1) verb: to assign funds to a project that has been approved by Kern COG, the state or other agency; (2) noun: a system of funding for implementing transportation projects or policies, such as through the State Transportation Improvement Program (STIP).

Program of Projects (POP) – Defines projects to benefit from federal transit funding provided to Kern County agencies by formula for each fiscal year from FTA Section 5311 and Congestion Mitigation/Air Quality (CMAQ) program. Kern COG, as the RTPA, and its member agencies work together to ensure that the funds listed in the POP are programmed and included in the Federal Transportation Improvement Program (FTIP).

Project Study Report (PSR) - Chapter 878 of 1987 Statutes requires that any capacity-increasing project on the state highway system have a completed PSR prior to programming the STIP. The PSR must include a detailed description of the project scope and estimated costs. This legislation's intent is to improve the accuracy of the schedule and costs shown in the STIP, and thus improve the overall accuracy of the STIP delivery and cost estimates.

Public Transportation – Transportation by bus, rail or other conveyance, either publicly- or privately- owned, that provides to the public general or special service on a regular and

continuing basis. Also known as “mass transportation,” “mass transit,” and “transit”.

Quality Transit Area – Areas within one-half mile of fixed route transit service based on planned transit expenditures.

Regional Transportation Improvement Program (RTIP) - List of proposed transportation projects submitted to the CTC by the RTPA as a request for state funding. Individual projects are first proposed by local jurisdictions, then evaluated and prioritized by the regional agency for submission to the CTC. The RTIP has a five-year planning horizon and is updated every two years.

Regional Transportation Plan (RTP) - A comprehensive 20-plus year blueprint for the region, updated every two years by the regional transportation planning agency. The RTP includes goals, objectives, and policies, and recommends specific transportation improvements.

Regional Transportation Planning Agency (RTPA) - Agencies responsible for the preparation of RTPs and RTIPs and designated by the State Business, Transportation and Housing Agency to allocate transit funds. RTPAs can be local transportation commissions, COGs, MPOs, or statutorily created agencies. Kern COG is the RTPA for Kern County.

Reverse Commuting – Travel in a direction opposite the main flow of traffic, such as from the central city to a suburb during the morning peak period.

Ridesharing – A form of transportation, other than public transit, in which more than one person shares the use of the vehicle, such as a van or car, to make a trip. Also known as “carpooling” or “vanpooling”.

Short-Range Transit Plans (SRTP) - A nine-year comprehensive plan required of all transit operators by federal and regional transportation funding agencies. The plans must define the operator's mission, analyze past and current performance, and plan specific operational and capital improvements to realize short-term objectives.

Shuttle – A public or private vehicle that travels back and forth over a particular route, especially a short route or one that provides connections between transportation systems, employment centers, and the like.

Single-Occupant Vehicle (SOV) – A vehicle with one occupant, the driver, who is sometimes referred to as a “drive-alone”.

Southern California Association of Governments (SCAG) – A six-county planning and coordinating agency, similar to Kern COG, that deals with transportation, water quality, housing and land use. Also reviews and comments on applications for a variety of federal and state assistance programs.

State Highway Account - references the State Highway Account in the State transportation Fund. The State Highway Account supports many state transportation highway capital and safety programs and is first primarily used to match federal transportation funding that is directed to California.

State Highway Operations and Protection Plan (SHOPP) - A program created by state legislation that includes state highway safety and rehabilitation projects, seismic retrofit projects, land and buildings projects, landscaping, some operational improvements, and bridge replacement. Unlike STIP projects, SHOPP projects may not increase roadway capacity. SHOPP is a four-year program of projects, adopted separately from the STIP cycle. The recent State gas tax increase partially funds the program, but it is primarily funded through the "old" nine-cent State gas tax and from federal funds. To be compatible with the Fund Estimate, a formula based on pavement condition and safety concerns is used to estimate an additional three years of the SHOPP program.

State Implementation Plan (SIP) - State plan required by the Federal Clean Air Act to attain and maintain national ambient air quality standards. It is adopted by local air quality districts and the State Air Resources Board.

State Transit Assistance (STA) - This program provides funding for mass transit and transportation planning. With half of the revenues transferred to the TP&D Account and appropriated to STA. STA apportionments to regional transportation planning agencies are determined by two formulas: 50 percent by populations and 50 percent by the amount of operator revenues (fares, sales tax, etc.) for the prior year. STA funds may be used for transit capital or operating expenditures. Passage of Proposition 116 disallows use of STA funds for streets and roads in non-urban counties.

State Transportation Improvement Program (STIP) - A list of transportation projects, proposed in RTIPs and the PSTIP, which are approved for funding by the CTC.

Surface Transportation Program (STP) - Funding program established by ISTEA, and continued under subsequent federal transportation legislation that is very flexible, in that many types of mass transit and highway projects are eligible for funding under this program. Ten percent of the projects funded under this program must be transportation enhancement activities and 10 percent for safety projects.

Sustainable Communities Strategy (SCS) - The SCS strives to reduce air emissions from passenger vehicle and light duty truck travel by better coordinating transportation expenditures with forecasted development patterns and, if feasible, help meet California Air Resources Board (CARB) greenhouse gas targets for the region.

Traffic Operations Centers (TOC) – Computer-based traffic signal control system that monitors traffic conditions and system performance, selects appropriate signal timing (control) strategies, and performs equipment diagnostics and alert functions. Sensors in the signals detect the passage of vehicles, vehicle speed, and congestion levels. Kern County's TOC is located within the Bakersfield City Hall.

Transportation Control Measures (TCMs) – Strategies to reduce driving or smooth traffic flows in order to cut auto emissions and resulting air pollution. Examples of TCMs include roving tow truck patrols to clear stalled vehicles and accidents from congested roadways, new or increased transit service, or a program to promote carpools and vanpools.

Transportation Demand Management (TDM) - "Demand-based" techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules that enable employees to commute to and from work outside of peak hours.

Transportation Improvement Program (TIP) - A federally required document produced by the regional transportation planning agency that states the investment priorities for transit and transit-related improvements, mass transit guideways, general aviation and highways. The State is also required to produce a federal TIP which includes all projects proposed for federal funding.

Urbanized Area - An area with a population of 50,000 or more designated by the U.S. Census Bureau, within boundaries to be fixed by responsible state and local officials, subject to approval by the Secretary of Transportation.

Vanpool – An arrangement in which a group of passengers share the use and cost of a van in traveling to and from pre-arranged destinations together.

Vehicle Miles Traveled (VMT) - Travel demand forecasting (modeling) is used to generate the average trip lengths for a region. The average trip length measure can then be used in estimating vehicle miles of travel, which in turn is used in estimating gasoline usage or mobile source emissions of air pollutants. Reducing VMT can help ease traffic congestion and improve air quality.

ACRONYMS

AA - Alternatives Analysis

AADT – Annual Average Daily Traffic

AASHTO - American Association of State Highway & Transportation Officials

ADA - Americans with Disabilities Act

APCD - Air Pollution Control District

AQAP - Air Quality Attainment Plan

AQMD – Air Quality Management District

ASR - Airport Surveillance Radar

AT – Active Transportation

AVLS – Automatic Vehicle Location System

AVR - Average Vehicle Ridership

AVTTAC - Aviation Transportation Technical Advisory Committee

BACM – Best Available Control Measure

BARCT - Best Available Retrofit Control Technology

BRT – Bus Rapid Transit

BSC - Bakersfield Senior Center

CAATS – California Alliance for Advanced Transportation Systems

CALTRANS - California Department of Transportation

CARB - California Air Resources Board

CCAA - California Clean Air Act

CEC – California Energy Commission

CEQA - California Environmental Quality Act

CHP – California Highway Patrol

CIP - Capital Improvement Program

CMA – Congestion Management Agency

CMAQ - Congestion Management/Air Quality (funding program)

CMP - Congestion Management Program

CMS – Changeable Message Signs; Congestion Management System

COG – Council of Governments

CPUC – California Public Utilities Commission

CTC - California Transportation Commission

CTP – California Transportation Plan

CTSA Consolidated Transportation Services Agency

CVWP – Central Valley Water Project

DAR – Dial-A-Ride

DOE - Department of Energy (federal)

DOT - Department of Transportation (federal)

DTIM - Demand Travel Impact Model

EAFB - Edward Air Force Base

EIR/EIS – Environmental Impact Report (state)/Environmental Impact Statement (federal)

EJ – Environmental Justice

EMM - Environmental Enhancement and Mitigation Program

EPA - Environmental Protection Agency (federal)

ETC – Electronic Toll Collection

FAA - Federal Aviation Administration

FCAAA - Federal Clean Air Act Amendments of 1990

FCR - Flexible Congestion Relief Program

FETSIM – Fuel Efficient Traffic Signal Management

FHWA - Federal Highway Administration

FIP - Federal Implementation Plan

FRA – Federal Railroad Administration

FSTIP - Federal Statewide Transportation Improvement Program

FTA - Federal Transit Administration

FTIP - Federal Transportation Improvement Program

FTZ - Foreign Trade Zone

FY - Fiscal Year

GET - Golden Empire Transit District

GIS – Geographic Information Systems

GPA - General Plan Amendment

GPS – Global Positioning Systems

HOV – High Occupancy Vehicle

HPMS - Highway Performance Monitoring Systems

HSGT – High Speed Ground Transportation

HSR - High Speed Rail

HOV - High Occupancy Vehicle

ILS - Instrument Landing System

ISR - Indirect Source Review

ISTEA – Intermodal Surface Transportation Efficiency Act of 1991

ITS - Intelligent Transportation Systems (replaces Intelligent Vehicle Highway Systems)

Kern COG - Kern Council of Governments

KT - Kern Transit

LOS - Level of Service

LTF - Local Transportation Fund

MMTI - Major Metropolitan Transportation Investments

MPG – Miles per gallon

MPO - Metropolitan Planning Organization

MTS – Metropolitan Transportation System

NAFTA – North American Free Trade Agreement

NAHC - Native American Heritage Commission

NAWS - (China Lake) Naval Air Weapons Station

NEPA - National Environmental Policy Act

NIMBY – Not In My Back Yard

NHS - National Highway System

NTS – National Transportation System

NO - nitric oxide

NO_2 - nitrogen dioxide

NOP - Notice of Preparation

OAA - Older Americans Act

OPR – Office of Planning and Research

OWP – Overall Work Program

O_3 – ozone

PAC - Project Advisory Committee

PAPI - Precision Approach Path Indicator

PM_{10} - Particulate Matter (less than 10 microns in size); $PM_{2.5}$ (less than 2.5 microns)

PMS – Pavement Management System

POP – Program of Projects

PPHM - parts per hundred million

PSR – Project Study Report

PTA – Public Transportation Account

PUC - Public Utilities Commission

QTA – Quality Transit Areas

ROC - Reactive Organic Compounds

ROW – Right(s)-of-Way

RSTP - Regional Surface Transportation Program

RTIP - Regional Transportation Improvement Program

RTP - Regional Transportation Plan

RTPA - Regional Transportation Planning Agency

SB - Senate Bill

SHA - State Highway Account

SHOPP – State Highway Operations and Protection Plan

SHPO - State Historic Preservation Office

SHRP - Strategic Highway Research Program

SIP - State Implementation Plan

SLTPP - State and Local Transportation Partnership Program

SJVAB - San Joaquin Valley Air Basin

SJVAPCD - San Joaquin Valley Air Pollution Control District

SR - State Route

SCS – Sustainable Communities Strategy

STA – State Transit Assistance

STAA - Surface Transportation Assistance Act

STAF - State Transit Assistance Fund

STIP - State Transportation Improvement Program

STP - Surface Transportation Program

TAC - Technical Advisory Committee

TAZ - Traffic Analysis Zone

TCI – Transit Capital Improvement Program

TCM - Transportation Control Measure

TDA - Transportation Development Act

TDM - Transportation Demand Management

TEA - Transportation Enhancement

TEA-21 – Transportation Enhancement Act for the 21st Century

TIF – Transportation Impact Fee

TMA - Transportation Management Area and/or Association

TOG - Total Organic Gases

TPPC - Transportation Planning Policy Committee

TTAC - Transportation Technical Advisory Committee

US DOT - Department of Transportation (federal)

USTIP - Updated State Transportation Improvement Program

VMT - Vehicle Miles Traveled

VT - Vehicle Trip

APPENDIX A

REGIONAL TRANSPORTATION PLAN CHECKLIST

Regional Transportation Plan Checklist for MPOs

(Revised March 2018)

(To be completed electronically in Microsoft Word format by the MPO and submitted along with the draft and final RTP to Caltrans)

Name of MPO: Kern Council of Governments

Date Draft RTP Completed: April 22, 2022

RTP Adoption Date: July 21, 2022

What is the Certification Date of the Environmental Document (ED)? July 21, 2022

Is the ED located in the RTP or is it a separate document? Separate Document *SD

By completing this checklist, the MPO verifies the RTP addresses all of the following required information within the RTP.

Regional Transportation Plan Contents

General

		Yes/No	Page #
1.	Does the RTP address no less than a 20-year planning horizon? (23 CFR 450.324(a))	Yes	1-1
2.	Does the RTP include both long-range and short-range strategies/actions? (23 CFR 450.324(b))	Yes	5-2 5-51 5-66 5-70 5-76 5-106 5-115 5-125 5-139
3.	Does the RTP address issues specified in the policy, action and financial elements identified in California Government Code Section 65080?	Yes	Table 2-1
4.	Does the RTP address the 10 issues specified in the Sustainable Communities Strategy (SCS) component as identified in Government Code Sections 65080(b)(2)(B) and 65584.04(i)(1)?	Yes	Table 2-1
	a. Identify the general location of uses, residential densities, and building intensities within the region?	Yes	4-17

	b. Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth?	Yes	4-17 Thru 4-32
	c. Identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region pursuant to Government Code Section 65584?	Yes	4-30
	d. Identify a transportation network to service the transportation needs of the region?	Yes	4-25
	e. Gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivisions (a) and (b) of Government Code Section 65080.01?	Yes	4-32
	f. Consider the state housing goals specified in Sections 65580 and 65581?	Yes	4-30
	g. Utilize the most recent planning assumptions, considering local general plans and other factors?	Yes	4-17 4-32
	h. Set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the ARB?	Yes	4-17 Thru 4-32
	i. Provide consistency between the development pattern and allocation of housing units within the region (Government Code 65584.04(i)(1)?	Yes	4-17 thru 4-32
	j. Allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Section 7506)?	Yes	4-8
5.	Does the RTP include Project Intent i.e. Plan Level Purpose and Need Statements?	Yes	Chap. 1 4-1
6.	Does the RTP specify how travel demand modeling methodology, results and key assumptions were developed as part of the RTP process? (Government Code 14522.2)	Yes	4-48
7.	Does the RTP contain a System Performance Report? (23 CFR 450.324 (f))	Yes	
	a. Does the report include a description of the performance measures and performance targets used in assessing the performance of the transportation system?	Yes	Appdx. D
	b. Does the report show the progress achieved in meeting performance targets in comparison with the performance in previous reports?	Yes	Appdx. D
	c. Does the report include an evaluation of how the preferred scenario has improved conditions and performance, where applicable?	Yes	Appdx. D
	d. Does the report include an evaluation of how local policies and investments have impacted costs necessary to achieve identified performance targets, where applicable?	Yes	Appdx. D

Consultation/Cooperation

		Yes/No	Page #
1.	Does the RTP contain a public involvement program that meets the requirements of Title 23, CFR 450.316(a)?	Yes	Appdx. B

a. Providing adequate public notice of public participation activities and time for public review and comment at key decision points, including a reasonable opportunity to comment on the proposed metropolitan transportation plan and the TIP;	Yes	4-10 thru 4-16
b. Providing timely notice and reasonable access to information about transportation issues and processes;	Yes	4-10 Thru 4-16
c. Employing visualization techniques to describe metropolitan transportation plans and TIPs;	Yes	4-10 Thru 4-16
d. Making public information (technical information and meeting notices) available in electronically accessible formats and means, such as the World Wide Web;	Yes	4-10 thru 4-16
e. Holding any public meetings at convenient and accessible locations and times;	Yes	4-10 thru 4-16
f. Demonstrating explicit consideration and response to public input received during the development of the metropolitan transportation plan and the TIP;	Yes	Appdx. C
g. Seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services;	Yes	4-10 thru 4-16 Appdx. C
h. Providing an additional opportunity for public comment, if the final metropolitan transportation plan or TIP differs significantly from the version that was made available for public comment by the MPO and raises new material issues that interested parties could not reasonably have foreseen from the public involvement efforts;	N/A	N/A
i. Coordinating with the statewide transportation planning public involvement and consultation processes under subpart B of this part; and	Yes	4-10 thru 4-16
j. Periodically reviewing the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process.	Yes	
2. Does the RTP contain a summary, analysis, and report on the disposition of significant written and oral comments received on the draft metropolitan transportation plan as part of the final metropolitan transportation plan and TIP that meets the requirements of 23 CFR 450.316(a)(2), as applicable?	Yes	Appdx. C
3. Did the MPO/RTPA consult with the appropriate State and local representatives including representatives from environmental and economic communities; airport; transit; freight during the preparation of the RTP? (23 CFR 450.316(b))	Yes	4-10 thru 4-16
4. Did the MPO/RTPA who has federal lands within its jurisdictional boundary involve the federal land management agencies during the preparation of the RTP? (23 CFR 450.316(d))	Yes	4-10 thru 4-16

5.	Where does the RTP specify that the appropriate State and local agencies responsible for land use, natural resources, environmental protection, conservation and historic preservation consulted? (23 CFR 450.324(g))	Yes	4-11
6.	Did the RTP include a comparison with the California State Wildlife Action Plan and (if available) inventories of natural and historic resources? (23 CFR 450.324(g)(1&2))	Yes	4-35
7.	Did the MPO/RTPA who has a federally recognized Native American Tribal Government(s) and/or historical and sacred sites or subsistence resources of these Tribal Governments within its jurisdictional boundary address tribal concerns in the RTP and develop the RTP in consultation with the Tribal Government(s)? (23 CFR 450.316(c))	Yes	4-14
8.	Does the RTP address how the public and various specified groups were given a reasonable opportunity to comment on the plan using the participation plan developed under 23 CFR part 450.316(a)? (23 CFR 450.316(a)(i))	Yes	4-10 Thru 4-16
9.	Does the RTP contain a discussion describing the private sector involvement efforts that were used during the development of the plan? (23 CFR 450.316(a))	Yes	4-10 thru 4-16

		Yes/No	Page #
10.	Does the RTP contain a discussion describing the coordination efforts with regional air quality planning authorities? (23 CFR 450.316(a)(2)) **(MPO nonattainment and maintenance areas only)**	Yes	4-3 4-5 4-10 4-13
11.	Is the RTP coordinated and consistent with the Public Transit-Human Services Transportation Plan? (23 CFR 450.306(h))	Yes	5-57
12.	Were the draft and adopted RTP posted on the Internet? (23 CFR 450.324(k))	Yes	N/A
13.	Did the RTP explain how consultation occurred with locally elected officials? (Government Code 65080(D))	Yes	4-11
14.	Did the RTP outline the public participation process for the sustainable communities strategy? (Government Code 65080(E))	Yes	4-10 thru 4-16
15.	Was the RTP adopted on the estimated date provided in writing to State Department of Housing and Community Development to determine the Regional Housing Need Allocation and planning period (start and end date) and align the local government housing element planning period (start and end date) and housing element adoption due date 18 months from RTP adoption date? (Government Code 65588(e)(5))	Yes	4-30 thru 4-31

Title VI and Environmental Justice

1.	Does the public participation plan describe how the MPO will seek out and consider the needs of those traditionally underserved by existing transportation system, such as low-		4-10 thru

	income and minority households, who may face challenges accessing employment and other services? (23 CFR 450.316 (a)(1)(vii))	Yes	4-16 Appdx. C
2.	Has the MPO conducted a Title VI analysis that meets the legal requirements described in Section 4.2?	Yes	4-15 Appdx. D
3.	Has the MPO conducted an Environmental Justice analysis that meets the legal requirements described in Section 4.2?	Yes	4-15 Appdx. D

Modal Discussion

1.	Does the RTP discuss intermodal and connectivity issues?	Yes	4-20 thru 4-23
2.	Does the RTP include a discussion of highways?	Yes	5-94 thru 5-106
3.	Does the RTP include a discussion of mass transportation?	Yes	5-53 thru 5-67
4.	Does the RTP include a discussion of the regional airport system?	Yes	5-108 thru 5-115
5.	Does the RTP include a discussion of regional pedestrian needs?	Yes	5-68 Thru 5-70

		Yes/No	Page #
6.	Does the RTP include a discussion of regional bicycle needs?	Yes	5-68 thru 5-70
7.	Does the RTP address the California Coastal Trail? (Government Code 65080.1) (For MPOs and RTPAs located along the coast only)	N/A	N/A
8.	Does the RTP include a discussion of rail transportation?	Yes	5-40 thru 5-51
9.	Does the RTP include a discussion of maritime transportation (if appropriate)?	Yes	5-42 thru 5-45
10.	Does the RTP include a discussion of goods movement?	Yes	5-40 thru 5-51

Programming/Operations

1.	Is the RTP consistent (to the maximum extent practicable) with the development of the regional ITS architecture? (23 CFR 450.306(g))	Yes	5-78 thru 5-80
2.	Does the RTP identify the objective criteria used for measuring the performance of the transportation system?	Yes	6-7
3.	Does the RTP contain a list of un-constrained projects?	Yes	5-33 thru 5-38

Financial

1.	Does the RTP include a financial plan that meets the requirements identified in 23 CFR part 450.324(f)(11)?	Yes	Chap. 6
2.	Does the RTP contain a consistency statement between the first 4 years of the fund estimate and the 4-year STIP fund estimate? (65080(b)(4)(A))	Yes	6-6
3.	Do the projected revenues in the RTP reflect Fiscal Constraint? (23 CFR part 450.324(f)(11)(ii))	Yes	6-7
4.	Does the RTP contain a list of financially constrained projects? Any regionally significant projects should be identified. (Government Code 65080(4)(A))	Yes	5-30 Thru 5-31

5.	Do the cost estimates for implementing the projects identified in the RTP reflect "year of expenditure dollars" to reflect inflation rates? (23 CFR part 450.324(f)(11)(iv))	Yes	5-4 thru 5-32
6.	After 12/11/07, does the RTP contain estimates of costs and revenue sources that are reasonably expected to be available to operate and maintain the freeways, highway and transit within the region? (23 CFR 450.324(f)(11)(i))	Yes	6-6
7.	Does the RTP contain a statement regarding consistency between the projects in the RTP and the ITIP? (2016 STIP Guidelines Section 33)	Yes	5-38
8.	Does the RTP contain a statement regarding consistency between the projects in the RTP and the RTIP? (2016 STIP Guidelines Section 19)	Yes	5-38
		Yes/No	Page #
9.	Does the RTP address the specific financial strategies required to ensure the identified TCMs from the SIP can be implemented? (23 CFR part 450.324(f)(11)(vi) (**nonattainment and maintenance MPOs only**)	Yes	5-72 thru 5-76

Environmental

1.	Did the MPO/RTPA prepare an EIR or a program EIR for the RTP in accordance with CEQA guidelines?	Yes	PEIR Page 1.0-6
2.	Does the RTP contain a list of projects specifically identified as TCMs, if applicable?	Yes	5-74
3.	Does the RTP contain a discussion of SIP conformity, if applicable?	N/A	
4.	Does the RTP specify mitigation activities? (23 CFR part 450.324(f)(10))	Yes	5-31 5-47 5-52 5-73 5-82 5-83 5-90 5-91 5-125 5-140
5.	Where does the EIR address mitigation activities?	Yes	PEIR Page 1.0-13 to 16
6.	Did the MPO/RTPA prepare a Negative Declaration or a Mitigated Negative Declaration for the RTP in accordance with CEQA guidelines?	N/A	N/A
7.	Does the RTP specify the TCMs to be implemented in the region? **(federal nonattainment and maintenance areas only)**	Yes	5-74 thru

I have reviewed the above information and certify that it is correct and complete.

	July 21, 2022
(Must be signed by MPO Executive Director or designated representative)	Date
Ahron Hakimi	Executive Director
Print Name	Title

APPENDIX B

PUBLIC INFORMATION POLICIES AND PROCEDURE

Kern Council of Governments

Public Information Policies and Procedures
May 2019

Policy Manual Chapter V: Planning and Services

Article XI: Public Involvement Procedures and Policies

Section 1. Introduction

This document is a plan for providing guidance for Kern Council of Governments' (Kern COG) elected officials and staff in public participation and interagency consultation throughout the regional planning process. It contains the agency policies, guidelines and procedures Kern COG uses in developing the metropolitan planning process. This includes the development and approval of the Regional Transportation Plan, Regional and Federal Transportation Improvement Program, and environmental review documentation related to growth, transportation, air quality, and any product prepared by Kern COG staff that statutorily requires public participation, or for which the Kern COG Board of Directors determines is necessary. Kern COG carries out its transportation and air quality planning responsibilities in a continuing, cooperative and comprehensive manner in conformance with federal and state Law that determine how Metropolitan Planning Organizations (MPOs) provide for early consultation and public participation. The various laws include but may not be limited to:

Federal

- Transportation and Conformity Regulations of Title 40 CFR Part 93.105
- Title 23 CFR Part 450.316
- Title 23 CFR Part 450.322(g)(1) and (2)
- Title 23 CFR Part 450.216(a)(1)
- Title 23 USC Part 134(g)(4)
- Title 23 USC Section 135(e)
- Title VI of the Federal Civil Rights Act of 1964
- Title 49 CFR Part 21.5
- Title 42 USC Chapter 21 Section 2000(d)
- Executive Order 12898 regarding Environmental Justice (1994)
- Executive Order 13166 regarding Improving Access to Services for Persons with Limited English Proficiency
- Executive Order 13175 regarding Consultation and Coordination with Indian Tribes
- US DOT Order 5610.2 (1997)
- US DOT Order 6640.23 (1998)
- 1990 Americans with Disabilities Act
- 1990 Clean Air Act Amendments
- 2005 Safe, Accessible, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)
- Moving Ahead for Progress in the 21st Century (MAP-21)
- Fixing America's Surface Transportation (FAST) Act

State

- Government Code Section 11135
- Government Code Section 65080
- California Environmental Quality Act (CEQA)

Title 23 CFR Part 450.316(a) states the following concerning participation and consultation:

“The Metropolitan Planning Organization (MPO) shall develop and use a documented participation plan that defines a process for providing citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with reasonable opportunities to be involved in the metropolitan transportation planning process.”

A vigorous public information process not only serves Kern COG by meeting federal requirements, but also allows for a fruitful exchange of ideas while developing programs or projects that may be controversial.

Section 2. Background

The federal government has mandated that public involvement in the metropolitan planning process meet minimum requirements. How effectively planning agencies provide opportunities for public input is an important criterion to determine federal fund allocation for local, regional, state projects and programs. While legislation such as the most recent federal transportation spending bills, the Americans with Disabilities Act and awareness of environmental justice issues have broadened the scope of public participation in the planning and programming process, prior federal transportation acts also required public participation.

California’s Ralph M. Brown Act has long required state and local agencies to perform their duties in the public’s full view and provide opportunities for public input. All environmental documents related to transportation plans include the public comment provisions of the California Environmental Quality Act (CEQA). Kern COG has always complied with California law in addition to meeting federal statute mandates.

Kern COG’s Board of Directors and technical advisory committees assist the bottom-up planning process and frequent, ongoing public and interagency participation at all stages of the process. Outreach programs are designed in cooperation with technical advisory committees and other transportation and air quality agencies. These programs will complement the decentralized planning process, which was established to increase participation in regional policy development.

Effective public involvement requires that affected individuals and groups be encouraged to participate in the development of local, regional, and state plans. The following policies, guidelines and procedures are designed to encourage participation during the preparation of the:

A. Regional Transportation Plan – Refer to Appendix C of the 2018 RTP;
B. Transportation Improvement Program;
C. Environmental impact studies or reports; and
D. Any product prepared by Kern COG staff that statutorily requires public participation or for which the Kern COG Board of Directors determines it is necessary.

Section 3. Partnerships

Kern COG staff maintains regular contact with the following agencies:

American Lung Association
Amtrak
Bakersfield ARC
Bakersfield Senior Center
Bakersfield Association of Realtors
Bakersfield Downtown Business Association
Bike Bakersfield
Bureau of Land Management
California Air Resources Board
California Department of Conservation – Oil, Gas & Geothermal Division
California Department of Finance
California Environmental Protection Agency
California Highway Patrol
California Office of Planning and Research
Caltrans Districts 6 and 9
Center for Race Poverty & the Environment
City of Arvin
City of Bakersfield
City of California City
City of Delano
City of Maricopa
City of McFarland
City of Ridgecrest
City of Shafter
City of Taft
City of Tehachapi
City of Wasco
CommuteKern
County of Kern
County of Kern Public Health Services Department
Cultiva La Salud
Dolores Huerta Foundation
Eastern Kern APCD
Edwards Air Force Base
Federal Highway Administration
Federal Transit Administration
Fresno Council of Governments
Golden Empire Transit District (GET)
Greater Bakersfield Chamber of Commerce
Greyhound Lines
Independent Living Center
Indian Wells Valley Airport District
Inyo County Transportation Commission
Kern Congestion Management Agency
Kern County Aging & Adult Services Department
Kern County Black Chamber of Commerce
Kern County Home Builders Association
Kern County Commission on Aging
Community Action Partnership of Kern
Kern County Hispanic Chamber of Commerce
Kern County Housing Authority
Kern County Superintendent of Schools

Kern County Water Agency
Kern Economic Development Corp.
Kern Minority Contractors Association
Kern Motorist Aid Authority
Kern Regional Center
Kern Transit
Kern Transportation Foundation
Kern Wheelmen Bicycle Club
Kings County Association of Governments
Leadership Counsel for Justice and Accountability
Local Agency Formation Commission
Madera County Transportation Commission
Merced County Association of Governments
Metro Bakersfield Consolidated Transportation Service Agency
Mexican-American Opportunity Foundation
Minter Field Airport District
Mono County Transportation Commission
Mojave Town Council
Natural Resources Defense Council
Naval Air Weapons Station - China Lake
New Advances for People with Disabilities
North of the River Recreation & Park District
Blue Sky Partners
San Joaquin Council of Governments
San Joaquin Valley Air Pollution Control District
Santa Fe Railways
Sierra Club
Southern California Auto Club
Southern California Association of Governments
Stanislaus Council of Governments
Tejon Indian Tribe of California
Tribal communities
Tubatulabal Tribe
Tulare County Association of Governments
Various chambers of commerce
Various community services districts
Various environmental/social equity organizations
Wasco and Delano Associations for the Developmentally Disabled
Wasco Housing Authority

Section 4. Guidelines

Kern COG is committed to developing and maintaining an effective citizen participation process. In order to accomplish this commitment, the following principles guide the public involvement process:

A. It is the right and responsibility of citizens to be involved in the transportation planning process.
B. Citizens should be educated about the needs and issues and encouraged to participate in finding solutions.
C. Early and timely citizen involvement is necessary to build community agreement on needs and solutions before alternatives are proposed.
D. Agreement on the final product is a desirable goal, but agreement does not mean 100 percent unanimity by all parties. Negotiation and compromise are essential ingredients to building agreement.

E. The process by which a decision is reached is just as important as the product. Citizens should end the process satisfied that they had the opportunity to be significantly involved and that their voices were heard and reflected in the final document.
F. After decisions are made, actions should follow to maintain confidence in the community involvement process.

Community involvement is not a one-time process. The manner in which the public is involved may change as the process progresses.

In Attachment A, Public Involvement Chart, Kern COG defines a public participation program for each document it produces. Final documents will reflect the needs and desires of affected communities within the region. This includes establishing procedures and responsibilities for:

A. Informing, involving, and incorporating public opinion into the planning process;
B. Consultative involvement of designated agencies on technical data and modeling used in developing regional plans and determining transportation improvement program and regional transportation improvement program conformity;
C. Clearly designating a lead staff person who is knowledgeable about the entire planning process to be responsible for the public involvement program; and
D. Providing adequate funds and schedule expenditures to implement the public participation program.

Section 5: Procedures

Community Members/Organizations Involvement
Metropolitan transportation planning requires that where a metropolitan planning area includes Federal public lands and/or Indian Tribal lands, the affected Federal agencies and Indian Tribal governments shall be involved appropriately in the development of transportation plans and programs. Discussion on environmental mitigation activities of the long-range transportation plan shall be developed in consultation with tribes. Kern COG continues Government-to-Government consultation with the Tejon Indian Tribe of California in the development of transportation plans and programs.

Kern COG will notify interested or affected citizens who may be impacted through traditional and electronic meeting announcements, newspapers, public service announcements, press releases, social media, special mailers, publications and committee agendas, meetings and other opportunities to participate, as appropriate. Community members or organizations may include but are not limited to:

Academic and scientific communities
Airport authorities
Appropriate private transportation providers
Bicycle and pedestrian groups
Business and industry officials
Elected officials
Environmental organizations
Freight shippers and receivers
Health and disabled organizations
Local public and private transit operators

Local, state and federal agencies
Minority and ethnic groups
Native American associations
Operators of major modes of transportation
Recreation groups
Senior citizen groups
Service organizations
Traffic, ridesharing, parking, and enforcement agencies
Youth services groups

A. Kern COG encourages public participation and acknowledges the value of this input.
B. Kern COG will provide complete and easily understood information and summaries. Planning issues and alternatives will be addressed in a realistic manner.
C. Kern COG will publish public comments in a newsletter or report. Reports will include specific agency responses, the effect of citizen input on decisions, and (when appropriate) updated reports of citizen participation.
D. Kern COG will conduct a thorough review of the program, including staff and citizen evaluation.
E. Kern COG will consult with Federal agencies and Indian Tribal governments in the development of transportation plans and programs pursuant to Federal law.

Level I

Public Involvement Requirements
Level I procedures address routine documents that serve as a subset of or facilitate more significant plans or determinations. These documents are implementing long-range direction provided by plans and documents that went through a more intensive public review procedure (Level II or III). These documents are subject to the minimum levels of public outreach under these policies. These procedures become effective once an initial draft document has been produced. Procedures that apply to these documents are customized as appropriate to better focus public involvement.[1]

Level I Documents

A. Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS) and Congestion Management Program (CMP) amendments
B. Federal Transportation Improvement Program (FTIP) amendments (excluding technical or administrative modifications)
C. Regional Transportation Improvement Program
D. Air quality conformity determinations
E. Overall Work Program (OWP), agency budget
F. Active Transportation Plans and studies
G. Environmental Documents, as defined by the California Environmental Quality Act and/or the National Environmental Policy Act [1]

[1] See Attachment A, Kern COG Document Public Involvement Chart, for specific requirements on specific documents.

Level I Procedures

1. No person shall be denied participation.
2. A legal notice or display ad will be placed in the advertising sections of at least one newspaper of general circulation within the affected community, including a Spanish-language publication, if possible.
3. Display ads will be placed as deemed necessary and targeted specifically to affected communities to encourage involvement and address key decision-making points.
4. Non-traditional approaches, such postal and electronic mailings to non-profit organizations, churches and chambers of commerce will be used to encourage involvement of the underserved and transit dependent in project development and public workshops. Spanish-language advertising will be included as deemed necessary by the agency in these non-traditional approaches.
5. Public meetings are defined as those regular COG meetings normally held on the third Thursday of each month.
6. Public workshops are defined as forums established specifically for the public to gain information and provide input on Kern COG documents and processes. This definition does not include technical workshops for member agency staff or elected officials even though they are technically open to the public.
7. Announcements dealing with documents and/or meetings and workshops will be posted on the Kern COG web site and social media sites.
8. A mailing list of individuals who have expressed interest will be maintained.
9. Meeting notices will be mailed or e-mailed to individuals who have expressed interest.
10. Kern COG shall provide appropriate assistance, auxiliary aids and/or services when necessary to afford disabled individuals an equal opportunity. Individuals with disabilities will be provided an opportunity to request auxiliary aids.
11. Kern COG will provide audio/visual presentations along with its maps, charts and graphics whenever practical to help the public better understand the plans, programs, projects or determinations it adopts as deemed necessary by the agency.
12. Kern COG will provide an interpreter, when requested, at any and all public hearings and workshops, and will maintain its subscription to a language line for day-to-day public inquires.
13. Kern COG's web site will maintain a link to a translation service for information contained on the agency site.
14. Projects must be evaluated for their potential for public interest. Projects likely to have considerable public interest must also include Level III requirements.
15. Electronic and or a hard copy of draft transportation plan amendments and draft transportation improvement program amendments, environmental documents, and the Congestion Management Program amendments will be made available for review at Kern Council of Governments and the main branch of the local library system within affected areas. Individual copies of all documents will also be distributed to any interested parties for a fee to offset printing charges.

Level II

Additional Public Involvement Requirements

Level II procedures address core agency plans, programs and declarations. These documents are subject to a higher level of public outreach than Level I documents under these policies. These procedures become effective before an initial draft document has been produced. The following documents must also meet the public involvement requirements listed in Level I:

Level II Documents

A. Federal Transportation Improvement Program
B. Corridor Studies
C. Transit Studies
D. Regional Housing Needs Assessment
E. Special Studies
F. Public involvement procedure amendments

Level II Procedures

1. Public review by various funding agencies submitting projects for the transportation improvement program will be accepted up to the final determination.
2. A copy of draft transportation plans and draft transportation improvement programs, environmental documents, and the Congestion Management Program will be made available for review at Kern Council of Governments and the main branch of the local library system within affected areas. Individual copies of all documents will also be distributed to any interested parties for a fee to offset printing charges.
3. Public comments and responses, and the disposition of any comments, will be made part of final transportation plans, transportation improvement programs, and environmental documents.

    a. **Prepare written summary/verbal presentation** – Staff will review all comments, synthesize them and prepare a narrative summary highlighting key points.
    b. **List all comments** – Using a summary chart format, staff will review and summarize all comments, categorizing them by topic and type of comments (e.g. question, fact, desire, opinion).
    c. **Respond to comments** – Staff will respond, in writing within 30 days, to significant comments. Those responses will be made part of the final document.
    d. **Provide the full record** – The decision-making body will be given copies of the meeting notes, the transcript (for public hearings) or taped transcripts.

4. Transportation improvement programs and environmental documents will be made available for public review for no less than a 30-day public review period.

5. Programs, projects, or plans routed through the State Clearinghouse shall adhere to the public information requirements of the Clearinghouse and also be made available for no less than 30 days.
6. If regionally significant changes are made to the transportation plan, transportation improvement programs, and environmental documents during the review and comment period, the plan(s) will be made available for 30-day public review and comment prior to final adoption.
7. Minor amendments to the transportation improvement programs will have a 14-day public review period and may be approved by the executive director.
8. Regionally significant changes to the transportation plan, transportation improvement programs, and environmental documents during the review and comment period shall also be advertised via press release to all media outlets, through electronic notice to Kern COG's address database and on the Kern COG web site as deemed necessary prior to final adoption.
9. The executive director or his/her designee will coordinate with the State to improve public awareness of the State Transportation Plan and/or the State Transportation Improvement Plan.
10. Records relating to the transportation plans, transportation improvement programs, and environmental impact reports will be made available for public review upon request.
11. Technical and policy information relating to the transportation plans, transportation improvement programs, and environmental impact reports will be made available for public review upon request.
12. Staff will hold public workshops as deemed necessary by the agency in local jurisdictions on the Regional Transportation Plan. These public meetings/workshops will be announced in a variety of formats, including public notices, display ads, press releases and direct mail and/or electronic mail notices in the affected communities as deemed appropriate by the agency.
13. All project plan amendments not considered administrative in scope shall be advertised via public notice and held for a 30-day review period.
14. Refer to the California Transportation Commission's 2017 Regional Transportation Plan Guidelines regarding addendums, supplemental and subsequent environmental documents to the Regional Transportation Plan.

Level III

Anticipated high-profile projects

The following must also meet the criteria listed in levels I and II. In general, Level III procedures address plans that provide long-range direction for the organization or that Kern COG staff determines to be controversial based on their environmental impacts, project scope or other determining factors. These Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS) is subject to this highest level of public outreach under these policies. These procedures become effective before an initial draft document has been produced. Kern COG staff will:

A. Develop a Regional Transportation Plan/Sustainable Communities Strategy
B. Develop a calendar of public workshops.

C. Identify the appropriate media contact to respond to media inquiries.
D. An e-mail address will be provided made available for public access to receive updates and to make and receive comments. Coordinate a press release highlighting the plan/program and coordination between Kern COG and public participation. Press releases will be sent to radio stations, television channels, and newspapers as deemed necessary by the agency.

Metropolitan transportation planning requires that where a metropolitan planning area includes Federal public lands and/or Indian Tribal lands, the affected Federal agencies and Indian Tribal governments shall be involved appropriately in the development of transportation plans and programs. Discussion on environmental mitigation activities of the long-range transportation plan shall be developed in consultation with tribes. Kern COG will continue Government-to-Government consultation with the Tejon Indian Tribe of California in the development of transportation plans and programs.

Senate Bill 375 increased the minimum level of public participation required in the regional transportation planning process. Collaboration between partners in the region during the development of a Sustainable Communities Strategy (SCS) and/or an Alternative Planning Strategy (APS) is essential and may include business and industry stakeholders, environmental justice stakeholders, social equity stakeholders and others. Public participation pursuant to SB 375 shall including the following:

1. Outreach efforts encouraging the active participation of a broad range of stakeholders in the planning process, consistent with the agency's adopted Federal Public Participation Plan. This includes, but is not limited to, affordable housing advocates, transportation advocates, neighborhood and community groups, environmental advocates, home builder representatives, broad-based business organizations, landowners, commercial property interests, and homeowner associations.
2. Consultation with other regional congestion management agencies, transportation agencies, and transportation commissions.
3. At least three regional public workshops will be held with information and tools providing a clear understanding of policy choices and issues. To the extent practicable, each workshop shall include urban simulation computer modeling to create visual representations of the SCS and APS.
4. Preparation and circulation of a draft SCS (and APS, if one is required) not less than 55 days before adoption of a final RTP.
5. A process enabling the public to provide a single request to receive notices, information and updates.
6. During the development of the SCS (and APS, if applicable), at least two informational meetings will be held for members of the Board of Supervisors and City Councils. Only one informational meeting is needed if it is attended by representatives of the Kern County Board of Supervisors and City Councils that represent a majority of the cities representing a majority of the population in the incorporated areas of the county.
    a. The purpose of the meeting (or meetings) will be to discuss the SCS (and APS, if applicable), including key land use and planning assumptions, with

the members of the Board of Supervisors and City Councils and to solicit and consider their input and recommendations.

b. Notices of these meetings are to be sent to the Clerk of the Board of Supervisors and City Clerks.

7. In preparing an SCS, Kern COG will consider spheres of influence that have been adopted by the Local Agency Formation Commission (LAFCO). Kern COG will also consult with LAFCO regarding special districts within the region that provide property-related services such as water or wastewater services, and will consult with these regional special districts, as appropriate, during development of a SCS (and APS if applicable).

Process for Receiving Public Comments

The following public involvement techniques may be used to inform and educate the public and/or gather information.

A. Formal Public Meetings/Workshops

Formal public meetings and/or workshops may be held during the process. The format for the workshops will be at the discretion of Kern COG. All Kern COG meetings and public workshops will be held in buildings accessible to persons with disabilities. The format options include:

- 'Theater' style with a presentation followed by audience response.
- 'Open-house' style with individual comments provided directly to a recorder, typed in by the participant, or via written comment sheets; or
- A mixed format with an 'open house' style meeting followed by a 'theater' style comment period.

In each case, Kern COG will provide audio/visual presentations along with maps, charts and graphics, whenever practical, to help the public better understand the plans, programs, or projects it adopts.

B. Mini – Grant Program

Kern Council of Governments may seek assistance from community-based organizations, etc. to solicit public input into key activities associated with the preparation of high profile projects such as the Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS). Kern COG may request help with ensuring diverse and extensive input by further expanding community outreach activities.

Kern COG may provide mini grants to organizations for outreach activities that result in public involvement and input from stakeholders regarding the RTP/SCS, with the primary goal of including Kern residents in the RTP and SCS transportation planning process. This program will help ensure that interested residents have ample opportunity to understand and provide meaningful input on these plans.

C. Small Group Sessions

A meeting of selected citizens, businesses, and/or neighborhood residents may be invited to participate in small group or roundtable sessions to discuss options and give opinions on specific transportation topics. Participants may be presented with materials and asked to respond. The following are types of small groups that might be involved in the process:

Plan/Program Advisory Committee (PAC) - An advisory committee established for the development of a plan or program may consist of a broadly representative group of citizens who understand other citizens' concerns, needs and wants, technical and administrative staff from various organizations, and officials from appropriate local and state entities.

A PAC with citizen participation can be a valuable asset. Generally, PACs provide and consider citizen input and advice regarding regional goals and objectives, problems and needs, and to discuss potential options and solutions regarding the activity and to be responsive to the citizen input.

PAC members may be expected to attend several public and neighborhood meetings. They may also be asked to assist, provide support and be responsible for the dissemination of information, and give testimony to the benefits and importance of the activity to the community, actively seek informed responses from the community regarding transportation problems and priorities, and elicit potential solutions.

Kern COG will specifically consider the need for a PAC with regard to major transportation plans, studies, programs and projects. If the Board elects to form a PAC, the PAC shall be organized with a special effort to appoint persons who are or will represent the needs of the persons traditionally underserved such as low income, minorities, elderly and disabled. The ways and means of determining PAC membership, committee structure, and specific roles and responsibilities for an activity shall be presented to the TTAC and Board for their approval. Membership will not be permanent, thus PAC members will serve for the length of the development and completion of a plan or program.

Stakeholders - Interview or meet with individuals or groups who have a vested interest in the outcome of a Kern COG-developed plan or program. Interviews and/or roundtable meetings would be conducted to identify issues and concerns. Such groups may include business, neighborhood, environmental, and others.

PAC and stakeholder meetings may include the use of various public involvement techniques to keep the group informed, obtain information, identify preferences and resolve conflicts.

Focus Groups - Kern COG may use this approach to uncover information that is difficult to access. This includes uncovering attitudes, opinions, and emotions on specific issues or topics from a group of 'screened' participants. This method may also be used to clarify issues so as to develop surveys.

D. Internet

Whenever possible, Kern COG will provide access to plans and programs through Internet access. When applicable, an e-mail address will be presented and made available for public access to make and receive comments.

E. Fairs and Festivals

Kern COG may attend community fairs and festivals to present various aspects of transportation planning, programming and projects as set forth in the RTP, as well as the FTIP. Participants are encouraged to view exhibits, ask questions, consider the information and give comments. Fairs create interest and dramatize a plan, program or TIP project through visualized graphics, audiovisuals, and interaction with Kern COG staff.

F. Public Opinion Surveys

Surveys report what people know or want to know. Surveys test whether a plan, program or an element of them is acceptable to the public as it is being developed. An appropriately sized random sample will be drawn from the targeted population and surveyed to develop a sense of general public attitudes. Surveys can be formal such as a direct mailing to citizens, businesses, and community organizations or informal such as a self-administered questionnaire attached within a draft document.

G. Phone/In-person Comments

A period of time may be provided to allow citizens to telephone or walk in their comments. Kern COG's phone number and address will be provided to the media and may be included on documents related to the plan or program. Kern COG will summarize verbal comments.

Section 6. Public Involvement Policy Evaluation

A. Significant changes to Kern COG's Public Involvement Procedures shall be published and available for a 45-day public review and comment period before final adoption.
B. Kern COG staff and the public will review the public review process biennially.

Evaluation Methodology
In order to regularly evaluate the Public Involvement Procedures, metrics are recommended and will be reported to the Board:

A. The accessibility of the outreach process to serve diverse geographic, language and ability needs.
B. The extent or reach of the process in involving and informing as many members of the public as possible.

C. The diversity of participants in the outreach process and its ability to reflect the broad range of ethnicities, incomes and special needs of residents in the Kern region.
D. The impact of public outreach and involvement on the plan/program and on policy board actions.
E. The satisfaction with the outreach process expressed by participants.

For each of these five performance measures, a set of quantifiable indicators has been established. They will be applied as appropriate to each plan/program's level requirements.

A. Accessibility Indicators:

- Meetings are held throughout the county.
- 100 percent of meetings are reasonably accessible by transit.
- All meetings are accessible under Americans with Disability Act requirements.
- Meetings are linguistically accessible to 100 percent of participants with three working days' advance request for translation. (*Meeting announcements will offer translation services with advance notice to participants speaking any language with available professional translation services*.)

B. Reach indicators
- Number of formal comments on draft final document logged into comment tracking and response system.
- Number of individuals actively participating in outreach program.
- Number of visits to the specific section of the Kern COG website.
- Number of newspaper articles, radio and television interviews mentioning the plan/program.

F. Diversity indicators
- Demographic of targeted workshop/charrette/meeting roughly mirror the demographics of the Kern region.
- Listing of targeted organizations and groups participating in at least one workshop/charrette/meeting.
- Listing of participants representing a cross-section of people of various interests, places of residence and primary modes of travel.

G. Impact Indicators
- 100 percent of written comments on draft final document received are logged into a comment tracking system, analyzed, summarized and communicated in time for consideration by staff and the policy board.
- 100 percent of significant written comments on draft final document are acknowledged so that the person making them knows whether his or her comment is reflected in the outcome of a policy board action, or, conversely, why the policy board acted differently.

H. Participant Satisfaction (*This information would be obtained via an online and written survey available on the Kern COG web site, and at each workshop/charrette/public meeting involving the plan or program in question*.)

- Accessibility to meeting locations.
- Materials presented in appropriate languages for targeted audiences.
- Adequate notice of the meetings provided.
- Sufficient opportunity to comment.
- Educational value of presentations and materials.
- Understanding of other perspectives and priorities.
- Clear information at an appropriate level of detail.
- Clear understanding of items that are established policy versus those that are open to public influence.
- Quality of the discussion.
- Responsiveness to comments received.

Section 7. Media Resources

Print Media Resources

Kern County is situated in California's southern San Joaquin Valley occupying 8,200 square miles. It is the third largest county in the State; with about the same area as New Jersey and is twice the area of L.A. county with 1/10th the population. The county is divided into three distinct geographical regions: The eastern third of the county is the Mojave Desert; the middle section straddles the Southern Sierra Nevada Mountains and the Transverse Ranges; the western portion is in the San Joaquin Valley. Because of the diversity in the market profile and geography of Kern County, it is necessary to address the county in segments. Public Notices must be carefully placed depending on the project and affected communities.

Countywide Publications	**Type**	**Adjudicated**
The Bakersfield Californian	Main / Greater Kern County	X
El Popular	Hispanic Interest	X

Indian Wells Valley	**Type**	**Adjudicated**
The Daily Independent	Main / Ridgecrest	X
News-Review	Main / Ridgecrest	X

Southeastern Kern County	**Type**	**Adjudicated**
Antelope Valley Press	Main / Palmdale	X
Mojave Desert News	Main / Mojave	X
Rosamond Weekly News	Main / Rosamond	X
Southeast Kern Weekender	Ridgecrest	
Tehachapi News	Main / Tehachapi	X

Kern River Valley	**Type**	**Adjudicated**
Kern Valley Sun	Main /Lake Isabella	X

Arvin/Lamont	**Type**	**Adjudicated**
Arvin Tiller	Main /Arvin	X
El Popular	Hispanic Interest	X

Southwestern Kern County	**Type**	**Adjudicated**
The Pine Mountain Pioneer	Main / Frazier (monthly)	--
Mountain Enterprise	Main / Frazier Park (weekly)	X

Metropolitan Bakersfield	**Type**	**Adjudicated**
The Bakersfield Californian	Main / Kern County	X
Bakersfield News Observer	African-American Interest	X
El Mexicalo	Hispanic Interest	X
El Popular	Hispanic Interest	X

Northwest Kern County	**Type**	**Adjudicated**
El Popular	Hispanic Interest	X
Shafter Press	Main / Shafter	X
Wasco Tribune	Main / Wasco	X

Western Kern County	**Type**	**Adjudicated**
The Midway Driller	Main / Taft	X

Section 8. Legal and Display Ad Minimum Requirements

Legal Notice:
Date, time, and place of public hearing or meeting;
Identity of the hearing body or officer;
General explanation of the matter to be considered;
General description, in text or by diagram, of the location of the real property, if any, that is the subject of the hearing or meeting;
The following statement when appropriate –"Individuals with disabilities may call Kern COG to request auxiliary aids necessary to participate in the public meeting/hearing."

Kern Council of Governments
Address
Contact name
Telephone number
Web site: www.kerncog.org
E-mail: ahakimi@kerncog.org

Notice of Intent to Adopt:
Period during which comments will be received;
Date, time, and place of any public meetings or hearings on the proposed project;
Brief description of the proposed project and its location;
Address where copies of the proposed negative declaration are available for review;
The following statement when appropriate – "Individuals with disabilities may call

Kern COG to request auxiliary aids necessary to participate in the public meeting/hearing."

Kern Council of Governments
Address
Contact name
Telephone number
Web site: www.kerncog.org
E-mail: ahakimi@kerncog.org

Notice of Determination: – Filed ONLY with Kern County Clerk's Office

Information identifying the project, including common name and location;
Brief description of the project;
Date on which Kern COG determines the project will not cause any significant adverse environmental effects;
Address where copy of the negative declaration may be examined;
The following statement – "Kern COG has complied with the California Environmental Quality Act in the preparation of this negative declaration;"
The following statement when appropriate – “Individuals with disabilities may call Kern COG to request auxiliary aids necessary to participate in the public review process.”

Kern Council of Governments
Address
Contact name
Telephone number
TTY number
Fax number
Web site address
Project manager e-mail address

Notice of Preparation:

A. Description of project;
B. Project location on a map;
C. Discussion of probable environmental effects of project;
D. The following statement when appropriate -"Individuals with disabilities may call Kern COG to request auxiliary aids necessary to participate in the public review process.”

Kern Council of Governments
Address
Contact name
Telephone number
TTY number
Fax number
Web site address

Project manager e-mail address

Notice of Completion:

A. Description of project;
B. Project location;
C. Date, time, and place of any public meetings or hearings on the proposed project;
D. Address where copies of the Draft EIR are available for review;
E. Period during which comments will be received;
F. The following statement when appropriate -"Individuals with disabilities may call Kern COG to request auxiliary aids necessary to participate in the public review process."

Kern Council of Governments
Address
Contact name
Telephone number
TTY number
Fax number
Web site address
Project Manager e-mail address

Sample Notice
Notice of Public Hearing

Date

Before the Kern Council of Governments (Kern COG) in the matter of STATE PURPOSE OF PUBLIC HEARING:

A. WHEREAS, Kern COG, in its capacity as the INSERT DESIGNATION will hold a public hearing to receive public comments regarding the INSERT PLAN, PROJECT, PROGRAM and

B. WHEREAS, NAME DOCUMENT AND PURPOSE

NOTICE IS HEREBY GIVEN THAT:

A. A PUBLIC HEARING will be held in the Kern COG conference room, 1401 19th Street, Suite 300, Bakersfield, California at 6:30 pm, on Thursday, STATE DATE, for the purpose of receiving public comments and testimony regarding INSERT PLAN, PROJECT, OR PROGRAM. This hearing will be a part of a regularly scheduled meeting of the Kern Council of Governments.

B. The INSERT PLAN, PROJECT, OR PROGRAM will be considered for INSERT ACTION by the Kern Council of Governments following the public hearing.

C. Any person wishing to present testimony related to INSERT PLAN, PROJECT, OR PROGRAM may be heard, or may submit written comments to Kern COG, 1401 19th Street, Suite 300, Bakersfield, California 93301, for inclusion in the official record of the hearing. Individuals with disabilities may call Kern COG to request auxiliary aids necessary to participate in the public review process.

Ahron Hakimi,
Executive Director
Kern Council of Governments
(661) 635-2900
TTY (661) 832- 7433
Fax: (661) 324-8215
Web site: www.kerncog.org
ahakimi@kerncog.org
DATE OF PUBLICATION

Display ads
Newspaper display ads, which may be inserted anywhere in the paper and are not confined to the classified section, will be used for the following documents: Regional Transportation Plan; Regional Transportation Improvement Program; Federal Transportation Improvement Program; all corridor studies; transit studies, including the unmet transit needs process; and all special studies.

These advertisements should run at the beginning, middle, and toward the end of the document development process. They will announce either a public input period, draft review availability or a final review period.

Display ads should be no smaller than 2 columns in width by no less than 4 inches deep. If financial constraints allow, display ads should run 2 columns wide by 7 inches deep or larger.

Given the larger canvas with which to work, display ads should contain at least one art element by which to draw the eye. This should include, but not necessarily be limited to the Kern COG logo. The number of different fonts used should be limited to two.

Sign In Sheets
Have a sign-in sheet available. This will become part of Kern COGs official record. Make sure people write legibly, this information will become a part of the mailing list. At a minimum, include: name, address (street, city, zip), daytime contact telephone number and e-mail address. The information needed from the sign-in sheet may vary from meeting to meeting. If quite a bit of information is needed, consider developing an information card that attendees can complete at their seat.

Have Kern COG materials available
Several items will help the public to understand the purpose of the agency, the project and Kern COGs role. Many questions as can be answered prior to the meeting, which will save time during the meeting.

A. Comment Sheets
B. Project Information Guide
C. Kern COG Information Guide
D. Presentation-specific support materials

Visual Aids
A. PowerPoint presentation
B. Slides
C. Enlarged diagrams and graphs
D. Enlarged maps
E. Videos
F. Handouts

Anticipate Questions
Anticipated questions should be developed and answered when the Project Information Guide is created. However, it is likely the audience will have many more. The process of transportation planning is not an easy one to grasp. Many members of the audience will have wishes and desires that simply cannot be fulfilled. How staff responds to questions or statements of desire will make a difference with their opinion of Kern COGs efforts to involve the public. Kern COG staff should create ways of telling the audience the planning process instead of telling the audience “No, we can’t.”

Are there creative ways to help the audience understand that transportation planning is a dynamic give-and-take process?

Attachment A: Kern COG Document Public Involvement Chart - 2019

	OWP	COG Budget	KMAA Budget	RTP /SCS	RTP[1] /SCS Amend	RTP[2] Env. Doc.	RTIP	FTIP	TIP[3] Amend	Corridor Studies	Transit Studies	Regional Housing Needs Assessment	Special Studies	Air Quality Conformity	Population & Socio-Economic Forecast	Public Information Policies/ Procedures	Active Transportation Plan
Procedures Level:	1	1	1	3	1	1	1	2	1	2	2	2	2	1	1	2	1
Document/Process Inception																	
Display Ads (Newspapers)				●						❍	❍	●	❍				
Direct Mail/Electronic Notices				●				●		●	●		●			●	
Press Releases				●						❍	❍	●				●	
Public/COG meeting	●	●	●					●									
Workshop(s)				●						●	●		●				
Draft Document/Process																	
Display Ads (Newspapers)				●				❍		❍	❍	●	❍				
Direct Mail/Electronic Notices				●				●		●	●		●			●	
Press Releases				●			❍	❍		❍	❍	●	❍				
Public/COG meeting	●	●	●	●			●	●		●	●	●	●	●	●	●	●
Workshop(s)				●			❍	❍		●	●		●		●		
Final Report/Plan/Study/Process																	
Display Ads (Newspapers)				●						●		●	●	❍			❍
Direct Mail/Electronic Notices	●	●	●	●			●	●		●	●		●	●	●	●	●
Press Releases				●			❍	❍		❍	❍	●	❍	❍	●		❍
Public/COG meeting	●	●	●	●			●	●		●	●		●	●	●	●	●
14-day Review Period					●				●								
30-day Review Period	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●
45-day Review Period						●										●	
55-day Review Period				●													
Legal Notice		●	●	●	●	●		●	●					●			●
Public Hearing		●	●	●	●			●	●					●			●

● *Required*

❍ *As deemed necessary by staff*

Display ads: Bakersfield Californian, El Popular, Arvin Tiller, Delano Record, Kern Valley Sun, Ridgecrest Daily Independent or Ridgecrest News-Review, Shafter Press, Taft Midway-Driller, Tehachapi News, Wasco Tribune Antelope Valley Press, Mojave Desert News, Rosamond Weekly, Mountain Enterprise Frazier Park (papers selected dependent on the project and affected communities)

[1]Minor RTP amendment types 2 and 3 will have a 14-day review period. Regionally signifcant major amendment types 4 and 5 will have a 30-day review, subject to environmental document requirements.

[2]Refer to CEQA/NEPA and California Transportation Commission latest Regional Transportation Plan Guidelines for addendum, subsequent and supplemental environmental documents.

[3]Minor TIP amendment types 2 and 3 will have a 14-day review period. Regionally signifcant types 4 and 5 will have a 30-day review.

2/1/2019

APPENDIX C

OUTREACH RESULTS

KERN COUNCIL OF GOVERNMENTS 2022 RTP OUTREACH PROGRAM

I. Purpose of Public Participation

Kern Council of Government's public participation program supports the Regional Transportation Plan update and Sustainable Community Strategy (RTP/SCS) development process. The public participation program builds on the Kern Regional Blueprint process, the 2014 RTP/SCS public participation program and the 2018 public participation program to seek grassroot public input for the region's future. The 2022 public participation program update was adopted in May 2019 and guides the RTP/SCS public outreach process (see Appendix B). The 2017 State RTP Guidelines recognize the Kern COG outreach plan as an exemplary planning practice that ensures the public is engaged throughout the process.[1] This program is an important part of complying with numerous state and federal regulations including Title VI of the Federal Civil Rights Act of 1964 and Federal Executive Order 12898 on Environmental Justice of 1994, and works together with the Integrated Performance Measures, Smart Mobility and Environmental Justice Measures Analysis (see Appendix D) to proactively address these regulations. In implementing this plan, Kern COG worked closely with local communities, non-profit organizations, and others to identify and prioritize the next steps for the future of the economy, transportation, housing, energy, community services and open space in the Kern region. The public participation program results will be reflected in the region's plans as appropriate to achieve the Kern region's mutual grassroot vision.

The 2017 State RTP Guidelines recognize the Kern COG outreach plan as an exemplary planning practice that ensures the public is engaged throughout the process.[1]

II. Countywide Results Summary

The 2022 RTP/SCS outreach program resulted in participation from more than 2,900 participants in the last year of a 4-year public outreach process using stakeholder meetings, mini-grants for non-profit hosted public workshops, phone surveys and online surveys. In addition, in the two years prior, over 4,300 participants provided input in annual phone surveys, festivals, events and online for a total of more than 6,900 participants providing input countywide. Kern COG's outreach activities are ongoing via the annual phone survey, online surveys and booth activities at local fairs and festivals when feasible. In addition, Kern COG's outreach strategy focuses on disadvantaged communities, providing appropriate translation and focused outreach events for all communities in the region.

...for a total of more than 6,900 participants providing input countywide.

III. Stakeholder Roundtable Meetings

Kern COG hosted three (3) stakeholder roundtable meetings in January 2020, August 2021, and November 2021. The purpose of the stakeholder roundtable meetings was to discuss the project and outreach process, to provide an overview of recent studies and to engage participants on transportation issues. Other issues discussed include the RTP/SCS environmental justice

[1] P. 316 – 2017 RTP Guidelines for MPOs, http://www.dot.ca.gov/hq/tpp/offices/orip/rtp/docs/2017RTPGuidelinesforMPOs.pdf

methodology and system level performance measures, Federal safety performance measure requirements and the Regional Housing Needs Allocation (RHNA) process.

A. Environmental and Social Equity and Business and Industry Stakeholder Roundtable Meeting – January 22, 2020

The Environmental and Social Equity and Business and Industry Roundtable provided an overview of U.S. Department of Transportation Planning Requirements including Environmental Justice Regulations, U.S Department of Justice Title VI Regulations, Growth Forecasting requirements, and the Regional Housing Needs Allocation process. Over fifteen (15) participants attended the meeting from various interest areas in the community including the Leadership Council for Justice and Accountability, Bike Bakersfield, Senator Melissa Hertado's office, Lamont/Weedpatch Collaborative, Center for Race, Poverty & the Environment, California Association of Retired Americans, Tejon Ranch, TDH Associates, and the City of Shafter, Taft, and Tehachapi.

B. Environmental and Social Equity and Business and Industry Stakeholder Roundtable Meeting – August 4, 2021

This meeting was conducted in-person and virtually to accommodate social distancing due to the Covid Pandemic. The meeting provided participants background and requirements for the Regional Transportation Plan/Sustainable Communities Strategy, the Regional Housing Needs Allocation process/status, status of the public outreach program and announcement of the Mini-Grant public outreach program and solicitation of applications.

Twenty-two (22) participants attended from various interest areas in the community including the Tubatulabal Tribe, Kern County Black Chamber of Commerce, League of Women Voters, Leadership Council for Justice & Accountability, California Trucking Association, Downtown Business Association, Bike Bakersfield, Cal Centre Logistics Park, Kern County Library, Kern County Public Works, FHWA, Caltrans District 6, California Air Resources Board, and two local business owners.

C. Regional Housing Needs Allocation Stakeholder Roundtable Meeting – November 3, 2021

This meeting was conducted in-person and virtually to accommodate social distancing due to the Covid Pandemic. The meeting provided participants information on the development of the 6th Cycle Regional Housing Needs Allocation (RHNA). Regional Government Services (RGS), the consulting firm assisting Kern COG with development of the RHNA Methodology was in attendance to answer questions. The Draft RHNA Methodology was made available to participants in advance of the meeting. The meeting also afforded participants the opportunity to hear from a panel discussing Kern Housing Concerns and Solutions. The panel was made up of Dave Dmohowski, Executive Officer of the Home Builders Association of Kern County, Stephen Pelz, Executive Director of the Housing Authority of the County of Kern, Michael Sigala, San Joaquin Valley Regional Planning Agencies Policy Council and Christopher Boyle, Development Services Director, City of Bakersfield. The meeting was attended by the Bakersfield Senior Center, Centro de Unidad Popular Benito Juarez, Home Builders Association of Kern County, Housing Authority of the County of Kern, TDH Associates, the Leadership Council for Justice and Accountability and the Cities of Arvin and Taft. Approximately thirty (30) individuals attended the meeting either in person or virtually

IV. Kern COG Mini-Grant Program

A. General Information

Kern Council of Governments (Kern COG) sought assistance from community-based organizations to solicit public input into key activities associated with the preparation of its 2022 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS**)**. Kern COG requested help to ensure diverse and extensive input focusing primarily on disadvantaged communities and diverse populations. These activities were coordinated with other public involvement activities conducted by Kern COG.

Kern COG was hosted by the following organizations: Kern County Black Chamber of Commerce, Bike Bakersfield, Bakersfield Senior Center, Leadership Counsel for Justice and Accountability, All Of Us Or None (AOUON). A total of nine (9) meetings were held during the months of September, October, and November 2021, in East Bakersfield, Lamont and Fuller Acres. One-Hundred and Sixty-Three (163) community members participated in the workshops. Community members ranged in age from college age to 60+ and self-identified as Hispanic/Latino, White/Not Hispanic, African American and more than one race

B. Principles for Growth/Strategies/Scenarios

Kern COG staff explained to participants the purpose of the Regional Transportation Plan and how the principles for growth and the strategies for transportation spending were developed during the public participation process for the 2018 Regional Transportation Plan. Kern COG staff reviewed the principles for growth and asked participants to study the growth principles and select the top three principles that were the most important for their region. “Provide a Variety of Housing Choices”, Conserve Energy and Natural Resources and Develop Alternatives” and “Conserve Undeveloped Land and Spaces, Water” were the most important principles for growth selected at a majority of the meetings. Participants were then asked to select the top three strategies that would complement the principles selected. Future growth scenarios were explained to the participants, and they were asked to select one that best met their opinion of how the region should grow and how fast change should take place.

C. Prioritization Results by Workshop

Date	Host/ Participants	Top Three Principles	Top Three Strategies	Selected Scenario
September 28, 2021	Kern County Black Chamber of Commerce East Bakersfield	1. Provide a Variety of Housing Choices 2. Conserve Energy/Natural Resources &	1. Provide Housing Closer to Jobs 2. Fix It First Road Maintenance **Tie**	Scenario 2 Moderate Change

Date	Host/ Participants	Top Three Principles	Top Three Strategies	Selected Scenario
	51 Participants	Develop Alternatives **Tie** 3. Conserve Undeveloped Land and Spaces, Water	3. Active Healthier Transportation	
September 30, October 19, & November 4, 2021	Bakersfield Senior Center East Bakersfield 36 Participants	1. Enhance Economic Vitality 2. Provide a Variety of Housing Choices 3. Provide Adequate/ Equitable Services	1. Provide Housing Closer to Jobs 2. Active Healthier Transportation 3. Fix It First Road Maintenance	Scenario 2 Moderate Change
October 13, 2021	All of Us or None (AOUON) Old Towne Kern 23 Participants	1. Provide a Variety of Transportation Choices 2. Use & Improve Existing Community Assets & Infrastructure 3. Provide a Variety of Housing Choices	1. Fix it First Road Maintenance **Tie** 2. Provide Housing Closer to Jobs 3. Active Healthier Transportation	Scenario 2 Moderate Change
October 14, 2021	Leadership Council for Justice and Accountability Lamont 6 Participants	1. Conserve Energy and Natural Resources, and & Develop Alternatives 2. Conserve Undeveloped Land, Spaces, Water 3. Provide a Variety of Housing Choices	1. Fix it First Road Maintenance **Tie** 2. Provide Housing Closer to Jobs 3. Active Healthier Transportation **Tie** 4. Invest in High Tech Transit	Scenario 3 Accelerated Change
October 18, 2021	Leadership Council for Justice and Accountability Fuller Acres 9 Participants	1. Use & Improve Existing Community Assets & Infrastructure **Tie** 2. Conserve Undeveloped Land, Spaces, Water 3. Conserve Energy/Natural Resources &	1. Fix It First Road Maintenance 2. Active Healthier Transportation 3. Increase Highway Capacity – Primarily for Freight	Scenario 2 Moderate Change

Date	Host/ Participants	Top Three Principles	Top Three Strategies	Selected Scenario
		Develop Alternatives		
October 30, 2021	Kern County Black Chamber of Commerce Domestic Violence Event 22 Participants	1. Provide a Variety of Housing Choices 2. Provide Adequate/ Equitable Services 3. Provide a Variety of Transportation Choices	1. Provide Housing Closer to Jobs 2. Active Healthier Transportation 3. Increase Highway Capacity – Primarily for Freight	Scenario 2 Moderate Change
November 9, 2021	Bike Bakersfield East Bakersfield 16 participants	1. Provide a Variety of Housing Choices 2. Increase Civic and Public Engagement 3. Provide Adequate/ Equitable Services	1. Provide Housing Closer to Jobs 2. Fix It First Road Maintenance 3. Increase Highway Capacity – Primarily for Freight	Scenario 2 – Moderate Change

D. Local Concerns Expressed

Local concerns expressed during the workshops included the following:

Central Bakesfield

- Streets were repaved by not alleys in the Carnation Tract
- Need left turn signal at Brundage & Chester
- Road Turn Improvements needed – Chester Ave., Union Ave, Cottonwood Road
- Road Widening – Cottonwood Road
- Extend Paseo past 4th Street – Block 4th Street at T
- Need bicycle lane on Brundage from Mt. Vernon to Wible
- Need bicycle lane on South Union
- Need pedestrian pth on South Chester
- Road Maintenance between Brundage and Casa Loma and South Chester to Wible; and between Brundage and Casa Loma on Cottonwood
- Pedestrian Path from Mt. Vernon to Union and E. California and Brundage
- Need bike path on Chester Avenue from Casa Loma to 23rd Street

East Bakersfield

- Need more bus routes and protected bus stops
- Need more transportation options

- Sidewalks in east Bakersfield need maintenance
- Street lighting is needed

Fuller Acres

- Need connectivity with Bakersfield
- Local streets need improvements
- Need sidewalks on Weedpatch Highway
- Need speed bumps on Fuller Road

V. Other Events

A. Festivals/Celebrations/Other Events

Kern COG participated in community festivals and celebrations. Additionally, on January 13, 2022, Chairman Bob Smith, Kern COG and Executive Director Ahron Hakimi, Kern COG met with members of a Bakersfield Senior's Group at Hodel's conference center to discuss the RTP and senior transit opportunities. There were approximately 80 people in attendance. Other festivals and celebrations are listed below.

Date	Event/Participants	Top Three Principles	Top Three Strategies
October 16, 2021	Oildorado Days/Taft 24 Participants	1. Provide a Variety of Housing Choices 2. Conserve energy/Natural Resources & Develop Alternatives 3. Conserve Undeveloped Land, Spaces, Water	1. Fix It First Road Maintenance 2. Increase Highway capacity – Primarily for Freight 3. Active Healthier Transportation
October 23, 2021	Solar Car Curriculum workshop/Tehachapi 5 Participants	1. Conserve Energy/ Natural Resources & Develop Alternatives 2. Enhance Economic Vitality **Tie** 3. Use & Improve Existing Community assets & Infrastructure	1. Fix It First Road Maintenance 2. Increase Highway Capacity – Primarily for Freight 3. Invest in High Tech Transit
October 28, 2021	Kern Transportation Foundation/Bakersfield 27 Participants	1. Enhance Economic Vitality 2. Provide a Variety of Housing Choices 3. Conserve energy/Natural Resources & Develop Alternatives	1. Increase Highway Capacity – Primarily for Freight 2. Fix It First Road Maintenance 3. Invest in High Tech Transit
November 3, 2021	Central California Receivers/Shippers Association/Bakersfield 7 Participants	1. Conserve Energy/Natural Resources & Develop Alternatives 2. Use & Improve Existing Community	1. Fix It First Road Maintenance **Tie**

		Assets & Infrastructure 3. Conserve Undeveloped Land, Spaces, Water	2. Invest in High Tech Transit 3. Increase Highway Capacity – Primarily for Freight
January 6 & 7, 2021	Ridgecrest Native American Petroglyph Festival 34 Participants	1. Use & Improve Existing Community Assets & Infrastructure 2. Enhance Economic Vitality 3. Provide a Variety of Transportation Choices	1. Fix It First Road Maintenance 2. Active Healthier Transportation 3. Provide Housing Closer to Jobs
Miscellaneous Meetings			
October 6, 2021	Kern COG TTAC/RPAC Members 8 Participants	1. Use & Improve Existing Community Assets & Infrastructure 2. Provide a Variety of Transportation Choices 3. Enhance Economic Vitality	1. Fix It First Road Maintenance 2. Increase Highway capacity – Primarily for Freight 3. Invest in High Tech Transit
October 13, 2021	Kern COG SSTAC Members	1. Use & Improve Existing Community Assets & Infrastructure 2. Enhance Economic Vitality 3. Provide a Variety of Transportation Choices	1. Fix It First Road Maintenance **Tie** 2. Increase Highway Capacity – Primarily for Freight 3. Invest in High Tech Transit **Tie** 4. Active Healthier Transportation
N/A	Kern County Public Works Employees 5 Participants	1. Enhance Economic Vitality 2. Provide a Variety of Transportation Choices **Tie** 3. Use & Improve Existing Community Assets & Infrastructure	1. Fix It First Road Maintenance **Tie** 2. Active Healthier Transportation 3. Invest in High Tech Transit

B. Local Roads Safety Planning (LSRP) – Summer 2021

During the summer/fall of 2021, Kern COG developed comprehensive Local Road Safety Plans (LRSPs) for the Cities of Arvin, Bakersfield, California City, Delano,

Maricopa, Shafter, Taft, Tehachapi, and Wasco. Four Hundred and Forty-Eight (448) people participated and/or completed surveys in the nine communities. These LRSPs are part of an ongoing safety effort per the Regional Transportation Plan (2018). An LRSP is a means of providing local and rural road owners with an opportunity to address unique roadway safety needs in their jurisdictions. The process of preparing the LRSPs will help create a framework to systematically identify and analyze safety problems and recommend safety improvements for the 9 Cities of Kern COG. The LRSPs will enable the 9 cities to enhance safety for all modes of transportation and for all ages and abilities.

Meetings were held via Zoom from June 22 through September 16, 2021.

1.	June 22	5-6 p.m. Shafter
2.	June 24	4-5 p.m. Delano
3.	June 29	5:30-6:30 p.m. Bakersfield
4.	July 12	4-5 p.m. Wasco
5.	July 24	3-4 p.m. Maricopa
6.	August 4	5-6 p.m. Taft
7.	August 5	6-7 p.m. Tehachapi
8.	August 17	6–7 a.m. Arvin
9.	September 16	5-6 p.m. California City

C. Clean Mobility Options Voucher Pilot Program (CMO) – Completed August 2021

CMO is a statewide initiative that provides funding for zero-emission shared mobility options to under-resourced communities in California. CMO is available throughout California to eligible disadvantaged communities, as well as eligible low-income tribal and affordable-housing communities, to increase access to safe, reliable, convenient, and affordable transportation options.

The number of eligible communities in the needs assessment is dependent on the existence of eligible low-income residential developments in the AB 1550 eligible communities. A minimum of 13 communities (Tejon Tribe, Tubatulabal Tribe, Delano, McFarland, Lost Hills, Wasco, Shafter, Buttonwillow, Taft, Lamont, Arvin, Lake Isabella, and Bodfish).

Kern COG desires to learn if residents of the disadvantaged communities would be interested enough in utilizing bicycles and e-bikes as a mode for local transportation if their community had a bike sharing program. Although much of our past research has taught us that families want there to be a safe environment for them to ride their bikes or walk, we want to determine that once the infrastructure is complete that they would ride the bicycles.

Two-Hundred and Twenty One (221) surveys were completed for the CMO Program. Results from this CMO outreach will assist Kern COG in addressing the areas of most concern regarding active and clean transportation options. Kern COG also oversees the Active Transportation Program funding and works closely with the agencies awarded these funds to provide adequate, active, and clean transportation options throughout Kern County.

VI. City Council and Board of Supervisors Presentations

During Spring of 2022, Kern COG staff addressed the eleven City Councils and the Board of Supervisors regarding development of the 2022 Regional Transportation Plan/ Sustainable Communities Strategy, Key Land Use and Planning Assumptions and Public Outreach. Staff provided each City Council Member and each member of the Board of Supervisors with an Executive Summary Brochure including planning assumptions maps, benefits of the Regional Transportation Plan and key strategies countywide. The meetings were held on the following dates:

- March 22, 2022 Maricopa City Council Chambers
- April 5, 2022 Wasco City Council Chambers
- April 12, 2022 California City Council Chambers
- April 14, 2022 McFarland Veterans Community Center
- April 18, 2022 Tehachapi Police Department Community Room
- April 19, 2022 Taft City Council Chambers
- May 4, 2022 Bakersfield City Council Chambers
- May 4, 2022 Ridgecrest City Council Chambers
- May 16, 2022 Delano City Council Chambers
- May 17, 2022 Shafter City Council Chambers
- May 24, 2022 Arvin City Council Chambers
- _____2022 Kern County Board of Supervisors

City Council Members and Members of the Board of Supervisors were encouraged to provide comments to Kern COG staff by June 16, 2022.

VII. Tribal Activities

Kern COG staff reached out to the Tejon Tribe verbally and in writing requesting a government-to-government meeting at the Tribes convenience. Kern COG also provided a draft government-to-government agreement to better facilitate the interaction between the two government organizations. The Tejon Tribe submitted an email discussing a Tribal Initiative important to the Tribe and the greater Native American Community. The initiative included the installation of “aboriginal placename signage” demarcating places of cultural, historical, spiritual and environmental importance along transportation corridors. The following initiative was included in the Policy Chapter (Chapter 2) of the RTP/SCS:

> “In consultation with local tribes, create signage, and/or roadside kiosks to demarcate and educate the public of places of cultural, historical, spiritual, and environmental tribal importance along and within transportation corridors, as cultural mitigation for new projects, and to promote tourism around the region’s extensive cultural heritage.

The Tejon Tribe is now a voting member of the Regional Planning Advisory Committee that oversees development of the RTP/SCS.

VIII. Surveys

A. Statistically Valid Community Survey

Godbe Research conducted statistically valid phone surveys of Kern County residents in the spring of 2018, 2019, 2020 and 2021. Each survey was of 1,200 residents for a total of 4,800 surveys.

Tracking to past surveys, the 2021 survey assessed the importance of 20 issues for improving future quality of life in Kern County. The quality of public education remained the top priority, when compared with 2020 data and the top seven priorities held the same rank order of importance as in 2020. The most important issues for the future in 2021 were (in order):

1. Improving the quality of public education (3.58)
2. Preserving water supply (3.54)
3. Improving crime prevention and gang prevention programs (3.48)
4. Improving water quality (3.47)
5. Maintaining local streets and roads (3.46)
6. Creating more high paying jobs (3.44)
7. Improving air quality (3.40)

With respect to commute behavior during the pandemic, approximately one third of residents said they have been telecommuting or working from home during the COVID-19 crisis, and about that many expect to continue after the crisis. About one in five residents indicated their company is requiring employees to work from home, while about a third of respondents preferred telecommuting because of the time and money savings.

The survey reports are available online at http://www.kerncog.org/?s=Quality+of+Life+Survey

B. On-line Surveys

During the 4-year public outreach leading up to development of the 2022 RTP/SCS, Kern COG used MetroQuest, a survey software program to conduct on-line surveys.

MetroQuest Survey 1

Survey 1 was used to test seven growth principles and options that would promote the principle. The survey was taken by 220 participants from September 17 – November 12, 2019. In order, the top five principles and top options are:

Top Five Principles	Options that Promote the Principle
1. Economic Vitality	1. Grow Retail 2. Grow Industries 3. Provide Job Training 4. Provide Education

2. Housing Choices	1. Condominium or Townhome 2. Residential with Commercial Below 3. Apartments 4. Multiple Family Housing 5. Single Family Housing
3. Conserving Land and Spaces	1. Economically Important Land 2. Buffer Zones 3. Habitats 4. Public Spaces 5. Natural Areas
4. Conserving Water and Energy	1. Wind Energy 2. Solar Energy 3. Air Quality 4. Water Quality
2. Providing Adequate Services	1. Senior Activities 2. Agency Collaboration 3. Recreation 4. Youth Activities 5. Public Safety

MetroQuest Survey 2

Survey 2 tested five priorities that support the Principles for Growth discussed in Survey No. 1. The survey was taken by 446 participants between January 24 – March 17, 2020. The priorities include:

- Fix it First Road Maintenance
- Invest in High Tech Transit
- Active Transportation
- Housing Close to Jobs
- Freight Capacity on Highways

Participants were asked to put the priorities in their order of preference. All options were randomized for each participant. The results of the priorities in order of ranking were:

1. Freight Capacity on Highways
2. Fix it First Road Maintenance
3. Active Transportation
4. Invest in High Tech Transit
5. Housing Close to Jobs

Participants were then asked to review detailed strategies that would further the Principles for Growth discussed in Survey No. 1. The strategies were explained as follows with the dollar signs representing relative cost:

Fix it First Maintenance

This strategy would support these "Principles for Growth." Enhance Economic Vitality; Conserve Energy and Resources; Use and Improve Existing Assets, and Provide a Variety of Transportation Choices. **$$$$**

Freight Capacity on Highways

This strategy would support these "Principles for Growth": Enhance Economic Vitality; Conserve Energy and Resources; Use and Improve Existing Assets, and Provide a Variety of Transportation Choices. **$$$$$**

High Tech Transit

This strategy would support these "Principles for Growth:" Enhance Economic Vitality; Conserve Energy and Resources; Provide Adequate Services; Use and Improve Existing Assets; Provide a Variety of Transportation Choices. **$$$**

Active Transportation

This strategy would support these "Principles for Growth:" Conserve Energy and Resources; Provide Adequate Services; Use and Improve Existing Assets, and Provide a Variety of Transportation Choices. **$$**

Housing Close to Jobs

The housing near jobs where feasible strategy supports all of the "Principles for Growth." The cost to government is minimal because housing is primarily produced by the private sector. **$**

All options were randomized for each participant. Results of the strategies in order of ranking were:

1. Housing Close to Jobs
2. High Tech Transit
3. Active Transportation
4. Fix it First Maintenance
5. Freight Capacity on Highways

MetroQuest Survey 3

Survey 3 asked participants to rank seven growth priorities that support the Principles for Growth discussed in Survey No. 1. The survey was taken by 200 participants between August 21 – November 12, 2020. The priorities include:

- Adequate Services;
- Housing Choices;
- Improve Community Assets;
- Conserve Water/Energy Use;
- Transportation Choices;
- Economic Vitality; and

- Conserve Land and Spaces.

Participants were asked to put the priorities in their order of preference. All options were randomized for each participant. The results of the ranking in order of priority were:

1. Economic Vitality
2. Transportation Choice
3. Adequate Services
4. Housing Choices
5. Improve Community Assets
6. Conserve Water & Energy Use
   Conserve Land and Spaces

Participants were then asked to evaluate their choices.

For **Adequate Services**, participants were asked to rank - Public Safety; Recreation; Youth Activities; Agency Collaboration; and Senior Activities.

For **Housing Choices**, participants were asked to rank - Apartment; Condominium Townhome; Residential/Commercial; Multi-Family Housing; and Single-Family Home.

For **Improve Community Assets**, participants were asked to rank – Sewers; Utilities; Roads; and Water Quality.

For **Conserve Water and Energy Use**, participants were asked to rank – Wind Energy; Solar Energy; air Quality; and Water.

For **Transportation Choices**, participants were asked to rank – Carpool; Single Occupancy Vehicle; Bike/Walk; Transit Between Cities; and Public Transit.

For **Economic Vitality**, participants were asked to rank – Grow Retail; Provide Job Training; Grow Industries; and Provide Education.

For **Conserve Land and Spaces**, participants were asked to rank – Retain Economically Important Businesses; Provide Buffer Zones; Retain Habitats; Protect Natural Areas; and Provide Public Spaces.

Results:

Adequate Services

1. Public Services
2. Recreation
3. Youth Activities
4. Agency Collaboration
5. Senior Activities

Housing Choices

1. Single-Family Home
2. Multi-Family Housing
3. Residential/Commercial
4. Condominium/Townhome
5. Apartment

Improve Community Assets

1. Water Quality

Conserve Water/Energy Use

1. Water

2. Roads
3. Utilities
4. Sewers

2. Air Quality
3. Solar Energy
4. Wind Energy

Transportation Choices

1. Public Transit
2. Transit Between Cities
3. Bike/Walk
4. Single-Occupancy Vehicle
5. Carpool

Economic Vitality

1. Education
2. Grow Industries
3. Provide Job Training
4. Grow Retail

Conserve Land and Spaces

1. Provide Public Spaces
2. Conserve Natural Areas
3. Retain Habitats
4. Provide Buffer Zones
5. Retain Economically Important Businesses

MetroQuest ADU Survey

This survey was conducted between January 29 - May 3, 2021, with 144 participants. A brief introduction of Accessory Dwelling Unit's was provided where ADU's serve as secondary housing that shares the building lot of a primary residence.

Results:
Would you like and ADU?
If you added an ADU to your property, what would you use it for?

- Family – 45%
  - Children – 68% yes/ 24% no
  - Parents – 90% yes/15% no
  - Extended Family – 58% yes/33% no
- Guests/Visitors
  - Friends of other Family – 62% no/28% yes
  - Your children's friends – 60% no/27% yes
  - Your friends – 38% no/34% yes
- Extra Income
  - Section 8 Tenant – 66% no/13% yes
  - Airbnb or VRBO – 50% no/ 21% yes
  - Young Family – 44% no/23% yes
  - College Students – 31% no/33% yes
  - Elderly – 25% no/

What type of unit would you be interested in?

- Studio 14% no/ 43% yes
- Garage Conversion 32% no/31% yes
- Addition to existing residence – 17% no/39% yes
- Multi-Unit (duplex, triplex, fourplex, etc.) 39% no/28% yes
- Multi-Level (one or two story)31% no/34% yes

What are your concerns about ADU's?

Cost - 83 chose this as their number one concern
62 participants said they would consider financial assistance.
63 respondents said they would not consider financial assistance for Section 8 tenants, while 27 said yes and 32 said maybe.

Neighbor's concerns – parking was the biggest concern for neighbors (48)
Managing Parking
Managing Privacy

IX. Promotions

In compliance with the Public Information Policies and Procedures document, Kern COG undertook a comprehensive outreach effort to promote the *Directions to 2050* community engagement process. Kern COG staff personally contacted stakeholders, such as city staff, agencies, health organizations, environmental groups, and community groups. Through the Mini-Grant Program, Kern COG and the hosting agency distributed fliers and provided advertising through newsletters, social media, and personal invitation in multiple languages. The Mini-Grant Program was successful in getting a diverse turnout and input from all communities, especially our disadvantaged communities. This combined with the outreach at community festivals/celebrations and other events has made this a very successful public outreach process.

APPENDIX D

INTEGRATED PERFORMANCE MEASURES ANALYSIS

APPENDIX D - INTEGRATED PERFORMANCE MEASURES ANALYSIS

Integrated Performance Measures Analysis for System Level, Smart Mobility Framework, Health Equity, Environmental Justice and Title VI

Planning Approach

The goal of Kern Council of Government's (COG) integrated Performance Measure process is to fulfill the requirements of federal system level performance measure requirements while demonstrating Federal Environmental Justice (EJ) and Title VI requirements, smart mobility, and health equity goals in one streamlined analysis. It is important to note that the Kern COG EJ and Title VI process as detailed in Appendix B - Public Information Policies and Procedure is designed to ensure that all people, regardless of race, color, national origin or income, are protected from disproportionate negative or adverse impacts caused by the 2022 Regional Transportation Plan (RTP) Program of Projects and heavily emphasizes participation of these communities in the plan development process. Appendix C summarizes this highly successful public outreach process garnering input from more than 7,000 participants. In addition to public outreach, we provide the Kern COG Board with the following technical analysis quantifying the RTP Program of Projects' effect on minority & low-income communities.

This Appendix implements and incorporates by reference the methodology to define EJ and Title VI areas developed with the input of the Kern COG Environmental and Social Equity Roundtable using a tool from the U.S. Environmental Protection Agency (EPA) titled EJ Screen[1]. This methodology is the same that was used for the previous RTP/SCS and differs from the previous one titled *The Cumulative Environmental Vulnerability Assessment (CEVA) developed by U.C. Davis*. Prior to adoption of the UC Davis methodology, Kern COG had adopted and implemented an earlier EJ analysis in November 2003. Both the latest U.S EPA and UC Davis methodologies are consistent with the original methodology developed in 2003. Kern COG was recognized in the 2010 state RTP Guidelines for its EJ methodology. The Guidelines stated: "*Kern Council of Government's 2007 RTP provides a good example of an Environmental Justice analysis within an RTP"*. In addition, Kern COG's EJ and Title VI analysis for the RTP continues to indicate that the Program of Projects protects EJ and Title VI areas from disproportionate negative or adverse impacts.

Kern COG's EJ and Title VI analysis for the RTP continues to indicate that the program of projects protects EJ and Title VI areas from disproportionate negative or adverse impacts.

Background

The legal basis for EJ is rooted in the United States Constitution and civil rights laws. Title VI of the Civil Rights Act of 1964 provides protection from discriminatory actions or results from programs or activities receiving federal financial assistance. Title VI not only bars intentional discrimination, but it also prohibits unjustified and disparate impact discrimination, i.e., a neutral policy or practice that has a disparate impact on minority groups. The understanding of civil rights has expanded to include low-income communities, as discussed in more detail below. As a governmental agency receiving federal funds, Kern COG is responsible for implementing both Title VI and conforming to federal EJ principles.

Federal Environmental Justice Requirements - President Clinton signed Executive Order 12898 in February 1994 that considered Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Executive Order 12898 requires that federal agencies shall, to the greatest extent allowed by law, administer and implement their programs, policies, and activities that affect human health or the environment so as to identify and avoid disproportionately high and adverse effects on minority and low-income populations. Consequently, the U.S. Department of Transportation (DOT) and Federal Highway Administration (FHWA) issued orders (in 1997 and 1998, respectively), along with a 1999 DOT

[1] U.S. Environmental Protection Agency, EJScreen Tool, https://www.epa.gov/ejscreen, 2019.

guidance memorandum which ordered every federal agency to make EJ part of its mission by identifying and addressing the effects of all programs, policies and activities on underrepresented groups and low-income populations. Consistent with Title VI, these measures ensure that every federally funded project nationwide consider the human environment when undertaking the planning and decision-making process. On August 4, 2011, seventeen federal agencies signed the "Memorandum of Understanding (MOU) on Environmental Justice and Executive Order 12898." The signatories, including the U.S. DOT, agreed to develop EJ strategies to protect the health of people living in communities overburdened by pollution and to provide the public with annual progress reports on their efforts. The MOU advances agency responsibilities outlined in the 1994 Executive Order 12898 and directs each of the federal agencies to make EJ part of its mission and to work with other agencies on EJ issues as members of the Interagency Working Group on Environmental Justice.

In response to this MOU, DOT revised its Environmental Justice Strategy. The revisions reinforce the DOT's programs and policies related to EJ and strengthen its efforts to reach out to minority and low-income populations. In addition, on August 15, 2012, the Federal Transit Authority (FTA) issued Circular 4703.1, Environmental Justice Policy Guidance for Federal Transit Administration Recipients, and on October 1, 2012, FTA issued Circular 4702.1B, Title VI Requirements and Guidelines for Federal Transit Administration Recipients. Neither of these circulars contains any new requirements, policies or directives. Nevertheless, Kern COG complies with the framework provided to integrate the principles of EJ into its decision-making processes.

New Federal Title VI Requirements - On May 2, 2012, the Secretary of Transportation signed DOT Updated Environmental Justice Order 5610.2 which states:

> *"…There may be some overlap between environmental justice and Title VI analyses; however, engaging in environmental justice analysis under Federal transportation planning … will not necessarily satisfy Title VI requirements. Similarly, a Title VI analysis would not necessarily satisfy environmental justice requirements, since Title VI does not include low-income populations. Moreover, Title VI applies to all Federally funded projects and activities, not solely those which may have adverse human health or environmental effects on communities"*[2]

The new guidance requires two separate analyses previously performed as one analysis. One for predominantly minority areas for Title VI, and one for minority plus low-income areas for EJ. On August 3, 2015, the Federal Highways Administration recommended in Kern COG's 4-year certification review letter:

> *"Kern COG **shall** conduct an environmental justice analysis of the benefits and burdens of the transportation system for minority and low-income populations in its next update of its RTP. Additionally, it **must** conduct a Title VI analysis of its RTP, as specified in the Department of Transportation Environmental Justice Order 5610.2(a), at the same time."*

During the COG certification review the federal agencies recommended the use of U.S. EPA's EJ Screen tool[3] which is based solely on the latest census data and excludes areas that do not meet the Federal Title VI or EJ requirements such as environmentally impacted areas that are not necessarily minority or low income. Such areas are included in the CEVA and CalEnviroScreen tool criteria. On March 10, 2016, Kern COG provided separate Title VI and EJ area maps created using the EJ Screen tool to the Environment and Social Equity Roundtable. The group recommended use of the new methodology consistent with the evolving federal requirements. This methodology was presented to over 18 stakeholders including the Tejon Indian Tribe, Lamont/Weedpatch Family Resource Center, Kern County Black Chamber of

[2] FJWA, https://www.fhwa.dot.gov/environmental/environmental_justice/ej_at_dot/orders/order_56102a/, 2012.

[3] U.S. Environmental Protection Agency, https://www.epa.gov/ejscreen, 2015.

Commerce, League of Women Voters, Valley Fever Awareness & Resources, Project Clean Air, Leadership Council for Justice and Accountability, TDH International, California Alliance for Retired Americans, at an RTP/SCS stakeholder roundtable meeting held on January 22, 2020. No requests were received to change the methodology as presented however, there were suggestions made on how to improve outreach.

State Requirements - In addition to federal requirements, California Government Code Section 11135 also provides protection from discriminatory actions or results from programs or activities receiving state financial assistance. The State of California also provides guidance for those involved in transportation decision-making to address EJ.

More recently, under Senate Bill 375 (SB 375), the state requires COGs to include a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP). The RTP/SCS represents the collective vision of Kern County and the eleven cities in the Kern COG region and provides a framework for the future development of its regional transportation system. Through SB 375, the California Air Resources Board (ARB) established per capita targets for Greenhouse Gas (GHG) reduction for cars and light trucks for the SCS. The targets for the Kern COG region are -5 percent in 2020 and -10 percent in 2035, relative to 2005 emission levels. As part of the early target setting process, the ARB appointed a Regional Target Advisory Committee (RTAC) to recommend factors to be considered and methodologies to be used for setting the targets. The RTAC report was finalized in September 2009 and included a recommendation on housing and social equity. The report recognized the impact policies to reduce vehicle miles traveled (VMT) could have on social equity, specifically calling for appropriately located affordable housing that match local wage levels. The RTAC further recommended that displacement and gentrification, as a result of changing land uses and increased housing costs, should be addressed and specifically avoided to the extent possible in the SCS. As a result of this recommendation and input from EJ stakeholders, Kern COG updated its methodology to include new areas of analysis, including gentrification and displacement.

Kern COG's EJ and Title VI principles are:

1. To avoid, minimize or mitigate disproportionately high and adverse human health or environmental effects, including social and economic impacts, on traditionally disadvantaged communities, especially racial minority areas exclusively and in racial minority and low-income areas;

2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and

3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority population areas and minority/low-income populations.

Federal Performance Measures – In addition to EJ and Title VI performance measure analysis, this integrated approach also includes the federal system level performance measures. As required by the recent federal transportation spending bills, the federal performance measures include a safety performance measure (PM1), state of good repair (PM2), and goods movement/other categories (PM3). These new PMs combined with the addition of the separate Title VI analysis is leading towards a less user-friendly analysis for the public as well as those communities the analysis is designed to protect.

Environmental Justice/Title VI Community Participation Process

A critical component of the 4-year Kern COG EJ process is the enhanced outreach program which targets input from EJ communities. The process successfully garnered input from more than 7,000 participants (2% of the adults in Kern County) and featured a mini-grant program that partnered with EJ and other stakeholders to host outreach events for their constituencies. It also featured a phone survey that over sampled in disadvantaged outlying communities to help corroborate the plan's goals and strategies, ensuring a bottom-up approach (see Appendix C).

As with the prior RTP EJ processes, Kern COG held three Environment and Social Equity Stakeholder Roundtable meetings between January 2020 and November 2021. Representatives from more than 25 organizations participated in at least one the three stakeholder roundtable meetings including:

- 21st Congressional District
- 14th State Senate District
- Tejon Tribe
- Tubatulabal Tribe
- Centro de Popular Benito Juarez
- Kern County Black Chamber of Commerce
- Lamont/Weedpatch Family Resource Center
- LOUD for Tomorrow
- Leadership Counsel for Justice and Accountability
- Center for Race Poverty & Environment
- Bike Bakersfield
- League of Women Voters
- American Civil Liberties Union of Southern California
- Valley Fever Awareness
- Bakersfield Senior Center
- Downtown Business Association
- California Retired Americans
- California Trucking Association
- Rebuilding Together Kern County
- Home Builders Association of Kern
- Kern Transportation Foundation
- Tejon Ranch
- TDH Associates
- Upside Productions
- California Air Resources Board
- Federal Highways Administration
- Kern COG Regional Planning Advisory Committee (RPAC) Members

In addition, to these meetings Kern COG met and communicated with representatives from these organizations throughout the process. These organizations reviewed the EJ process and re-use of the methodology from the prior RTP/SCS for identifying Federal Title VI and EJ areas consistent with evolving federal guidelines (discussion in Background section above).

Demographics

Kern County is California's third largest county in area, encompassing approximately 8,200 square miles. Kern County comprises 11 incorporated cities and a federally recognized urban area, Metropolitan Bakersfield, with a population over 909,000 (2020 U.S. Census), as well as 42 census-recognized unincorporated communities. Federal Environmental Justice Guidelines call for identification of traditionally under-represented populations, including classified minorities such as those of Hispanic/Latino descent, African-Americans, Asian-Americans, Native Americans and others, as well as low-income populations.

Table D-1: Kern County Population by Race and Hispanic or Latino – 2020 Census

TOTAL POPULATION BY RACE (NOT HISPANIC/LATINO) AND HISPANIC OR LATINO		
(Universe: Total population)	**Count**	**Percent**
Total:	909,235	100.0%
Hispanic or Latino	499,158	54.9%
Not Hispanic or Latino:		
White alone	279,600	30.8%
Black or African American alone	46,776	5.1%
American Indian and Alaska Native alone	5,197	0.6%
Asian alone	44,257	4.9%
Native Hawaiian and Other Pacific Islander alone	1,127	0.1%
Some Other Race alone	4,557	0.5%
Two or More Races	28,563	3.1%

Table D-1 shows the Kern region has an ethnic majority with Hispanics/Latinos making up 55% of the total population. Non-Hispanic Whites account for 31% of the population, down from 50% in 2000. The rise and shift in population makeup in the Kern region is primarily because of births along with an influx of new immigrants. The African American, Asian, and American Indian populations make up 5%, 5% and 1% respectively of the population. Population growth in Kern mirrors the rest of the state, which is one of the most diverse in the nation. Population growth results from large net increases in three population groups: aging baby boomers, their children - the millennials - and immigrants, mostly from Mexico and Central America. Net migration (people moving to the county minus those moving away) accounted for most of the population gain between 2000 and 2010, i.e., 54%. Nearly 30% of the net migration was the result of immigration from outside the United States. Natural increase (births minus deaths) accounted for 45% of the population gain.

Table D-2: Kern County Income 2019 and Poverty 2020

Kern County Income and Poverty – U.S. Census	
$ 53,350	Median household income (in $2019)
$ 23,326	Per capita income in past 12 months (in $2019)
18.3%	Percent persons in poverty – (2020)

Source: U.S. Census, 2015-2019 American Community Survey, 2020 Small Area Income and Poverty Estimates (SAIPE)

Approximately 18.3% of individuals in Kern County live below the federal poverty line, the second highest poverty rate in California after Del Norte County at 18.5% according the 2020 U.S. Census Bureau statistics (**Table D-2**).

For two decades now, Kern has had a majority minority population and now has one of the highest poverty levels in the state. Addressing the transportation needs of a racially diverse and disadvantaged population has grown even more significant in Kern COG's transportation planning efforts. The rapid increase in poverty is partially a result of state policies working to curtail two of Kern's primary industries, oil production and groundwater production for agriculture.

Population Concentrations - The challenge was to identify all populations within the Kern region that qualify as "traditionally disadvantaged," without counting the same people more than once. In addition, because of Kern County's farm- and oil- based economies, significant portions of both its rural and urban regions would qualify under one or more of the criteria if population threshold "floors" were not established to represent minimum concentrations. Population concentrations of traditionally disadvantaged groups were established to better focus the examination onto specific neighborhoods rather than attempting to look at the entire county en masse. Consistent with past RTPs, the maps in **Figures D-1** and **D-2** use the U.S. Environmental Protection Agency (EPA) EJScreen tool[4] to show significant concentrations of minority (people of color) and low-income populations**.** The concentration areas were updated using the latest version of EJScreen. Since the RTP is a federally required document, Kern COG is required to use a method that meets federal requirements. EJScreen was designed by the U.S. EPA under the Obama administration to accomplish this requirement. Kern COG has received comments from federal oversight agencies, during is federal certification review, to use a method for identifying Title VI and Environmental Justice areas consistent with federal policy. Other tools, such as CalEnviroScreen, use additional variables such as environmental risk to identify disadvantaged areas. These additional variables are not consistent with federal requirements for the RTP. The maps in **Figures D-1** and **D-2** reflect the latest available data on concentrations of minority and low-income areas according to U.S. EPA, and use EJScreen defaults for setting the floor of the concentration at the 80th percentile for both minority and low income population.

[4] U.S. Environmental Protection Agency, https:ww.epa.gov/ejscreen, 2019.

Figure D-1: Minority Population Concentrations - U.S. EPA EJScreen Tool 2019

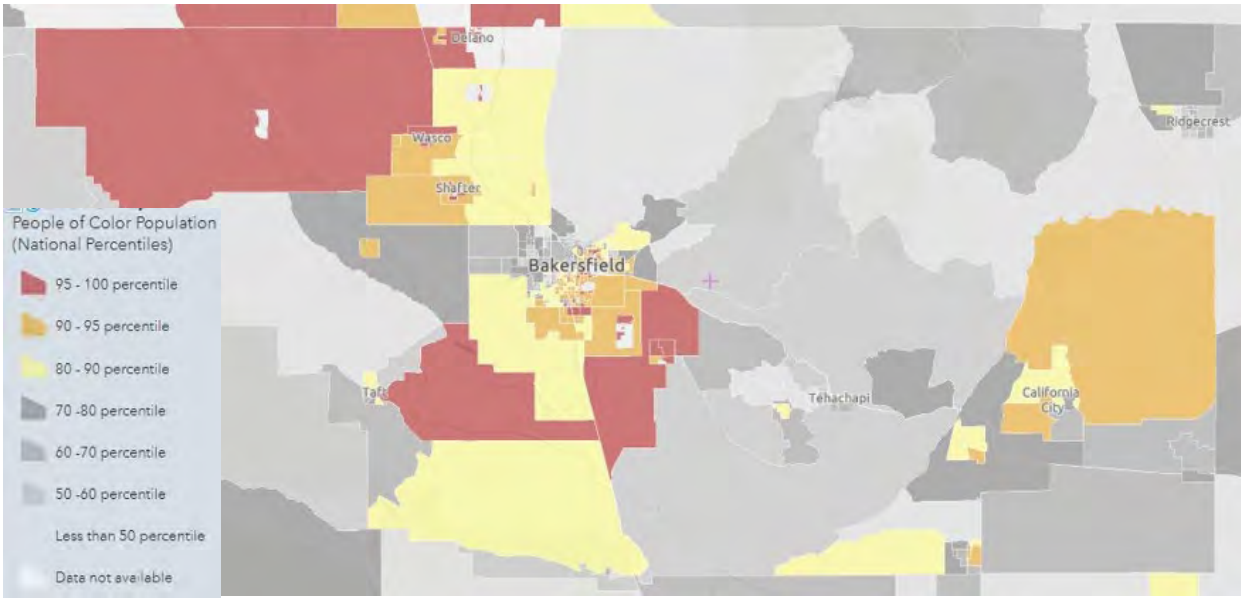
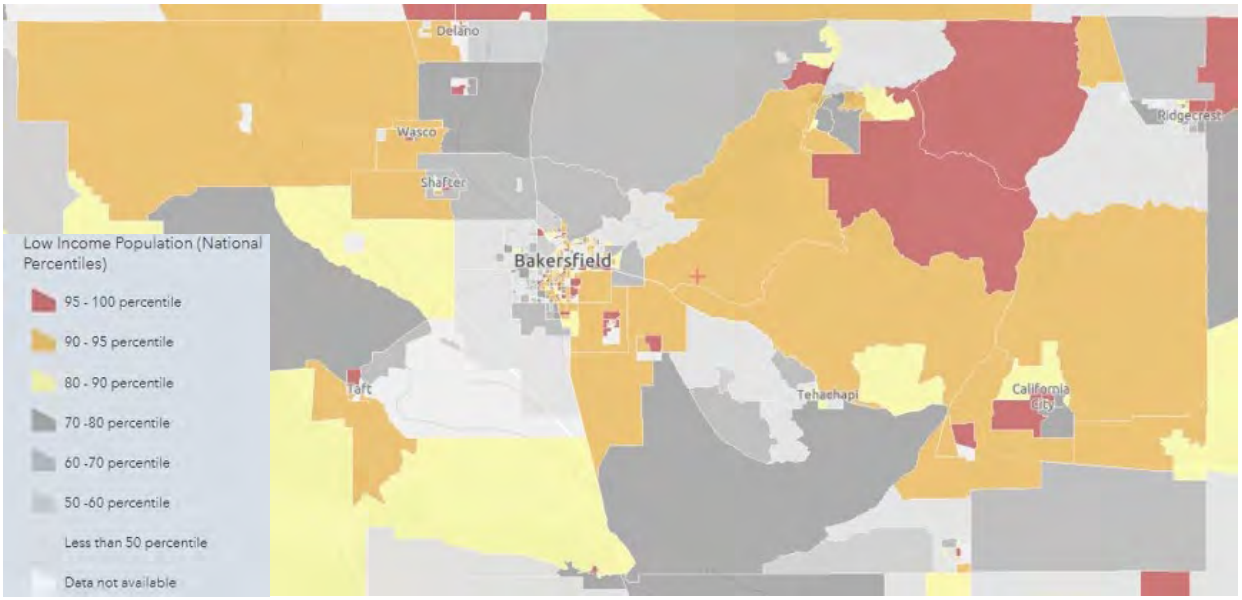


Figure D-2: Low Income Population Concentrations - U.S. EPA EJScreen Tool 2019



Figures D-3 and **D-4** illustrate the Federal Title VI (blue areas map) and Federal Environmental Justice (pink areas map) areas required for the RTP performance measure analysis. These areas were defined using the latest available U.S. Census data and the U.S. EPA EJ Screen Tool. The Federal Title VI areas are required to only look at areas that contain a concentration of minority population. Federal Environmental Justice areas are required to look at minority and/or low-income areas together. These maps show the Kern COG transportation analysis zones (TAZs) that correspond the census block groups identified using the EJScreen tool that are shown as being at or above the 80th percentile of concentration. Note that both block groups and TAZs are subdivisions of census tracts, simplifying the correspondence.

Figure D-3: Federal Title VI Areas (Minority Concentration Areas Only – Above 80th Percentile)

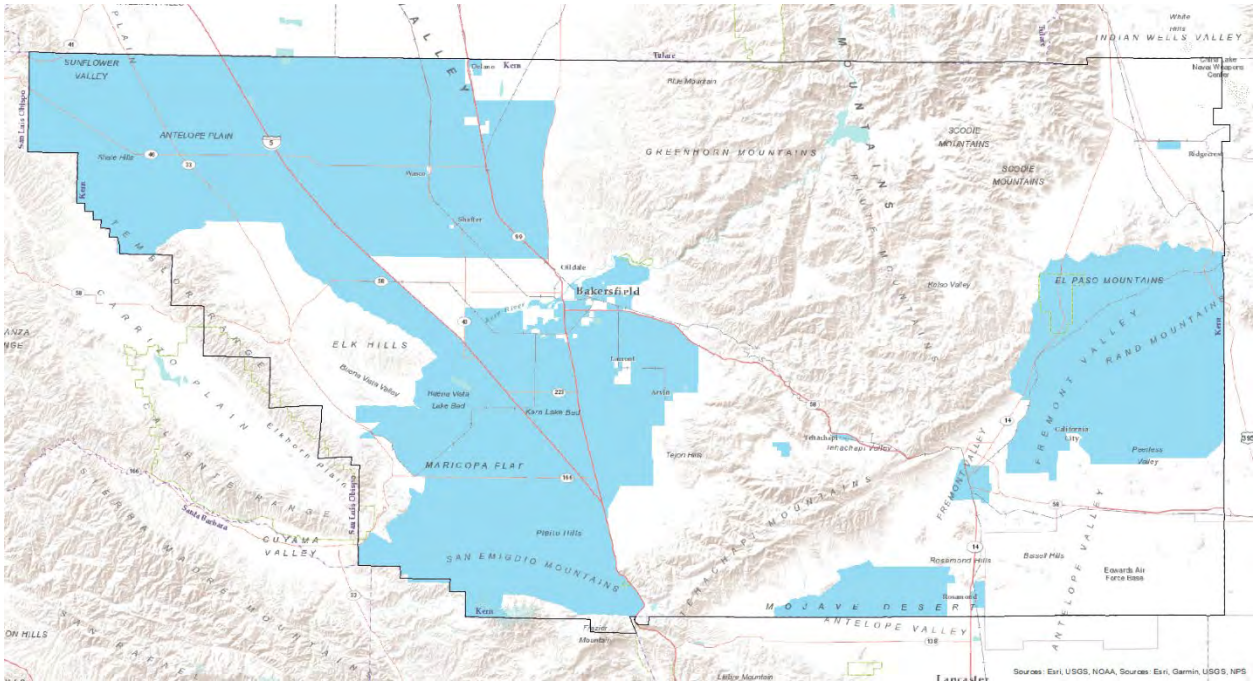
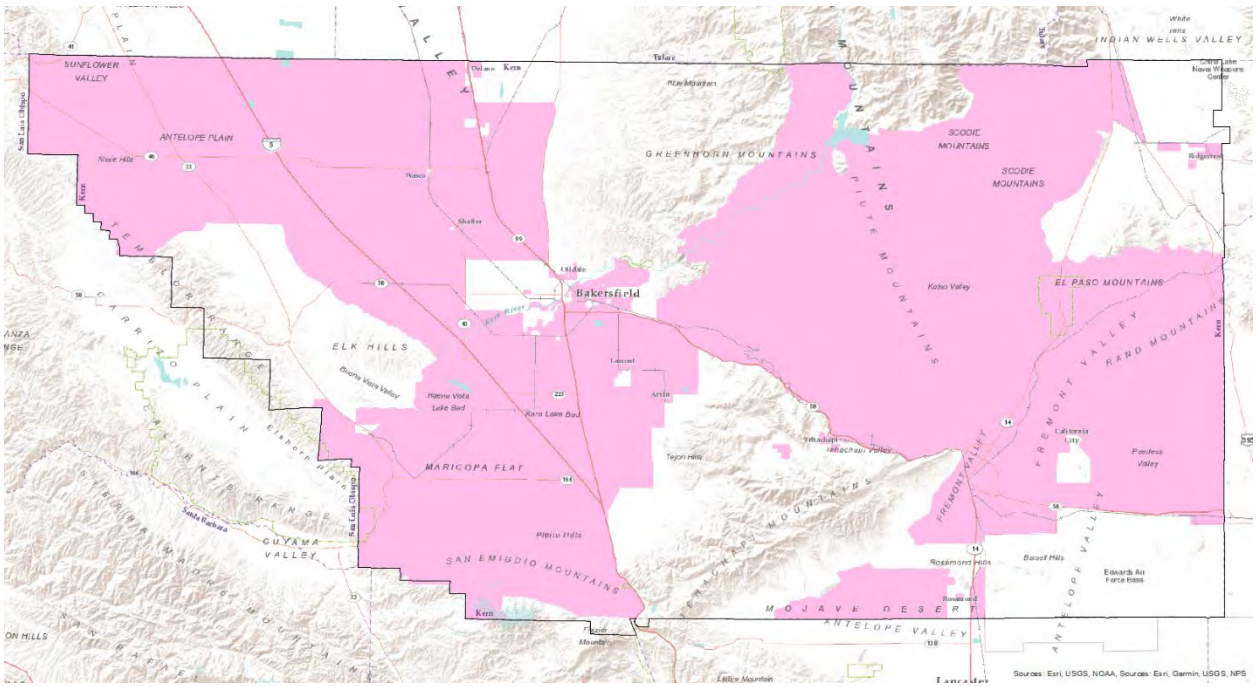


Figure D-4: Federal EJ Areas (Minority and Low Income Concentration Areas – Above 80th Percentile)



RTP Development

Pursuant to Government Code Section 14522, the California Transportation Commission (CTC) is authorized to prepare guidelines to assist in the preparation of RTPs. The CTC's RTP guidelines suggest that projections used in the development of an RTP should be based upon available data (such as from the

Bureau of the Census), use acceptable forecasting methodologies, and be consistent with the Department of Finance baseline projections for the region. The most recent update to the RTP guidelines was published in 2017, and includes new provisions for complying with SB 375, as well as new guidelines for regional travel demand.

SB 375 requires MPOs to prepare a SCS that demonstrates how the region will meet its GHG reduction targets through integrated land use, housing and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the California Air Resources Board.

In compliance with SB 375 and the CTC guidelines, the eight San Joaquin Valley Metropolitan Planning Organizations (SJV MPOs) have collaborated and developed the San Joaquin Valley Model Improvement Program (SJV MIP). The new MIP includes several model upgrades that respond directly to the requirements of the CTC guidelines and allow for measurable outputs that help ensure transportation system investments benefit all populations, without consistently burdening any single one. The upgrades include:

- Land Use – demographic characteristics that influence travel behavior;
- Geographic scale – land use and transportation system refinements in transit-oriented developments, central business districts, and mixed-use development;
- Sensitivity to mode – person trips, auto availability, mode choice/split, transit assignment;
- Pricing – auto operations (fuel, maintenance, etc.), parking, toll, transit fare;
- Sensitivity to congestion – time of day refinements, influence on auto availability and distribution;
- Air Quality/Greenhouse Gas – speed, trucks, interregional travel;
- Best Management Practices – sensitivity to smart growth, demand and/or system management within model or as quick-response tools;
- Validation – formal static and dynamic tests; and
- Documentation – Clear and fully documented executive/public and technical staff including limitations and potential ways to overcome limitations.

Complete documentation on the SJV MIP can be found at http://www.kerncog.org/category/data-center/transportation-modeling/ .

Measuring Performance

Performance measures: (1) provide information on how well the transportation system is performing compared to the base year and/or future no-build scenario; (2) identify opportunities for system improvements to meet the plan's goals; and (3) assess the system-wide impacts of future improvements.

System Level Performance - System-wide performance measures should not be applied unilaterally, but should only be used as an indicator that the plan's policies and actions are headed in the same direction as the goals. Often progress shown in one performance measure can show a negative effect in another area.

Demonstrating improvements in all performance measures may be nearly impossible to achieve. For example, improvements in congestion may increase travel speeds and negatively affect air quality. In addition, improvements under a specific performance measure may take several planning cycles to achieve. The existing activity in the plan has a certain level of inertia created by previously adopted RTPs. Projects that have completed environmental review need to move to right-of-way acquisition and construction fairly quickly, before the environmental work is out of date and more resources are needed to update the environmental work. The performance measure process is designed to provide feedback in areas upon which the region should focus the subsequent plan update, while minimizing disruptions to the project delivery process.

APPENDIX D - INTEGRATED PERFORMANCE MEASURES ANALYSIS

The Kern Regional Transportation Model is the primary tool for measuring system-level performance of the plan. Kern COG uses an integrated one-model approach for its performance measures analysis. The model uses monitoring data and growth assumptions to compare the performance measures for the RTP and SCS. The two primary categories of performance measures used are the Smart Mobility Framework and Title VI/EJ. The EJ measures have been in place since 2001 and have been adapted for use with the Smart Mobility Framework performance measure category.

Smart Mobility Framework Performance - The State of California prepares an annual Regional Progress Report. This RTP includes measures that are coordinated with the measures in the statewide progress report. In February 2010, the California Department of Transportation (Caltrans) released *Smart Mobility 2010: A Call to Action for the New Decade* that establishes performance measures based on place types in recognition of a "one-size does NOT fit all" philosophy. Kern County has been split into two broad place-types for the smart mobility analysis. The first is the Metropolitan Bakersfield or urban place type. The second is made up of the outlying communities or rural place type. The RTP performance measure analysis differs somewhat for these two place types. One of the performance measures for sustainability/livability uses a slightly different modeling method to analyze air quality on a per-capita basis. This measure differs from the other performance measures in that a second model, EMFAC, developed by the California Air Resources Board, uses the output vehicle travel from the Regional Transportation Model to generate nitrogen oxide (NOx) by air basin analysis areas rather than urban and rural. NOx is a precursor gas that contributes to ozone and particulate matter, Kern's two most significant air pollutants.

Health Equity Performance – In support of California's Health-in-All-Policies effort, close to half of the performance measures monitor progress on measures affecting public health. This integrated approach provides feedback on health-related measures for both EJ and Title VI areas as well, providing a clear health equity series of measures.

According to the Robert Wood Johnson Foundation which provides an annual county health ranking by state, Kern County has consistently ranked near the bottom.[5] The ranking methodology weights 40% on social/economic factors (employment, income, education, family/social support, community safety), 30% on behavioral factors (tobacco use, diet/exercise, alcohol/drug use, sexual activity), 20% on clinical care (access to care, quality of care), and 10% on environmental factors (air/water quality, housing/transit). Based on these assumptions, improving the economic and behavioral factors by providing more jobs and transit/active transportation options would provide the most effective means to improve public health in our region.

Tracking Progress - Performance measures are often driven more by the tools available to measure them than by the policies that need to be tracked. Performance measures can be divided into two types. The first includes future performance measures that are used in modeling to compare scenarios such as the ones in this analysis. A second type is a monitoring indicator that measures observed data rather than modeled data, such as traffic counts and air quality. The following observed indicator variables are used in this analysis and are updated each RTP cycle to provide longitudinal data to help update forecasts and track progress toward our goals:

- Traffic count information;
- Truck origin destination studies along key corridors;
- Traffic speed survey program;
- Transit ridership travel survey;
- Bike rider survey; and
- Air Quality Monitoring System.

[5] Robert Wood Johnson Foundation, http://www.countyhealthrankings.org/, 2018.

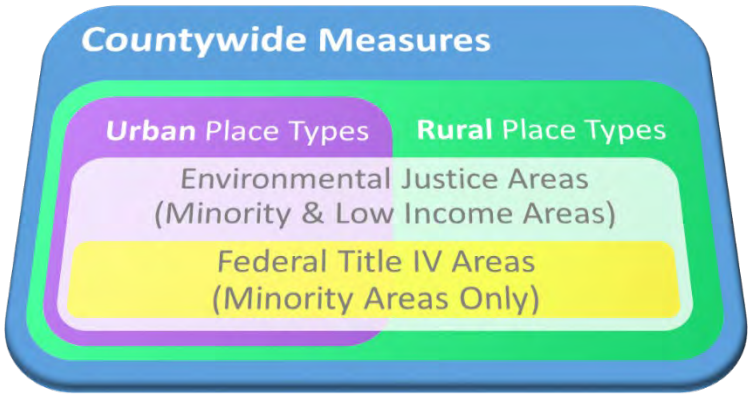
These datasets are incorporated into the base year validation of the regional transportation model and provide the basis for forecasting future performance measures and tracking progress toward the goals.

Performance Measures Analysis Methodology

Kern COG has developed an integrated framework for eleven performance measures to demonstrate consistency of the RTP and SCS with its seven established goals. Some of the performance measures comply with as many as five goals.

This figure illustrates the overlap among the eleven performance measures used for countywide analysis, the two Smart Mobility Framework place types, and EJ areas. For example, some measures are the same for EJ, urban and rural place types, and countywide, while other measures may only be used in two of the three categories.

Figure D-3: Integrated Performance Measures Framework



Performance Measure Analysis Results

As discussed above, as part of the Environmental Justice/Title VI Community Outreach Process Kern COG held Environmental and Social Equity Roundtable stakeholder meetings. The meetings built on the federally recognized best practices effort began by Kern COG in 2000. The Environmental and Social Equity Roundtable identified low-income, minority, elderly, and disabled people as the target populations for analyzing Federal Title VI and EJ efforts. Areas with higher-than-average concentrations of the target populations were identified and mapped by census block groups. Kern COG used the transportation model output stratified by EJ areas and the urban and rural place types to determine whether the goals of the RTP were being met. Following is a more detailed description of the performance measures used to measure progress toward the RTP Goals described in Chapter 2.

1) **Mobility/Health Equity** – Calculates average trip time by mode (auto and transit) from EJ Transportation Analysis Zones (TAZs) and countywide.

2) **Accessibility/Economic Well-Being/Health Equity** – Calculates average trip time by mode (auto and transit) to major job centers from a group of approximately 2,400 TAZs. Accessibility also provides an economic measure by indicating the level of congestion around major job centers that may affect freight movement.

3) **Efficiency/Cost-Effectiveness** – Calculates the planned expenditure per passenger miles traveled. Calculates passenger miles traveled by both vehicle and transit networks for current and planned transit projects (increased headway, new routes) and capacity-increasing road project links in future years, inside EJ TAZs and countywide. These figures are divided by the total investment in these projects and used to calculate their cost-effectiveness.

4) **Livability/Consumer Satisfaction** – Calculates the average trip delay after feedback between constrained and unconstrained roadways on links inside EJ TAZs and countywide.[6]

5) **Environment/Health Equity** – Calculates vehicle emissions of NOx per person for the valley and mountain/desert portions of Kern and PM-10 for the Indian Wells Valley. NOx is a precursor emission for both ozone and particulate matter 2.5 for which the Mojave Desert (including mountain areas) and the San Joaquin Valley portions of Kern have exceeded the federal standards. The Indian Wells Valley portion of Kern has only exceeded the PM-10 standard.

6) **Environment/Health Equity** – Calculates the percentage change in households within ¼ mile of roadway volumes greater than 100,000 in urban and rural place types and in EJ communities.

7) **Sustainability/Preservation** – Provides for maintenance as the system expands.

8) **Equity** – Calculates the passenger miles traveled and compares to the percentage of investment in EJ areas and urban and rural place types.

9) **Reliability/Congestion** – Calculates the distance of Level of Service (LOS) D through F links inside EJ TAZs and countywide.

10) **Reliability/Safety/Public Health** – Calculates the percentage increase between property damage, injury, and fatal accident rates between base year 2020 and 2046.

The model generated several factors, including travel times, vehicle miles traveled, passenger miles traveled, transit boardings, transit trip hours, transit trip distance, and road miles of LOS C or worse for 2020 (base year), 2046 build scenario, and 2046 no-build scenario. The 2046 build scenario assumes all projects listed in Table 5-1 of the 2022 RTP will have been completed, whereas the No-Build scenario assumes 2046 traffic levels on the same network used in 2020. An additional assumption was that funding sources and technology will remain constant. The model also stratified its factors along three separate lines:

Table D-3: Performance Measure Analysis Summary by RTP Goals for System Level, Smart Mobility Framework, Health Equity, and Environmental Justice and Title VI Areas

Table No. (Apdx. D)	RTP Goal/Performance Measure (PM) Category	Smart Mobility Geographic Coverage Place type(PT)	Performance Measure Description	Performance Measure Target/Test	Target Met? (Yes/No/ Partial)
D-4	Mobility / health equity (transit)	Urban, rural, countywide PT	Average Travel Time – Peak **Highway** Trips	Improvement over No Project Baseline	Yes
D-5			Average Travel Time – Peak **Transit** Trips	Improvement over No Project Baseline	Yes
D-6	Accessibility / economic well-being / health equity (transit)	Urban, rural, countywide PT	Average Travel Time to Job Centers – **Highway** Trips	Improvement over No Project Baseline	Yes
D-7			Average Travel Time to Job Centers – **Transit** Trips	Improvement over No Project Baseline	Yes
D-8	Efficiency / cost effectiveness /	Urban, rural, countywide PT	Average Daily Investment per Passenger Mile Traveled – **Highways**	Improvement over Countywide Average	Yes

[6] Delay refers to the amount of additional time a vehicle spends on the road because of congestion. Constrained and unconstrained roads refer to those streets, highways, or freeways where congestion is either typical or atypical.

Table No. (Apdx. D)	RTP Goal/Performance Measure (PM) Category	Smart Mobility Geographic Coverage Place type(PT)	Performance Measure Description	Performance Measure Target/Test	Target Met? (Yes/No/ Partial)
D-9	health equity (transit)		Average Daily Investment per Passenger Mile Traveled – **Transit**	Improvement over Countywide Average	Partial
D-10	Livability / customer satisfaction	Urban, rural, countywide PT	Average Trip Delay Time in Hours	Improvement over Countywide Average	Yes
D-11	Environment / health equity	3 Air Basins	% Change NOx/PM by air basin	Improvement over Base Year	Yes
D-12		Urban, rural, countywide PT	% Change in Households within 500 feet of Roadway Volumes > 50,000	Improvement over Base Year	Yes
D-13	Sustainability / preservation	Countywide PT	Percentage Change in Maintenance Dollars Per Lane Mile	Improvement over Base Year	Yes
D-14	Equity / health equity (transit)	Urban, rural, countywide PT	% of Expenditures versus Passenger Miles Traveled in 2035 – **Highways**	Improvement over Countywide Average	Partial
D-15			% of Expenditures versus Passenger Miles Traveled in 2035 –**Transit**	Improvement over Countywide Average	Yes
D-16	Land Consumption / health equity	Countywide PT	% change in Farmland consumed outside City Spheres of Influence	Improvement over Historic Baseline	Yes
D-17	Health equity	Countywide PT	Health Cost Savings	Improvement over No Project Baseline	Yes
D-18	Reliability / congestion	Urban, countywide PT	Average Level of Congestion in Hours	Improvement over Base Year	Partial
D-19	Reliability / safety / health equity	Urban, rural, countywide PT	Annualized Accident Statistics for Annual Average Daily Traffic	Improvement over Countywide Average	Yes
D-20	Federal PM-1 Safety/health equity	Countywide PT	Forecast of Accidents for Vehicles, Bicycles and Pedestrians	Improvement over 5 year running base	Partial
D-21	Federal PM-2 Sustainability / preservation	Countywide PT	Observed bridge/pavement condition on locally maintained national highway system routes	Improvement over 2-4 year targets	No
D-22	Federal PM-3 mobility/accessibility	Countywide PT	Observed travel time reliability on locally maintained national highway system	Improvement over 4 year targets	Yes

**Note: Due to data limitations Environmental Justice/Title VI areas were not able to be broken out for performance measures D-11, D-13, D-16, D-17, D-20, D-21, D-22 however, they are still included in these analyses.*

all of Metropolitan Bakersfield (urban); all other areas of Kern County, including the ten other incorporated cities and unincorporated communities (rural); and countywide. Kern COG paid particular attention to the accessibility and mobility criteria because they represent overall system performance now and in the future.

Table D-3 contains a breakdown of which performance measure applies to which goal and category. The table also provides a summary of the target threshold and whether that target was met (yes), partially yes (partial), or not at all (no). The analysis shows that all the performance measure targets have been met except for two which were only partially met. Performance measures that have only been partially met should be watched carefully in future RTP iterations.

Detailed Performance Measure Analysis by RTP Goals/Category

Mobility

Mobility is defined as the ability to move throughout the region and the time it takes to reach desired destinations. The criterion is measured by calculating average travel times during the base year 2020, in 2046 when all RTP projects are completed, and in a 2046 no-build scenario where none of the RTP projects are completed. The goal for mobility is to demonstrate that EJ/Title VI TAZs perform better, or at least no worse, than all TAZs when comparing countywide to countywide. Peak highway and transit trip periods (evening commute times) were used to demonstrate the worst-case scenario.

The countywide average highway travel time for all TAZs was 16.39 minutes in 2020. Both EJ and Title VI TAZs currently perform better on the countywide measure than all TAZs and do even better under this plan by 2046 while all TAZs get see a slight increase in average travel time by 2046, clearly demonstrating that the expenditures in the plan benefits EJ/Title VI TAZs or neighborhoods. The travel time benefit is seen mostly in rural EJ/Title VI TAZs. Overall, people living in EJ/Title VI TAZs will have shorter average travel times anywhere within the county than county residents as a whole.

Table D-4a: All TAZs Average Travel Time – Peak Highway Trips (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	13.49	13.43	13.99
Rural Areas	24.21	24.36	24.07
Countywide	16.39	16.71	16.88

Table D-4b: EJ TAZs Average Travel Time – Peak Highway Trips (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	13.57	13.55	14.01
Rural Areas	24.28	23.16	23.39
Countywide	16.35	16.17	16.54

Table D-4c: Title VI TAZs Average Travel Time – Peak Highway Trips (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	13.74	13.72	14.17
Rural Areas	24.88	23.84	24.05
Countywide	16.15	16.11	16.45

The Urban/Metro average transit travel time is 34.95 minutes in 2020. Because rural area transit ridership comprises a small percentage of trips in the model, and the travel model excludes low frequency routes and dial-a-ride service characteristic in rural areas, staff is unable to adequately compare the rural transit network to the predominantly higher frequency Metro Bakersfield transit service. The model excludes low frequency routes due to model and data limitations. However, in comparing average Metro travel times for transit trips between all TAZs and EJ/Title VI TAZs, the latter continue to fare better than all TAZs with the best service in the EJ Area TAZs. By 2046, planned transit investment in Urban Metro will reduce average transit travel time from 34.12 minutes in 2020 to 32.7 minutes by 2046, where no investment would see travel times grow to 38.84 minutes. Countywide, people living in EJ/Title VI TAZs will have shorter average transit travel times anywhere within the county than county residents as a whole.

Table D-5a: All TAZs Average Travel Time – Peak Transit Trips (minutes)[7]

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	34.95	33.92	39.24
Rural Areas	n.a.	n.a.	n.a.
Countywide	35.87	35.91	41.24

** includes portions of trips outside of Metro that drive to use metro transit*

Table D-5b: EJ TAZs Average Travel Time – Peak Transit Trips (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	34.12	32.68	38.06
Rural Areas	n.a.	n.a.	n.a.
Countywide	35.11	34.83	40.39

** Includes portions of trips outside of Metro that drive to use metro transit*

Table D-5c: Title VI TAZs Average Travel Time – Peak Transit Trips (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	33.82	33.67	38.84
Rural Areas	n.a.	n.a.	n.a.
Countywide	34.73	35.77	40.95

** Includes portions of trips outside of Metro that drive to use metro transit*

Accessibility/Economic Well Being

Accessibility differs from mobility in that it is measured by commuter trip times to major job centers rather than overall trip times. Major job centers are defined as those TAZs containing employment sites with 75 or more workers. Specifically, accessibility is defined as the ease of reaching destinations as measured by the percentage of commuters who can get to work within a given period. As with mobility, the goal is to ensure that commuters in EJ/Title VI TAZs throughout the county have average trip times that are shorter, or at least no longer, than in the county as a whole. The measure on highways also provides an indicator of the ability of freight to get to major employment sites, providing a measure of economic well-being for the region.

In 2020, the average highway commute times for all TAZ's countywide to a major job center was 12.09 minutes. The countywide measures for both highway and transit for EJ/Title VI TAZs perform better than all TAZs. Rural EJ/Title VI area highways are worse than all TAZs however investment in the build alternative by 2046 shows improvement in travel times over 2020 where the no build alternative shows that EJ/Title VI areas would get worse. This demonstrates that the RTP expenditure plan benefits EJ/Title VI TAZ neighborhood areas. The model analysis for transit has limitations in rural areas. The model excludes

[7] No data is maintained on average travel times for low frequency rural fixed-routes and dial-a-ride services. The countywide average listed under Average Travel Time – Peak Transit Trips and EJ TAZs Average Travel Time – Peak Transit Trips reflects statistics on transit routes with a minimum of 3 trips per day.

low frequency routes found predominantly in rural areas due to model and data limitations. However, transit service in EJ/Title VI areas out-perform average transit travel times all TAZs.

Table D-6a: All TAZs Average Travel Time to Major Job Centers – Highway (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	10.15	10.26	10.69
Rural Areas	16.96	17.38	17.28
Countywide	12.09	12.35	12.74

Table D-6b: EJ TAZs Average Travel Time to Major Job Centers – Highway (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	9.83	9.98	10.38
Rural Areas	18.24	18.12	18.34
Countywide	12.05	12.23	12.66

Table D-6c: Title VI TAZs Average Travel Time to Major Job Centers - Highway (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	9.96	10.12	10.59
Rural Areas	19.42	19.38	19.68
Countywide	12.02	12.27	12.75

Table D-7a: All TAZs Average Travel Time to Major Job Centers - Transit (minutes)[8]

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	32.82	28.13	31.13
Rural Areas	n.a.	n.a.	n.a.
Countywide	33.59	30.6	34.25

** Includes portions of trips outside of Metro for those who drive to use metro transit*

Table D-7b: EJ TAZs Average Travel Time to Major Job Centers – Transit (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	32.39	27.31	30.72
Rural Areas	n.a.	n.a.	n.a.
Countywide	33.24	29.81	34.03

** Includes portions of trips outside of Metro for those who drive to use metro transit*

[8] No data is maintained on average travel times for low volume rural fixed-routes and dial-a-ride services. The countywide average listed under Average Travel Time – Peak Transit Trips and EJ TAZs Average Travel Time – Peak Transit Trips reflects statistics on transit routes with a minimum of 3 trips per day.

Table D-7c: Title VI TAZs Average Travel Time to Major Job Centers - Transit (minutes)

Place Type	2020	2046 Build	2046 No Build
Urban/Metro	32.17	28.01	30.61
Rural Areas	n.a.	n.a.	n.a.
Countywide	32.99	30.45	33.63

** Includes portions of trips outside of Metro for those who drive to use metro transit*

Efficiency/Cost-Effectiveness

Efficiency and cost-effectiveness can be measured by maximized returns on transportation investments. This criterion was measured by dividing the average daily capital investment from 2022 - 2046 RTP projects by the average number of daily passenger miles traveled (PMT) on the transportation network, both inside and outside of EJ/Title VI TAZs for urban and rural place types. Total average daily PMT and total investment levels over the course of this plan are found in **Table D-14**. In general, highways are carrying higher volumes and tend to be more cost effective on a daily basis, however transit has a higher capacity during peak periods, making it more cost-effective to expand during peak traffic periods. In addition, transit expands the carrying capacity of road investments. This analysis looks at daily cost effectiveness of capital expenditures.

For highways at the countywide level, EJ/Title VI areas have similar cost effectiveness rates of expenditure as the county at about 1 cent per passenger mile traveled. The same is true for urban EJ areas and rural Title VI areas compared to the county as a whole. Rural EJ and rural Title VI areas at .002 and .001 are more cost effective in expenditures compared to the respective all-county rural at .003 and urban at .01. Overall expenditures in EJ/Title VI areas are the same or more efficient/cost-effective than expenditures in the county as a whole.

Table D-8a: All TAZs Average Daily Investment per Passenger Mile Traveled – Highways ($)

Place Type	2046
Urban/Metro	.01
Rural Areas	.003
Countywide	.01

Table D-8b: EJ TAZs Average Daily Investment per Passenger Mile Traveled – Highways ($)

Place Type	2046
Urban/Metro	.01
Rural Areas	.002
Countywide	.01

Table D-8c: Title VI TAZs Average Daily Investment per Passenger Mile Traveled – Highways ($)

Place Type	2046
Urban/Metro	.01
Rural Areas	.001
Countywide	.01

Table D-9a: All TAZs Average Daily Investment per Passenger Mile Traveled – Transit ($)[9]

Place Type	2046
Urban/Metro	1.80
Rural Areas	3.20
Countywide	2.00

Table D-9b: EJ TAZs Average Daily Investment per Passenger Mile Traveled – Transit ($)

Place Type	2046
Urban/Metro	2.02
Rural Areas	2.65
Countywide	2.18

Table D-9c: Title VI TAZs Average Daily Investment per Passenger Mile Traveled – Transit ($)

Place Type	2046
Urban/Metro	2.38
Rural Areas	3.87
Countywide	2.62

For transit at the countywide level Kern spends more on average per passenger mile traveled in both EJ and Title VI areas than the county as a whole. The same is true for the Metro Bakersfield area but not rural EJ areas. Although serving rural Title VI areas is less cost efficient than the county as a whole, it does demonstrate that a priority has been placed on investment in rural EJ/Title VI areas.

Livability/Consumer Satisfaction

Consumer satisfaction is one potential measure of livability and is defined as the condition where consumers can largely agree that their transportation needs are being met in a safe, reliable, efficient, and cost-effective manner. The criterion is measured by the daily amount of trip delay in hours. On roadways, trip delay refers to the difference between the time a trip should take and the time it requires, or the difference between free-flow traffic and some level of congestion. Traffic congestion also affects the on-time performance of transit operations, limiting alternative transportation choices during peak periods and impacting the region's livability. Average vehicle delay is spread relatively evenly within one percent by 2046.

Table D-10a: All TAZs Average Vehicle Delay Time (hours)

Place Type	Delay Hours 2020	Delay Hours 2046	Total Hours 2046	Percentage Delayed
Urban/Metro	25,591	29,054	368,461	8
Rural Areas	8,905	14,252	352,548	4
Countywide	34,527	43,447	722,644	6

[9] Because Kern COG's regional transportation model cannot estimate passenger miles traveled for rural transit services, estimates for daily investment per PMT countywide are unable to be calculated.

Table D-10b: EJ TAZs Average Vehicle Delay Time (hours)

Place Type	Delay Hours 2020	Delay Hours 2046	Total Hours 2046	Percentage Delayed
Urban/Metro	16,936	20,440	265,375	8
Rural Areas	7,741	12,659	287,403	4
Countywide	24,688	33,120	554,010	6

Table D-10c: Title VI TAZs Average Vehicle Delay Time (hours)

Place Type	Delay Hours 2020	Delay Hours 2046	Total Hours 2046	Percentage Delayed
Urban/Metro	14,669	17,967	237,561	8
Rural Areas	6,195	10,555	215,820	5
Countywide	20,877	28,541	454,597	6

Environment/Health

This measure is defined as enhancing the existing transportation system while improving the environment and health of the population. It is one of the factors in Kern COG's EJ and Title VI criteria set that the transportation model currently cannot directly measure. Environmental effects vary among different transportation projects and can only be determined meaningfully on a project-by-project basis. The goal is for projects in this RTP to demonstrate no difference in unmitigated impacts between EJ populations and the region as a whole. This goal is measured through conformity with the Clean Air Act Amendments of 1990 according to measures of certain pollutants such as nitrous oxide and particulate matter.

Both Kern COG's long-term RTP and the short-term Federal Transportation Improvement Program (FTIP) require a demonstration of air quality "conformity" prior to being adopted by Kern COG and the federal government. This conformity process is necessary because the San Joaquin Valley Air Basin is nonattainment for ozone and particulate matter. The process ensures that new transportation projects will either benefit or at least have no negative effect on air quality. Kern COG's conformity analysis for its most recent FTIP amendment was approved by the US DOT on August 13, 2021. A revised conformity analysis has been undertaken to support the 2022 RTP and the 2023 FTIP.

Table D-11: Vehicle NOx/PM10 Emissions Decrease

Air Basin (portion of Kern)	Base/Budget	Horizon 2046	Percentage Decrease	Federal Air Standard Met?
San Joaquin Valley NOx (2020)	23.3	7.9	66	YES
Mojave Desert NOx (2020)	3.6	1.1	69	YES
Indian Wells Valley PM10* (2020)	0.4	0.2	50	YES

**Indian Wells Valley totals are for all particulate matter 10 microns or smaller, not just the NOx precursor.*

The above table illustrates that federal standards are being met with this RTP. For a more detailed discussion of air quality, see the 2022 Conformity Analysis for simultaneous adoption with the 2022 RTP and 2023 FTIP.

In addition to maintaining federal air standards for each air basin/planning area, an analysis has been performed that indicates that the RTP shows improvement in households within 500 feet of major high volume roadways. However, environmental effects vary among different transportation projects and can only be determined meaningfully on a project-by-project basis.

Table D-12a: All TAZs Households within 500 Feet of Roadway Volumes Greater than 50,000 (households)

Place Type	2020	2046	Percentage Increase
Urban/Metro	6,102	9,267	52
Rural Areas	1,288	1,766	37
Countywide	7,390	11033	49

Table D-12b: EJ TAZs Households within 500 Feet of Roadway Volumes Greater than 50,000 (households)

Place Type	2020	2046	Percentage Increase
Urban/Metro	5,451	7,600	39
Rural Areas	747	975	31
Countywide	6,198	8,575	38

Table D-12c: Title VI TAZs Households within 500 Feet of Roadway Volumes Greater than 50,000 (households)

Place Type	2020	2046	Percentage Increase
Urban/Metro	4,934	6,544	33
Rural Areas	520	746	43
Countywide	5,454	7,290	34

The analysis indicates that additional revitalization in the urban/metro area may significantly increase housing closer to high volume transportation corridors, which may negatively impact this Environment/Health goal. However, EJ/Title VI areas are being affected at a slower rate than all areas countywide. Rural Title VI areas do show a higher percentage increase in the future along major high volume rural routes, however, over 20% of the traffic on these routes are though county trips being generated outside the region. Progress in urban Title VI areas greatly offset the small increase in housing in rural areas.

Sustainability/Preservation

Sustaining and preserving the transportation system can be measured by the total annualized amount of maintenance funding divided by the number of lane miles in the model. Countywide maintained lane miles are calculated from the transportation model. In November 2006, a transportation sales tax initiative with 56% voter approval failed to garner the two-thirds vote required to pass. Had it passed, approximately 40% of the funding would have been reserved for maintenance. This RTP assumes a modest increase in funding of 12% over previous RTPs (see **Table 6.1**) reflecting a possible increase to federal, state and/or local sources such as a local transportation measure. The following tables illustrate the growing issue of maintaining an expanding road system and underscores the need for rapid action to provide new funding sources to maintain the system. Note that road maintenance funds are not reported by EJ/Title VI areas, however local jurisdictions strive to maintain roads based on where conditions are worse but currently lack funding necessary to bring all roads up to tip top condition.

Table D-13a: Maintenance Dollars per Lane Mile for the Transportation System (miles, $)

Countywide	Base 2020	Horizon 2046	Percentage Change
Lane Miles	8,042	9,685	20
Annual Maintenance	$74,948,000	$104,115,000	38
Maintenance per Mile	$9,320	$9,850	6

Table D-13b: Maintenance Dollars per Lane Mile for the Transportation System if Additional Funding Does Not Become Available (miles, $)

Countywide	Base 2015	Horizon 2042	Percentage Change
Lane Miles	8,042	9,685	20
Annual Maintenance	$74,948,000	$74,948,000	0
Maintenance per Mile	$9,320	$7,739	-17

Equity

Equity is defined as a fair and reasonable distribution of transportation investment benefits (as a share of countywide benefits). Kern COG took a similar approach to equity as with cost-effectiveness, comparing the total investment in roads and transit through the horizon year of the plan with total passenger miles traveled in metro/urban, rural areas, and the county as a whole. All numbers were converted to percentages for simplicity.

The EJ/Title VI area percentages for highways when compared to the metro and countywide EJ/Title VI areas are receiving a similar level or higher level of benefit from investment when compared with the amount of travel in those respective areas. However, in rural areas for both highways and transit this is not the case. In past RTP cycles rural areas benefited from major highway projects on 58, 46 and 14. This cycle major earmark projects in Metro are a priority. Expenditures between rural and metro/urban tend to fluctuate as major projects are delivered.

Like highway expenditures, transit expenditures are from Table 5-1 and show a strong level of investment in EJ/Title VI areas. Note that the distribution of funding for bus transit service and rail was distributed based on the location of transit and rail stops where the transit system is accessed.

Table D-14a: All TAZs Percentage of Passenger Miles Traveled Verses Planned Transportation Investment by 2046 – Highways (miles, $)

Place Type	2046 PMT	Total Investment*	PMT % (countywide)	Investment % (countywide)
Urban/Metro	20,430,000	1,878,000,000	48	80
Rural Areas	21,923,000	460,000,000	52	20
Countywide	42,353,000	2,338,000,000	100	100

**Investment totals include all forecasted funding sources. Funding by place type is subject to the adopted Project Delivery Policies and Procedures (http://www.kerncog.org/publications/policies-and-procedures) as implemented in each Regional Transportation Improvement Program (RTIP) 2-year cycle. Note that Metropolitan Bakersfield has 2/3rds of the countywide population and a transportation development impact fee that is forecasted to provide over $500 million in transportation funding for roads & highways by 2046 that is only available to be invested in Metro.*

Table D-14b: EJ TAZs Percentage of Passenger Miles Traveled Verses Planned Transportation Investment by 2046 – Highways (miles, $)
(EJ areas should receive investment roughly equal to or greater than the % PMT)

Place Type	2046 PMT	Total Investment	PMT % (compared to all TAZs countywide)	Investment % (compared to all TAZs countywide)
Urban/Metro	14,853,000	1,537,000,000	35	66
Rural Areas	18,776,000	288,000,000	44	12
Countywide	33,629,000	1,825,000,000	79	78

Table D-14c: Title VI TAZs Percentage of Passenger Miles Traveled Verses Planned Transportation Investment by 2046 – Highways (miles, $)
(Title VI areas should receive investment roughly equal to or greater than the % PMT)

Place Type	2046 PMT	Total Investment	PMT % (compared to all TAZs countywide)	Investment % (compared to all TAZs countywide)
Urban/Metro	13,509,000	1,400,000,000	32	60
Rural Areas	14,404,000	153,000,000	34	7
Countywide	27,913,000	1,553,000,000	66	66

Table D-15a: All TAZs Percentage of Expenditures Versus Passenger Miles Traveled in 2046 – Transit (miles, $)

Place Type	2046 PMT	Total Investment	PMT % (countywide)	Investment (countywide)
Urban/Metro	101000	$ 1,595,000,000	86%	77%
Rural Areas	17000	$ 477,000,000	14%	23%
Countywide	118000	$ 2,072,000,000	100%	100%

Table D-15b: EJ TAZs Percentage of Expenditures Versus Passenger Miles Traveled in 2046 – Transit (miles, $)
(EJ areas should receive investment roughly equal to or greater than the % PMT)

Place Type	2046 PMT	Total Investment	PMT % (compared to all TAZs countywide)	Investment % (compared to all TAZs countywide)
Urban/Metro	76000	$ 1,348,000,000	64%	65%
Rural Areas	13000	$ 302,000,000	11%	15%
Countywide	89000	$ 1,698,000,000	75%	82%

Table D-15c: Title VI TAZs Percentage of Expenditures Versus Passenger Miles Traveled in 2046 – Transit (miles, $) (Title VI areas should receive investment roughly equal to or greater than the % PMT)

Place Type	2046 PMT	Total Investment	PMT % (compared to table all TAZs countywide)	Investment % (compared to all TAZs countywide)
Urban/Metro	63000	$ 1,313,000,000	53%	63%
Rural Areas	10000	$ 339,000,000	8%	16%
Countywide	73000	$ 1,696,000,000	61%	82%

Land Consumption

The California Department of Conservation maps farmland throughout California under the Farmland Mapping and Monitoring Program (FMMP). An analysis was performed on the 1988 and 2018 FMMP maps on the consumption of farmland by urban and built-up areas outside city spheres of influence boundaries. For more detailed analysis through the year 2046, see Chapter 4, Table 4-4. The definition of farmland under Government Code Section 65080.01 (b) excludes farmland from spheres of influence boundaries. In period from 1988 to 2018, an average of -0.3 square miles of farmland per year was converted to urban use outside existing city spheres of influence. With this RTP, over the next 26 years farmland consumption by urban uses may be reduced as much as 80% compared the historic rate of urbanization outside city spheres of influence. The analysis does not include conversion of land to habitat, solar, ground water recharge basins, or fallowing due to lack of water.

Table D-16: Kern County Important Farmland Conversion 2046 (square miles / year)

Place Type	Average Annual Farmland Consumed by Urban Uses Outside Spheres of Influence 1988-2018	Planned Average Annual Farmland Consumed by Urban Uses Outside Spheres of Influence 2020-2046	% Reduction
Countywide	-.3 sq. mi. / yr.	-0.06 sq. mi./ yr.	80

Health Equity

For this analysis health equity is measured by the percent reduction in health care costs for the plan over the no project alternative in the year 2046. Daily health costs are determined by the estimated number of air quality related health incidents. Air quality emissions were calculated using the California Air Resources Board EMFAC model and based on those emissions. Costs were estimated using the TIAX LLC study prepared for the American Lung Association of California in 2011. This plan shows a 4% savings in health care costs from improved air alone compared to a no project alternative.

Table D-17: Kern County Daily Health Costs in 2046 ($)

Place Type	No Project Health Cost	Plan Health Cost	% Reduction
Countywide	$565,854	$542,558	4%

It is important to note that according to the Robert Wood Johnson Foundation, improving air and water quality is not as big a factor in improving public health as focusing on the economic and behavioral factors. A region that provides for more jobs and transit/active transportation options would provide the most effective means to improve public health in our region. Several other performance measures in this analysis look at travel to major job centers, transit, as well as safety by EJ and Title VI areas.

Reliability/Congestion

Reliability is the percentage of on-time arrivals for both transit and highway trips. For highways, it is measured by the number of hours daily that passengers spend in congested traffic. Congestion on roadways is measured by the amount of time in hours that a vehicle is not able to reach the speed limit on a given roadway segment. The measure also affects the reliability of transit service in Metropolitan Bakersfield. The Metro transit system currently lacks any facilities immune to congestion such as carpool lanes, bus lanes, or light rail. The level of congestion is not a significant measure for rural place type areas based on the Smart Mobility Framework analysis; however, the numbers are provided for comparison purposes.

Countywide residents will see the number of hours spent in congested traffic rise 20.5% from 2020 to 2046. as compared to EJ TAZs with only a 20.3% increase. Title VI TAZs fared a little worse for highway travel at 1.3 percentage points higher than all TAZs countywide. Although relatively similar to countywide congested hours this measure should be watched closely in future RTP cycles.

Table D-18a: All TAZs Average Level of Congestion (hours)

Place Type	2020	2046	Percentage Increase
Urban/Metro	305,767	368,461	20.5
Rural Areas	285,115	352,548	23.7
Countywide	592,141	722,644	22.0

Table D-18b: EJ TAZs Average Level of Congestion (hours)

Place Type	2020	2046	Percentage Increase
Urban/Metro	219,600	265,375	20.8
Rural Areas	233,913	287,403	22.9
Countywide	454,522	544,010	19.7

Table D-18c: Title VI TAZs Average Level of Congestion (hours)

Place Type	2020	2046	Percentage Increase
Urban/Metro	195,065	237,561	21.8
Rural Areas	170,371	215,820	26.7
Countywide	366,429	454,597	24.1

For transit, reliability is judged by the percentage of on-time arrivals for each operator. Golden Empire Transit District has developed its own EJ analysis, “Title VI Update,” last produced in March 2022. Based

on observations from 2021, GET estimated its on-time arrival rate averaged 85% on Title VI minority routes and 83% for non-title VI routes.[10]

Reliability/Safety

For Kern COG's EJ/Title VI policy purposes, safety is the minimal risk of accident or injury as measured by reduced accidents. While the model does make predictions regarding the number of accidents that cause property damage, injury, and fatalities, it cannot stratify that information specifically by project.

Despite the model's inability to predict accident rates on specific projects, it does provide an aggregate look at annual accidents in 2020 compared to 2046. Results show that total accidents will rise at rate slower than the population increase thanks to new safety treatments to be implemented in the region. At a system level this analysis demonstrates that by the horizon year of the plan, no more accidents will occur in EJ/Title VI areas than all TAZs countywide. Meanwhile, EJ TAZs will see a slower increase for injury accidents than the region as a whole. For example, in Metro Bakersfield, fatalities are forecasted to rise from 63 in 2020 to approximately 80 in 2046, a 27% increase while EJ areas in Metro will see a slower increase in fatalities of 22%. In rural EJ TAZs, however, the rate for the property damage and injury type of accident rise 21% rise, a similar rate to the increase in all rural. Note that the average of Title VI areas are also similar to the Countywide average of 23%.

Table D-19a: All TAZs Annualized Accident Statistics for Annual Average Daily Traffic

Place Type	2020	2046	Percentage Increase
Urban/Metro			
Property damage	3,112	3,897	25
Injury	1,774	2,221	25
Fatality	63	80	27
Rural			
Property damage	3,657	4,432	21
Injury	2,086	2,526	21
Fatality	70	90	29
Countywide			
Property damage	6,783	8,344	23
Injury	3,866	4,756	23
Fatality	137	170	24

Table D-19b: EJ TAZs Annualized Accident Statistics for Annual Average Daily Traffic

Place Type	2020	2046	Percentage Increase
Urban/Metro			
Property damage	2,286	2,829	24
Injury	1,303	1,613	24
Fatality	46	57	24
Rural			

[10] Golden Empire Transit District Title VI Program Update, March 2022, p. 41 https://www.getbus.org/wp-content/uploads/2022/03/Title-VI-Program-Update-2022-2025-APPROVED-032022-v2.pdf

Place Type	2020	2046	Percentage Increase
Property damage	3,139	3,801	21
Injury	1,789	2,167	21
Fatality	64	77	20
Countywide			
Property damage	5,435	6,643	22
Injury	3,098	3,787	22
Fatality	110	134	22

Table D-19c: Title VI TAZs Annualized Accident Statistics for Annual Average Daily Traffic

Place Type	2020	2046	Percentage Increase
Urban/Metro			
Property damage	2,073	2,574	24
Injury	1,182	1,467	24
Fatality	42	52	24
Rural			
Property damage	2,334	2,894	24
Injury	1,331	1,650	24
Fatality	47	59	28
Countywide			
Property damage	4,418	5,481	24
Injury	2,518	3,124	24
Fatality	89	111	22

Safety Targets – Federal Performance Measure 1 (PM-1)

Under the requirements of the recent federal transportation spending bills, states and metropolitan planning organizations (MPOs) like Kern COG are required to annually monitor safety performance measure progress through the statewide and metropolitan planning process. Failure to meet safety targets set by the state and/or MPO could result in redistribution of Caltrans Active Transportation Program (ATP) funding at the state level into the federal Highway Safety Improvement Program (HSIP). Many of the projects in the ATP program improve safety for bike and pedestrians, and would likely still be eligible under HSIP.

The Federal Highways Administration (FHWA) will review how MPOs are working to achieve their targets, in accordance with the federal rules, as they conduct MPO Certification Reviews every 4 years. Failure to adequately address target performance measure requirements could eventually result in loss of the MPO's federal certification along with access to federal transportation funds. The most recent Kern COG federal target compliance documentation is available here: http://www.kerncog.org/federal-performance-measures/, and were accepted at the last federal certification review.

Unlike the previous RTP performance measures, these three federal performance measures use recent observed data rather than modeled future data. The data shows vehicle, bicycle and pedestrian 5 year running averages were within 4% of their targets set in the prior year with the serious injury rate

outperforming the target by a half of percent. Kern has also seen a significant increase in construction over the past 5-years with the funds from SB1 and federal earmarks. This construction activity may be contributing to the poor performance toward the targets over 5-year trend. The projects however are wrapping up and we should see improvements in safety upon their completion.

Table D-20: Federal Performance Measures (PM-1) - Safety

PM-1 Safety Performance Measure Category	2021 5-year running average	2020 Target for 2021 5-year running avg.	% Difference
Vehicle Related Fatality Rate per 100M miles traveled	1.77	1.71	-3%
Vehicle Related Serious Injury Rate per 100M miles traveled	4.37	4.39	0.5%
Bicycle/Pedestrian Fatality/Serious Injury Rate per 1000 pop.	.000122	.000117	-4%

Source: CHP SWITRS data, Kern COG Travel Model

Sustainability / Preservation – Federal Performance Measure 2 (PM-2)

Under the requirements of the federal transportation spending bill, state transportation agencies and metropolitan planning organizations (MPOs) like Kern COG are required to monitor bridge and road pavement condition on the National Highway System (NHS) routes in the region every other year. In consultation with Kern COG Staff, Caltrans has established statewide and regional targets for bridge and pavement condition. Kern COG works with the affected local jurisdictions to provide weighted average conditions to help Caltrans with target setting on locally maintained NHS routes. The Kern region is within 5 percentage points of the performance targets on NHS routes, however the percent of roads and bridges found to be in good condition are about half the target goal.

If California does not achieve the established statewide aggregate 2 and 4-year targets then the state is required to develop an improvement plan in consultation with the MPOs. In addition, the Federal Highways Administration (FHWA) will review how MPOs are addressing and achieving their targets (or assisting the state in achieving targets) during their 4-year Federal Certification Review. Maintaining Federal MPO Certification is a pre-requisite to receiving federal funding. At the next review Kern COG intends to report the long-time and successful use of Regional Surface Transportation Program (RSTP) and Highway Bridge Programs by our member agencies for state of good repair projects on federal aid system routes including the NHS. In addition, the Kern COG board has an adopted policy for approving a regional RSTP project that could be used to for prioritizing maintenance projects on local NHS routes should Caltrans monitoring demonstrate failure to meet the targets. Kern COG can also consider project delivery policies that help prioritize bridge and pavement maintenance on the NHS. Local jurisdictions are encouraged to promote projects and policies that improve the NHS routes in their jurisdictions to help the region to perform as good or better than targets for our region.

Table D-21: Federal Performance Measure PM-2 – Road Pavement/Bridge Condition

PM-2 Road Pavement/Bridge Condition	2019 Observed % Good or Fair	2019 Target % Good or Fair
Pavement Condition – NHS Routes	90	95
Bridge Condition – NHS Routes	93	95

Mobility / Accessibility – Federal Performance Measure 3 (PM-3)

Under the requirements of the federal transportation spending bill, state transportation agencies and metropolitan planning organizations (MPOs) like Kern COG are required to annually monitor travel time reliability performance measure progress through the statewide and metropolitan planning process. Failure to meet travel time reliability targets will require Caltrans to provide an explanation to FHWA. In addition, FHWA will review how MPOs are addressing and achieving their targets (or assisting the state in achieving

targets) as they conduct the 4-Year Certification Reviews. Maintaining Federal MPO Certification is a pre-requisite to receiving federal funding. At that review Kern COG intends to report the existing travel-time performance measures in the RTP and the Project Delivery Policy and Procedures.

Caltrans has established statewide and Kern COG targets using the National Performance Management Research Data Set (NPMRDS) with travel time data from INRIX propriety cell phone data for Kern's NHS routes. An informative link on the federal performance measure process for travel time reliability is https://ops.fhwa.dot.gov/perf_measurement/reliability_measures/index.htm
and https://ops.fhwa.dot.gov/publications/tt_reliability/.

Travel time reliability for a segment = (80th percentile travel time)/(50th percentile travel time). Caltrans considers Travel time reliability<1.5 as reliable. **Figure D-4** is a travel time reliability map of NHS routes in Kern using that method. The analysis indicates that Kern is meeting the PM3 Target Caltrans developed.

Figure D-4: Map of Travel Time Reliability on NHS Route

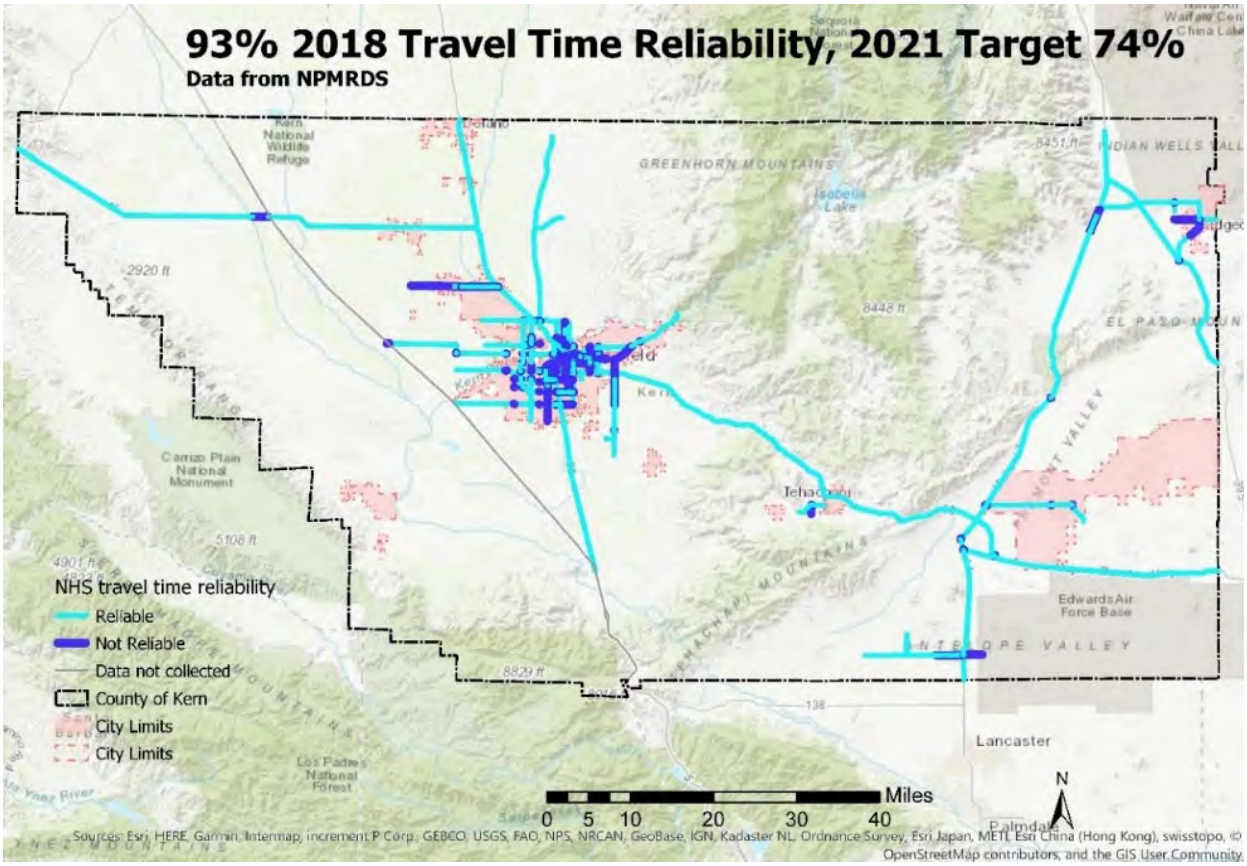


Table D-22: Federal Performance Measure PM-3 – Travel Time Reliability

PM-3 Travel Time Reliability	2018 Observed % Reliable	2021 Target % Reliable
Kern County – NHS Routes	93	74

Member agencies are encouraged to promote projects and policies that will help the region's NHS routes to perform as good or better than targets for our region. Federally required performance measures for pavement condition of the National Highway System (PM-2) and freight and other measures (PM-3) are also available in the performance measure progress reports online at: http://www.kerncog.org/category/docs/performance-monitoring/

Environmental Justice/Title VI Conclusions

Considering the analyses as a whole, this RTP meets the federal requirements for both Title VI and EJ by ensuring that all of the population is subject to proportionate benefits and detriments. Note that EJ and Title VI do not create an entitlement; however, they do attempt to assure that transportation projects do not have discriminatory effects or disparate impacts on any segment of the population, especially those traditionally disadvantaged groups such as racial minorities and low-income communities. The above analyses show that out of 17 performance measures that look at EJ/Title areas, However, Kern COGs EJ/Title VI Strategy focuses equally on our public information/outreach process as well as this planning analysis.

From a public information perspective, Kern COG's commitment to EJ and both rural and urban community types are demonstrable through its efforts in gathering public input. These efforts include broadcasting its monthly meetings on television, using display advertising and electronic notices in appropriate languages to announce workshops and public hearings, and developing web interactive survey tools and social media advertisements for long-range planning efforts. Kern COG has been visible in every community over the last three years during city council meetings, street fairs, and community festivals. Kern COG's agenda is distributed to 2,000 organizations and individuals. Over 7,000 people have provided input to this RTP's development. Appendix C summarizes the extensive RTP outreach effort. In addition, Kern COG is the only small/medium sized metropolitan planning organization listed as a best practice for its Public Involvement Procedure in the California Transportation Commission's adopted 2017 RTP Guidelines.[11]

From a planning standpoint, the transportation model indicates that, with few exceptions, Kern COG has and will continue to divide its resources equitably, with no single population group suffering disproportionate and adverse effects from agency activity. However, the analyses demonstrated that out of 22 performance measure categories a couple of areas need to be closely watched in future iterations of this analysis, while a couple of other areas showed improvement compared to the previous RTP EJ/Title VI performance measures analysis.

One measure from the last RTP analysis that showed some potential issues for rural EJ/Title VI areas now only shows that issue for rural EJ areas. Rural Title VI areas now show a higher level of commitment in this RTP compared the last one. The Cost-effectiveness and health equity measure (Table D-9) shows how transit expenditures compare in EJ/Title VI areas versus the region as a whole. The cost-effectiveness measure continues to show that transit expenditures in rural EJ areas are more cost-effective than other areas. The difference however is not enough to make all EJ areas countywide more cost-effective than the County as a whole. It is important to note that countywide EJ and Title VI areas show a higher level of commitment to providing service to these areas even though they are less cost effective. We will continue to watch this measure.

Since the last RTP Table D-10 has gone from partial to a yes in meeting the target. The measure now shows that travel delay in EJ/Title VI areas get worse at the same rate as the county as a whole. Table D-14 shows that EJ area highway expenditures are 1 percentage point below the total passenger miles traveled, and Table D-18, Average Level of Congestion, does ok for EJ areas but now Title VI areas perform a little worse than the county as a whole by a few percentage points. We will keep watch on two measures in future cycles.

Other examples are the environment/health performance measures. These measures indicate that policies related to environmental concerns such as air quality and noise will be affected by this plan, but EJ areas will again not be impacted to the same degree as countywide. The increased impact in EJ areas is linked to the increased revitalization and new households in those areas.

[11] California Transportation Commission, 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations, http://www.dot.ca.gov/hq/tpp/offices/orip/rtp/docs/2017RTPGuidelinesforMPOs.pdf , p. 316.

It is important to realize that the areas that were identified as EJ/Title VI changed dramatically in the past 4 years even though we used the same tool (U.S. EPA EJScreen) and methodology. Based on the U.S. Census ACS data, Kern has seen a significant increase in low income and minority population between 2015 and 2019 based. This is the 4th four-year update cycle in a row we have seen significant changes to area identified as EJ/Title VI areas and each time the modeling results have clearly shown that EJ/Title VI areas predominantly benefit from the RTP expenditure plan better than all areas as a whole. Note that the changes have been requested in past cycles by stakeholders and the federal review agencies, not to mention that Kern has gone from half to two-thirds minority population in the past 20 years. We believe that the reason the expenditure plan has done well in benefiting title VI/EJ areas is because of the extensive public outreach that has created a grassroots, bottom-up process in identification of projects that benefit all communities in our region.

Smart Mobility Conclusions

The Smart Mobility Framework method divided the performance measures into two place types—urban and rural. The measures reveal that a relatively even distribution of resources in efficiency/cost-effectiveness. For example, highway investment is $.01 per passenger mile traveled in both urban and rural area highways, while transit investment is many times less cost effective in rural compared to urban areas primarily due to the longer distance lower volume trips that Kern Transit provides.

A continuing trend in the rural place type from the prior RTP shows rural areas are receiving greater congestion than urban place types. This is likely due to an anticipated increase in traffic on I-5 to and from Los Angeles and developments proposed near Frazier Park.

As urban growth and traffic increase, both rural and urban place types are anticipated to see an increase in traffic accidents, however rural areas will not increase as fast as urban areas.

The performance measures examined all funding sources, and not just those subject to the 60–40 guideline policy adopted by the Kern COG Board. It is interesting to note that more passenger miles are traveled outside of Metropolitan Bakersfield than within. That is because the metro area makes up 5% of the total area of the county, and through-county trips make up about 20% of all travel in Kern County.

Health Equity Conclusions

The health equity performance measures show that this plan will be a great benefit to both the public and the EJ/Title VI communities. This plan will reduce air quality related health costs by 4% (see table D-17). Although populations near high volume roadways will increase by 49% for all areas, down from 68% in the prior RTP, EJ/Title VI areas will only increase by 38% and 34% respectively, lowering the potential health impacts to these areas (see Table D-12). Even more importantly, according to the Robert Wood Johnson foundation, the plan will ensure access to jobs for EJ/Title VI areas via transit and highways remains better than county as a whole (Table D-7). Finally, safety (Table D-19) shows that EJ/Title VI areas are better or the same as the County as a whole for projected fatalities and injuries.

Federal Performance Measure Conclusions

This RTP we have added two new federally required performance measures two the PM-1 Safety measure in the last RTP. The two new ones are Observed Bridge/Pavement condition on the NHS (PM-2) and Observed Travel Time Reliability on the NHS (PM-3). The latter one is the only one that has met the target set during its previous cycle. The PM-1 safety target was met for vehicle related serious injury rate but not vehicle related fatalities or bicycle/pedestrian accident rates. PM-2 Observed Bridge/Pavement condition have fallen sort of the target set 2 years ago, but only by a few percentage points. Note that PM-1 is

updated annually, PM-2 every other year, and PM-3 every 4 years. This plan incorporates those updates by reference, and they can be accessed at https://www.kerncog.org/federal-performance-measures/ .

System-wide Conclusions

System-wide, the performance measures indicate that the Kern region is losing ground in its battle with overall congestion. With the focus of more than $640 million in federal demonstration funds to the region, accessibility to major job centers countywide is forecasted to degrade by close to a half minute between 2020 and 2046.

Many of the future improvements will be more expensive. The cheap, easy fixes are no longer available. Changing a six-lane arterial to eight or ten lanes can be costly. Not only does the congestion affect the reliability of our transportation system, it affects transit operations as well.

Transit can only provide a relief for congestion if the express bus service is not stuck in the same traffic as single-occupant vehicles. Planned investment in carpool and bus lanes on freeways, ramps, and arterial streets is not much more expensive than adding free-flow lanes; however, they can provide a vital relief valve during peak travel times. The ability to get around during peak periods is important to ensure the economic vitality of the region and can stretch the effectiveness of Kern's transportation dollar.

The Sustainability/Preservation measure indicates the importance of increasing maintenance funding with the expanding transportation system. This is consistent with the input during the public outreach process that placed maintenance as a top priority.

Some local successes have occurred for new funding sources. The City of Bakersfield passed a utility tax for transportation maintenance, and the Cities of Arvin, Bakersfield, Delano and Ridgecrest have approved general fund sales tax measures, a portion of which could be used for road maintenance. State passage of Senate Bill 1 provided an important near/mid-term solution for transportation funding. The federal highway trust fund however is insolvent and must be fixed as part of the next federal surface transportation act reauthorization. Innovative long-term pay-as-you-go solutions such as a phased-in odometer-based mileage tax, should be seriously considered.

Appendix D Attachment

Kern Travel Model EJ/Title VI Performance Measures Output

2022 RTP Performance Measures Output	Alternatives:	2020	2046	2046 NoBuild	2020 T6	2046 T6	2046 T6 No Build
ACCESSIBILITY AND MOBILITY							
*** Average travel times (minutes) from county zones to all zones							
Peak Drive Alone Travel Time		17.2	17.45	17.63	17.2	17.45	17.63
Peak Shared Ride Travel Time		14.74	15.28	15.42	14.74	15.28	15.42
Peak All-Auto Travel Time		16.39	16.71	16.88	16.39	16.71	16.88
Peak Transit Travel Time		35.87	35.91	41.24	35.87	35.91	41.24
Off-Peak Drive Alone Travel Time		17.3	17.53	17.71	17.3	17.53	17.71
Off-Peak Shared Ride Travel Time		14.83	15.36	15.5	14.83	15.36	15.5
Off-Peak All-Auto Travel Time		16.49	16.79	16.96	16.49	16.79	16.96
Off-Peak Transit Travel Time		34.67	34.42	37.65	34.67	34.42	37.65
Day-Avg Drive Alone Travel Time		17.25	17.49	17.67	17.25	17.49	17.67
Day-Avg Shared Ride Travel Time		14.79	15.32	15.46	14.79	15.32	15.46
Day-Avg All-Auto Travel Time		16.44	16.75	16.92	16.44	16.75	16.92
Day-Avg Transit Travel Time		35.05	34.88	38.74	35.05	34.88	38.74
*** Average travel times (minutes) from county zones to Job Centers							
Peak Drive Alone Travel Time		12.28	12.52	12.95	12.28	12.52	12.95
Peak Shared Ride Travel Time		11.43	11.8	12.09	11.43	11.8	12.09
Peak All-Auto Travel Time		12.03	12.3	12.69	12.03	12.3	12.69
Peak Transit Travel Time		32.91	28.72	33.14	32.91	28.72	33.14
Off-Peak Drive Alone Travel Time		12.41	12.63	13.05	12.41	12.63	13.05
Off-Peak Shared Ride Travel Time		11.55	11.9	12.18	11.55	11.9	12.18
Off-Peak All-Auto Travel Time		12.15	12.41	12.78	12.15	12.41	12.78
Off-Peak Transit Travel Time		33.81	31.25	34.6	33.81	31.25	34.6
Day-Avg Drive Alone Travel Time		12.34	12.57	13	12.34	12.57	13
Day-Avg Shared Ride Travel Time		11.49	11.85	12.14	11.49	11.85	12.14
Day-Avg All-Auto Travel Time		12.09	12.35	12.74	12.09	12.35	12.74
Day-Avg Transit Travel Time		33.59	30.62	34.25	33.59	30.62	34.25
*** Average travel times (minutes) from county EJ zones to all zones							
Peak Drive Alone Travel Time		17.29	17.06	17.41	17.09	17.01	17.33
Peak Shared Ride Travel Time		14.5	14.51	14.89	14.32	14.47	14.82
Peak All-Auto Travel Time		16.35	16.17	16.54	16.15	16.11	16.45
Peak Transit Travel Time		35.11	34.83	40.39	34.73	35.77	40.95
Off-Peak Drive Alone Travel Time		17.23	16.98	17.33	16.96	16.86	17.19
Off-Peak Shared Ride Travel Time		14.55	14.54	14.93	14.34	14.45	14.84
Off-Peak All-Auto Travel Time		16.33	16.13	16.5	16.07	16.01	16.37
Off-Peak Transit Travel Time		34.57	34.03	37.74	33.85	34.08	36.66
Day-Avg Drive Alone Travel Time		17.26	17.02	17.37	17.02	16.93	17.26
Day-Avg Shared Ride Travel Time		14.52	14.53	14.91	14.33	14.46	14.83
Day-Avg All-Auto Travel Time		16.34	16.15	16.52	16.11	16.06	16.41
Day-Avg Transit Travel Time		34.74	34.28	38.56	34.12	34.6	37.96
*** Average travel times (minutes) from county EJ zones to Job Centers							
Peak Drive Alone Travel Time		12.27	12.41	12.9	12.2	12.42	12.95
Peak Shared Ride Travel Time		11.39	11.66	11.99	11.44	11.76	12.14
Peak All-Auto Travel Time		12	12.18	12.62	11.97	12.21	12.7
Peak Transit Travel Time		32.24	27.51	32.36	32.33	28.7	32.84
Off-Peak Drive Alone Travel Time		12.38	12.51	12.98	12.31	12.52	13.04
Off-Peak Shared Ride Travel Time		11.49	11.75	12.07	11.55	11.86	12.23
Off-Peak All-Auto Travel Time		12.11	12.28	12.7	12.08	12.32	12.79
Off-Peak Transit Travel Time		33.57	30.63	34.57	33.18	31.03	33.87
Day-Avg Drive Alone Travel Time		12.32	12.46	12.94	12.25	12.47	13
Day-Avg Shared Ride Travel Time		11.44	11.7	12.03	11.49	11.81	12.18
Day-Avg All-Auto Travel Time		12.05	12.23	12.66	12.02	12.27	12.75
Day-Avg Transit Travel Time		33.24	29.83	34.03	32.99	30.45	33.63

2022 RTP Performance Measures Output	Alternatives:	2020	2046	2046 NoBuild	2020 T6	2046 T6	2046 T6 No Build
*** Average travel times (minutes) from county zones to EJ zones							
Peak Drive Alone Travel Time		13.24	13.5	13.94	13.1	13.4	13.84
Peak Shared Ride Travel Time		12.37	12.57	12.96	11.83	12.21	12.58
Peak All-Auto Travel Time		12.95	13.18	13.6	12.69	12.99	13.41
Peak Transit Travel Time		35.24	34.83	39.8	34.81	34.35	39.46
Off-Peak Drive Alone Travel Time		13.35	13.59	14.03	13.22	13.5	13.94
Off-Peak Shared Ride Travel Time		12.46	12.65	13.03	11.93	12.3	12.67
Off-Peak All-Auto Travel Time		13.05	13.27	13.69	12.79	13.09	13.51
Off-Peak Transit Travel Time		34.59	33.79	37.15	34.68	33.8	37.24
Day-Avg Drive Alone Travel Time		13.29	13.55	13.98	13.16	13.45	13.89
Day-Avg Shared Ride Travel Time		12.42	12.61	12.99	11.88	12.25	12.63
Day-Avg All-Auto Travel Time		13	13.22	13.65	12.74	13.04	13.46
Day-Avg Transit Travel Time		34.78	34.1	37.92	34.72	33.96	37.87
ACCESSIBILITY AND MOBILITY							
*** Average travel times (minutes) from metro zones to all zones							
Peak Drive Alone Travel Time		13.97	13.91	14.48	13.97	13.91	14.48
Peak Shared Ride Travel Time		12.51	12.51	13.04	12.51	12.51	13.04
Peak All-Auto Travel Time		13.49	13.43	13.99	13.49	13.43	13.99
Peak Transit Travel Time		34.95	33.92	39.24	34.95	33.92	39.24
Off-Peak Drive Alone Travel Time		13.3	13.24	13.71	13.3	13.24	13.71
Off-Peak Shared Ride Travel Time		11.57	11.71	12.08	11.57	11.71	12.08
Off-Peak All-Auto Travel Time		12.72	12.71	13.16	12.72	12.71	13.16
Off-Peak Transit Travel Time		32.92	30.84	33.1	32.92	30.84	33.1
Day-Avg Drive Alone Travel Time		13.53	13.47	13.98	13.53	13.47	13.98
Day-Avg Shared Ride Travel Time		11.89	11.99	12.42	11.89	11.99	12.42
Day-Avg All-Auto Travel Time		12.98	12.96	13.45	12.98	12.96	13.45
Day-Avg Transit Travel Time		33.56	31.79	35	33.56	31.79	35
*** Average travel times (minutes) from metro zones to Job Centers							
Peak Drive Alone Travel Time		10.75	10.83	11.41	10.75	10.83	11.41
Peak Shared Ride Travel Time		10.13	10.34	10.76	10.13	10.34	10.76
Peak All-Auto Travel Time		10.57	10.68	11.22	10.57	10.68	11.22
Peak Transit Travel Time		32.29	27	31.12	32.29	27	31.12
Off-Peak Drive Alone Travel Time		10.12	10.18	10.61	10.12	10.18	10.61
Off-Peak Shared Ride Travel Time		9.59	9.77	10.04	9.59	9.77	10.04
Off-Peak All-Auto Travel Time		9.95	10.05	10.43	9.95	10.05	10.43
Off-Peak Transit Travel Time		32.98	28.51	31.13	32.98	28.51	31.13
Day-Avg Drive Alone Travel Time		10.33	10.4	10.88	10.33	10.4	10.88
Day-Avg Shared Ride Travel Time		9.76	9.96	10.27	9.76	9.96	10.27
Day-Avg All-Auto Travel Time		10.15	10.26	10.69	10.15	10.26	10.69
Day-Avg Transit Travel Time		32.82	28.13	31.13	32.82	28.13	31.13
*** Average travel times (minutes) from metro EJ zones to all zones							
Peak Drive Alone Travel Time		14.19	14.16	14.61	14.42	14.39	14.83
Peak Shared Ride Travel Time		12.38	12.46	12.88	12.42	12.52	12.94
Peak All-Auto Travel Time		13.57	13.55	14.01	13.74	13.72	14.17
Peak Transit Travel Time		34.12	32.68	38.06	33.82	33.67	38.84
Off-Peak Drive Alone Travel Time		13.2	13.16	13.56	13.3	13.25	13.65
Off-Peak Shared Ride Travel Time		11.39	11.57	11.88	11.41	11.58	11.91
Off-Peak All-Auto Travel Time		12.59	12.61	12.98	12.66	12.67	13.05
Off-Peak Transit Travel Time		32.75	30.24	32.7	32.28	30.57	32.25
Day-Avg Drive Alone Travel Time		13.54	13.51	13.93	13.69	13.65	14.07
Day-Avg Shared Ride Travel Time		11.73	11.89	12.24	11.76	11.92	12.28
Day-Avg All-Auto Travel Time		12.93	12.94	13.34	13.03	13.04	13.45
Day-Avg Transit Travel Time		33.18	31.01	34.41	32.76	31.52	34.28

2022 RTP Performance Measures Output	Alternatives:	2020	2046	2046 NoBuild	2020 T6	2046 T6	2046 T6 No Build
*** Average travel times (minutes) from metro EJ zones to Job Centers							
Peak Drive Alone Travel Time		10.44	10.56	11.07	10.57	10.71	11.28
Peak Shared Ride Travel Time		9.82	10.06	10.43	9.97	10.24	10.66
Peak All-Auto Travel Time		10.25	10.4	10.87	10.39	10.56	11.09
Peak Transit Travel Time		31.6	25.82	30.27	31.7	26.96	30.85
Off-Peak Drive Alone Travel Time		9.79	9.89	10.31	9.93	10.03	10.51
Off-Peak Shared Ride Travel Time		9.25	9.48	9.74	9.36	9.6	9.93
Off-Peak All-Auto Travel Time		9.61	9.76	10.13	9.75	9.9	10.33
Off-Peak Transit Travel Time		32.64	27.84	30.87	32.31	28.36	30.54
Day-Avg Drive Alone Travel Time		10.01	10.12	10.57	10.15	10.26	10.78
Day-Avg Shared Ride Travel Time		9.43	9.67	9.97	9.56	9.81	10.17
Day-Avg All-Auto Travel Time		9.83	9.98	10.38	9.96	10.12	10.59
Day-Avg Transit Travel Time		32.39	27.31	30.72	32.17	28.01	30.61
*** Average travel times (minutes) from metro zones to EJ zones							
Peak Drive Alone Travel Time		11.89	12.04	12.63	11.73	11.92	12.5
Peak Shared Ride Travel Time		11.25	11.25	11.81	10.74	11.01	11.49
Peak All-Auto Travel Time		11.68	11.77	12.35	11.41	11.61	12.16
Peak Transit Travel Time		34.14	32.71	37.49	33.6	32.13	36.95
Off-Peak Drive Alone Travel Time		11.47	11.62	12.1	11.3	11.48	11.95
Off-Peak Shared Ride Travel Time		10.66	10.79	11.18	10.37	10.64	10.99
Off-Peak All-Auto Travel Time		11.2	11.34	11.79	10.99	11.2	11.63
Off-Peak Transit Travel Time		32.76	30.18	32.5	32.77	30.12	32.46
Day-Avg Drive Alone Travel Time		11.62	11.77	12.28	11.45	11.64	12.14
Day-Avg Shared Ride Travel Time		10.85	10.95	11.4	10.5	10.77	11.16
Day-Avg All-Auto Travel Time		11.36	11.49	11.98	11.13	11.34	11.81
Day-Avg Transit Travel Time		33.18	30.93	33.99	33.02	30.7	33.76
ACCESSIBILITY AND MOBILITY							
*** Average travel times (minutes) from nonmetro zones to all zones							
Peak Drive Alone Travel Time		25.75	25.55	25.36	25.75	25.55	25.36
Peak Shared Ride Travel Time		20.94	21.99	21.48	20.94	21.99	21.48
Peak All-Auto Travel Time		24.21	24.36	24.07	24.21	24.36	24.07
Peak Transit Travel Time		47.21	61.06	59.41	47.21	61.06	59.41
Off-Peak Drive Alone Travel Time		24.45	24.38	24.08	24.45	24.38	24.08
Off-Peak Shared Ride Travel Time		19.6	21.12	20.42	19.6	21.12	20.42
Off-Peak All-Auto Travel Time		22.88	23.28	22.86	22.88	23.28	22.86
Off-Peak Transit Travel Time		54.5	71.76	71.24	54.5	71.76	71.24
Day-Avg Drive Alone Travel Time		24.9	24.78	24.52	24.9	24.78	24.52
Day-Avg Shared Ride Travel Time		20.06	21.42	20.79	20.06	21.42	20.79
Day-Avg All-Auto Travel Time		23.34	23.65	23.27	23.34	23.65	23.27
Day-Avg Transit Travel Time		52.35	68.89	68.1	52.35	68.89	68.1
*** Average travel times (minutes) from nonmetro zones to Job Centers							
Peak Drive Alone Travel Time		18.69	19	18.92	18.69	19	18.92
Peak Shared Ride Travel Time		16.74	17.3	17.09	16.74	17.3	17.09
Peak All-Auto Travel Time		18.1	18.47	18.36	18.1	18.47	18.36
Peak Transit Travel Time		43.57	60.66	57.64	43.57	60.66	57.64
Off-Peak Drive Alone Travel Time		17.02	17.44	17.36	17.02	17.44	17.36
Off-Peak Shared Ride Travel Time		15.01	15.53	15.38	15.01	15.53	15.38
Off-Peak All-Auto Travel Time		16.38	16.82	16.72	16.38	16.82	16.72
Off-Peak Transit Travel Time		47.34	70.03	68.18	47.34	70.03	68.18
Day-Avg Drive Alone Travel Time		17.6	17.98	17.9	17.6	17.98	17.9
Day-Avg Shared Ride Travel Time		15.57	16.11	15.95	15.57	16.11	15.95
Day-Avg All-Auto Travel Time		16.96	17.38	17.28	16.96	17.38	17.28
Day-Avg Transit Travel Time		46.47	68.11	66.06	46.47	68.11	66.06

2022 RTP Performance Measures Output	Alternatives:	2020	2046	2046 NoBuild	2020 T6	2046 T6	2046 T6 No Build
*** Average travel times (minutes) from nonmetro EJ zones to all zones							
Peak Drive Alone Travel Time		26.09	24.77	24.98	27.03	25.68	25.87
Peak Shared Ride Travel Time		20.5	20.01	20.25	20.65	20.39	20.63
Peak All-Auto Travel Time		24.28	23.16	23.39	24.88	23.84	24.05
Peak Transit Travel Time		53.69	68.06	67.11	52.75	67.15	65.26
Off-Peak Drive Alone Travel Time		23.75	22.69	22.83	25.17	23.93	24
Off-Peak Shared Ride Travel Time		19.1	18.63	18.89	19.08	18.95	19.2
Off-Peak All-Auto Travel Time		22.2	21.3	21.49	23.14	22.22	22.36
Off-Peak Transit Travel Time		63.08	79.18	79.49	61.38	76.11	75.68
Day-Avg Drive Alone Travel Time		24.56	23.41	23.57	25.82	24.54	24.65
Day-Avg Shared Ride Travel Time		19.58	19.11	19.35	19.63	19.47	19.7
Day-Avg All-Auto Travel Time		22.92	21.94	22.14	23.75	22.79	22.95
Day-Avg Transit Travel Time		60.46	76.29	76.36	58.93	73.75	73.02
*** Average travel times (minutes) from nonmetro EJ zones to Job Centers							
Peak Drive Alone Travel Time		20.11	19.84	20.14	21.29	21.02	21.45
Peak Shared Ride Travel Time		18.06	18	18.11	18.99	18.92	19.07
Peak All-Auto Travel Time		19.48	19.26	19.51	20.55	20.34	20.68
Peak Transit Travel Time		51.4	69.25	66.83	50.81	67.52	64.31
Off-Peak Drive Alone Travel Time		18.18	18.12	18.38	19.59	19.57	19.92
Off-Peak Shared Ride Travel Time		16.39	16.29	16.4	17.27	17.45	17.6
Off-Peak All-Auto Travel Time		17.6	17.52	17.73	18.83	18.86	19.15
Off-Peak Transit Travel Time		57.9	78.75	77.65	57.41	76.11	74.39
Day-Avg Drive Alone Travel Time		18.84	18.72	18.99	20.18	20.08	20.46
Day-Avg Shared Ride Travel Time		16.94	16.86	16.97	17.86	17.95	18.11
Day-Avg All-Auto Travel Time		18.24	18.12	18.34	19.42	19.38	19.68
Day-Avg Transit Travel Time		56.48	76.87	75.6	55.93	74.37	72.44
*** Average travel times (minutes) from nonmetro zones to EJ zones							
Peak Drive Alone Travel Time		17.49	17.7	17.82	18.36	18.49	18.63
Peak Shared Ride Travel Time		15.86	16.36	16.31	15.88	16.32	16.39
Peak All-Auto Travel Time		16.95	17.24	17.3	17.53	17.74	17.86
Peak Transit Travel Time		50.91	64	62.65	52.82	66.09	64.71
Off-Peak Drive Alone Travel Time		16.65	16.94	17.07	17.41	17.67	17.77
Off-Peak Shared Ride Travel Time		14.61	15	15.11	14.99	15.36	15.51
Off-Peak All-Auto Travel Time		15.96	16.27	16.39	16.58	16.87	16.99
Off-Peak Transit Travel Time		56.71	72.36	72.07	58.93	74.86	74.32
Day-Avg Drive Alone Travel Time		16.94	17.2	17.33	17.73	17.95	18.06
Day-Avg Shared Ride Travel Time		15.03	15.47	15.52	15.29	15.69	15.81
Day-Avg All-Auto Travel Time		16.29	16.6	16.7	16.9	17.17	17.29
Day-Avg Transit Travel Time		55.15	70.3	69.78	57.31	72.73	72.02

2022 RTP Performance Measures Output	Alternatives:		2020	2046	2046 NoBuild	2020 T6	2046 T6	2046 T6 No Build
COST EFFECTIVENESS CONSUMER SATISFACTION & RELIABILITY-COUNTYWIDE								
Area	Condition	Congested Vehicles Hours						
County	all	Total	592141	722644	750074	592141	722644	750074
County	EJ	Total	454522	554010	571354	366429	454597	467403
COST EFFECTIVENESS CONSUMER SATISFACTION & RELIABILITY-URBAN/METRO								
Area	Condition	Congested Vehicles Hours						
Metro	all	Total	305767	368461	398360	305767	368461	398360
Metro	EJ	Total	219600	265375	284019	195065	237561	253466
COST EFFECTIVENESS CONSUMER SATISFACTION & RELIABILITY-RURAL/NON METRC								
Area	Condition	Congested Vehicles Hours						
Non Metro	all	Total	285115	352548	349954	285115	352548	349954
Non Metro	EJ	Total	233913	287403	286022	170371	215820	212639
COST EFFECTIVENESS CONSUMER SATISFACTION & RELIABILITY-COUNTYWIDE								
Area	Condition	Vehicle Delay Hours						
County	all	Total	34527	43447	56964	34527	43447	56964
County	EJ	Total	24688	33120	41335	20877	28541	35583
COST EFFECTIVENESS CONSUMER SATISFACTION & RELIABILITY-URBAN/METRO								
Area	Condition	Vehicle Delay Hours						
Metro	all	Total	25591	29054	42814	25591	29054	42814
Metro	EJ	Total	16936	20440	28904	14669	17967	25327
COST EFFECTIVENESS CONSUMER SATISFACTION & RELIABILITY-RURAL/NON METRC								
Area	Condition	Vehicle Delay Hours						
Non Metro	all	Total	8905	14252	13969	8905	14252	13969
Non Metro	EJ	Total	7741	12659	12409	6195	10555	10235
SAFETY								
All county								
ACCIDENTS DATA								
Total =			10786	13268	13376	10786	13268	13376
PDO =			6783	8344	8411	6783	8344	8411
Injury =			3866	4756	4795	3866	4756	4795
Fatal =			137	170	170	137	169	170
VICTIM DATA								
Killed =			156	192	194	156	192	194
Injured =			464	571	576	464	571	576

2022 RTP Performance Measures Output	Alternatives:		2020	2046	2046 NoBuild	2020 T6	2046 T6	2046 T6 No Build
county EJ Links only								
ACCIDENTS DATA								
Total =			8643	10564	10652	7025	8716	8749
PDO =			5435	6643	6698	4418	5481	5502
Injury =			3098	3787	3818	2518	3124	3136
Fatal =			110	134	136	89	111	111
VICTIM DATA								
Killed =			125	153	155	102	126	127
Injured =			372	455	459	302	375	377
SAFETY								
All metro								
ACCIDENTS DATA								
Total =			4949	6196	6392	4949	6196	6392
PDO =			3112	3897	4020	3112	3897	4020
Injury =			1774	2221	2291	1774	2221	2291
Fatal =			63	80	81	63	79	81
VICTIM DATA								
Killed =			72	90	93	72	90	93
Injured =			213	267	275	213	267	275
metro EJ Links only								
ACCIDENTS DATA								
Total =			3635	4499	4657	3297	4094	4224
PDO =			2286	2829	2929	2073	2574	2656
Injury =			1303	1613	1669	1182	1467	1514
Fatal =			46	57	59	42	52	54
VICTIM DATA								
Killed =			53	65	68	48	59	61
Injured =			156	194	201	142	176	182
SAFETY								
All nonmetro								
ACCIDENTS DATA								
Total =			5818	7048	6959	5818	7048	6959
PDO =			3659	4432	4376	3659	4432	4376
Injury =			2085	2526	2494	2085	2526	2494
Fatal =			70	90	89	74	90	89
VICTIM DATA								
Killed =			84	102	101	84	102	101
Injured =			250	303	300	250	303	300
nonmetro EJ Links only								
ACCIDENTS DATA								
Total =			4992	6045	5974	3712	4602	4504
PDO =			3139	3801	3756	2334	2894	2832
Injury =			1789	2167	2141	1331	1650	1614
Fatal =			64	77	76	47	59	57
VICTIM DATA								
Killed =			72	88	87	54	67	65
Injured =			215	260	257	160	198	194

APPENDIX E

A GREAT START: SCS SUCCESS STORIES

Sustainable Communities Strategy (SCS) Success Stories
Benefitting Disadvantaged Communities in Kern

In order to help demonstrate the Kern region's extensive efforts to comply with state climate change goals, Kern COG has identified related member agency activities. All of the following success stories benefit the disadvantaged communities by improving emissions; the highlighted strategies benefit Kern's disadvantaged communities directly.

NEW STRATEGIES

1. Bakersfield High Speed Rail Station Area Plan – Specific/General Plan Update
2. Kern COG 4,000 Workplace Charging Spaces by 2025
3. Improvements to 51 Bus Stops – Metro Bakersfield/Disadvantaged Neighborhoods
4. New Taft Transit Center / Regional Transit Hub
5. Early Delivery of Wasco Disadvantage Community Active Transportation Projects
6. Bakersfield Disadvantage Communities Bike Share & Downtown Bicycle Connectivity Project
7. Kern Highway Projects Advancing Complete Streets
8. Kern Regional Active Transportation Plan Including Disadvantaged Communities
9. Kern COG IntelligentTransportation System Plan Update
10. SJV Rural Transit Shared Mobility Study for Disadvantaged Communities
11. SR 184 Lamont Bike and Pedestrian improvements
12. SR 184 and 155 Roundabouts in Disadvantage Communities of Delano and Weedpatch
13. Kern County General Plan Update – Land Use, Conservation, Open Space, Circulation, Housing, and other key elements
14. Early Deployment Pricing Policies for Parking and FastPass HOT Lanes

ENHANCED STRATEGIES

15. City of Bakersfield Redevelopment Projects – Mill Creek and Baker Street
16. Commuter Rail Feasibility Study – Amtrak Improvements
17. Rideshare Program – Commute Kern
18. Expanding Park and Ride Lots
19. Dial-A-Ride and Local Transportation Services
20. Kern County Bicycle Master Plan & Complete Streets Recommendations/City of Tehachapi Bicycle Master Plan
21. City of Bakersfield Bicycle Facilities
22. Westside Station Multi-modal Transit Center
23. San Joaquin Valley Vanpool Program (CalVans)
24. Kern County Wind Farm Areas (Largest in U.S.)
25. City of Shafter Container Yard and Intermodal Rail Facility Expansion
26. Intersection Signalization/Synchronization

ENHANCED STRATEGIES (continued)

27. City of Bakersfield 4 New Downtown Infill Housing Projects
28. Cities of McFarland and Shafter – Conversion of transit fleet to electric vehicles
29. Golden Empire Transit – Purchase of 2 Electric Buses
30. Lost Hills Wonderful Park and Communitywide Improvements
31. Grapevine Specific and Community Plan and Special Plan

EXISTING/CONTINUING STRATEGIES

32. City of Tehachapi General Plan (Form-Based Code, Transect Zone, Mobility Element, Town Form Element)
33. Infill Incentive Zone – Lower Transportation Impact Fee Core Area
34. City of Taft General Plan – Sustainability Principles
35. City of Ridgecrest General Plan and Multi-Modal Circulation Element
36. Metro Bakersfield General Plan Sewer Policy – Hook-up required for parcels less than 6 acres
37. City of Bakersfield Required Lot Area Zoning Strategies
38. San Joaquin Valley Air District's Indirect Source Review to Mitigate Off-Site Impacts of Development
39. Transit Priority Areas in the Kern COG SCS
40. Metropolitan Bakersfield General Plan Centers Concept – Transit Priority & Strategic Employment Place Types
41. GET Short-Term Service Plan (2012–2020)
42. GET X-92 Commuter Express bus service to Tejon Industrial Complex
43. Kern511 – Traveler Information System
44. San Joaquin Valley Blueprint Integration Project
45. Caltrans Vehicle Detection System – State Route 43 Intersection Improvements and East Bakersfield Vehicle Detection Systems
46. California Highway Patrol's Safety Corridors
47. Purchase of CNG Buses (80+ bus fleet)
48. The Electric Cab Company of Delano
49. Downtown Elementary School Expansion (Bakersfield)
50. Traffic Control Devices
51. Kern Region Energy Action Plans (Kern REAP) and Kern Energy Watch Goal 3
52. Tejon Ranch Conservation and Land Use Agreement
53. Kern County Community Revitalization Program
54. Kern Transit – Route Connection with Antelope Valley Transit Authority
55. CSU Bakersfield – Public Transit Center

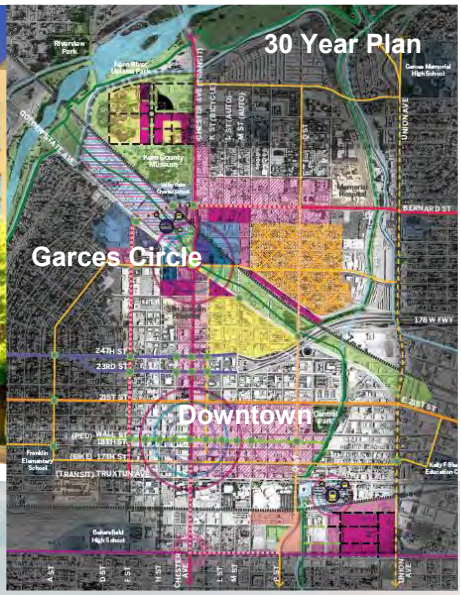
PROJECT TITLE: Bakersfield High Speed Rail Station Area Plan – Specific/General Plan Update
PROJECT SPONSOR: City of Bakersfield

PROJECT DESCRIPTION:
The City of Bakersfield in partnership with and funding from the California High-Speed Rail Authority, are developing a High Speed Rail Station Area Plan for Downtown Bakersfield. The Plan will serve as vision document that will guide the future development of the HSR station area.

PROJECT BENEFITS:
Based on with an economic impact analysis, the vision document will: increase population and economic density in the urban core; support residential and commercial activity; develop under-utilized or vacant properties; connect existing activity and cultural centers; create an efficient, reliable, and effective multi-modal transportation system; connect existing activity and cultural centers; enhance sustainability, livability and a sense of place; and secure funding for identified implementation actions like a new property-based business improvement district.

COST BENEFIT RATIO: Not Applicable
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2017
STATUS: In Progress

Reference: *City of Bakersfield, 2016*



1401 19th Street, Suite 300, Bakersfield, California 93301

PROJECT TITLE: 4,000+ Workplace Charging Spaces by 2025
PROJECT SPONSOR: Kern Council of Governments and member agencies

PROJECT DESCRIPTION:
Active Transportation and Demand Management is the Federal Highway Administration's (FHWA's) program to promote active management, control, and influence of travel demand, traffic demand, and travel flow of transportation facilities. Under this program Kern COG member agencies are invited to work with Kern COG staff to capitalize on the resources provided through a new work element and OWP 801.1 grant writing element to develop electric charging infrastructure projects in Kern communities. Together, Kern plans to establish a county-wide network of 2,456 Electric Vehicle Charging Stations (EVSE) (4,320 spaces) at workplaces and public charging locations to support Governor Brown's 2015 ZEV Action Plan goal of 1.5 million ZEVs on California roads by the year 2025.

PROJECT BENEFITS:
Kern COG's implementation of Active Transportation Demand Management programs will offer opportunities to reduce transportation-related air pollution emissions and greenhouse gas emissions by engaging the public and private sectors in actions that accelerate advanced clean transportation technologies enhancing efforts to influence travel demand, and travel flow of transportation facilities through our traditional Transportation Demand Management strategies.

COST BENEFIT RATIO:
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2016-2025
STATUS: In progress

Electric charging station in Tehachapi

Electric charging station in Bakersfield

Photo: Tehachapi News

PROJECT TITLE: **Improvements to 51 Bus Stops – Metro Bakersfield/Disadvantaged Neighborhoods**
PROJECT SPONSOR: City of Bakersfield, County of Kern, Golden Empire Transit District (GET), Kern Council of Governments and VOICED

PROJECT DESCRIPTION:
Through a partnership of the City of Bakersfield, County of Kern, Golden Empire Transit District (GET), and Kern COG, and VOICED, a coalition formed to build alliances with organizations that provide services to individuals with disabilities and their families, Bakersfield residents with disabilities have increased bus stop accessibility. Contributed funds through the partnership improved 51 bus stop locations that were identified and prioritized in Bakersfield. Additional locations are currently planned.

PROJECT BENEFITS:
Improvements to ADA ramps and sidewalks have improved access to the bus stop locations for the riders while improvements to the curb, gutter and pavement adjacent to the bus stops have improved access for the drivers.

COST BENEFIT RATIO: Not Applicable
TOTAL COST OF PROJECTS: $1,000,000
YEAR OF CONSTRUCTION: 2016
STATUS: In Progress

Press conference for bus stop accessibility

Installation of new bus stop

Photos: Golden Empire Transit

PROJECT TITLE: Taft Transit Center – Regional Transit Hub

PROJECT SPONSOR: City of Taft

PROJECT DESCRIPTION:
The City of Taft broke ground on the Taft Transit Center in November 2016. The location of the transit facility is along the Rails to Trails and Oilworker Monument. The design for the facility will preserve the historic theme of the Rails to Trails. The facility will not only be a transit center but will include a maintenance and office building and a community center. The facility's expected completion is in Summer of 2017.

PROJECT BENEFITS:
This project is being funded by surplus Proposition 1B Transit funds. Residents of the cities of Taft and Maricopa will be sheltered from the summer heat and winter while waiting for Taft and Kern transit service. Due to its central location, this facility may encourage the use of Taft and Kern transit to local and visiting riders.

COST BENEFIT RATIO: $49.18/lb.
TOTAL COST OF PROJECTS: $1.9 million
YEAR OF CONSTRUCTION: 2016-17
STATUS: In progress

Rendering of Taft Transit Center

Groundbreaking ceremony of Taft Transit Center

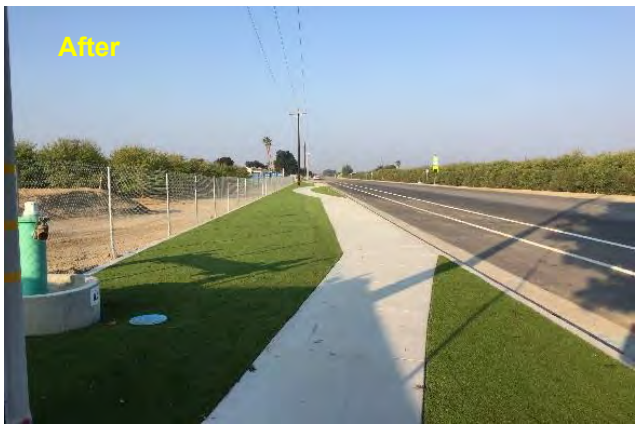
PROJECT TITLE: Early Delivery of Wasco Active Transportation Program Projects

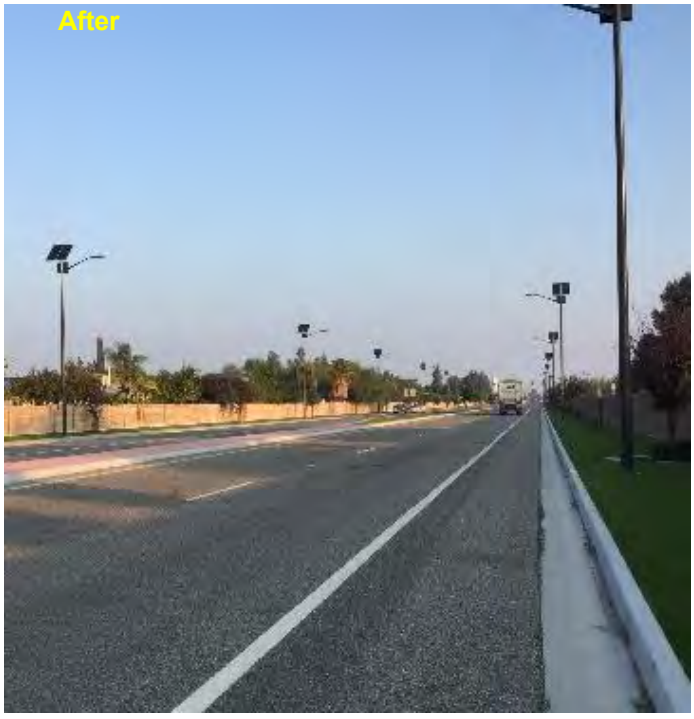
PROJECT SPONSOR: City of Wasco

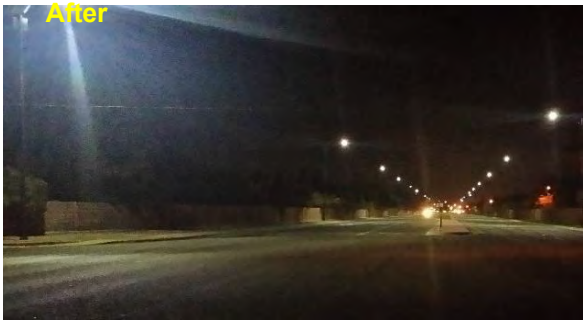
PROJECT DESCRIPTION:
The City of Wasco was awarded Active Transportation Program (ATP) funding during the first cycle of ATP. The projects included bike and pedestrian improvements for John L. Pruiett Elementary School and Teresa Burke Elementary School; pedestrian improvements near Karl Clemens School and Palm Avenue Elementary School; and pedestrian safety lighting and pedestrian infrastructure along the Highway 43 corridor. These were some of the first ATP projects delivered in the State.

PROJECT BENEFITS:
There were significant benefits to the City of Wasco and its residents with the completion of these ATP projects. These included access to bike lanes, safe and walkable streets, lighting and landscaping along sidewalks, and safe routes to schools for students.

COST BENEFIT RATIO: Not Applicable
TOTAL COST OF PROJECTS: $3.6 million
YEAR OF CONSTRUCTION: 2014-2017
STATUS: Varies







PROJECT TITLE: Bakersfield Disadvantage Communities Bike Share & Bicycle Connectivity Project
PROJECT SPONSOR: City of Bakersfield

PROJECT DESCRIPTION:
In 2017 Kern COG awarded nearly one million dollars to the City of Bakersfield in regional share Active Transportation Program funds for a new bike share program and improvements to central Bakersfield. The program includes adding 19 miles of bike lanes; installing 80 bicycle parking and storage racks; and adding up to 25 stations with 180 dock ports for 100 smart bicycles. This pilot project may be expanded if proven successful.

PROJECT BENEFITS:
The City of Bakersfield's implementation of this project will offer opportunities to reduce transportation-related air pollution emissions and greenhouse gas emissions by providing the public with more active transportation choices. The project benefits the largest concentration for disadvantage populations in the region, for a community with the second highest number of disadvantaged census tracts in the state. This project has tremendous potential to affect the health and access to jobs and services for these disadvantaged neighborhoods. The project is also expected to attract millennial job seekers.

COST BENEFIT RATIO:
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2016
STATUS: In progress

Bakersfield Bike Share Program

PROJECT TITLE: Kern Highway Projects Advancing Kern COG Complete Streets Recommendations
PROJECT SPONSOR: Kern Council of Governments

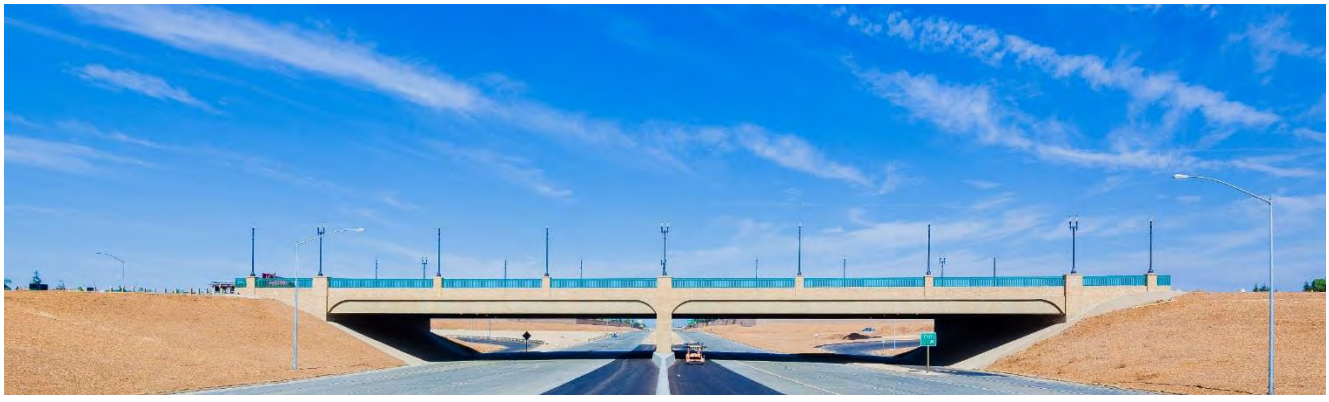
PROJECT DESCRIPTION:
In 2012 Kern COG completed the Complete Streets Recommendations report. Highway projects in Kern are implementing these recommendations. The Thomas Roads Improvement Program has now completed the following complete streets facilities:

- More than 21 miles of new bike lanes
- More than 18 miles of new sidewalks
- More than 120 new ADA curb cuts
- Three new interchanges with ramp metering

PROJECT BENEFITS:
These projects incorporate bike and pedestrian friendly facilities as well as facilities that promote carpools, vanpools and transit use through ramp metering. Surface streets are at grade, improving ease of bike and pedestrian flow.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2009-2021
STATUS: In Progress

Calloway Bridge, Westside Parkway



PROJECT TITLE: **Kern Regional Active Transportation Plan** Including Disadvantaged Communities
PROJECT SPONSOR: Kern Council of Governments

PROJECT DESCRIPTION:
Kern COG began the development of an Active Transportation Plan for the Kern region in July 2016 and completion date in June 2017. The Plan will inventory existing active transportation infrastructure, identify deficiencies in the system and prioritize the installation of new facilities that will improve system safety, connectivity and user convenience.

PROJECT BENEFITS:
With financial assistance from both the metropolitan Bakersfield public transit provider, Golden Empire Transit, and the County of Kern's Regional Transit the active transportation/public transit interface will be examined to improve transit opportunities to active transportation users.

COST BENEFIT RATIO: Not Applicable
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2017-2037
STATUS: In Progress

Examples of obstructed sidewalk and sidewalk gap in Downtown Bakersfield

PROJECT TITLE: Kern Intelligent Transportation Systems Plan
PROJECT SPONSOR: Kern Council of Governments

PROJECT DESCRIPTION:
In 2017 Kern COG began the development of an update to the current Intelligent Transportation System (ITS) Infrastructure Plan. The plan proposes implementation of technology that improves the efficiency of the transportation system. An example of ITS infrastructure is traffic signal coordination.

PROJECT BENEFITS:
The ITS Plan provides for phasing in of new technologies that will improve the efficiency of the transportation system thereby reducing greenhouse gas and health based air pollution emissions.

COST BENEFIT RATIO: Not Applicable
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2017-2042
STATUS: In Progress

Examples of Intelligent Transportation Systems

PROJECT TITLE: **SJV Rural Transit Shared Mobility Study for Disadvantaged Communities Implementation Alternatives for Meeting Transit Needs in the Rural San Joaquin Valley**
PROJECT SPONSOR: Kern Council of Governments

PROJECT DESCRIPTION:
The 8-San Joaquin Valley COGs are partnering with the Institute of Transportation Studies at UC Davis and Michael Sigala to explore opportunities for leveraging new technology driven shared access services to enhance, compliment, and/or replace traditional fixed-route transit serving rural communities. The shared access services will study ridesharing, carsharing, and bikesharing.

PROJECT BENEFITS:
The partnership and project will expand low-carbon transportation options in rural areas and disadvantage communities.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: $600,000
YEAR OF CONSTRUCTION:
STATUS: In progress

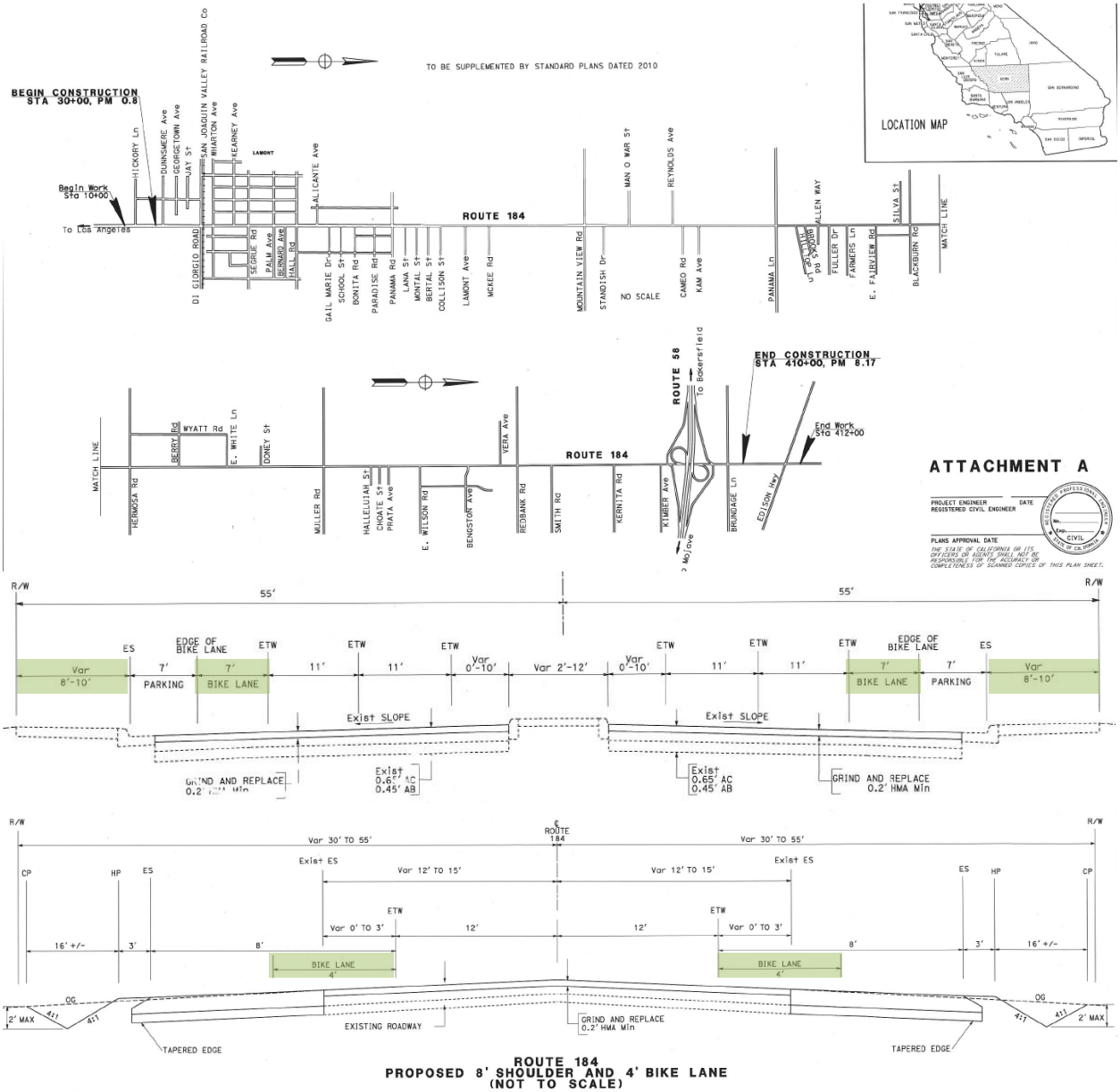
PROJECT TITLE: SR 184 Lamont Bike and Pedestrian improvements
PROJECT SPONSOR: Caltrans

PROJECT DESCRIPTION:
Caltrans 18.5 mile project proposed to rehabilitate State Route 184 connecting the disadvantaged communities of Southeast Bakersfield, Lamont and Weedpatch. The project will widen the shoulders to standard widths, install a Class 2 bike lane, and upgrade existing nonstandard curb ramps. The project scope also includes Complete Street concepts.

The project will provide a safer route for pedestrians, and bike traffic along residential, commercial and institutional frontages and close a major bike and pedestrian facility gap in these disadvantaged community.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: $318,500
YEAR OF CONSTRUCTION: 2018
STATUS: Proposed

PROJECT BENEFITS:



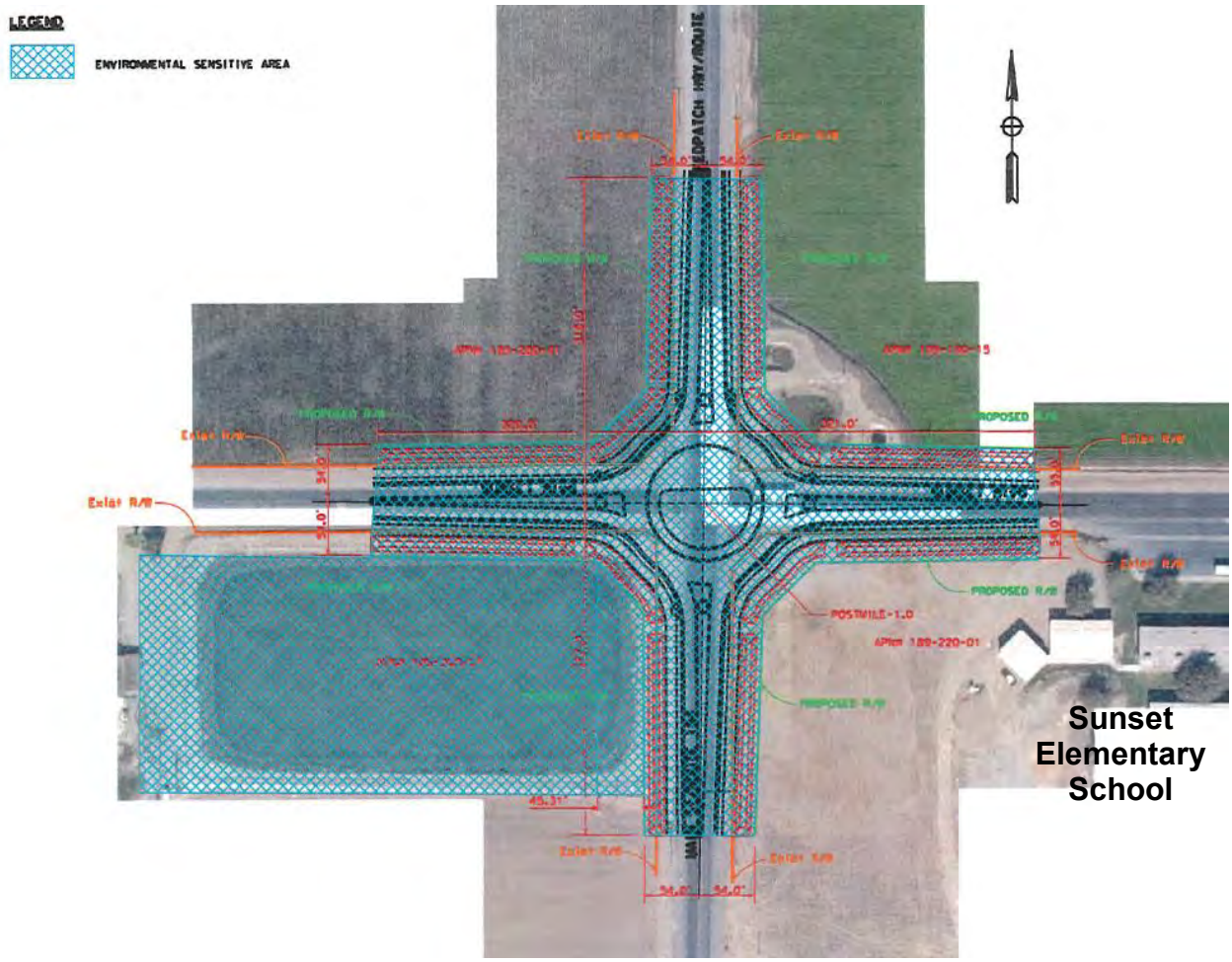
ROUTE 184
PROPOSED 8' SHOULDER AND 4' BIKE LANE
(NOT TO SCALE)

PROJECT TITLE: SR 184 and 155 Roundabouts in Disadvantage Communities of Delano and Weedpatch
PROJECT SPONSOR: Caltrans

PROJECT DESCRIPTION:
Caltrans project proposed a roundabout at the intersection of State Route (SR) 185 and Sunset Blvd, near the disadvantaged communities of Lamont and Weedpatch. This site benefits rural elementary school.

PROJECT BENEFITS:
The roundabout in Lamont will improve safety and welfare of the traveling public and reduce the number and severity of collisions by accelerating the replacement of a 4-way stop. The roundabout will also have splitter islands, sidewalks, ramps and crosswalks for pedestrians.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: $3 million
YEAR OF CONSTRUCTION: 2019
STATUS: Proposed



PROJECT TITLE: **Kern County General Plan Update – Land Use, Conservation, Open Space, Circulation, Housing, and other key elements**

PROJECT SPONSOR: County of Kern

PROJECT DESCRIPTION:
In October 2016, the County of Kern kicked off the update to their General Plan. The General Plan update includes Land Use, Conservation, Open Space, Circulation, Housing, Water, Healthy Communities, Energy, Military Readiness, Safety and Noise Elements. The update process to the document that controls the resource land use areas of the county. The document will have to balance land uses and resources will providing a plan for disadvantaged unincorporated communities. The County already requires farmland lost to Solar requires 2-1 farmland preservation Easements.

PROJECT BENEFITS:
The plan when complete will advance the existing efforts to preserve Kern County resource areas for future generations while helping to reduce greenhouse gas production through alternative energy and ensuring water availability for the region's agricultural carbon sink.

COST BENEFIT RATIO: Not Applicable
COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: Not Applicable
STATUS: In progress

Kern County General Plan Update

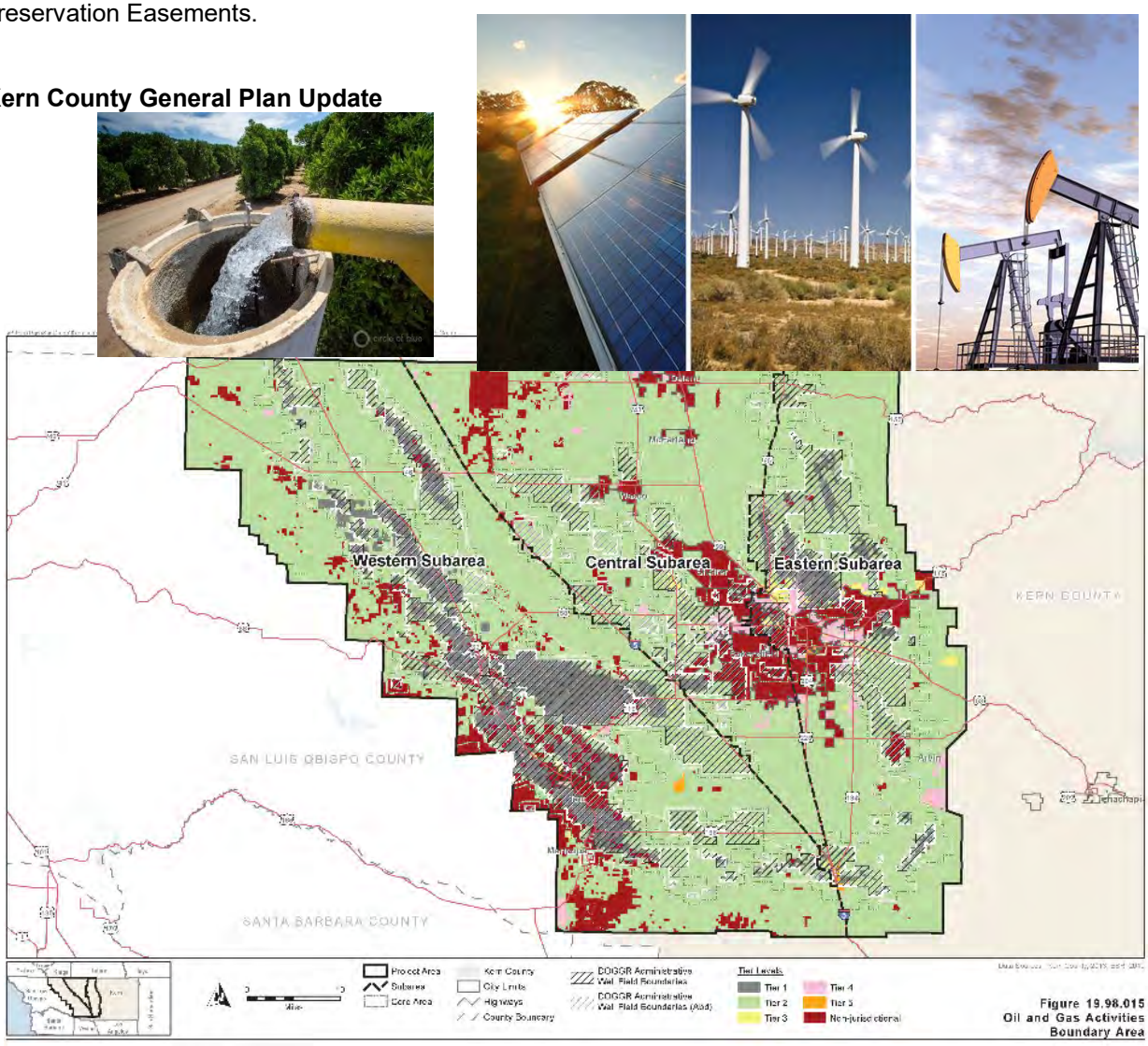


Figure 19.98.015
Oil and Gas Activities
Boundary Area

PROJECT TITLE: Early Deployment Pricing Policies for Parking and FastPass HOT Lanes
PROJECT SPONSOR: City of Bakersfield/Caltrans

PROJECT DESCRIPTION:
Parking Pricing - In 2016 the City of Bakersfield approved an increase in the parking cost at the city owned downtown parking structure, and downtown parking is being evaluated as part of the HSR Station Area Plan.

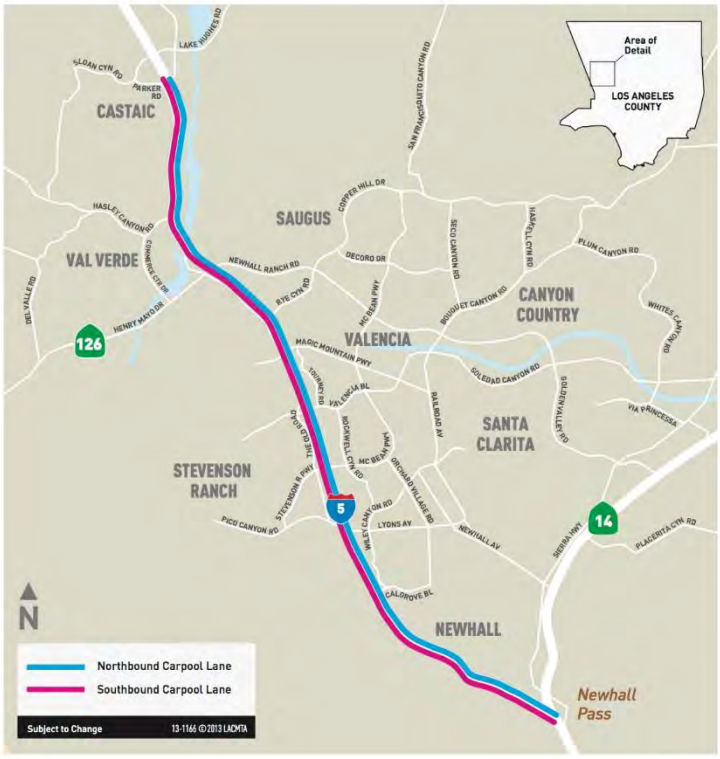
HOT Lanes Pricing - New FastPass lanes on I-5 and SR 14 are planned to be extended through Santa Clarita towards Kern County. These corridors are used by more than 10,000 Kern commuters per day and will likely benefit vehicle occupancy in Kern as well as Southern California. Interestingly, not many people commute from Kern. Over 90% of Kern workers both live and work in Kern County and most make occasional trips to Southern California.

PROJECT BENEFITS:
Parking toll lane pricing policies have proven to be an effective means to redistribute demand during peak periods, delaying the need for new infrastructure while providing a pay-as-you-go method to make improvements to the parking area or corridor. The reduced congestion benefits GHG and health based criteria pollutants.

COST BENEFIT RATIO: Not Applicable
COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION:
STATUS: In progress

Bakersfield Downtown Parking Garage

I-5 North Capacity Enhancements
Phase 2a



Metro

Caltrans

PROJECT TITLE: City of Bakersfield Redevelopment Projects – Mill Creek and Baker Street
PROJECT SPONSOR: City of Bakersfield

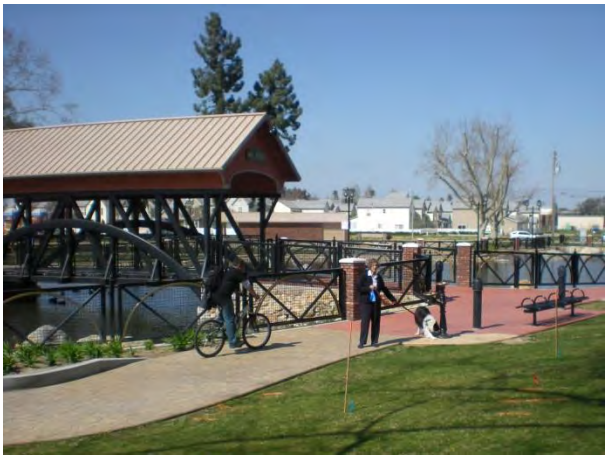
PROJECT DESCRIPTION:
The Mill Creek Linear Project was a redevelopment project in Downtown Bakersfield, and included the renovation and redesign of Central Park. The Mill Creek Project includes a 1.5 mile linear park, housing, senior housing, and commercial developments, along with landscaping and street improvements, and has recently received a State AHSC grant for senior housing.

The Baker Street Village Project was also a redevelopment project that involved the revitalization of Olde Town Kern. The Project mixes condos and lofts, along with 10,000 square feet of commercial and community space.

PROJECT BENEFITS:
These two mixed-use redevelopment projects help reduce auto dependency, roadway congestion, and improve air quality. In addition, these projects promote pedestrian and bicycle travel, and promote efficient use of land and infrastructure.

COST BENEFIT RATIO: Not Applicable
COST OF PROJECTS: $58 million
YEAR OF CONSTRUCTION: 2007-2017
STATUS: In progress

Mill Creek Linear Project and Pedestrian Corridor



Mill Creek Senior Housing (AHSC) Project

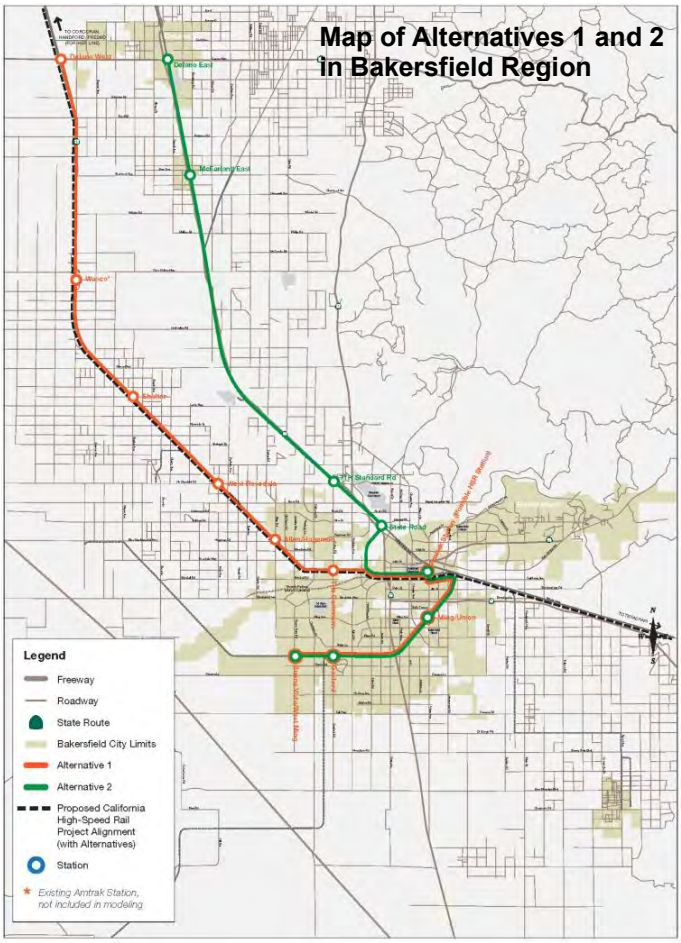
Baker Street Village Project

PROJECT TITLE: Commuter Rail Feasibility Study/Amtrak Improvements

PROJECT SPONSOR: Kern Council of Governments

PROJECT DESCRIPTION:
Kern COG contracted with a consultant to develop a feasibility study for Federal Small Starts or New Starts program, and to determine alternative commuter bus and passenger rail service to replace or enhance the Amtrak San Joaquin passenger rail service between Bakersfield and Fresno once high-speed rail is implemented.

In 2016 Amtrak began operating a 7th train per day on this corridor, facilitating potential additional intercity stops on this passenger rail corridor in Kern.



high-speed rail trains begin to operate in six to eight years. If funding is available, strategies include:

- A possible commuter passenger rail service from Bakersfield to Delano with stops in northwest Bakersfield, Shafter, Wasco, and Delano.
- A possible commuter passenger rail service to rural employment sites such as Frito Lay, Grimmway, Bolthouse, etc.
- An extension of the Metrolink commuter passenger rail services from Palmdale to Rosamond.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION:
STATUS: In progress

Source: Commuter Rail Feasibility Study, Draft July 2012

PROJECT TITLE: Rideshare Program – Commute Kern
PROJECT SPONSOR: Kern Council of Governments

PROJECT DESCRIPTION:
Commute Kern provides customer service upon request from the general public, employers, colleges, vanpool operators, other agencies and the media regarding ridesharing opportunities. As an on-line transportation demand management program, Commute Kern's website-commutekern.org, serves as a resource for carpooling, vanpooling, public transit, park-and-ride facility use, telework, walking and bicycling for commutes to work and school to help improve our air quality. The program also allows for flexible scheduling, daily tracking, vanpool management, outreach to employers, resources to commuters such as concierge services, and forum for discussion and sharing resources.

PROJECT BENEFITS:
Using rideshare services reduces the number of single occupancy vehicles on the road, and ultimately helps to improve our air quality.

COST BENEFIT RATIO:
2016-2017: $58.36 / lbs.
2017-2018: $59.15 / lbs.
COST OF PROJECT:
2016-2017: $ 231,420
2017-2018: $ 243,886
YEAR OF CONSTRUCTION: Non-construction
STATUS: Ongoing

Bicycle

Carpool

Public Transit

PROJECT TITLE: Expanding Park and Ride Lots
PROJECT SPONSOR: Caltrans, City of Bakersfield and California City

PROJECT DESCRIPTION:
The purpose of the development of Park and Ride lots is to provide a safe and centralized location for commuters to meet and either carpool, vanpool, or use transit. There are seven existing Park and Rides within Kern County that Caltrans (Districts 6 and 9) operates. There are lots in Lake Isabella, Delano, Taft, Ridgecrest, and three in Bakersfield.

The newest Park and Ride location was created through a partnership with Tejon Ranch, GET Bus, and IKEA Industrial Plaza. A bus picks up and drops off the Industrial Plaza employees from the newest park and ride lot at South H Street and McKee Road.

An addition proposed project is the construction of College Station Park and Ride with a bus turnout at the intersection of California City Blvd. (South) and Yale Ave in California City. The primary purpose of the project is to provide a place to park and car/van pool for those working at the Borax Plant in Boron, and Edwards Air Force base.

PROJECT BENEFITS:
Provides a meeting point for commuters to leave their individual cars as they join carpools or vanpool services. This service helps eliminate the number of single occupied vehicles from the roads on a daily basis.

In addition, the proposed project is anticipated to reduce the number of vehicle trips for those who will car or van pool to work. Using the latest emission factors, it is estimated that this project would remove between 865 and 1,100 pounds of emissions annually over a twenty year life expectancy.

COST BENEFIT RATIO: $23 / lbs.
COST OF PROJECT: $375,000
YEAR OF CONSTRUCTION: 2014
STATUS: Complete

Park and Ride lot at South H Street and McKee Road

Map of Park & Ride Lots in Kern County

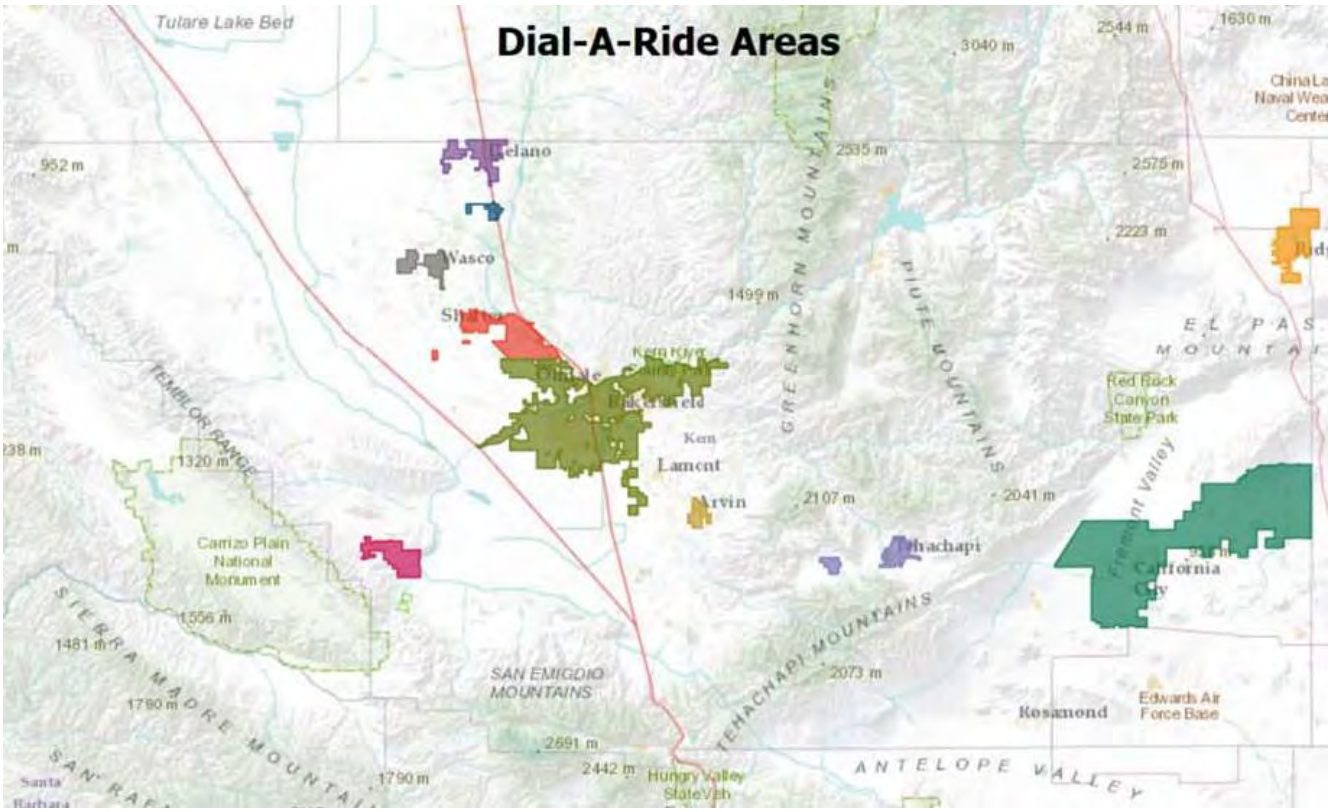
PROJECT TITLE: Dial-A-Ride and Local Transportation Services
PROJECT SPONSOR: City of Arvin, California City, City of Delano, City of McFarland, City of Ridgecrest, City of Shafter, City of Taft, City of Tehachapi, City of Wasco, City of Bakersfield (GET)

PROJECT DESCRIPTION:
The following cities provide Dial-A-Ride service to the public within their city limits: Arvin, California City, Delano, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. The Dial-A-Ride services vary from city to city; some cities provide services to all the public while some limit services to seniors and the disabled. In addition, Bakersfield through Golden Empire Transit (GET) provides the GET-A-Lift service to eligible persons. Dial-A-Ride service within the Bakersfield urban area is also provided by the Consolidated Transportation Service Agency (CTSA).

Kern COG is part of a study with UC Davis on shared mobility for rural transit that may of solutions to enhance transit service in rural, disadvantaged communities.

PROJECT BENEFITS:
The Dial-A-Ride service is a form of ridesharing that benefits the Kern region by reducing the number of single occupancy vehicles on the road which ultimately helps improve our air quality.

COST BENEFIT RATIO: Not Applicable
COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION:
STATUS: In progress



PROJECT TITLE: **Kern County Bicycle Master Plan and Complete Streets Recommendations / City of Tehachapi Master Bike Plan**
PROJECT SPONSOR: Kern Council of Governments/ City of Tehachapi

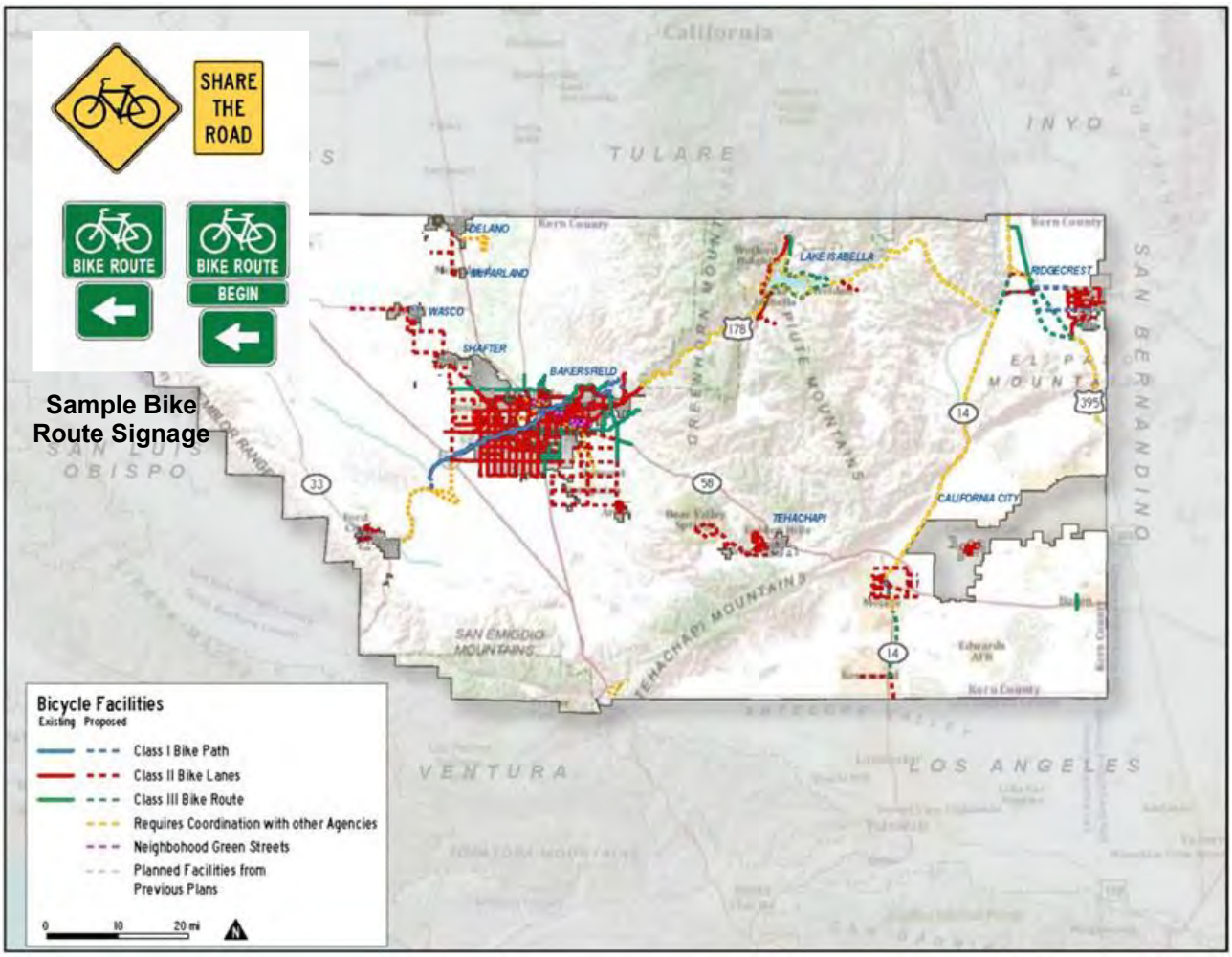
PROJECT DESCRIPTION:
The Kern County Bicycle Master Plan and Complete Streets Recommendations proposed 664 miles of new bikeways, including 30 miles of Class I bike paths, 297 miles of Class II bike lanes, 46.6 miles of Class III bike routes, and 186 miles of Class II bike routes on State Routes. In addition, the Plan also presents recommendations for complete streets.

The City of Tehachapi Master Bike Plan proposed 31.69 total miles of bikeways, including 4.66 miles of Class I Bike Paths and 25.24 miles of Class II bike lanes.

PROJECT BENEFITS:
Replacing vehicular trips with bicycle trips can reduce human-generated GHGs in the atmosphere, reduce VMT, reduce fuel consumption and lessen mobile source pollutants, such as carbon dioxide being released into the air.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION:
STATUS: Kern County Final Plan will be issued in September 2012 and the City of Tehachapi Master Bike Plan was adopted in June 2012.

Map of Proposed Bicycle Facilities in Kern County



Source: Kern County Bicycle Master Plan and Complete Streets Recommendations, June 2012.

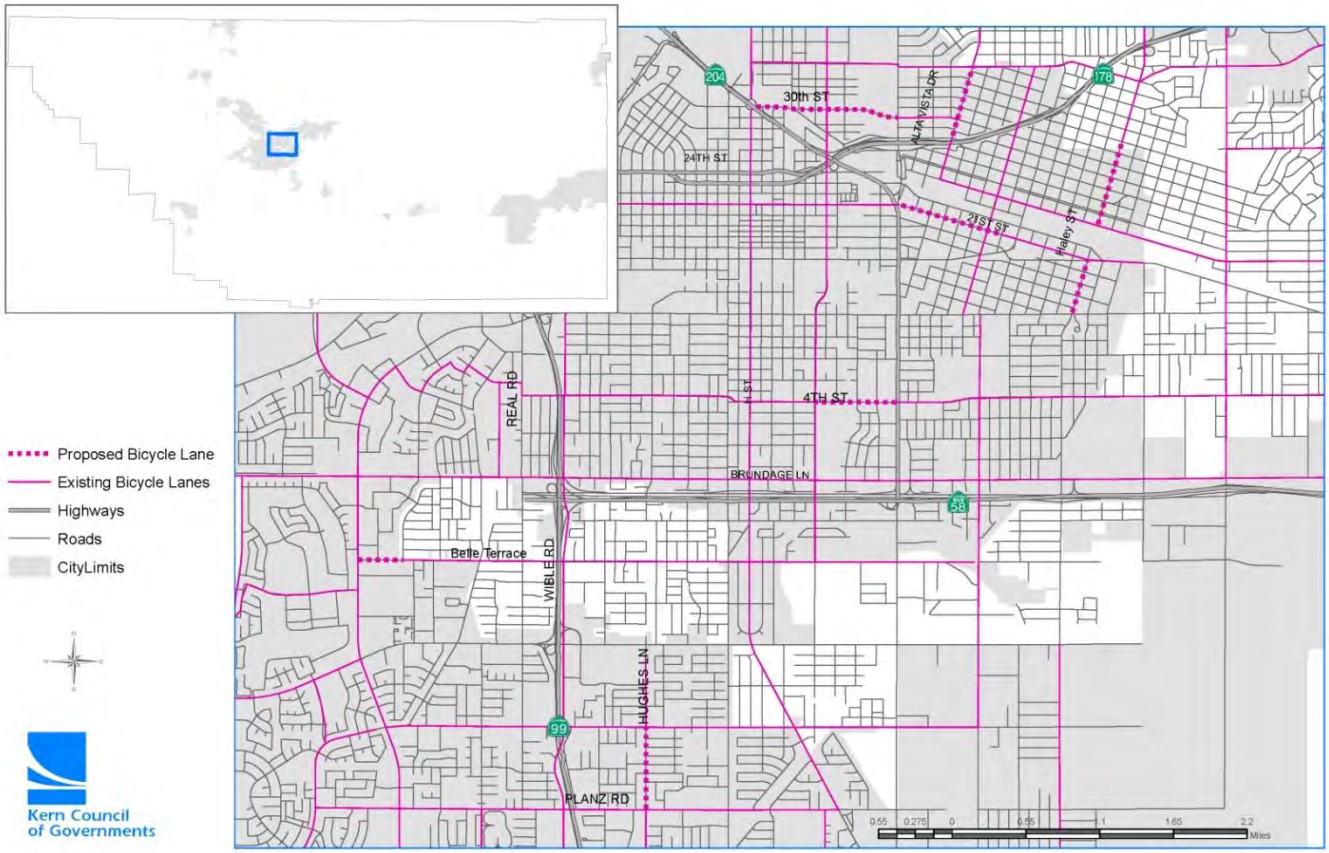
PROJECT TITLE: City of Bakersfield Bicycle Facilities
PROJECT SPONSOR: City of Bakersfield Public Works Department

PROJECT DESCRIPTION:
These projects relate to bicycle facilities at numerous locations within the City of Bakersfield. There were a total of two proposed bicycle facilities projects (total of eight proposed lanes) for the Fiscal years of 2012-2013. Both projects proposed the installation of Class 2 bicycle lanes along each corridor including pavement striping, markings and roadway signage. The map also includes the existing bicycle facilities.

PROJECT BENEFITS:
On-street bike lanes (Class 2) along major roadways help raise bicycle usage resulting in lower emissions and congestion, while resolving safety issues.

COST BENEFIT RATIO: $7 – $21/ lbs.
TOTAL COST OF PROJECTS: $35,000 - $60,000
YEAR OF CONSTRUCTION: 2013
STATUS: Constructed, Planned

Map of Bicycle Lanes



PROJECT TITLE: Westside Station – Multi-modal Transit Center

PROJECT SPONSOR: California City

PROJECT DESCRIPTION:
The completed project provides the eastern Kern region with a multi-modal transit center on City owned property in the Wonder Acres neighborhood at the southwest corner of California City Blvd. and Wonder Ave. The Transit Center includes a parking lot, lighting, restrooms, landscaping, and Kern Regional Transit bus stops.

The purpose of this project is to provide a comfortable, accessible, and a safe place to park that encourages residents who were parking at the previously undeveloped site to commute to work or school using car pools, ride sharing or public transit.

PROJECT BENEFITS:
Improves site accessibility to local area residents desiring to use van pools, ride sharing and public transit throughout the Kern region. Encourages future users of alternative transportation options.

COST BENEFIT RATIO: All emissions: $8.34/lbs.
COST OF PROJECT: Approximately $500,000
YEAR OF CONSTRUCTION: Completed in 2013
STATUS: Constructed

Westside Station – Multi-modal Transit Center, California City

PROJECT TITLE: San Joaquin Valley Vanpool Program (CalVans)
PROJECT SPONSOR: CalVans

PROJECT DESCRIPTION:
The San Joaquin Valley vanpool program (CalVans) is a public vanpool service that serves Central California and began serving Kern County residents in 2009. CalVans provides public transit services to people in transportation uses that are difficult for traditional public transit operators to provide. CalVans currently provides transportation services to farmworkers throughout the county and has also provided services to Shafter students attending Taft Community College. In 2016, CalVans added vanpools going to Tehachapi. There are now 28 vanpools operating in Kern.

PROJECT BENEFITS:
CalVans provides a higher level of vanpooling while reducing overall miles traveled and carbon dioxide emissions from passenger vehicles.

CalVans provides 7, 8, and 15-passenger vans to its customers. Currently CalVans has over 495 vanpools in operation which in turn saves nearly 13,000 vehicle miles traveled per day. Growing demands project a market for nearly 500 vans pools which can save approximately 100,000 vehicle miles traveled per day.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS:
YEAR OF CONSTRUCTION: 2009
STATUS: In process

Local college students who use CalVans

PROJECT TITLE: Kern County Wind Farm Areas (Largest in the U.S.)

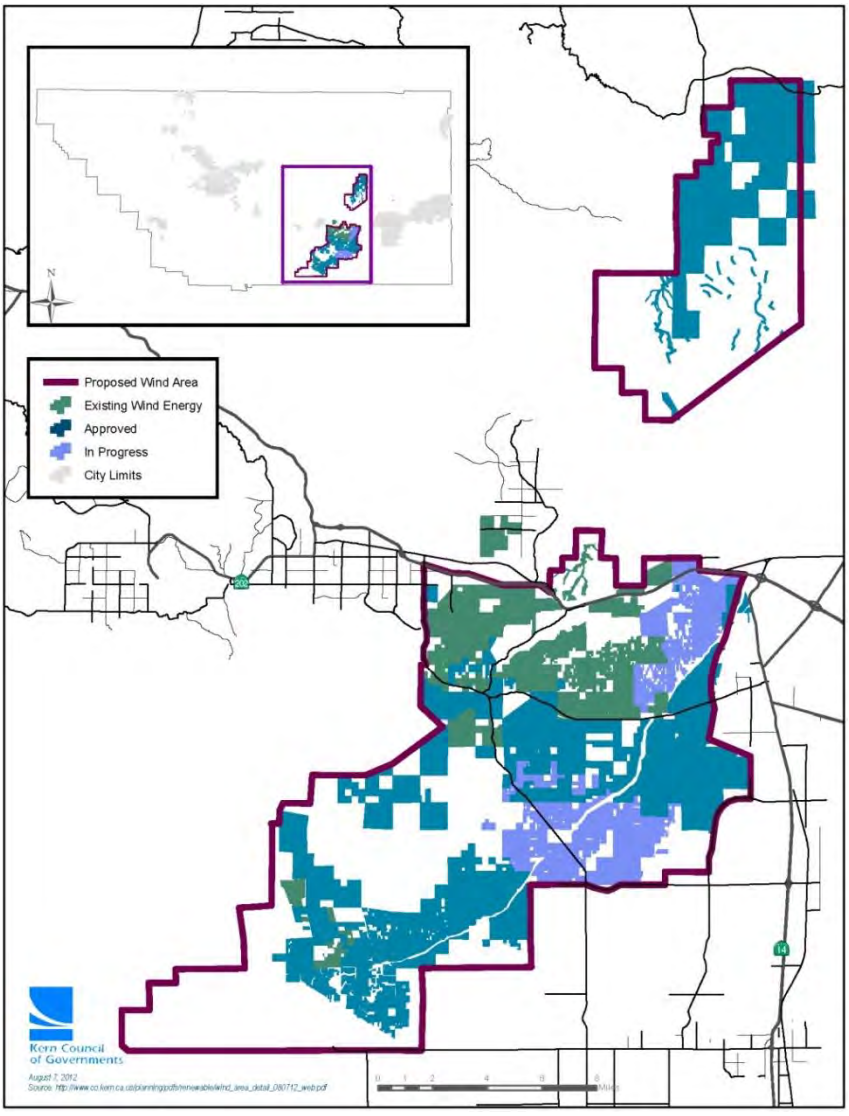
PROJECT SPONSOR: County of Kern

PROJECT DESCRIPTION:
The County of Kern has 21,752 acres of existing wind energy areas, 57,524 acres of approved wind projects and 14,998 acres of wind projects that are in progress.

PROJECT BENEFITS:
Wind is a clean source of renewable energy that produces no air pollution. In addition, wind turbines create power without producing greenhouse gases.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION:
STATUS: In process

Map of Preliminary Wind Farm Areas (DRAFT)



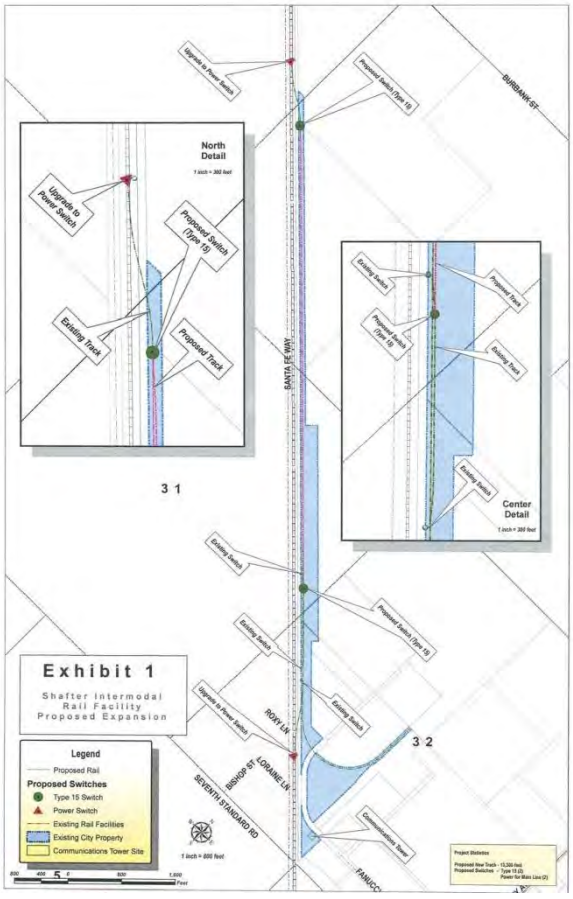
PROJECT TITLE: City of Shafter Container Yard and Intermodal Rail Facility Expansion
PROJECT SPONSOR: City of Shafter

PROJECT DESCRIPTION:
The City of Shafter Intermodal Rail Facility was recently expanded by adding 2 miles of tail sidings and a container storage yard. The rail facility will establish a dedicated reliable intra-state rail shuttle connecting the Port of Oakland and Los Angeles/Long Beach with the southern San Joaquin Valley. The container yard is leased by a dock operating company for Los Angeles/Long Beach and Oakland and uses the facility to help match loads between the ports and the southern San Joaquin Valley so as to eliminate emissions and truck trips.

PROJECT BENEFITS:
The rail shuttle will better utilize existing port facilities, highways, and rail infrastructures in California to reduce the relocation of empty containers, remove trucks from overcrowded highways, and improve air quality. The proposal is to create an intermodal facility which will divert the freight transported by 600 trucks per day to 2 unit trains per day to and from the Port of Oakland.

COST BENEFIT RATIO: $99 / lbs.
TOTAL COST OF PROJECTS: $60 million
YEAR OF CONSTRUCTION: 2013
STATUS: In process

Proposed Shafter Intermodal Rail Facility Expansion



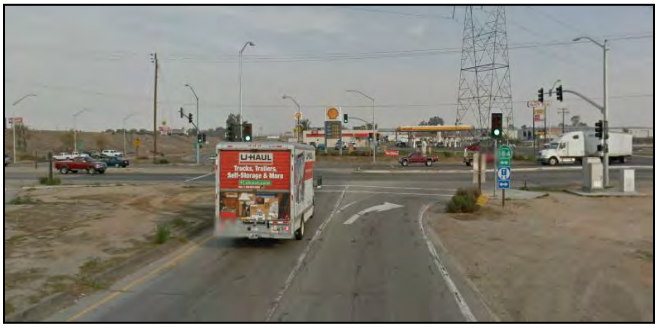
Container Yard

PROJECT TITLE: Next Generation Intersection Signalization
PROJECT SPONSOR: City of Bakersfield Public Works, Kern County Roads Department, City of Ridgecrest, Caltrans

PROJECT DESCRIPTION:
Existing and proposed intersection signalization projects at numerous locations throughout the Kern region. A total of 13 intersection signalization proposed projects have been scheduled for the Fiscal years of 2012-2014.

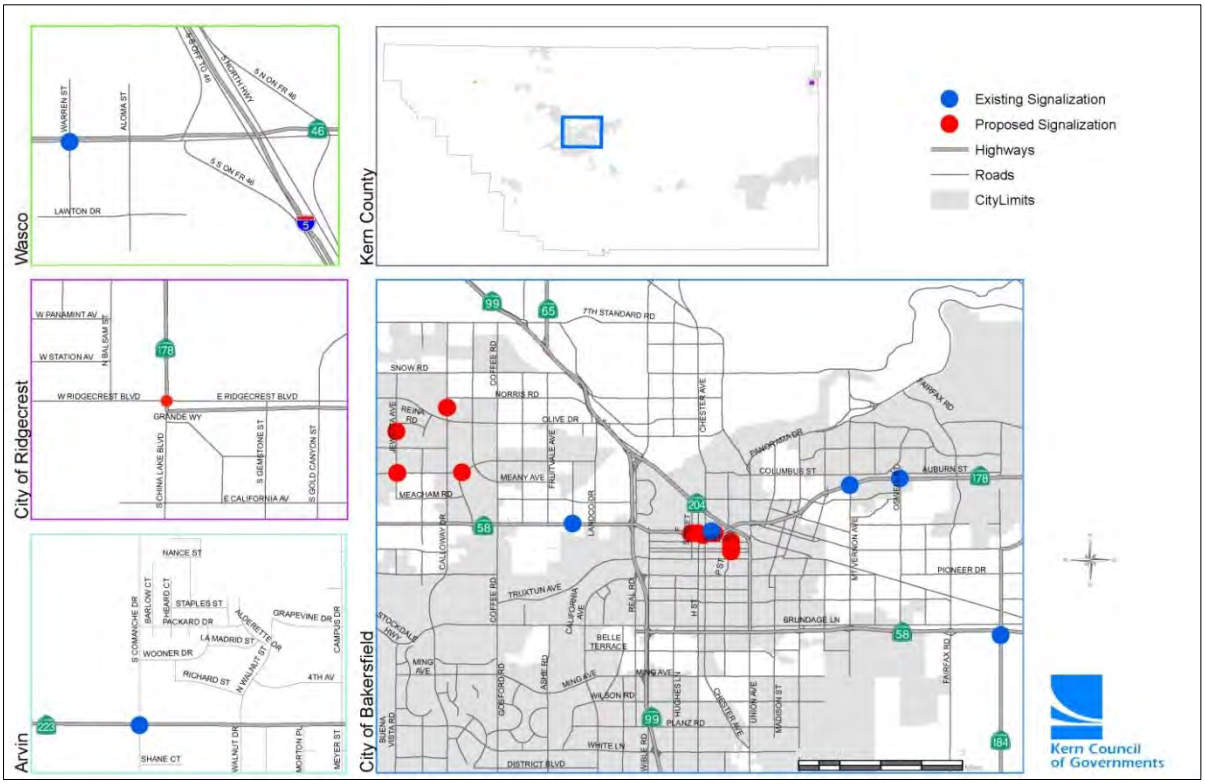
In 2016 Kern COG commenced an update to the Intelligent Transportation System (ITS) Plan that will look at the next generation of traffic signal technology.

PROJECT BENEFITS:
Improves signal timing along the reference corridor which will reduce overall vehicle stops and starts, and limits delay in travel time. The reduction in vehicle stops and starts will improve the corridor's average speed, thereby reducing the harmful pollutants generated by vehicles traveling at low speeds and when idling.



COST BENEFIT RATIO: $ 3 – $ 60/ lbs.
TOTAL COST OF PROJECT:
$ 104,500 - $ 652,500
YEAR OF CONSTRUCTION: 2009**,** 2011, 2013-2014
STATUS: Constructed/Operating, Planned

Proposed Intersection Signalization Projects



PROJECT TITLE: **City of Bakersfield 4 New Downtown Infill Housing Projects** – Mill Creek South, 1612 City Lofts, 17th Place Townhouses, AHSC Senior Housing Project at Mill Creek
PROJECT SPONSOR: City of Bakersfield

PROJECT DESCRIPTION:
South Mill Creek Apartments was developed and operates with Federal housing financing. The property utilizes the Low Income Housing Tax Credit Federal housing program to make rent affordable to lower income tenants.

1612 City Lofts (The Lofts) is a mixed use development located in the thriving Downtown Bakersfield Arts and Entertainment District or popularly known as "The District." 1612 City Lofts became the first mixed-use building in downtown Bakersfield in the 21st century. The Lofts also provide a workforce housing as part of a program through the Bakersfield Economic Redevelopment Agency. Tenants income limits are adjusted annually.

17th Place Townhomes is an environmentally friendly downtown community walking distance from downtown amenities. The luxury development townhomes will include drought-sensitive landscaping and courtyard space.

AHSC Senior Housing Project at Mill Creek provides affordable one and two-bedroom apartment homes for seniors 55 years and older. The Mill Creek Village will be coming in early 2017 and includes private patios or balconies and a central courtyard.

PROJECT BENEFITS:
The infill housing projects are conveniently located to public transportation that includes the Amtrak Station and Bakersfield Downtown Transit Center. The housing projects are also within walking distance of downtown shopping and dining.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: Varied
STATUS: In Progress

1612 City Lofts located in mixed use building in Downtown Bakersfield

17th Place Apartments Downtown

Mill Creek Veterans Housing Downtown

PROJECT TITLE: Cities of McFarland and Shafter – Conversion of transit fleet to electric vehicles
PROJECT SPONSOR: City of McFarland, City of Shafter

PROJECT DESCRIPTION:
The City of Shafter introduced four electric vans for use in its Dial-A-Ride program. Each van is configured to carry up to 16 passengers or cargo at 100 miles per charge. The City of McFarland is in the process of converting their transit fleet to electric vehicles.

PROJECT BENEFITS:
The benefits of transit electric vehicles includes the reduction of the number of single occupancy vehicles on the road and ultimately helps improve our air quality, lower maintenance and repair costs, and lower fuel costs.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2016
STATUS: In Progress

Shafter Electric Vehicles

PROJECT TITLE: **Golden Empire Transit/Kern Transit –** Purchase of 4 Electric Buses
PROJECT SPONSOR: Golden Empire Transit District, Kern Transit

PROJECT DESCRIPTION:
The Golden Empire Transit District will be purchasing 2 electric buses in 2017. Clean non-polluting buses may attract more riders who may be looking to alternatives to the auto for home to work purposes. These electric buses are planned to be used for the future bus rapid transit route in Bakersfield.

Kern Transit was recently awarded a grant to purchase 2 electric busses for its east Kern run to the Metrolink station in Lancaster.

PROJECT BENEFITS:
As fleets increase, rapid routes may make commuter travel preferable. This improves preferences and accessibility to medical, shopping centers and employment centers.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2017
STATUS: In Progress

Electric buses being driven in Bakersfield

Kern Transit Bus at Intermodal Rail Stop

PROJECT TITLE: Lost Hills Wonderful Park and Communitywide Improvements
PROJECT SPONSOR: The Wonderful Company

PROJECT DESCRIPTION:
The Lost Hills Wonderful Park is located at the intersection of Highway 46 and Lost Hills Road. The park was part of Lynda Resnick, co-chair of The Wonderful Company, Central Valley Leadership Project. Phase I of the project involved major park improvements including resurfaced basketball court, soccer field, bleachers, and a mile-long walking path that circles the park, a splash park, and solar powered lights to illuminate the park in the evening. The community center located in the park was also completely renovated to include a fully equipped kitchen, tables and chairs for community and private events. Phase II of the project renovation included widening of streets and addition of bike lanes; installation of sidewalks, gutters, bus stop shelters and street lights; and the planting of drought-resistant landscaping.

The Wonderful Company made major street improvements in the community. The Wonderful Company, improved 3.8 miles of streets, built 7.2 miles of sidewalk, extended 220 driveways and installed 6.9 miles of curbs and gutters. In addition, the Wonderful Company planted 730 trees, put up 16 stop signs, erected 38 LED street lights and built 1,400 feet of 60-foot-wide pedestrian walkways. Residents of Lost Hills can safely walk, ride their bike, or drive to the Park. Directly across from the Park is a bus shelter for the regional transit, Kern Transit. The Wonderful Company, the County and Caltrans are developing a pedestrian overpass on SR 43 for the community.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2019
STATUS: Completed

PROJECT BENEFITS:

PROJECT TITLE: Grapevine Specific and Community Plan and Special Plan
PROJECT SPONSOR: County of Kern

PROJECT DESCRIPTION:
Newly approved developments such as Grapevine leverage new technologies to provide the lowest carbon footprint, sustainable education, and housing options closer to jobs in the region. In December, 2016, Kern County approved the Tejon Ranch Company's Grapevine Community Plan which is strategically located on 8,010 acres adjacent to the Tejon Ranch Commerce Center on both sides of Interstate 5 near its junction with Highway 99 in the southern San Joaquin Valley. The Tejon Ranch Commerce Center has transformed the vehicle traffic traveling the freeways into a greater asset for Kern County, resulting in the creation of 5 million square feet of commercial and logistics uses and 4,000 associated jobs.

PROJECT BENEFITS:
Reduction in vehicle miles traveled and a reduction in the overall percapita carbon footprint. Importantly, the Grapevine development will be guided by Sustainability Principles that reduce GHG emissions through implementation of an emission reduction agreement, Transportation Management Association programs and design elements that employ renewable energy technology, water conservation measures, alternative fuels technology for vehicle fleets and provision for electric charging stations.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: Unknown
STATUS: In Progress

Reference: http://www.grapevineattejonranch.com/

Grapevine development project concepts

PROJECT TITLE: City of Tehachapi General Plan – Form Based Code General Plan
PROJECT SPONSOR: City of Tehachapi

PROJECT DESCRIPTION:
The City of Tehachapi adopted the 2035 General Plan Update, and the new General Plan will contribute towards the implementation of SB 375.

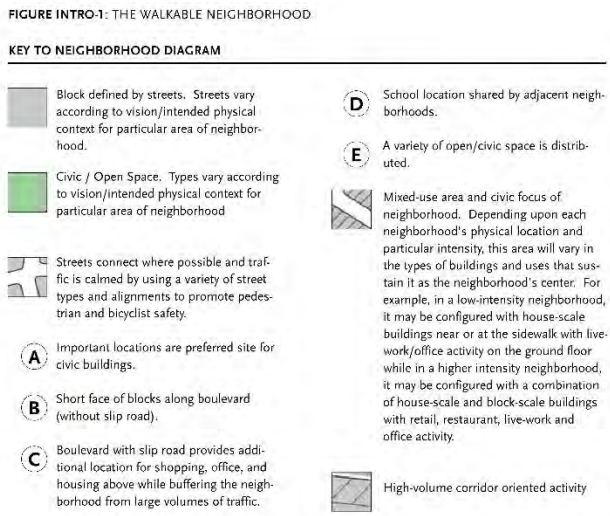
The new General Plan can be characterized as a Form Based General Plan because it emphasizes facilitating mixed use, walkable neighborhoods and developments. The "T" Zone will facilitate high density mixed use development opportunities. The Mobility Element is still linked to the Land Use Element with an emphasis on greater connectivity, walkability, and opportunities for mixed use developments. The "O" Sectors will reinforce the preservation of the Sphere of Influence area as open space, prevent urban sprawl and maintain our compact urban form. The "G" Sectors will emphasize infill development as our highest priority as the General Plan continues to build out.

PROJECT BENEFITS:
The new General Plan will maintain a compact urban form by maintaining all areas outside of the current City limits and within the sphere of influence area as Open Space. This approach will prevent urban sprawl, protect important agricultural resources and provide a clear line of demarcation between town and countryside.

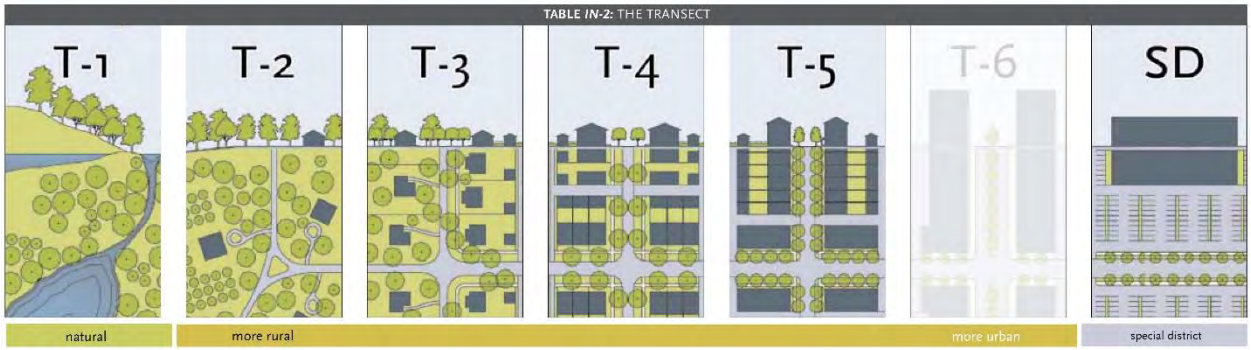
COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: Unknown
STATUS: In Progress

Reference: *City of Tehachapi General Plan, 2012*

The Walkable Neighborhood example



Conceptual Transect System



PROJECT TITLE: Infill Incentive Zone – Lower Transportation Impact Fee Core Area
PROJECT SPONSOR: City of Bakersfield / City of Tehachapi

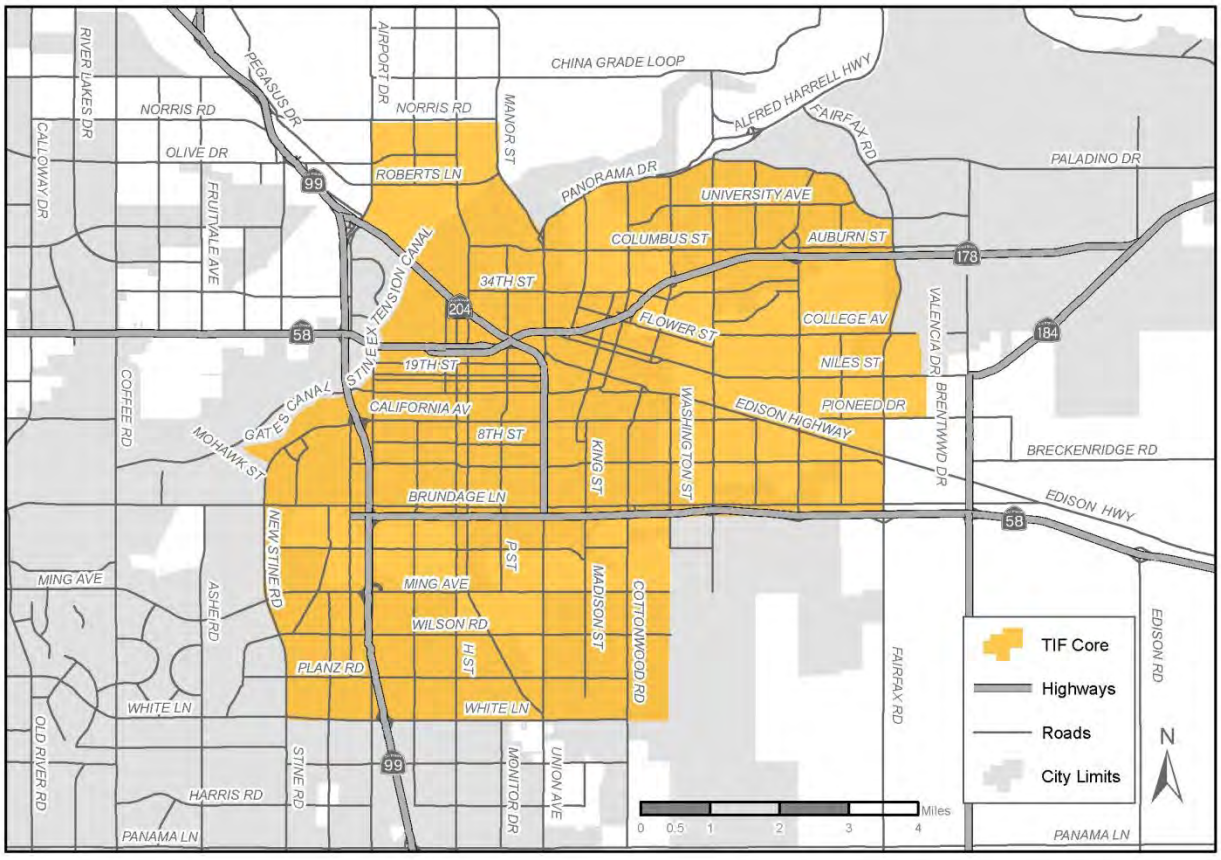
PROJECT DESCRIPTION:
The Transportation Impact Fee (TIF) Core Area is a designated area within Metro Bakersfield that has been identified through the City's Land Use policies as an area where development is encouraged. Developers who plan projects in the TIF Area will have reduced permitting fees. The TIF Core Area would allow an increase of approximately four times the number of households that are currently in this area.

The City of Tehachapi also has implemented a Tehachapi Region Core Area TIF. Tehachapi's TIF is established for the similar purposes as Bakersfield's TIF.

PROJECT BENEFITS:
Implementing incentives for development in the TIF Core Area can promote infill, mixed-use, and discourage sprawl. Future development in the TIF Core Area will also bring the public closer to quality transit service.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: n.a.
STATUS: In process

Map of TIF Core Area for Bakersfield



PROJECT TITLE: City of Taft General Plan – Sustainability Principles
PROJECT SPONSOR: City of Taft

PROJECT DESCRIPTION:
The City of Taft's General Plan incorporates sustainable principles throughout the elements of the General Plan. The City's principle involves the three aspects of sustainability: environment, economy, and equity. Throughout the General Plan, there is a leaf symbol adjacent to goals and policies based on the sustainable or "green" principles.

PROJECT BENEFITS:
The City of Taft's General Plan promotes the development of a sustainable community by ensuring its general plan policies are crafted to cut greenhouse gas emissions and move toward cleaner energy sources.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Not Applicable
YEAR OF CONSTRUCTION: Not Applicable
STATUS: In Progress

Reference: *City of Taft General Plan, 2009*

Table of Sustainable Principles by Element

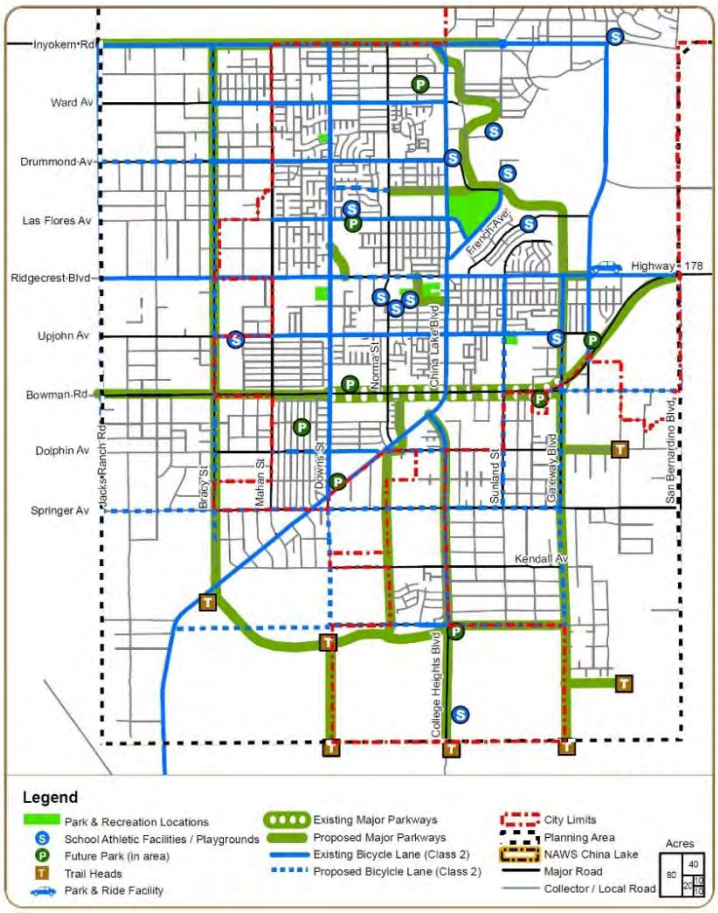
	Land Use	Circulation	Open Space & Conservation	Energy Resources	Noise	Safety	Public Facilities & Services	Economic Development
Environment								
Promote compact, walkable, mixed-use development.	•	•	•					•
Focus new development in existing developed areas in the Planning Area, while limiting growth of undeveloped lands.	•		•	•				
Promote infill development.	•		•	•			•	•
Protect open space and agricultural lands.	•		•					•
Promote the efficient use of energy and resources (water, soil, building materials, etc.).			•	•			•	
Economy								
Create strong local and regional economies.	•		•	•				•
Encourage jobs/housing balance.	•			•			•	•
Support energy and resource efficient industries.			•	•				•
Promote energy and resource efficient buildings.	•		•	•				
Promote economic opportunity for all segments of the community.	•							•
Enhance the design character of commercial and office development	•							•
Equity								
Provide adequate housing for all income levels.	•							
Provide a fair and predictable land use planning process.	•		•					•
Promote development that is equitable in terms of sharing costs and benefits among all Taft residents and businesses.		•					•	
Require fair treatment in the development, adoption, and enforcement of regulations and policies.	•	•	•	•	•	•	•	•
Promote alternative transportation options to increase access.		•	•					

PROJECT TITLE: City of Ridgecrest General Plan and Multi-Modal Circulation Element
PROJECT SPONSOR: City of Ridgecrest

PROJECT DESCRIPTION:
In 2009, the City of Ridgecrest adopted its most recent General Plan. The guiding principles that are included in the updated general plan are: explore land use and policy alternatives; provide guidance in the planning and evaluation of future land and resource decisions; and provide a vision and framework for the future growth of the City. In addition, the Circulation Element addresses automobile travel, public transit, aviation, and trails for bicyclists and pedestrians.

PROJECT BENEFITS:
The City of Ridgecrest's updated General Plan includes new goals, policies, and implementation measures that are sustainable approaches. A new Land Use goal in the City's General Plan is to provide an appropriate mix of land use opportunities and provide incentives for infill development. In addition, the Circulation Element includes a goal to encourage and provide alternative modes of transportation and alternatives to travel for Ridgecrest residents to decrease dependence on single-occupant vehicular travel and reduce vehicle emissions.

Non-Motorized Circulation Map



COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Not Applicable
YEAR OF CONSTRUCTION: Not Applicable
STATUS: In Progress

Reference: *City of Ridgecrest General Plan, 2009*

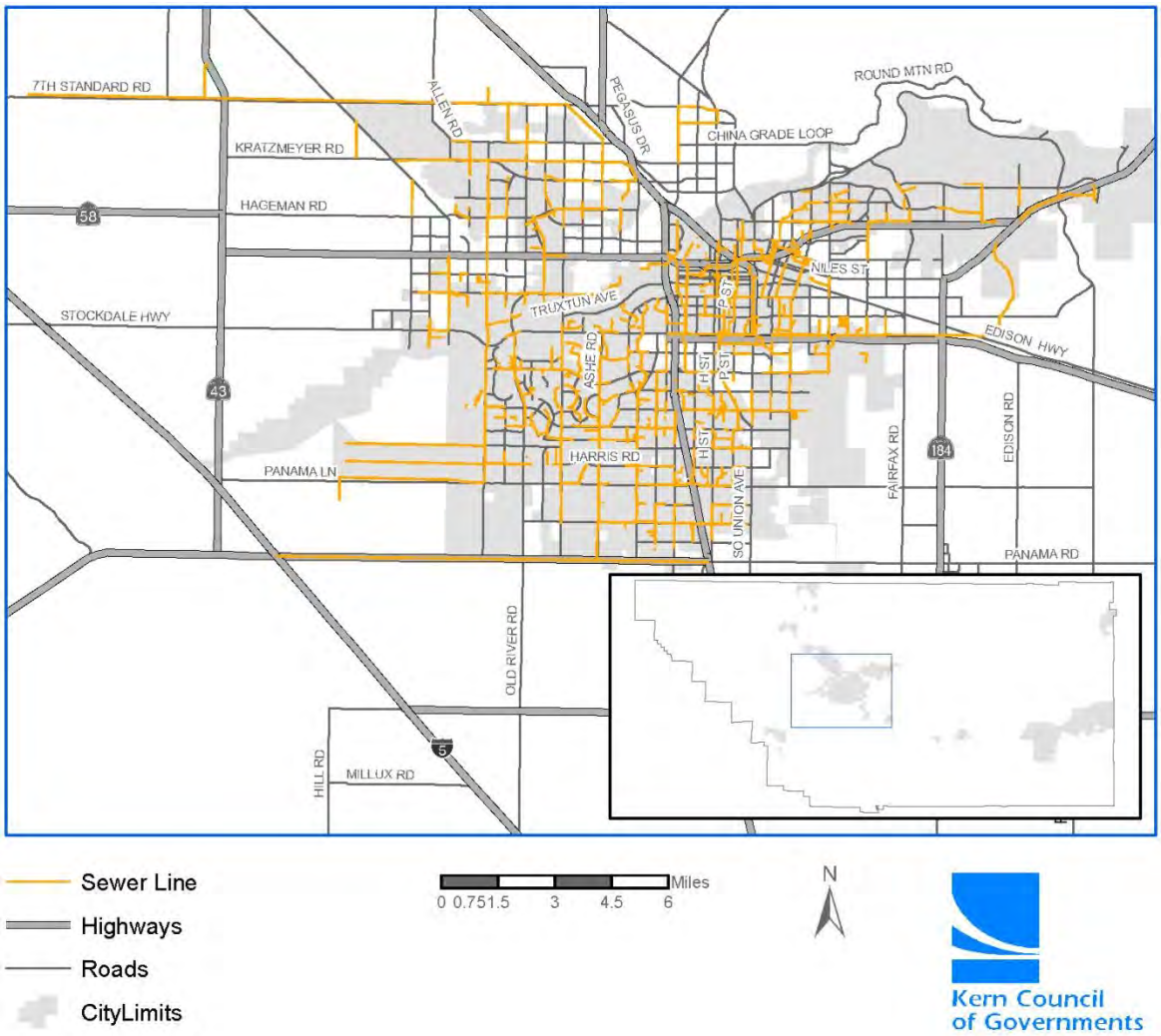
PROJECT TITLE: General Plan Sewer Policy – Hook-up required for parcels less than 6 acres
PROJECT SPONSOR: County of Kern

PROJECT DESCRIPTION:
In November 2005, the Kern County Board of Supervisors approved revisions to the Metropolitan Bakersfield General Plan including its sewer policy. The revisions required all new commercial, industrial and residential developments including residential land divisions proposing parcels smaller than six gross acres to connect to public sewer.

PROJECT BENEFITS:
The policy is intended to ensure that new growth be based on the availability of the extension of sewer infrastructure. The policy greatly curtails large lot development on the periphery of Metro Bakersfield.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION:
STATUS: In process

Map of Sewer Area in Metro Bakersfield



PROJECT TITLE: City of Bakersfield Required Lot Size Zoning Strategies
PROJECT SPONSOR: City of Bakersfield

PROJECT DESCRIPTION:
In January 2005, the City of Bakersfield amended Section 17.14.070 of the Municipal Code relating to minimum lot area zoning. The amendment reduced the minimum lot size for R-2 zone dwellings to four thousand five hundred square feet per dwelling unit.

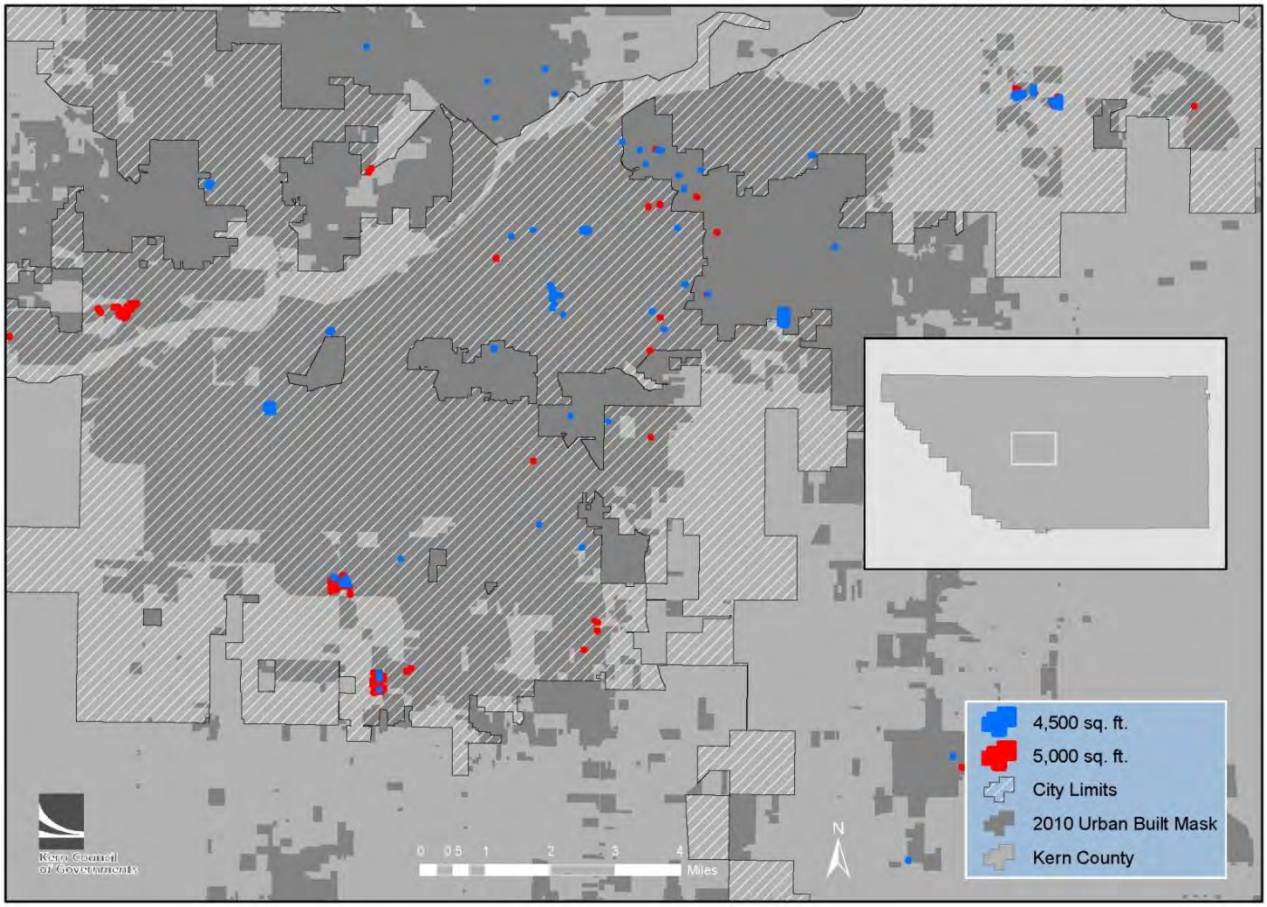
The City of Bakersfield also has a Planned Unit Development (PUD) zone, which enables developers to propose any lot size they desire, subject to discretionary approval by either the Council or Planning Commission. An example of a project that achieved higher density in a single-family residential development is University Park located in southwest Bakersfield.

The housing project includes a mixture of small, but traditional lots as well as cluster lots where six lots share a single driveway. In addition, the City has the Commercial-Center (C-C) zone which permits mixed use development by-right.

PROJECT BENEFITS:
Building on smaller lot sizes allows for compact and sustainable development. Planning and implementing compact sustainable development provides opportunities to reduce greenhouse gas emissions.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: Ordinance implemented in 1995
STATUS: In process

Map of Small Lot Areas in Metro Bakersfield



PROJECT TITLE: **San Joaquin Valley Air Pollution Control District – Indirect Source Review (ISR) to Mitigate Off-Site Air Quality Impacts of New Development**
PROJECT SPONSOR: San Joaquin Valley Air Pollution Control District (SJVAPCD)

PROJECT DESCRIPTION:
The SJVAPCD adopted Indirect Source Review (Rule 9510) to reduce the impacts of growth in emissions from all new land development in the San Joaquin Valley. Indirect air emissions are emissions indirectly caused by growth in population. ISR applies to development projects that have not yet gained discretionary approval.

PROJECT BENEFITS:
The ISR Rule looks to reduce the emission of harmful pollutants, specifically NO_x and PM_{10} associated with the construction and operation of new development projects in the San Joaquin Valley.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: Unknown
STATUS: Adopted

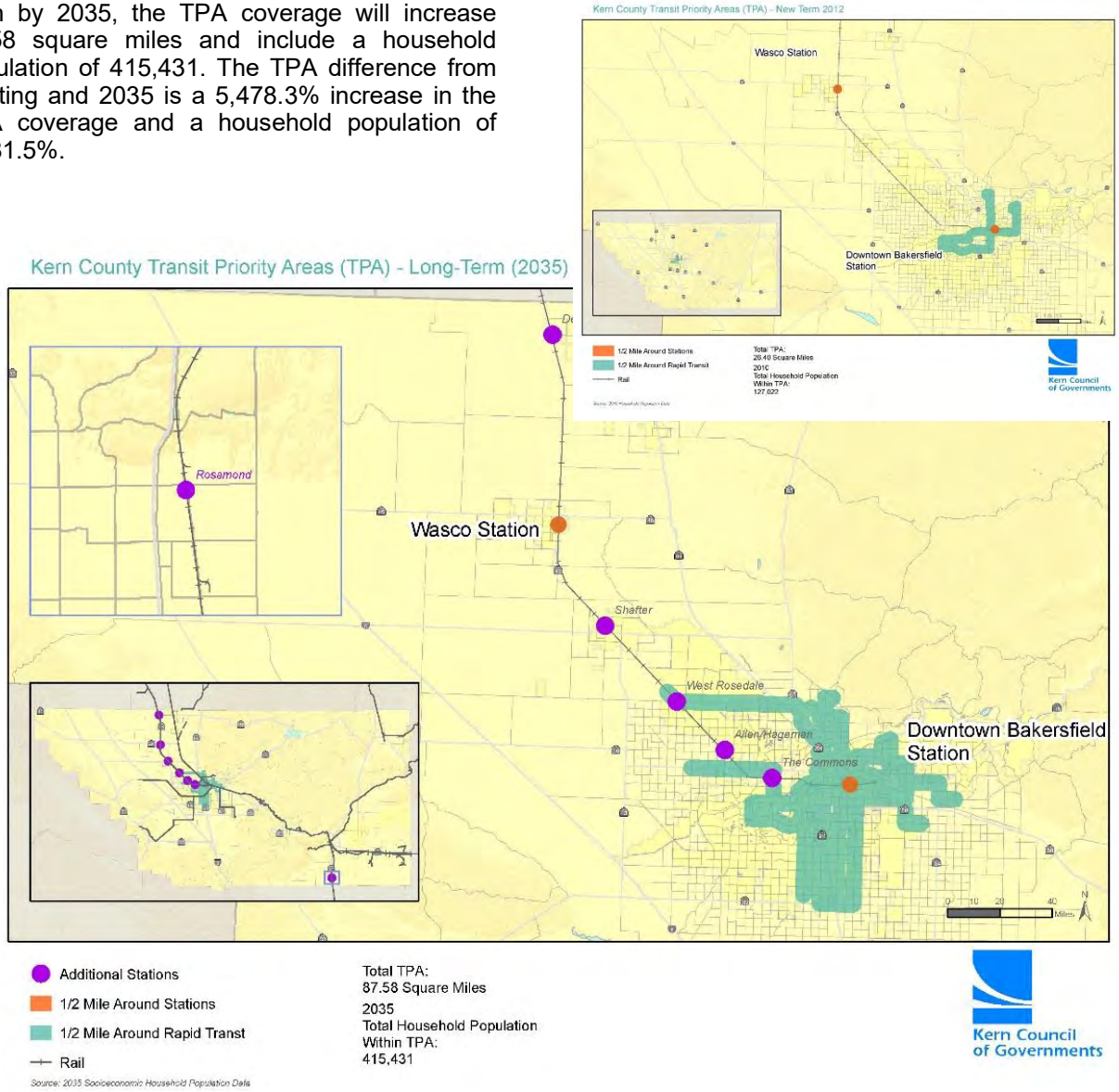
Examples of Smart Growth Development Located in Downtown Bakersfield

PROJECT TITLE: Transit Priority Areas (TPA)
PROJECT SPONSOR: Kern Council of Governments

PROJECT DESCRIPTION:
SB 375 addresses Transit Priority Areas (TPA) as part of the SCS. TPA are areas within ½-mile of either rail stations or bus services with 15 minute headways in the peak period. The current TPA only includes the Amtrak stations with a total - population of 5,628 within the TPA. In October 2012, the GET Short Term Transit Plan will implement their 2012 plan which will increase the TPA coverage to 26.40 square miles and include a household population of 127,022 within the TPA. With the implementation of the GET Long Range Plan by 2035, the TPA coverage will increase 87.58 square miles and include a household population of 415,431. The TPA difference from existing and 2035 is a 5,478.3% increase in the TPA coverage and a household population of 7,281.5%.

PROJECT BENEFITS:
TPA encourages sustainable development by providing accessibility to quality transit which can reduce vehicle miles traveled and reduce the region's GHG.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECT: Unknown
YEAR OF CONSTRUCTION: October 2012
STATUS: Planned



PROJECT TITLE: **Metropolitan Bakersfield General Plan Centers Concept – Transit Priority & Strategic Employment Place Types**
PROJECT SPONSOR: Kern Council of Governments

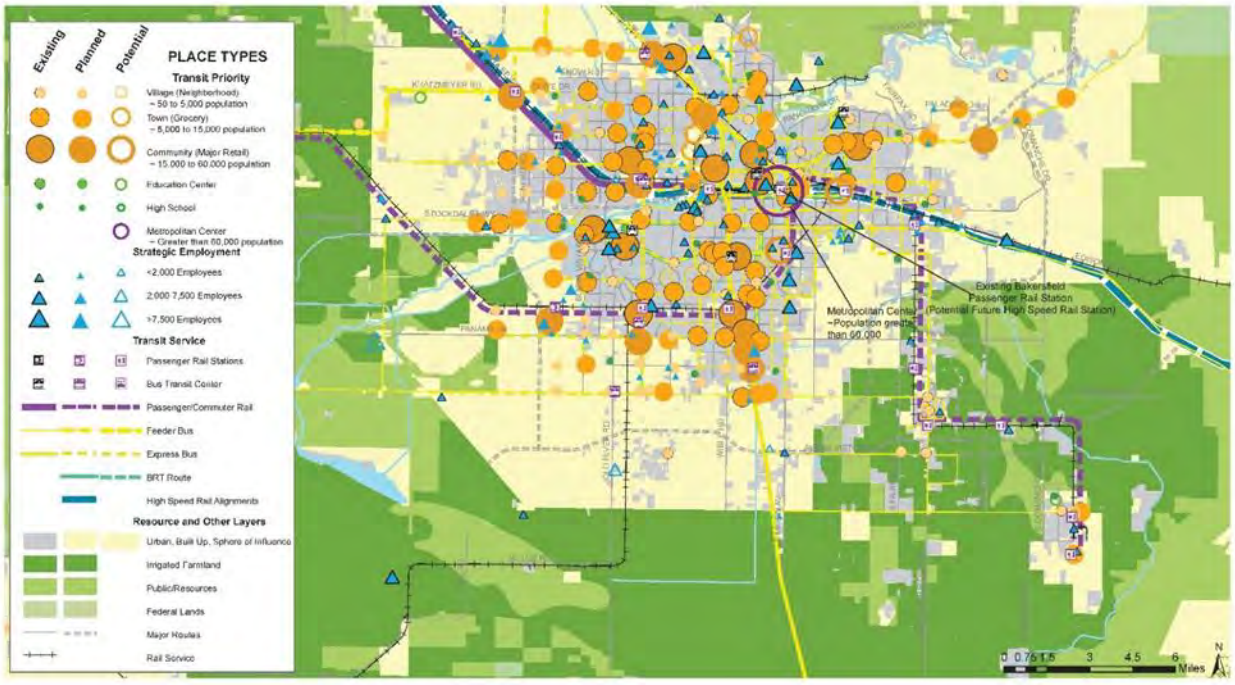
PROJECT DESCRIPTION:
Below is a map based on the Metro Bakersfield General Plan Centers Concept that was adopted in 1992. The Centers Concept was incorporated into the 2008 Kern Regional Blueprint Conceptual View maps. These map series were designed to illustrate some of the Regional Blueprint Principles designed to promote sustainable communities. The Maps are distinguished in phases; resources and other layers, existing, planned, and potential centers, along with a map that combines all the phase layers. The Maps include City spheres of influence from the County General Plan (included in the Public/Resources layer), the transportation model network, and the major transit routes.

PROJECT BENEFITS:
Transit Priority Centers and Strategic Employment Place Types are illustrated in three phases; existing, planned, and potential. The Planned and Potential centers are located along major transit services within the urban area.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: N/A
YEAR OF CONSTRUCTION: N/A
STATUS: Adopted

DISCLAIMER: These maps are for conceptual purposes only. The RTP is updated every 4 years. Local general plans and other data can be updated more frequently. For more detailed information on the latest planning assumptions, please refer to the latest locally adopted general plan for each community or other latest data source. Local general plans and other data updates will be incorporated into the next RTP update every 4 years.

Conceptual View - Bakersfield, Arvin
Transit Priority & Strategic Employment Place Types Map



PROJECT TITLE: GET - Short-Term Service Plan (2012-2020)
PROPOSED SPONSOR: Golden Empire Transit District (GET)

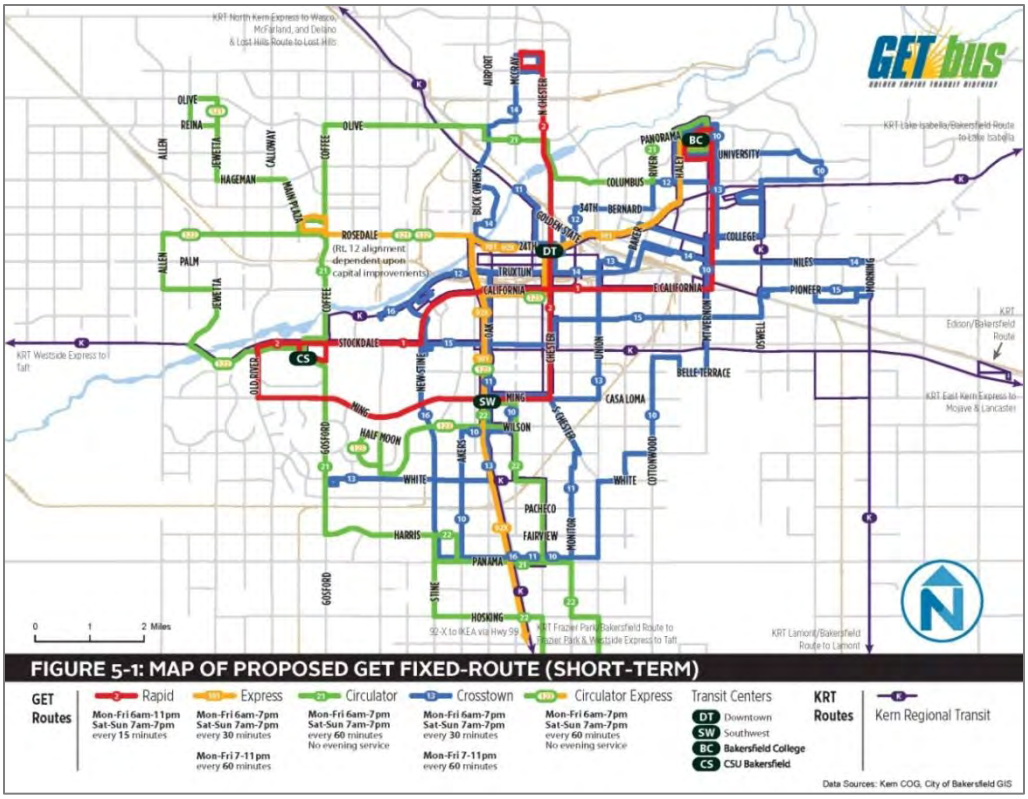
PROJECT DESCRIPTION:
In the Metropolitan Bakersfield Transit System Long-Range Plan, there is a proposed Short-Term Service Plan (2012-2020). In the Short-Term plan, GET's fixed-route bus network would be reconfigured to reflect population and employment growth since the 1980's and to improve customer service and cost-effectiveness. In addition, the area covered within .75 miles from the Short-Term transit routes is 111 square miles.

PROJECT BENEFITS:
The prominent features of the Short-Term Plan includes a new transit center at CSU Bakersfield, increased service to CSU Bakersfield and Bakersfield College, faster cross-town trips, and decreased emphasis on timed connections at transit centers. The public will have more access to quality transit which will influence more people to use public transportation.

COST BENEFIT RATIO: -
TOTAL COST OF PROJECT: -
YEAR OF CONSTRUCTION: -
STATUS: Planned

Reference: *Metropolitan Bakersfield Transit System Long-Range Plan, April 2012*

Short Term Service Plan (2012-2020)



PROJECT TITLE: GET X-92 Commuter Express bus service to Tejon Industrial Complex
PROJECT SPONSOR: Golden Empire Transit District (GET)

PROJECT DESCRIPTION:
Since 2008, GET has been using federal and local funds to provide a round-trip commuter express bus service that begins at 22nd Street and Eye Street, travels to a Park and Ride facility at McKee Road, and then terminates at the Tejon Industrial Complex (TIC). The purpose of this service is to provide employees of the TIC an efficient, inexpensive commuter alternative to driving to work in their own car. Service is also provided to the Tejon Outlets.

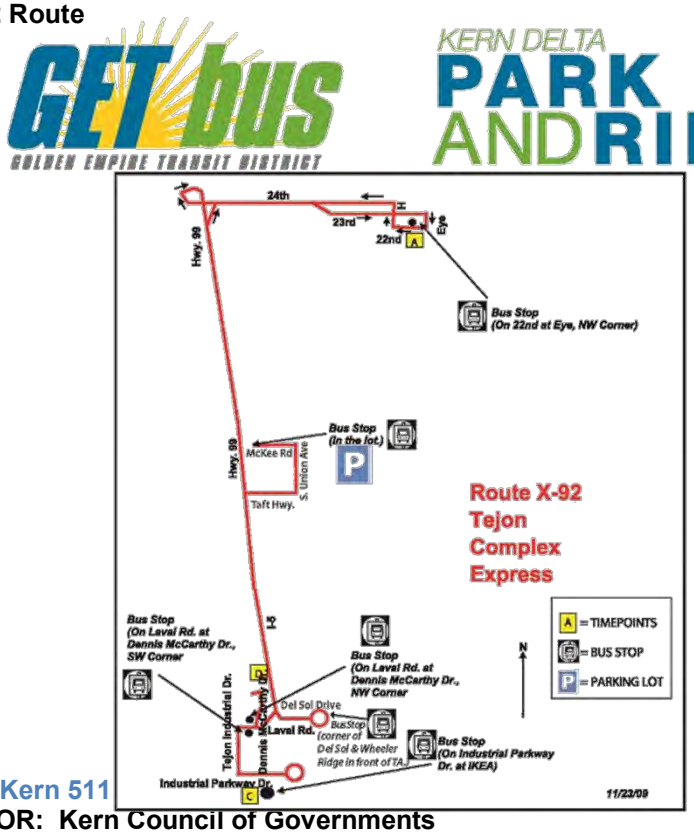
GET staff has worked closely with the employers at TIC to ensure the X-92 Route arrivals and departures match the work schedules as much as possible. GET currently offers nine round-trip schedules beginning at 3:50 a.m. and ending as late as 12:10 a.m. to accommodate as many TIC employers/employees as possible. Approximately 19,000 employees per year use the X-92. A 31-day pass for the service currently costs $55; a significant value given the fluctuation of today's fuel prices!

PROJECT BENEFITS:
The X-92 Route provides the benefits below:

- Lowers employee driving costs such as general vehicle wear and tear, oil changes, fuel costs, etc.
- Allows for TIC employers to offer fare subsidies to meet SB 375 requirements.
- Reduces the number of single occupancy vehicle trips.
- Reduces vehicle emissions throughout metro-Bakersfield and the surrounding rural area.

COST BENEFIT RATIO: 29% (FY 2015-2016)
COST OF PROJECTS: $361,767 (FY 2015-2016)
YEAR OF CONSTRUCTION:
STATUS: In progress

Map of GET's X-92 Route



PROJECT TITLE: Kern 511
PROJECT SPONSOR: Kern Council of Governments

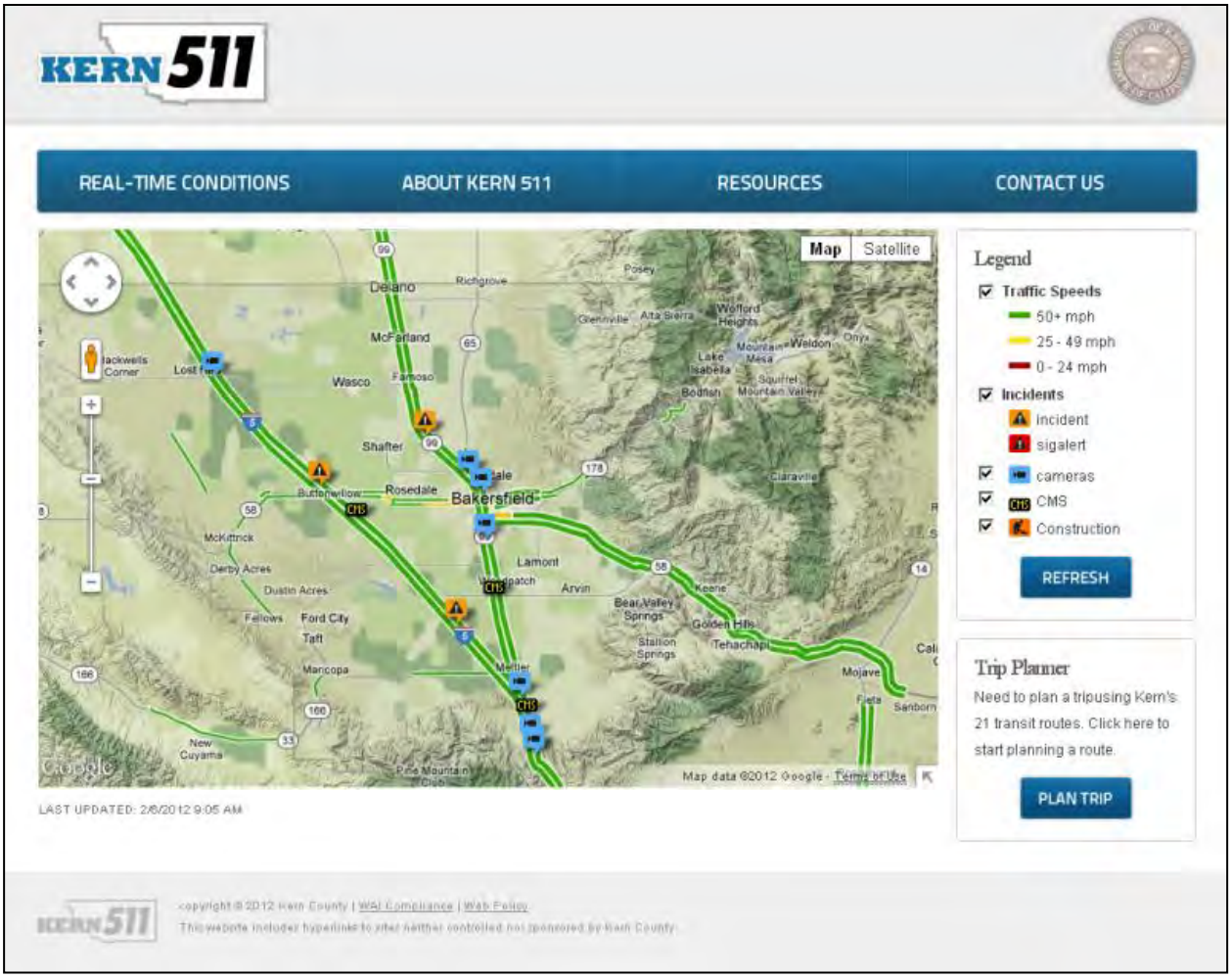
PROJECT DESCRIPTION:
Establish a 511 Traveler Information System in Kern County. The Kern 511 System will include a website and an Interactive Voice Recognition System (IVR).

The purpose of this project is to provide real-time information to the traveling public to improve traffic flow and safety on highways throughout Kern County.

PROJECT BENEFITS:
Provides traveler information including traffic speeds, traffic alerts, transit services, carpool information, and trip planning.

COST BENEFIT RATIO: Unknown
COST OF PROJECT: $773,762
YEAR ESTABLISHED: 2012
STATUS: In Process

Kern County 511 Website



PROJECT TITLE: San Joaquin Valley Blueprint Integration Project
PROJECT SPONSOR: San Joaquin Valley Blueprint

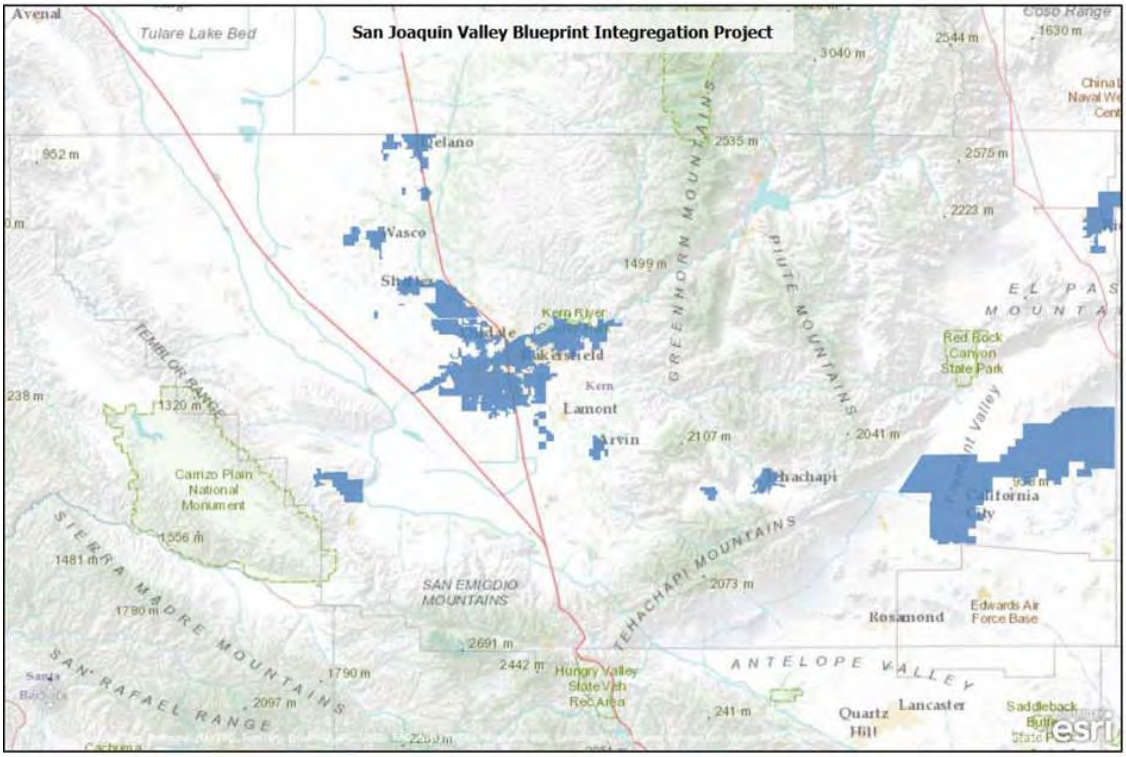
PROJECT DESCRIPTION:
The San Joaquin Valley Blueprint Integration Project is a valley-wide program to provide support to cities in the valley whose population is under 50,000. The Project integrates Blueprint Smart Growth principles into the cities' General Plan and planning policies. A team of planning consultants will serve as Circuit Planners and will provide hands-on support to local agencies to integrate the appropriate Blueprint principles into local planning programs.

Within Kern County, the following small cities are involved in the Project and will be integrating the corresponding Blueprint Integration (BPI) tool:

Ridgecrest – Sign Ordinance
Wasco – Design guidelines SR 46 Corridor
Arvin – Design guidelines
Shafter – Strategy to link transportation/land use
California City – infill strategy
McFarland – Ag mitigation program
Tehachapi – Climate Action Plan Guidance
Taft – Zoning Ordinance audit tool

PROJECT BENEFITS:
The SJV Blueprint Integration Project assists in implementing the 12 Blueprint Smart Growth Principles. The Principles include creating walkable neighborhoods, mixing land uses, and providing a variety of transportation choices.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION:
STATUS: In progress



PROJECT TITLE: Caltrans Detection Systems - State Route 43 Intersection Improvements and East Bakersfield Vehicle Detection Systems

PROJECT SPONSOR: Caltrans

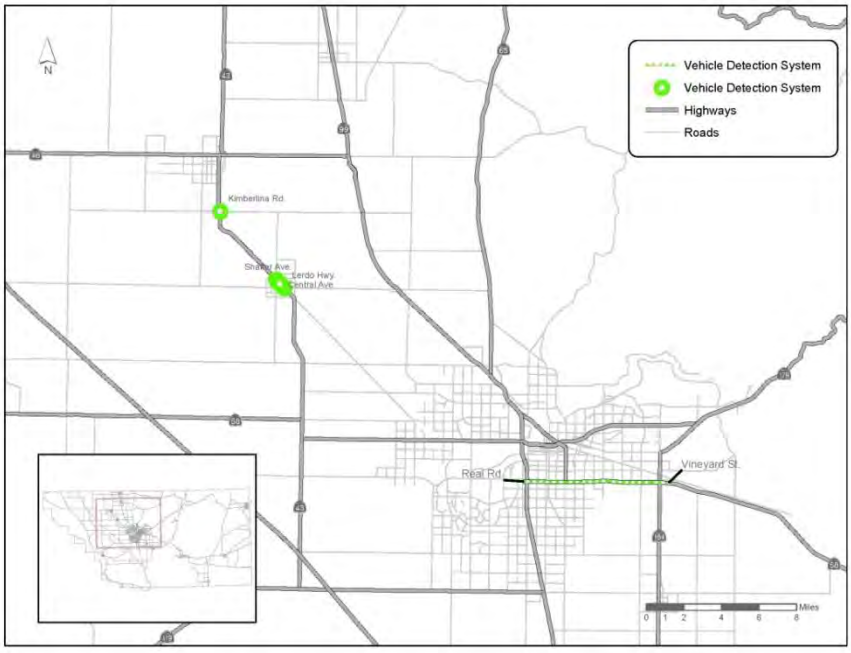
PROJECT DESCRIPTION:
The SR 43 Intersection Improvements in Shafter installed vehicle detection systems (loops, vehicle signal heads, conduit and connectors) and new signal controllers with GPS clocks to reduce traffic congestion and improve operations at the following intersections of SR 43: Lerdo Hwy, Shafter Ave, Central Ave and Kimberlina Rd.

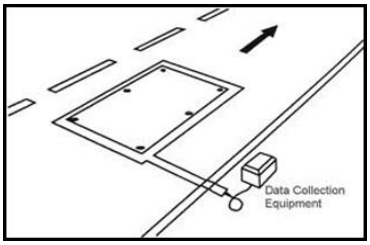
The East Bakersfield Vehicle Detection Systems proposed project will install vehicle detection systems in order to reduce traffic congestion and maximize efficiency of existing highways. The system will be on State Route 58 through the City of Bakersfield from Real Road to Vineyard Street at various locations. The system may be traditional loops installed in roadways or microwave radar detection systems.

PROJECT BENEFITS:
The system will provide travelers with real time information to make decisions to choose alternate routes for more efficient travel. These efficiencies will also help to improve air quality.

COST BENEFIT RATIO: All emissions – $7.00 - $21.00 / lbs.
COST OF PROJECTS: $1,038,000
YEAR OF CONSTRUCTION: 2010, 2012
STATUS: Operating, In Construction

Detection System





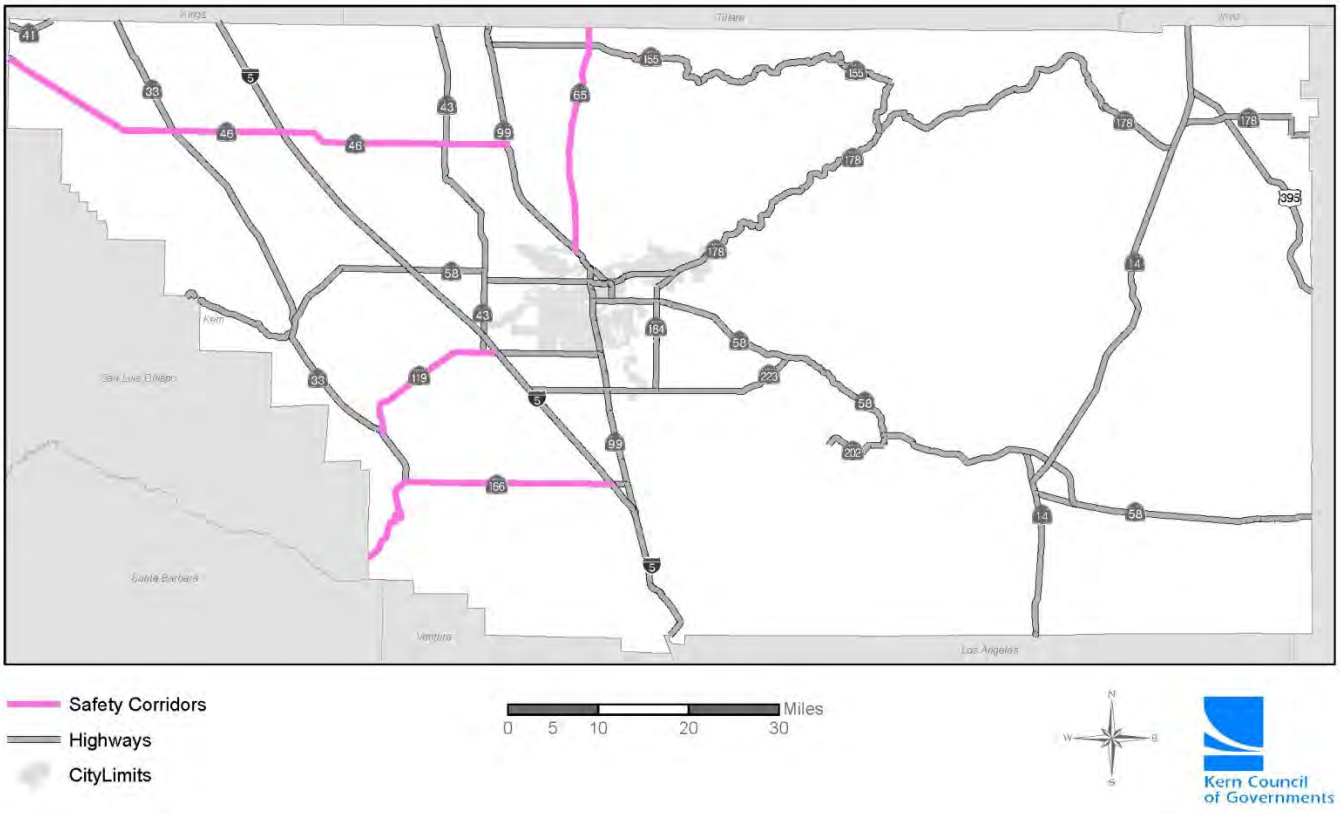
PROJECT TITLE: California Highway Patrol's Safety Corridors
PROJECT SPONSOR: California Highway Patrol

PROJECT DESCRIPTION:
The California Highway Patrol (CHP) has received funds from the Office of Traffic Safety (OTS) to establish task forces comprised of representatives from city, county, regional, state, and federal government agencies, and the private sector. The mission of each task force is to assess a high collision highway or pedestrian corridor, and make recommendations to improve traffic safety on the roadways of interest.

PROJECT BENEFITS:
With the increased CHP presence along these highway safety corridors, drivers will be more sensible of their driving habits. Sensible driving and observing the speed limits can impact fuel efficiency and have a fuel economy benefit of 5% to 33% (fueleconomy.gov). Fuel efficiency can reduce CO2 emissions through reducing the burning of gasoline and diesel.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: Started in 2002
STATUS: In progress

Map of Safety Corridors in Kern County



PROJECT TITLE: Purchase of CNG Buses
PROJECT SPONSOR: Golden Empire Transit District, County of Kern Roads/Kern Regional Transit

PROJECT DESCRIPTION:
Purchasing and replacing CNG buses for Golden Empire Transit (GET) and Kern Regional Transit (KRT). There are three proposed projects that relate to the acquisition of CNG buses for Fiscal Years 2012-2014.
The purpose of these projects is to invest in alternate fuel fleets which promote the reduction of automobile trips, while also reducing the emission of harmful pollutants.

PROJECT BENEFITS:
Increasing the available capacity for passengers will encourage the public not to drive their own vehicles and decrease the number of buses for services that will reduce fleet emission levels.

COST BENEFIT RATIO: $ 34+ / lbs.
COST OF PROJECTS: $400,000 - $575,000 per bus
YEAR OF CONSTRUCTION: 2013-2014
STATUS: Planned

GET CNG Bus

KRT CNG Bus

PROJECT TITLE: The Electric Cab Company of Delano

PROJECT SPONSOR: The Electric Cab Corporation and Private Organization

PROJECT DESCRIPTION:
The Electric Cab Company of Delano is a business organization founded in the City of Delano. The company currently provides local transportation services to the community members of Delano.

PROJECT BENEFITS:
The Electric Cab Company provides alternative transportation services to the community of Delano by using electric vehicles which reduce the emission of harmful air pollutants.

COST BENEFIT RATIO: Unknown
COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2012
STATUS: In progress

http://www.theelectriccab.com/

Images of Electric Cab Company's electric vehicles

Photos from: http://www.theelectriccab.com/

PROJECT TITLE: Downtown Elementary School (City of Bakersfield)
PROJECT SPONSOR: Bakersfield City School District

PROJECT DESCRIPTION:
Downtown Elementary School is located in the City of Bakersfield's Downtown. The school serves K-8 students and provides extended day programs where the school day is extended before and after school to accommodate working parents. Downtown Elementary was recently expanded to accommodate more students.

PROJECT BENEFITS:
Downtown Elementary was designed to support families of the employees working in the downtown area.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION:
STATUS: In process

PROJECT TITLE: Traffic Control Devices
PROJECT SPONSOR: City of Bakersfield

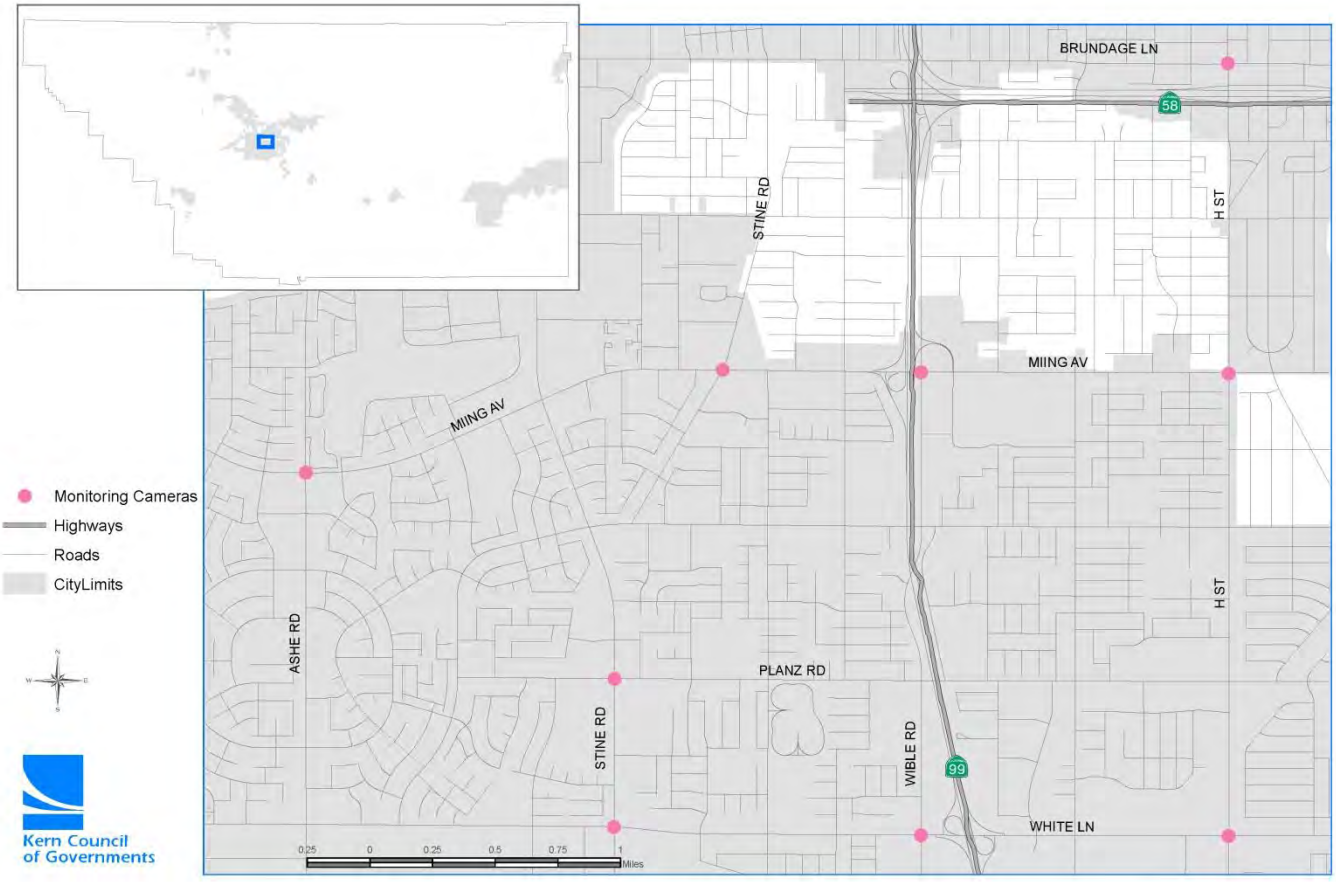
PROJECT DESCRIPTION:
Implements traffic control devices at numerous locations within the City of Bakersfield. There were a total of four proposed traffic control device projects (total of nine monitoring cameras) for the Fiscal years of 2012-2014.

The purpose of these projects is to improve traffic flow and safety through better signal timing and accident detection through main corridors. The cameras will be controlled and monitored from the City's Traffic Operation Center (TOC), and changes to signal time can be made through the City's existing signal communication system.

PROJECT BENEFITS:
Signal timing improvements as well as visually monitoring traffic flow on central corridors will reduce overall vehicle stops and starts and limit delays in travel time. This reduction in vehicle stops and starts will improve the corridor's average speed, thereby reducing the harmful pollutants generated by vehicles at low speeds and when idling.

COST BENEFIT RATIO: $15 – $30 / lbs.
TOTAL COST OF PROJECTS: $168,000 - $460,000
YEAR OF CONSTRUCTION: 2013-2014
STATUS: Planned

Proposed Traffic Control device Projects (Traffic Monitoring Cameras)



PROJECT TITLE: Kern Region Energy Action Plans (Kern REAP) and Kern Energy Watch Goal 3
PROJECT SPONSORS: Kern Energy Watch Partnership with Southern California Edison (SCE), Pacific Gas & Electric (PG&E), and Southern California Gas Company (SCG)

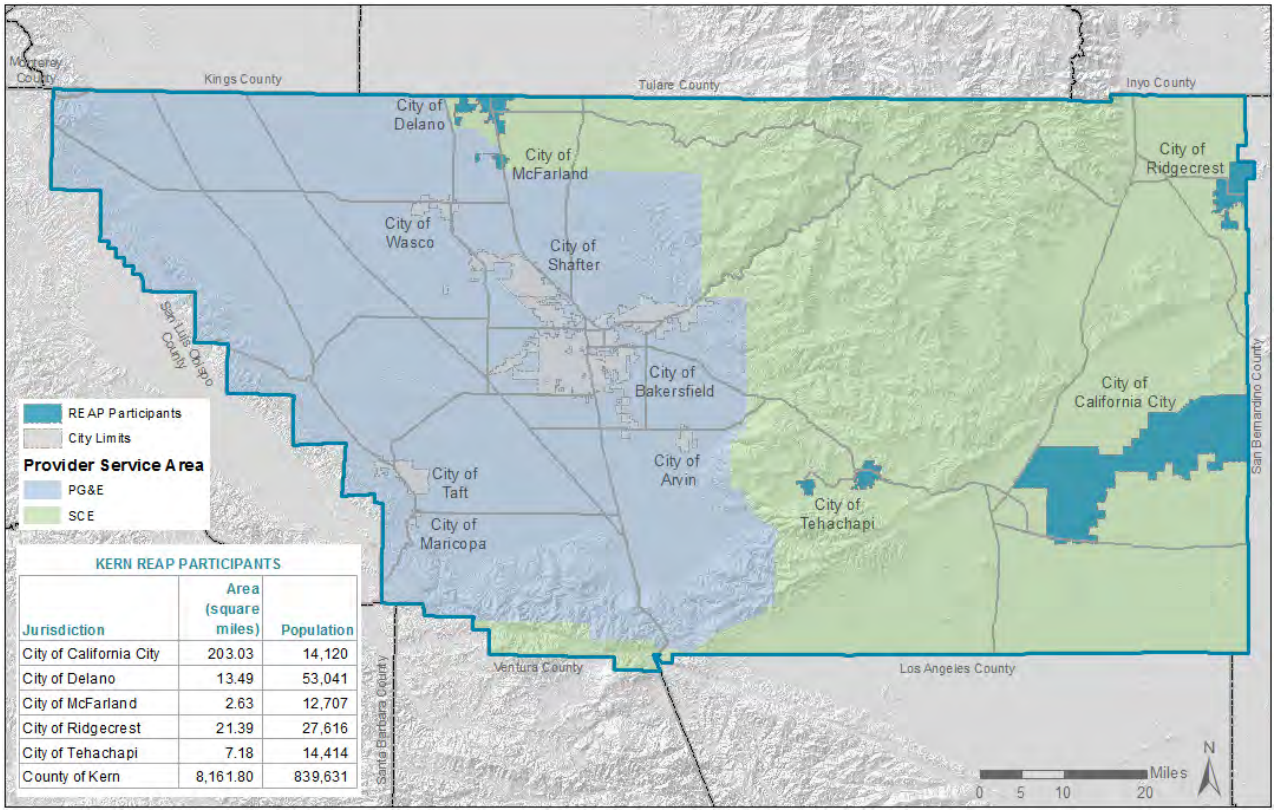
PROJECT DESCRIPTION:
Kern COG is coordinating Greenhouse Gas Inventories based on energy use and Energy Action Planning (EAP) for ten cities and the County of Kern. Energy Action Plans identify policies, goals, and strategies for the city or county to adopt and enforce or to implement to improve energy efficiency.

Through SCE's Flight #5.6 Funding Opportunity and the Kern Energy Watch Partnership, Kern COG was awarded funding for activities that support California's Long-Term Energy Efficiency Strategic Plan along with the Great Valley Center, which was awarded funding to implement PG&E's Green Communities Program. Kern COG coordinates the efforts of all of the partners and programs. As of October 2013, the County of Kern and ten cities have completed baseline inventories for the years 2005 and 2010. Five cities and the County of Kern have adopted Energy Action Plans. Work will continue to update the inventories in 2014, to identify strategies to address natural gas use, then to update the plans, and to establish plans for the remaining local government partners.

PROJECT BENEFITS:
Through the development of EAPs, the participating municipalities will be the lead in conducting energy inventories and using energy efficiency to reduce global warming emissions and energy use in both their own facilities and throughout the communities.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: N/A
YEAR OF CONSTRUCTION: N/A
STATUS: Completed

Map of Kern Region Energy Action Plans and Utility Service Areas



KERN REAP PARTICIPANTS

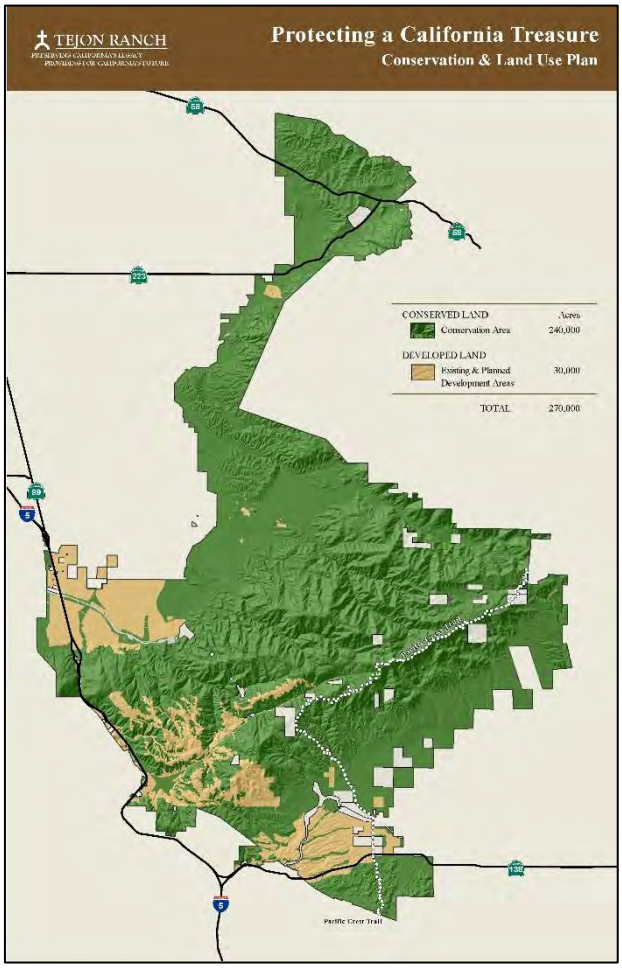
Jurisdiction	Area (square miles)	Population
City of California City	203.03	14,120
City of Delano	13.49	53,041
City of McFarland	2.63	12,707
City of Ridgecrest	21.39	27,616
City of Tehachapi	7.18	14,414
County of Kern	8,161.80	839,631

PROJECT SPONSOR: Tejon Ranch Co.

PROJECT DESCRIPTION:
On June 17, 2008, Tejon Ranch Co. and the nation's major environmental organizations, including The Sierra Club, Natural Resources Defense Council, Audubon California, the Planning and Conservation League and the

Map of Kern Region Energy Action Plans and Utility Service Areas

Endangered Habitats League, unveiled a landmark agreement on the future of the Tejon Ranch. The agreement provides for the permanent protection of 240,000 acres of the historic Ranch — approximately 90 percent of the entire landholding. The remaining 10 percent, or 30,000 acres, of the Ranch is designated for responsible master-planned community development. The agreement and land use plan serve as a major regional sustainability success story, and the scale of the landscape makes it a state-wide and national success.



infrastructure corridors offer opportunities for regionally-beneficial development. The Conservancy has developed and is implementing a Ranch-wide management plan in collaboration with the Tejon Ranch Company.

The agreement also provides new opportunities for public access, including realignment of 37 miles of the Pacific Crest Trail to the Blue Ridge on Tejon Ranch, a potential location for a new CA state park, and a potential UC Reserve research site. In addition, the Conservancy leads public access programs that have brought approximately 5,000 visitors to the Ranch since 2008 and are serving approximately 1,000 per year through docent-led tours.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Not Applicable
YEAR OF CONSTRUCTION: Not Applicable
STATUS: In Progress

Reference: *Tejon Ranch Co.*

Tejon Ranch – Conservation and Land Use Plan Map

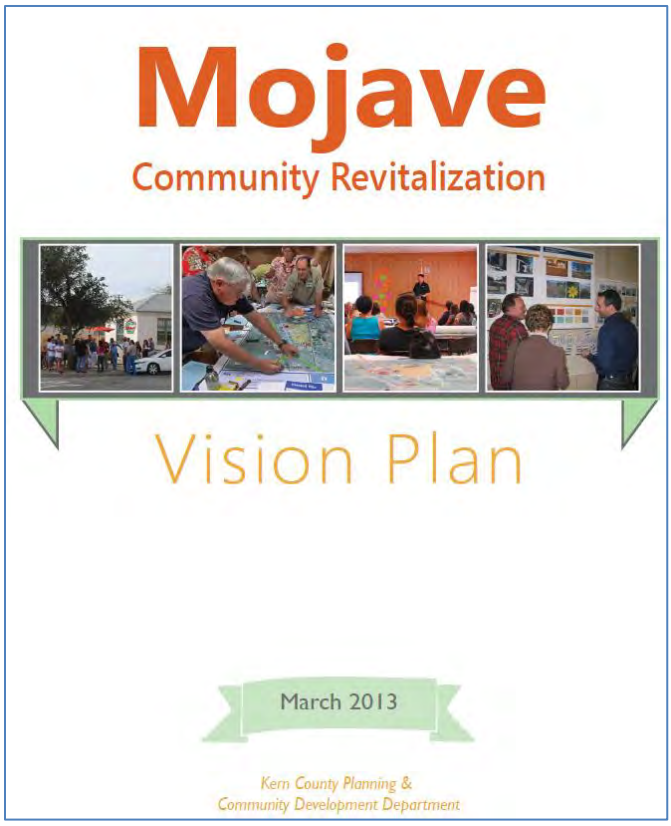
PROJECT TITLE: Kern County Community Revitalization Program
PROJECT SPONSORS: County of Kern

PROJECT DESCRIPTION:
With the recent loss of redevelopment agencies, the County of Kern Planning and Community Development Department established a centralized Economic Opportunity Areas and developed the RENEWBIZ grant-funding mechanism to assist communities with initiating projects that improve and enhance the quality of life within the community as well as increase the economic benefit to the County as a whole. The Kern County Community Revitalization Program provides the seed money for a focused visioning process that is tailored to each community to develop a visual road map and unique identity. Each community visioning effort is highly collaborative and requires the County's close collaboration with an outreach/visioning consultant and the local community. Many times, initial funding for the visioning efforts have come from private businesses.

PROJECT BENEFITS:
The program has attracted investment and real improvements of over $4 million in the communities of Oildale, East Bakersfield, Rosamond, Mojave, Boron, and soon, Olde Town Tehachapi. The outreach efforts established a collaboration between residents, businesses, and stakeholders with the county that continues with physical improvements and additional planning efforts to be completed into the future.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: N/A
YEAR OF CONSTRUCTION: N/A
STATUS: In Process

Two of the community vision plans developed through the Kern County Community Revitalization Programs



PROJECT TITLE: Kern Transit – Route Connection with Antelope Valley Transit Authority
PROJECT SPONSOR: Kern Transit

PROJECT DESCRIPTION:
Kern Transit now meets with Antelope Valley Transit Authority's Route 785 that provides commuter service to Downtown Los Angeles, San Fernando Valley, and Century City. The Kern Transit Route 100 also connects with the Metrolink in Lancaster.

PROJECT BENEFITS:
The collaboration with Kern Transit and Antelope Valley Transit Authority provides significant alternative transportation benefits for commuters and enhances air quality.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS: Unknown
YEAR OF CONSTRUCTION: 2016
STATUS: In progress

Kern Transit Route 100 Schedule (September 2016)

KernTransit 800-323-2396

Eastbound

	Mon-Fri	Sat/Sun ONLY	Mon-Fri		Mon-Sun	Mon-Fri		Mon-Sun	Mon-Fri	Mon-Sun		
Bakersfield												
Bakersfield Amtrak			4:55 AM	7:30 AM	8:10 AM	9:25 AM	10:25 AM	12:40 PM	2:21 PM	5:15 PM	7:55 PM	9:00 PM
County Admin. Building - Truxtun Ave.			#	#	#	#	#	#	#	#	#	#
Kern County Superior Court - Truxtun Ave.			#	#	#	#	#	#	#	#	#	#
Greyhound - 18th St.			5:00 AM	7:35 AM	8:15 AM	9:30 AM	10:30 AM	12:45 PM	2:26 PM	5:20 PM	8:00 PM	9:05 PM
GLI Downtown Transit Center	3:25 AM	3:50 AM	5:03 AM	7:38 AM	8:18 AM	9:33 AM	10:33 AM	12:48 PM	2:29 PM	5:23 PM	8:03 PM	9:08 PM
Bakersfield College - Panorama Dr.			5:13 AM	7:50 AM	8:30 AM	9:45 AM	10:45 AM	1:01 PM	2:42 PM	5:36 PM	8:15 PM	9:20 PM
Kern Medical Center - LR			#	#	#	#	#	#	#	#	#	#
Kern Medical Center - Flower St.			5:18 AM	7:58 AM	8:38 AM	9:53 AM	10:53 AM	1:12 PM	2:53 PM	5:46 PM	8:25 PM	9:30 PM
Keene												
Keene	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY
Tehachapi												
K-Mart - Mulberry St.	4:13 AM	4:40 AM	6:08 AM	8:48 AM	9:28 AM	10:43 AM	11:43 AM	2:07 PM	3:48 PM	6:36 PM	9:10 PM	10:15 PM
Senior Manor 1 & 2 - West E St.	#	#	#	#	#	#	#	#	#	#	#	#
Cameron Canyon Rd. at Hwy. 58	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY		
Mojave												
Carl's Jr. - Inyo St.	4:43 AM	5:10 AM	6:38 AM	9:23 AM	10:03 AM	11:18 AM	12:18 PM	2:42 PM	4:23 PM	7:06 PM		
Mojave Airport - Airport Blvd.			6:45 AM									
Rosamond												
Rite-Aid - Eagle Way	5:00 AM	5:25 AM		9:40 AM	10:20 AM		12:35 PM	2:50 PM	4:40 PM	7:23 PM		
Hummel Hall - 20th St.	5:06 AM	5:30 AM		9:46 AM	10:26 AM		12:41 PM	3:05 PM	4:46 PM	7:29 PM		
Lancaster												
Mobil - Avenue J	5:23 AM	5:50 AM		10:03 AM	10:43 AM		12:58 PM	3:22 PM	5:03 PM			
AV College - Entrance H	5:27 AM	5:55 AM										
Lancaster City Park - AVTA	5:35 AM											
Schools First - 15th St	#	#										
AV Medical Center - 15th St.	5:43 AM	6:01 AM										
Senior Center - Jackman St.	5:49 AM	6:07 AM		10:13 AM	10:53 AM		1:08 PM	3:32 PM	5:13 PM			
Metrolink - Sierra Hwy.	5:58 AM	6:16 AM		10:22 AM	11:02 AM		1:17 PM	3:41 PM	5:22 PM	7:50 PM		

Westbound

	Mon-Fri		Mon-Fri	Sat/Sun ONLY	Mon-Fri	Mon-Sun	Mon-Fri	Mon-Sun	Mon-Fri	Mon-Sun		
Lancaster												
Lancaster City Park - AVTA									6:10 PM			
Metrolink - Sierra Hwy.			6:48 AM	7:07 AM	10:55 AM	12:10 PM	2:20 PM	4:30 PM	6:20 PM	8:40 PM		
Senior Center - Jackman St.			6:54 AM	7:13 AM	11:01 AM	12:16 PM	2:27 PM	4:37 PM	6:25 PM	8:45 PM		
Mobil - Avenue J			7:03 AM	7:22 AM	11:11 AM	12:26 PM	2:37 PM	4:48 PM	6:35 PM	8:52 PM		
Rosamond												
Hummel Hall - 20th St.	5:37 AM		7:23 AM	7:42 AM	11:30 AM	12:45 PM	2:54 PM	5:05 PM	6:52 PM	9:09 PM		
Rite-Aid - Eagle Way	5:43 AM		7:29 AM	7:48 AM	11:36 AM	12:51 PM	3:00 PM	5:11 PM	6:58 PM	9:14 PM		
Mojave												
Carl's Jr. - Inyo St.	6:00 AM	7:05 AM	7:45 AM	8:07 AM	11:55 AM	1:10 PM	3:19 PM	5:28 PM	7:15 PM	9:32 PM		
Mojave Airport - Airport Blvd.								5:35 PM				
Tehachapi												
Cameron Canyon Rd. at Hwy. 58	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY	REQUEST ONLY		
K-Mart - Mulberry St.	6:30 AM	7:35 AM	8:20 AM	8:42 AM	12:30 PM	1:45 PM	3:49 PM	6:13 PM	7:47 PM	9:59 PM		
Senior Manor 1 & 2 - West L St.	#	#	#	#	#	#	#	#	#	#		
Keene												
Keene	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY	RLQULSI ONLY		
Bakersfield												
Kern Medical Center - LR	#	#	#	#	#	#	#	#				
Kern Medical Center - Flower St.	7:15 AM	8:23 AM	9:08 AM	9:30 AM	1:15 PM	2:30 PM	4:39 PM	6:56 PM				
Bakersfield College - Panorama Dr.	7:20AM	8:30 AM	9:15 AM	9:37 AM	1:22 PM	2:37 PM	4:47 PM	7:03 PM				
GLI Downtown Transit Center	7:31 AM	8:41 AM	9:26 AM	9:48 AM	1:33 PM	2:48 PM	4:59 PM	7:13 PM	8:40 PM	10:49 PM		
Greyhound - 18th St.	7:34 AM	8:44 AM	9:29 AM	9:51 AM	1:36 PM	2:51 PM	5:02 PM	7:16 PM	8:43 PM	10:52 PM		
Kern County Superior Court - Truxtun Ave.	#	#	#	#	#	#	#	#	#	#		
County Admin. Building - Truxtun Ave.	#	#	#	#	#	#	#	#	#	#		
Bakersfield Amtrak	7:39 AM	8:49 AM	9:34 AM	9:56 AM	1:41 PM	2:56 PM	5:07 PM	7:21 PM	8:48 PM	10:57 PM		

 # = Bus may stop at these locations, in addition to the timed stops.
Underlined times are drop off only, no boarding at this time.

PROJECT TITLE: California State University of Bakersfield – Construction of Public Transit Center

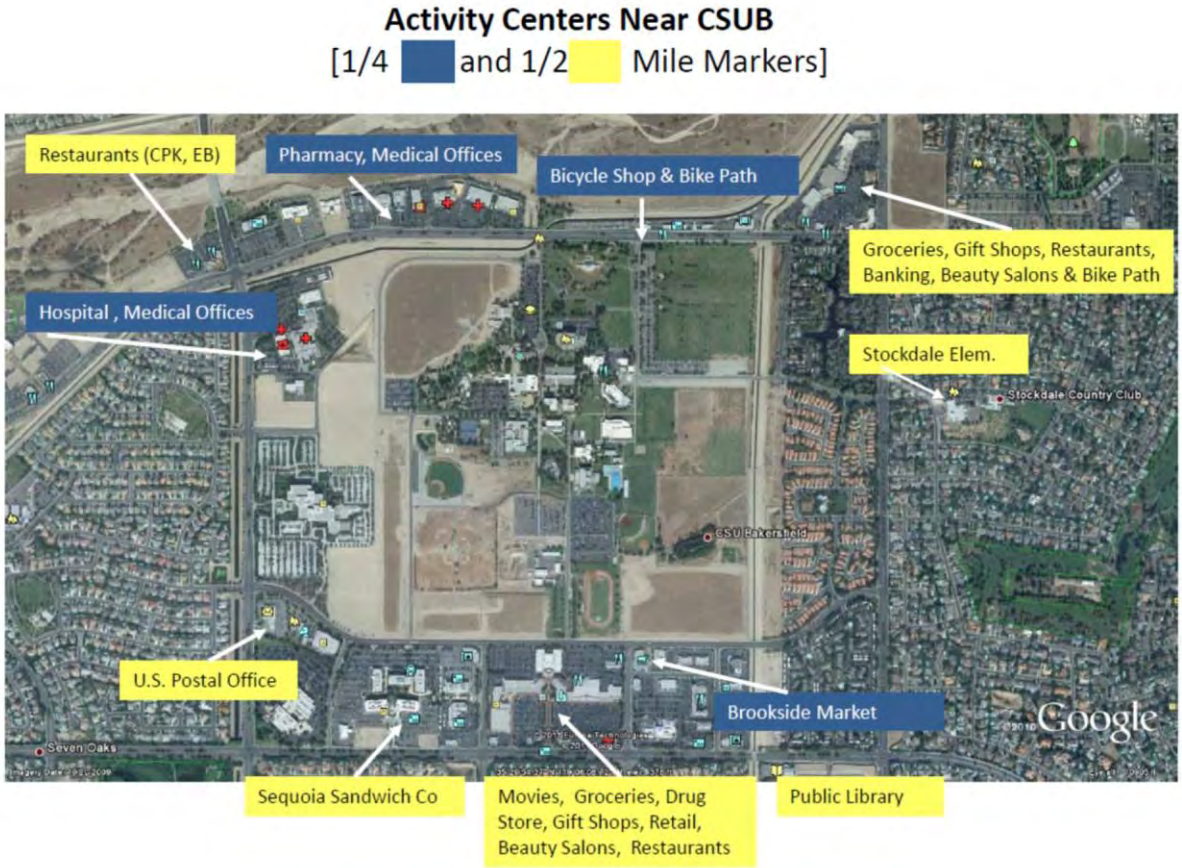
PROJECT SPONSOR: Golden Empire Transit District, California State University of Bakersfield

PROJECT DESCRIPTION: The California State University of Bakersfield (CSUB) Transit Center is a partnership between CSUB and Golden Empire Transit District (GET). In GET's Long Range Plan, a new transit center was identified in the Short-Term Service Plan (2013-2020) at CSUB campus. The transit center will facilitate access and travel to several activity centers that include large employers, retail, a hospital, medical offices, and residential neighborhoods.

PROJECT BENEFITS:
The CSUB Transit Center will improve existing transportation choices by enhancing points of modal connectivity, increasing the number of modes accommodated on existing assets and reducing congestion on existing modal assets. The location of the station is along a bicycle corridor and passengers may also connect with Kern Regional Transit.

COST BENEFIT RATIO: Unknown
TOTAL COST OF PROJECTS:
YEAR OF CONSTRUCTION: 2017, 2018, 2019
STATUS: In progress

Surrounding area of proposed CSUB Transit Center



APPENDIX F

SAN JOAQUIN VALLEY REGIONAL OVERVIEW

VALLEYWIDE OVERVIEW

INTRODUCTION

This overview will discuss the various aspects that bring the San Joaquin Valley together as one cohesive region that is working together for common goals. The Valleywide Overview is broken up into five sections. The five sections of this overview summarized below.

Section 1. One Valley: The San Joaquin Valley Profile
This section describes the San Joaquin Valley's (SJV) regional characteristics to include geography, population, demographics, economy, and also discusses some information on why and how it's considered an economically distressed area.

Section 2. Valley Success in Partnering and Planning
This section provides insight into how the regional transportation planning agencies (RTPA) are coordinating together to improve air quality, develop sustainable communities' strategies, and through valleywide coordination, implement RTP/SCS initiatives and projects.

Section 3. Goods Movement
This section explains our current environment regarding new emerging technologies and systems. It also describes current goods movement studies and good movement projects that are taking place in the San Joaquin Valley, and finally touches on the future of goods movement in the SJV.

Section 4. Valley Wide Planning Efforts
This section discusses the coordinated efforts between the RTPAs in the SJV. It provides information on the San Joaquin Valley Regional Policy Council, Valley Voice efforts and other collaborative planning efforts.

Section 5. Valley Success in Implementation
This section focuses on two major success stories in the SJV, which have been the investment in passenger rail and the successful implementation of the State Route 99 Business Plan.

Just how this overview discussed the ongoing collaboration amongst the San Joaquin Valley Regional Transportation Planning Agencies, The Valleywide Overview was also developed in coordination with staff from each of the of the RTPA's. Staff from the San Joaquin Council of Governments, Stanislaus Council of Governments, Merced County Association of Governments, Madera County Transportation Commission, Fresno Council of Governments, Tulare County Association of Government, Kings County Associate of Governments, and the Kern Council of Governments, all contributed to this document.

1. ONE VALLEY: THE SAN JOAQUIN VALLEY PROFILE

GEOGRAPHY

The San Joaquin Valley (SJV) is the southern portion of the Great Central Valley of California [Figure 6-1]. The San Joaquin Valley stretches from the Tehachapi Mountains in the south to the San Joaquin Delta in the north, a distance of nearly 300 miles. The eastern boundary is the Sierra Nevada Mountains, which reaches elevations of over 14,000 feet, while the western boundary is the lower coastal ranges. The Valley floor is about 10,000 square miles in size.

Figure 6 - 1: San Joaquin Valley Topography

For the purposes of this report, the San Joaquin Valley is considered to include the entirety of the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and Kern. The total area of the eight counties is 27,383 sq. mi. (larger than West Virginia). Kern County straddles the Sierra Nevada Mountains and occupies a portion of the Mojave Desert. The desert portion of Kern County (about 3,650 sq. mi.) is within the Southeastern Desert Air Basin, while the remainder of Kern County and the other counties are in the San Joaquin Valley Air Basin.

On the valley floor, the topography is generally flat to rolling, and the climate is characterized by long, very warm summers, and short, cool winters. Precipitation is related to latitude and elevation, with the northern portions of the valley receiving approximately 12-14 inches of rain a year, while the southern portion has an annual average of less than six inches. Snow rarely falls on the valley floor, but heavy winter accumulations are common in the Sierra Nevada Mountains.

The SJV occupies an area between the two largest metropolitan areas in California, San Francisco and Los Angeles. The major transportation facilities run generally north/south through the SJV and include State Route 99, Interstate 5, Union Pacific Railroad and Burlington Northern & Santa Fe Railroad. Several highways and some rail lines cross the Valley east/west including State Routes 4, 120, 152, 198 and 58 among others. In addition, the Valley contains numerous oil and natural gas pipelines, a myriad of telecommunication facilities, distribution centers, the Port of Stockton, and air travel corridors.

POPULATION

While the SJV is largely rural in nature, it does contain several large cities and suburbs with a total population of a little over 4 million people (more than the population of 24 states). The eight San Joaquin Valley counties are a part of eight Metropolitan Statistical Areas (MSAs): Stockton (San Joaquin County), Modesto (Stanislaus County), Merced, Fresno-Madera, Hanford-Corcoran (Kings County), Visalia (Tulare County) and Bakersfield (Kern County). Most of the Valley's population resides along the State Route 99 corridor including four cities of over 150,000 people (Fresno, Bakersfield, Stockton and Modesto) *[Figure 6-2]*. Population growth has been sustained and significant *[Figure 6-3]*. In 1970, the eight San Joaquin Valley counties had a population of just over 1.6 million. By 2020, the population had increased 166% to over 4.3 million *[Figure 6-4] people.* The SJV continues to be one of the fastest growing regions in the state. The SJV accounted for 8.2% of California's total population in 1970 and has grown to account for 11% of California's total population today. By 2060, the Valley is projected to capture 12.8% of the state's population *[Figure 6-4].*

Figure 6 - 2: San Joaquin Valley Population Centers

Figure 6 - 3: San Joaquin Valley Total Population Projections, California Department of Finance

Geography \ Year	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Fresno County	933,249	979,625	1,026,358	1,053,955	1,096,638	1,135,837	1,170,525	1,200,150	1,226,158	1,249,858	1,272,559
Kern County	842,069	881,129	912,975	961,629	1,019,221	1,075,952	1,127,781	1,174,771	1,217,086	1,256,599	1,295,502
Kings County	152,398	149,455	154,745	159,733	165,752	171,517	176,940	181,726	185,868	189,652	192,955
Madera County	150,182	154,166	158,794	168,293	178,070	187,842	197,025	205,517	213,456	220,790	228,393
Merced County	256,785	268,843	284,761	298,184	314,690	330,805	346,085	359,888	372,461	384,691	396,956
San Joaquin County	688,464	727,038	776,068	810,495	853,661	891,642	923,341	948,975	968,662	984,240	996,241
Stanislaus County	516,583	536,530	555,955	581,308	606,128	627,883	645,069	658,448	668,224	675,118	680,311
Tulare County	442,517	463,671	480,788	496,657	516,810	535,463	551,563	565,075	575,525	584,163	591,539
San Joaquin Valley Total	3,982,247	4,160,457	4,350,444	4,530,254	4,750,970	4,956,941	5,138,329	5,294,550	5,427,440	5,545,111	5,654,456
California	37,366,938	39,007,121	39,782,419	40,808,001	41,860,549	42,718,403	43,353,414	43,785,947	44,049,015	44,176,739	44,228,057
San Joaquin Valley Population Percentage of California	10.7%	10.7%	10.9%	11.1%	11.3%	11.6%	11.9%	12.1%	12.3%	12.6%	12.8%

Sources: California Department of Finance. Demographic Research Unit.
Report P-2A: Total Population Projections, California Counties, 2010-2060 (Baseline 2019 Population Projections; Vintage 2020 Release). Sacramento: California. July 2021.

Figure 6 - 4:San Joaquin Valley Projected Population Growth as a Statewide Percentage

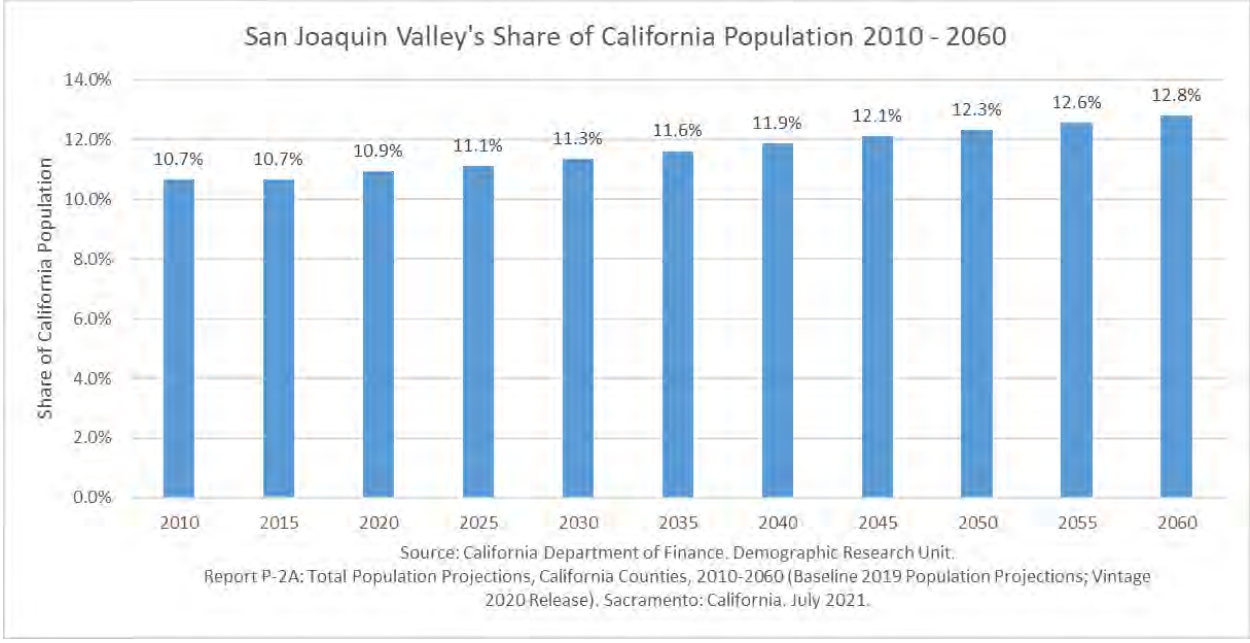
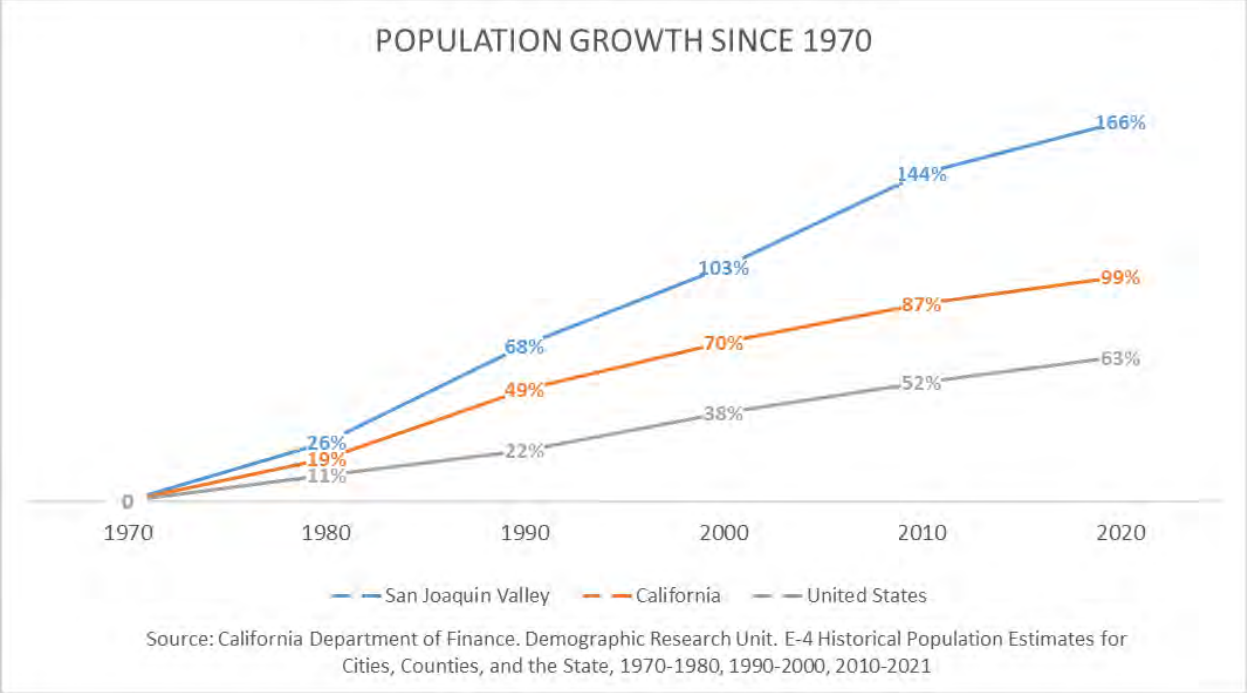


Figure 6 - 5: San Joaquin Valley Population Growth Relative to State and Federal Population Growth



Future population growth is also expected to be sustained and significant. Both ends of the SJV are under growth pressure from the neighboring metropolitan areas of Los Angeles and the San Francisco Bay Area, in addition to the natural growth rate. Population in the eight SJV counties is projected to reach just over 5.6 million by 2060, using growth projections from the California State Department of Finance (DOF) *[Figure 6-3]*. Figure 6.5 demonstrates Valleywide population growth relative to California and the U.S. as a whole.

ECONOMY

The San Joaquin Valley is famous for agricultural production. All eight counties rank within the top 12 of California's 58 counties. In addition, if the SJV were a state, it would be the top agricultural producing state in the country. The SJV produced $36.5 billion in agricultural products in 2019 This amount is more than double the remainder of California and more than the next highest producing state, Iowa. *[Figure 6-7]*.

Figure 6 - 6: Agriculture Production Value and Ranks of San Joaquin Valley Counties, 2019

Agriculture Production Value and Ranks of San Joaquin Valley Counties, 2019		
County	**Rank in California**	**Gross Value of Agriculture Production($1,000)**
Fresno	1	7,714,540
Kern	2	7,692,667
Tulare	3	7,508,852
Stanislaus	5	3,526,856
Merced	6	3,270,959
San Joaquin	7	2,638,145
Kings	8	2,187,693
Madera	10	1,998,826
San Joaquin Valley Total		36,538,538
California Total		61,711,823

Source: California Agricultural Statistics Review 2019-2020, California Department of Food & Agriculture

Figure 6 - 7: California Gross Value of Agriculture Production

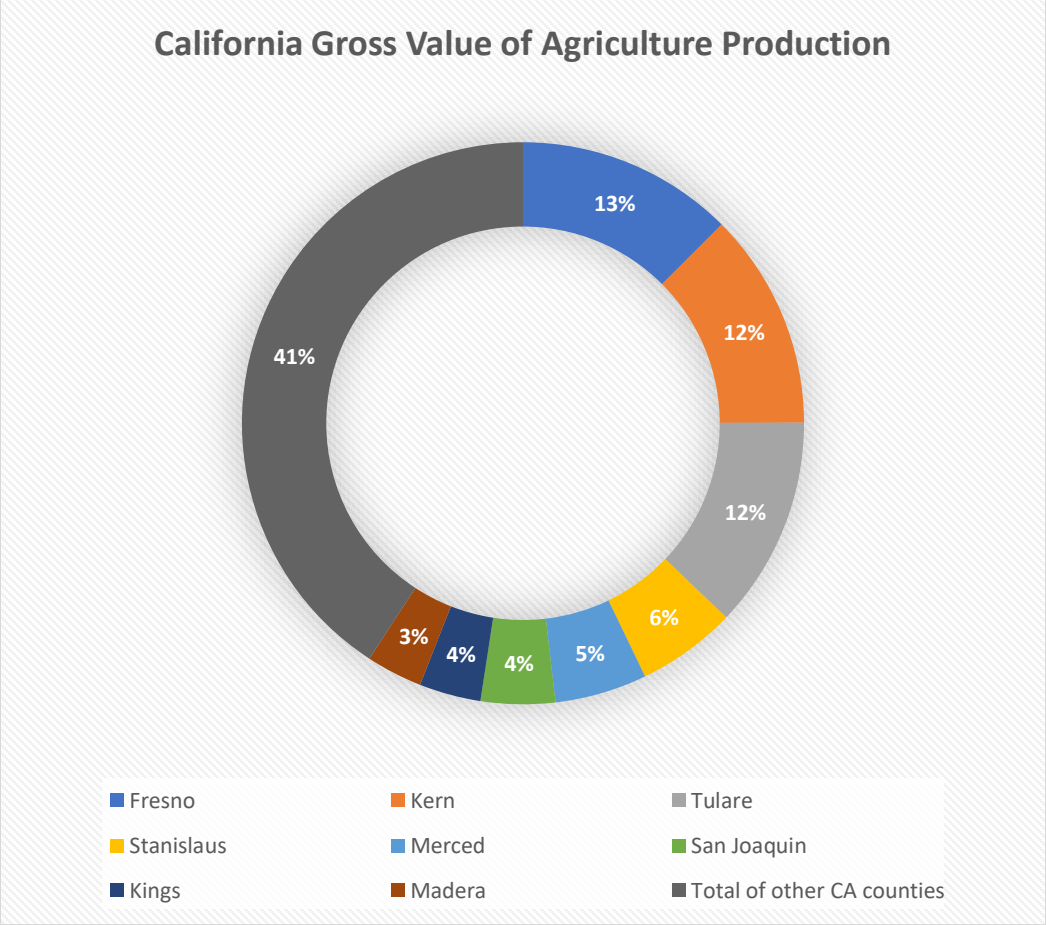
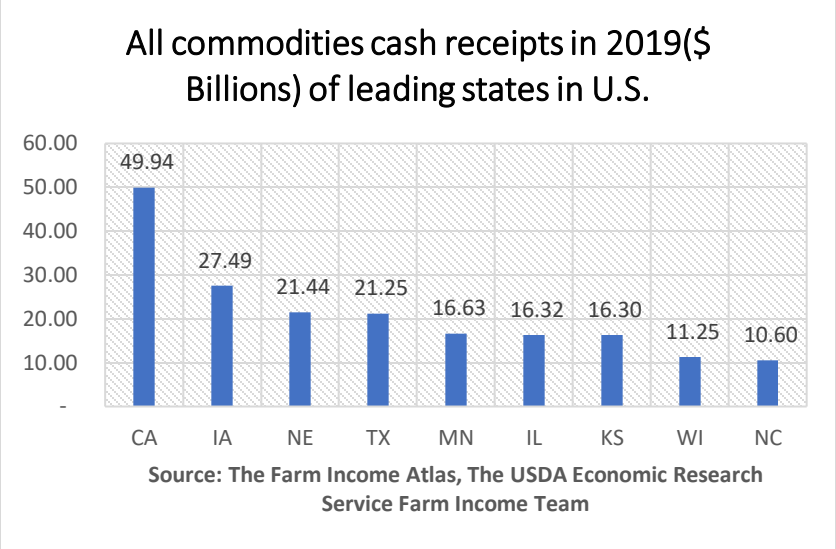


Figure 6 - 8: All Commodities Cash Receipts in 2019 of Leading States in the U.S.



Agriculture accounts for 12% of the Valley's jobs *[Figure 6-8].* In comparison, only 2% of the state and nation's jobs are in agriculture *[Figure 6-9].* Other major employment sectors in the Valley are education, health and social services (21.9%) and retail trade (10.9%).

Figure 6 - 9: San Joaquin Valley Employment by Industry

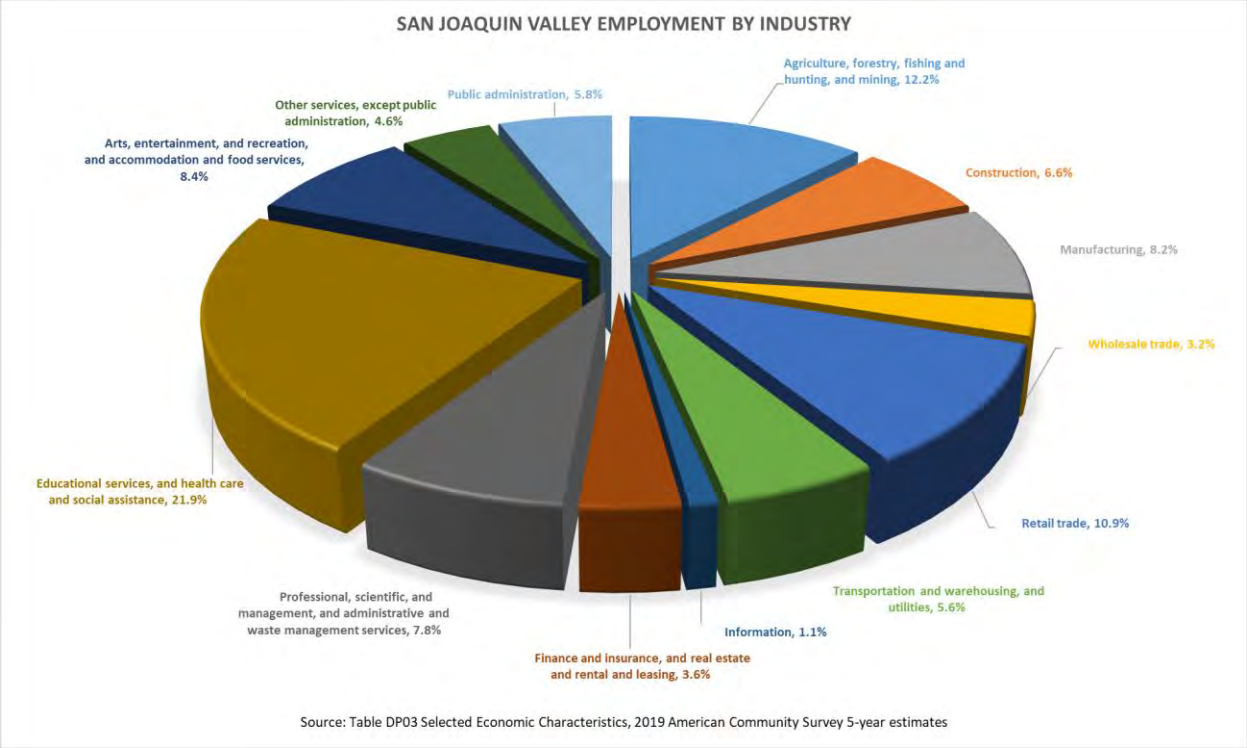


Figure 6 - 10: Employment by Industry, Comparing San Joaquin Valley with CA and the U.S.

Empolyment by Industry, comapring San Joaquin Valley with California and United States, 2019

Region / Industry	San Joaquin Valley		California		United States	
	Empolyment	Percent	Empolyment	Percent	Empolyment	Percent
Agriculture, forestry, fishing and hunting, and mining	180,439	12.2%	415,545	2.2%	2,743,687	1.8%
Construction	98,218	6.6%	1,175,234	6.3%	10,207,602	6.6%
Manufacturing	120,883	8.2%	1,692,820	9.1%	15,651,460	10.1%
Wholesale trade	46,990	3.2%	525,711	2.8%	4,016,566	2.6%
Retail trade	161,763	10.9%	1,950,499	10.5%	17,267,009	11.2%
Transportation and warehousing, and utilities	83,506	5.6%	993,917	5.3%	8,305,602	5.4%
Information	15,703	1.1%	539,809	2.9%	3,114,222	2.0%
Finance and insurance, and real estate and rental and leasing	53,673	3.6%	1,116,974	6.0%	10,151,206	6.6%
Professional, scientific, and management, and administrative and waste management services	115,429	7.8%	2,546,055	13.7%	17,924,655	11.6%
Educational services, and health care and social assistance	324,706	21.9%	3,904,118	21.0%	35,840,954	23.1%
Arts, entertainment, and recreation, and accommodation and food services	125,005	8.4%	1,936,179	10.4%	14,962,299	9.7%
Other services, except public administration	68,119	4.6%	969,511	5.2%	7,522,777	4.9%
Public administration	86,026	5.8%	824,869	4.4%	7,134,146	4.6%
Civilian employed population 16 years and over	1,480,460	100%	18,591,241	100%	154,842,185	100%

Source: Table DP03 Selected Economic Characteristics, 2019 American Community Survey 5-year estimates

ECONOMICALLY DISTRESSED AREA

The San Joaquin Valley is one of the most economically distressed regions in the United States. High unemployment rates have historically plagued the Valley. As shown in Figure 6-10, in 2019 the Valley's unemployment rate was 9.1%, in contrast to 6.1% and 5.3% for the state and the nation, respectively.

Educational levels for SJV residents lag behind those of California and the United States. Only 17.6% of persons 25 years of age and older have a bachelor's degree or higher, compared to 33.9% and 32.1% for the state and nation, respectively *[Figure 6-11].* The rate of those in the Valley who have an associate degree, or some college credits is slightly higher than the state or nation, however.

With the Valley's mix of employment types, high unemployment, and low educational attainment levels, the Valley is plagued with a low median household income. As shown on Figure 6-12 below, the Valley's median household income of $56,406 is far below the state and nation's averages of $75,235 and $62,843.

Figure 6 - 11: Education Attainment San Joaquin Valley Population 25 Years of Age and Older

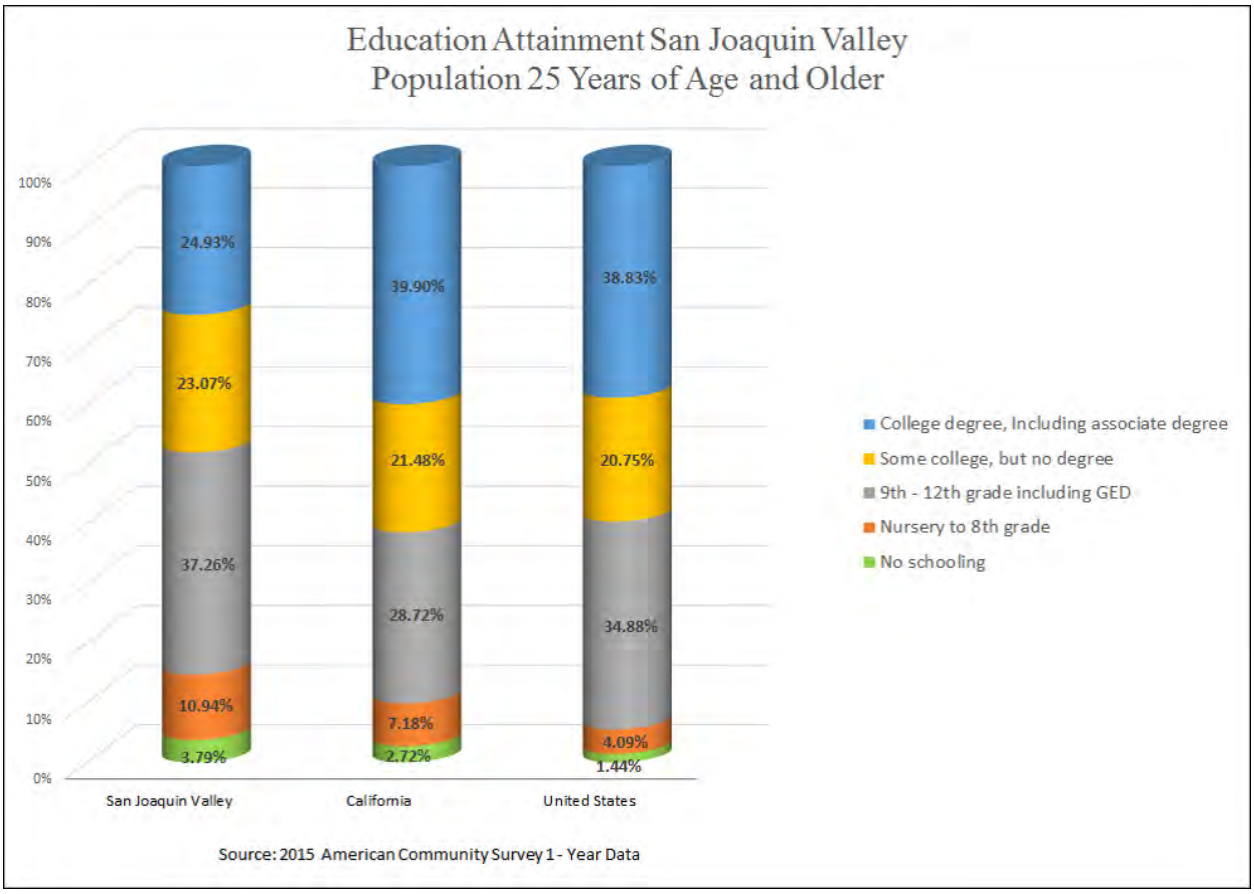
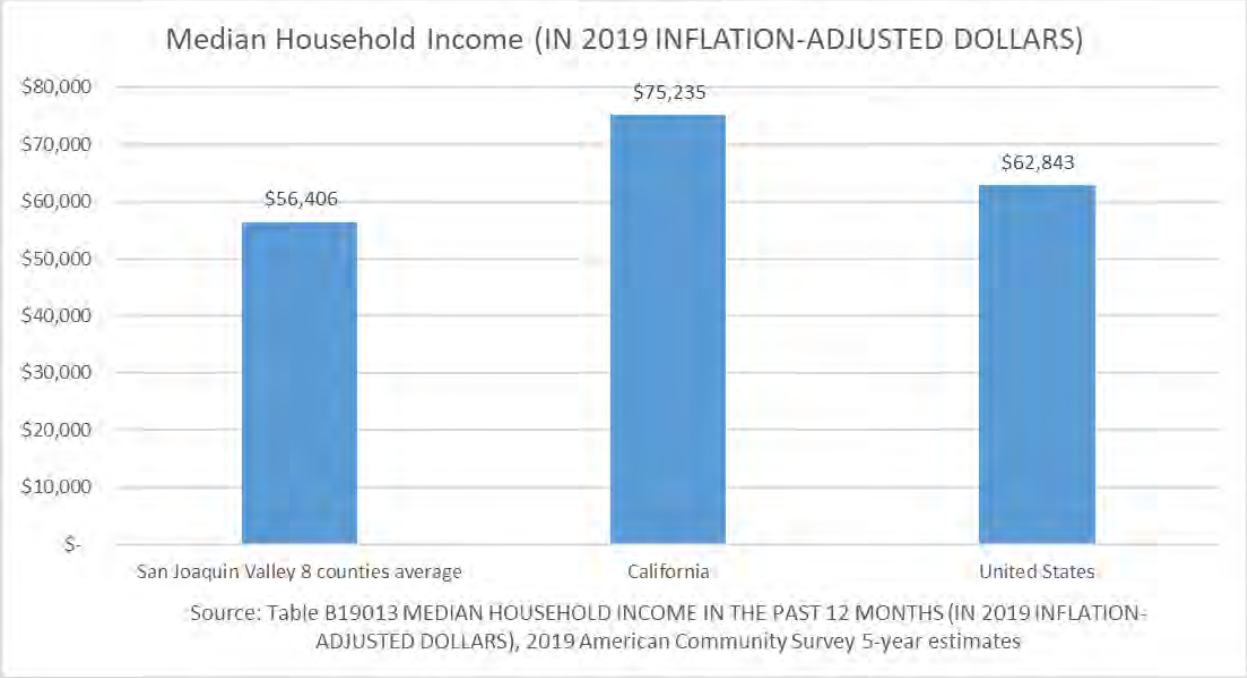


Figure 6 - 12: Median Household Income

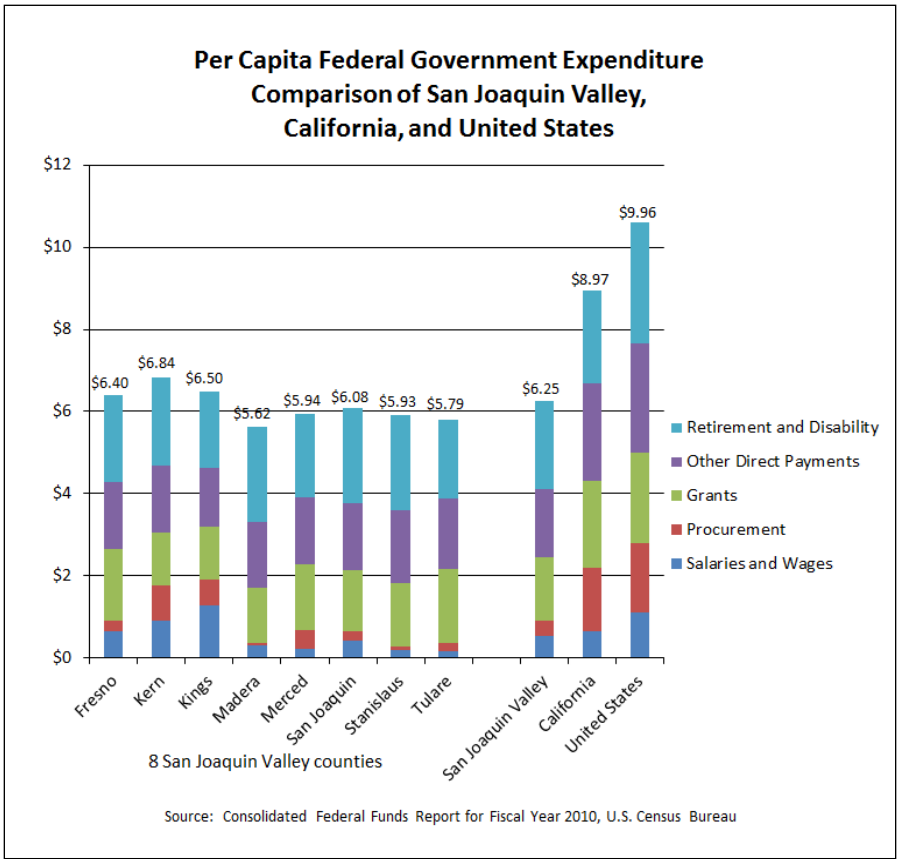


The economic plight of the San Joaquin Valley is starting to be recognized at a national level. The Congressional Research Service (CRS) completed a study in 2005 (California's San Joaquin Valley: A Region in Transition) comparing the economic conditions of the San Joaquin Valley to the Central Appalachian region, another severely economically distressed region. The Central Appalachian region (primarily eastern KY and parts of WV, TN and VA) is the most economically distressed sub-region within the Appalachian Regional Commission (ARC). ARC was created by Congress in 1965 in response to the persistent socioeconomic challenges in the Appalachian region. Economic conditions in the Valley were shown to be comparable to Central Appalachia and lagging far behind the state of California as a whole and the United States. For example, poverty rates in the Valley are similar to the poorest region of the Appalachians and are actually trending worse than the Central Appalachian region.

While being one of the most economically challenged regions in the country, the Valley has traditionally received far less federal assistance than other regions in the United States. The CRS study also showed that the Valley is lagging behind the Appalachian region, California and the United States in per capita federal expenditures.

Figure 6-13 below indicated that in 2010, the per capita federal government expenditure for the Valley and each of its eight counties was still far below that of California and the United States. With the termination of the Federal Financial Statistics Program, the per capita federal government expenditure data after 2010 has been discontinued.

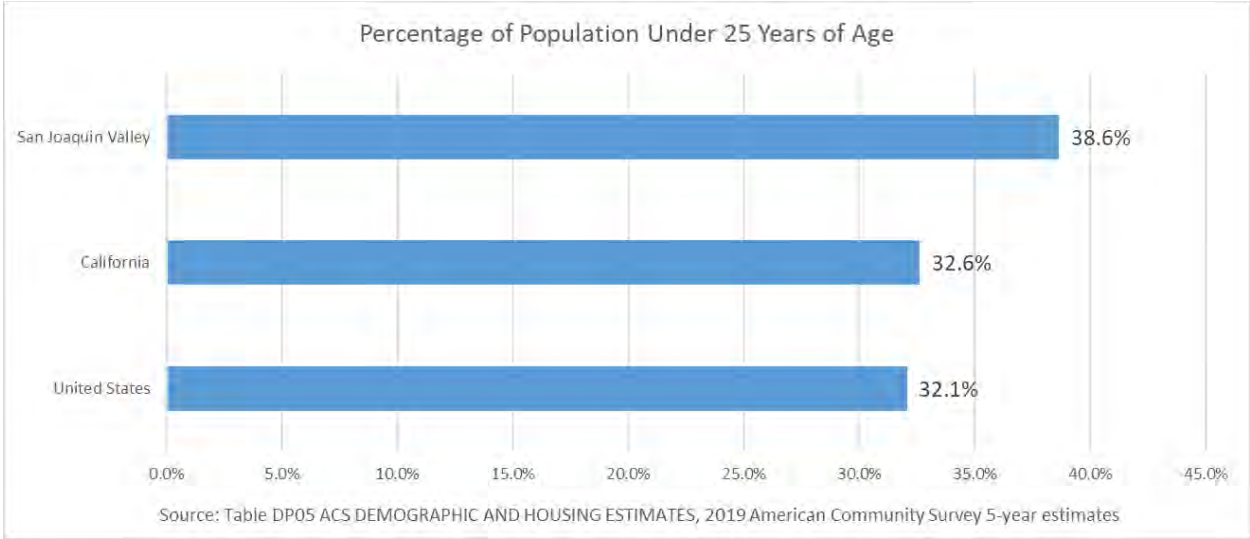
Figure 6 - 13: Federal Spending Comparison Chart



DEMOPGRAHICS

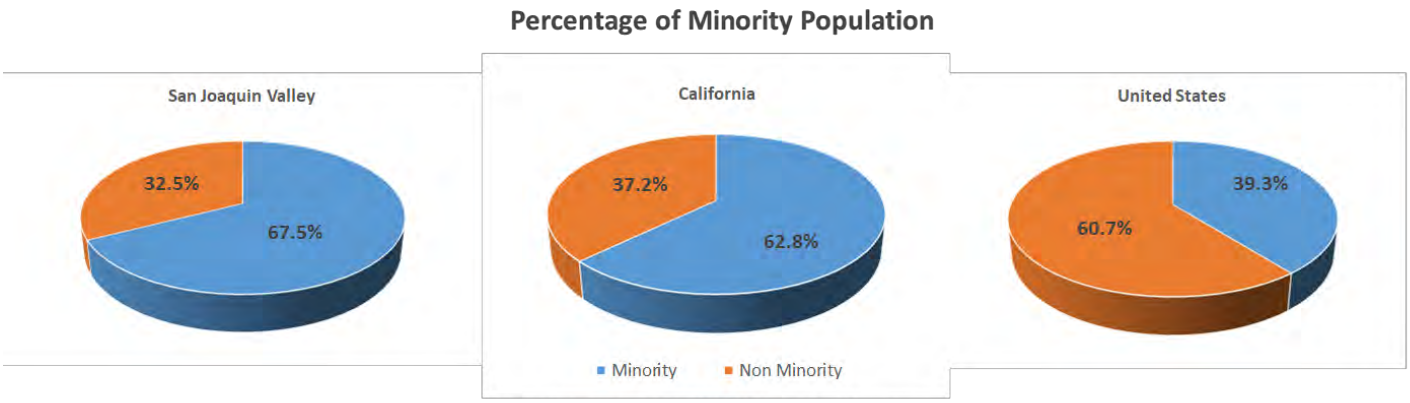
The Valley has a younger population than California as a whole and the United States. In 2019, 38.6% of Valley residents were under the age of 25 compared to 32.6% for California and 32.1% for the United States *[Figure 6-14].*

Figure 6 - 14: Percentage of Population Under 25 Years of Age



The residents of the Valley are more ethnically diverse than those of California and the United States. According to the 2019 American Community Survey, 67.5% of the Valley's inhabitants are minority (non-white), compared to 62.8% and 39.3% for the state and nation *[Figure 6-15].*

Figure 6-15: Percentage of Minority Population



Source: Table DP05 ACS DEMOGRAPHIC AND HOUSING ESTIMATES, 2019 American Community Survey 5-year estimates

2. VALLEY SUCCESS' IN PARTNERING AND PLANNING

The Valley's success' in partnering and planning has resulted in large improves for the SJV's residents. This section provides detailed insight to valleywide coordinated approaches. It is broken down into the three subsections listed below.

- Air Quality
- Sustainable Community Strategies
- Valley-Wide RTP/SCS Coordination Efforts

AIR QUALITY

Background

The San Joaquin Valley is one of the largest and most challenging air quality nonattainment areas in the United States. The SJV nonattainment area includes eight counties from San Joaquin County to Kern County on the Western border of the Sierra Nevada range. These counties represent a diverse mixture of urban and rural characteristics yet are combined in a single nonattainment area that violates federal health standards for ozone and particulate matter. Air quality monitoring stations continue to indicate that the San Joaquin Valley is among the worst polluted regions in the country. Since the eight counties are combined into a single nonattainment area, there is a coordinated approach for compliance with the federal Clean Air Act. That coordinated approach is essential in meeting the San Joaquin Valley's goal to provide clean air to all residents.

Coordination

On-going coordination with federal, state, and local partners has been, is, and will continue to be critical to the meeting the goal of providing clean air to all San Joaquin Valley residents. As one of the few multi-jurisdictional planning areas in the country, the individual decisions and actions of each of the San Joaquin Valley Regional Planning Agencies (RPAs) have the potential to affect the entire the SJV. This coordination process is critical to documenting compliance with the Federal Clean Air Act, as well as enabling the expenditures that build and maintain transportation infrastructure; investments which provide valuable jobs to San Joaquin Valley residents.

Transportation Conformity

The primary goal of the transportation conformity process is to assure compliance with transportation conformity regulations with respect to the requirements for Regional Transportation Plans (RTPs), Federal Transportation Improvement Programs (FTIPs), amendments, compliance with the California Environmental Quality Act (CEQA), implementation of applicable transportation control measures (TCMs), and applicable State Implementation

Plans (SIPs). Since coordination efforts have begun, the San Joaquin Valley RPAs have been successful in complying with conformity requirements for the 2004 TIP/RTP, 2006 TIP, 2007 TIP/RTP, 2011 TIP/RTP, and 2014 TIP/RTP. In addition, FHWA has determined that the SJV RPA planning processes substantially meet the federal planning requirements. TIP/RTP Amendments, including coordinated amendment cycles and development of valley-wide process to be federally approved.

Continued examples of the San Joaquin Valley RPA coordinated efforts with respect to transportation conformity include the following:

- Monitoring and testing of transportation model updates;
- Continued documentation of latest planning assumptions and compliance with the transportation conformity rule and corresponding guidance documents;
- Drafting of valley-wide procedures for RPA staff use, with detailed instructions from the execution of EMFAC to post-processing of emissions results consistent with applicable SIPS; and
- Preparation of boilerplate documentation, including draft public notices and adoption resolutions, as well as draft response to public comments.

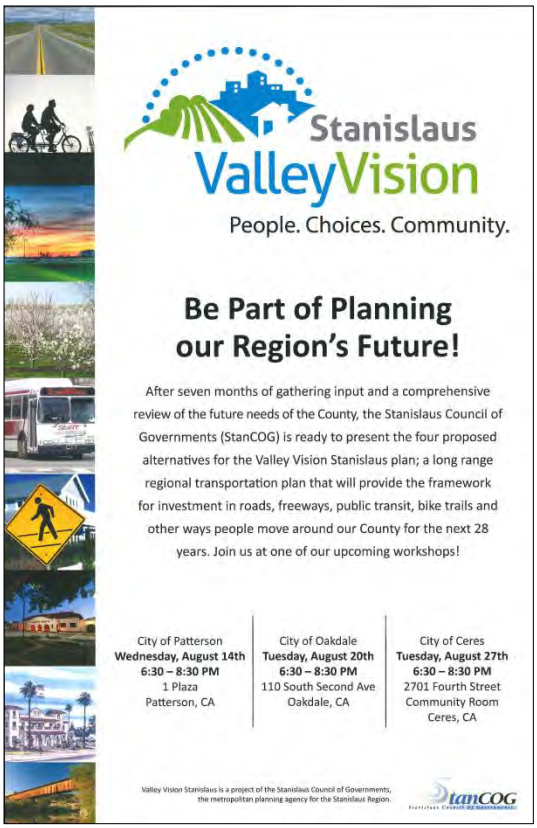
SUSTAINABLE COMMUNITIES STRATEGIES

California's Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Under the Sustainable Communities Act, the California Air Resources Board (ARB) sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, the ARB established these targets in the San Joaquin Valley as GHG reductions of 5% by 2020 and 10% by 2035. The ARB is currently in the process of setting the second round of targets for the regions. Under Senate Bill 375, each Metropolitan Planning Organization (MPO) in the State is required to develop a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) to demonstrate that, if implemented, the SCS will attain or exceed the greenhouse emission reduction targets. If the targets cannot be met, then an Alternative Planning Strategy (APS) needs to be developed. The SCS outlines the plan for integrating the transportation network and related strategies with an overall land use pattern that accounts for projected growth, housing needs, changing demographics, and forecasted transportation needs among all modes of travel.

For the San Joaquin Valley, each MPO is scheduled to approve their SCS as an element of their Regional Transportation (RTP/SCS) in 2018. Referred to as the RTP/SCS, each Valley COG has developed an investment strategy that outlines their region's transportation future through 2042. Each RTP/SCS in the Valley goes in-depth into the projects, policies, and strategies that will achieve compliance with state laws while delivering a financially constrained plan matching forecasted revenues with transportation demands. Some achievements of the collective RTP/SCS include:

- Provision of transportation and travel choices
- Improving safety, mobility, efficiency of the transportation system
- Maximizing economic competitiveness/economic vitality
- Facilitating goods movement
- Building healthy and active communities
- Improving the environment
- Providing a range of housing choices

Figure 6 - 15: Valley Vision



VALLEY WIDE COORDINATION ON RTP/SCS EFFORTS

Valley Visions

While SB 375 mandated individual development of the RTP/SCS, the eight MPOs in the San Joaquin Valley have had a history of collaboration in this process to share information, best practices, and foster consistent approaches to RTP/SCS development. The eight COGs participated in a joint grant proposal to the California's Strategic Growth Council for Proposition 84 funding. The grant was funded and launched as "Valley Visions" in the 2014 RTP/SCS process

Valley Visions was implemented as a series of planning efforts underway throughout the San Joaquin Valley. It took a big-picture look at how the Central Valley grows over time in a way that uses resources efficiently, protects existing communities, conserves farmland and open space, and supports the Central Valley economy, ultimately reducing future greenhouse gas emissions. The Valley Visions logo was provided to each COG to use and customize to their region if they wanted.

One of the tasks identified in the successful grant proposal was enhancement of the eight COG's individual public outreach efforts with a valleywide campaign. The project scope for this task included templates/written materials for customization, a media campaign to engage residents

and publicize outreach efforts (social media, newspapers, radio and/or TV), and to assist with the development of SB 375 required workshops and hearings.

Of particular note was an informational video on the SCS process provided in three languages: English, Spanish, and Hmong and the media campaign that was active during the months of August, September, and October 2013. The videos were made available on YouTube, with links on the Valley Visions web page (www.valley-visions.org).

Valley Visions is yet another example showcasing the successes in valleywide collaboration. The eight counties of the San Joaquin Valley coordinated some aspects of these planning efforts and maximized resources, while each area's Metropolitan Planning Organization (MPO) developed a separate plan. This effort helped the Valley COGs brand a consistent message about sustainability.

3. GOODS MOVEMENT

Figure 6 - 16: General Electric LNG Locomotive

Figure 6 – 17: Electric Hybrid Semi-Truck Technology

Figure 6 – 18: Federal Alt. Fuel Corridors

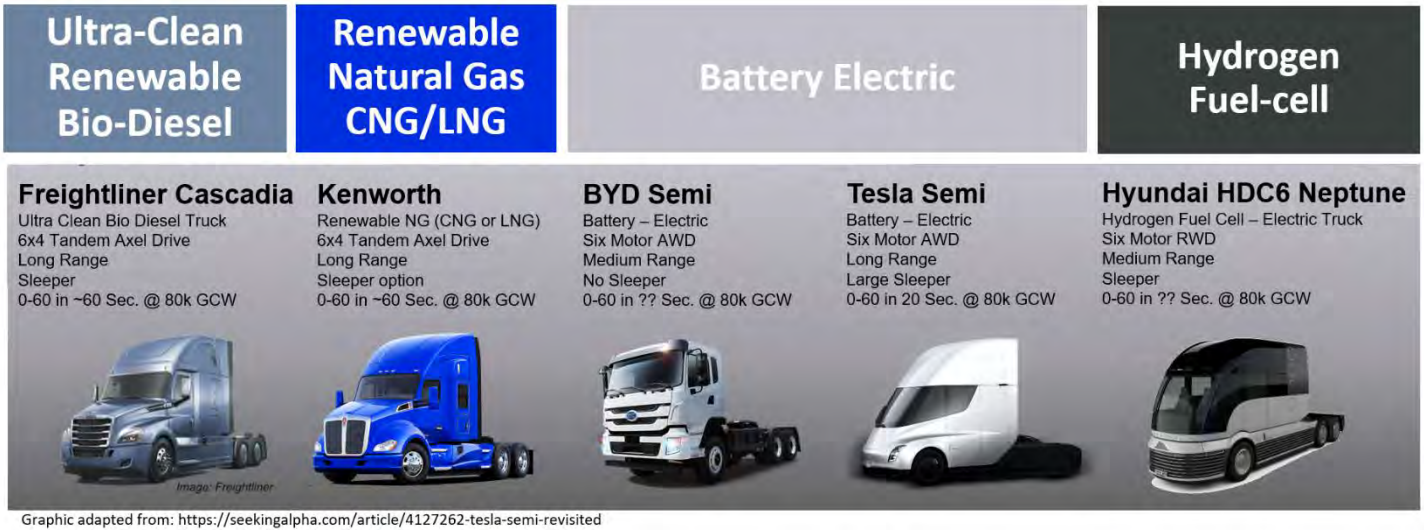
In the Statewide Goods Movement Action Plan, the California Department of Transportation (Caltrans) designated the Valley as one of the State's four major international trade corridors. The eight-county San Joaquin Valley (SJV) region is experiencing the demands of the modern global logistics system across a range of goods, from raw agricultural materials to consumer products. The critical role that the SJV plays in California and the nation's food supply will continue to require an effective goods movement system to distribute and export products quickly and efficiently. The growing regional population, and that population's growing expectations, will require increased attention to the safe and reliable movement of goods consistent with competing needs for infrastructure and greater sensitivity to emissions and congestion. Continued pressure on costs and profits is leading shippers and receivers to seek transportation efficiency gains wherever they can be found. Within the SJV, that goal translates to continual fine-tuning of logistics chains and transportation practices, and to a willingness to shift production and distribution facilities and activities to achieve the optimum combination. Due to its central location, relatively inexpensive land, labor force, and multimodal transportation system, the SJV has also become a major distribution point for international exports and consumer products. Prior to the recession, the Valley was the fastest growing population center in California and is poised to return to this position as the economy recovers. The San Joaquin Valley is also a better location—more central to West U.S. markets—for the return of overseas manufacturing, not to mention relatively better water availability for processing than in Southern California.

Many of the agricultural products that the San Joaquin Valley produces are exported through California's rail, marine and airport systems as well as using the highway and roadway systems to move commodities from farm—to processor/packer—to market. While Interstate 5 and State Route 99 are the two, primary north/south transportation arteries, SR 99 is the transportation

backbone of the San Joaquin Valley and is served by many significant east-west corridors such as SR 58, SR 120, SR 180, I-580 to 205, SR 152, SR 198, and SR 46. The SJV is also served by the Port of Stockton, the inland terminus for Marine 580.

The San Joaquin Valley, as a region, needs to effectively plan for efficient goods movement and successfully partner with the private sector, state and federal agencies to make necessary investments. A failure to effectively plan and invest could result in congested and poorly maintained highways, lost economic opportunities due to inadequate access to markets, land use conflicts between logistics-oriented business and growing communities, and poor air quality due to diesel emissions. Emphasis on system-wide efficiency, alternative fuel technology *[Figures 6-16 thru 19]*and a comprehensive goods movement system seem to have become key elements of competitive funding. It is anticipated these trends will continue to shape transportation policy and that future funding may emulate the approach of the state's Trade and Congested Corridor Programs funded through Senate Bill 1.

Figure 6 - 19: Emerging Clearer Medium/Long-Haul Semi-Truck Fleet Technology



Graphic adapted from: https://seekingalpha.com/article/4127262-tesla-semi-revisited

EMERGING TECHNOLOGIES/SYSTEMS

In addition to new clean trucking technologies, *Figure 6-20* illustrates battery-powered, autonomous-rail vehicle technology. This emerging technology promises to be an energy-efficient, zero-emission solution developed by a Southern California start-up, Parallel Systems, initially intended to serve short-haul rail routes less than 500 miles. The firm has a pilot project in Georgia with the parent company to the San Joaquin Valley Railroad (SJVR), hauling containers on existing rail and SJVR is interested in expanding the pilot to the Valley. The technology uses safe, wireless charging buried beneath the tracks between the railroad ties, and the vehicles can stop in 1/10th the distance of a normal train.

The San Joaquin Valley will continue to coordinate with Caltrans, CARB, and SJVAPCD to explore the possibility of developing a zero-emissions freight corridor along SR 99/I-5 or the parallel railroad corridors that connects SJV distribution and shipping with the Ports of L.A./Long Beach, Oakland and all points East. *Figure 6-21* illustrates potential rail corridors connecting a conceptual network of inland rail ports in the Valley to the seaports. Note that the emission savings are based on the older diesel truck standards and may not be as beneficial for combating Ozone and Particulate matter according to a draft CARB study.[1] However, rail remains 10 times more energy efficient and less carbon emitting than trucking, while providing a significant benefit to roadway maintenance and safety. It is also important to note that the California High Speed Rail when implemented would free up capacity on the BNSF mainline for freight currently being used by Amtrak.

[1] CARB, Draft Truck vs. Train Emission Analysis, 2020, https://ww2.arb.ca.gov/resources/fact-sheets/draft-truck-vs-train-emissions-analysis

Figure 6 - 20: Parallel Systems Electric Intermodal Rail Technology

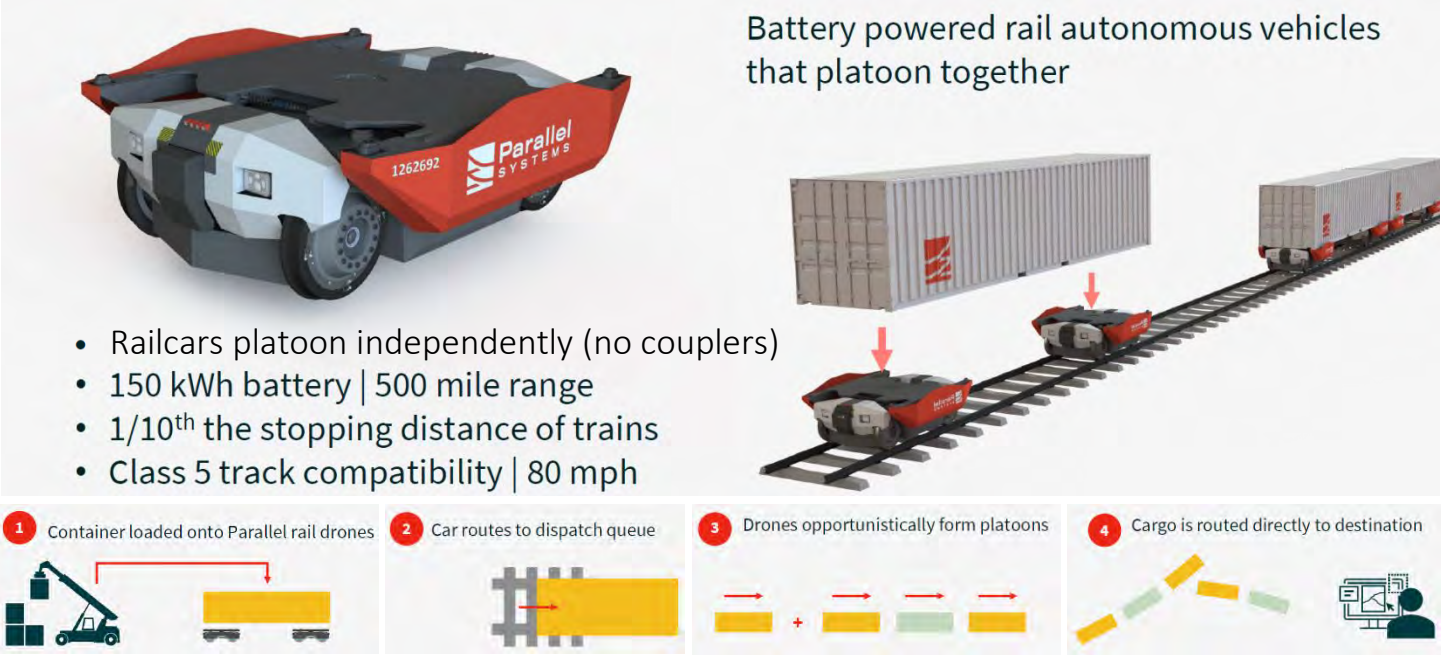
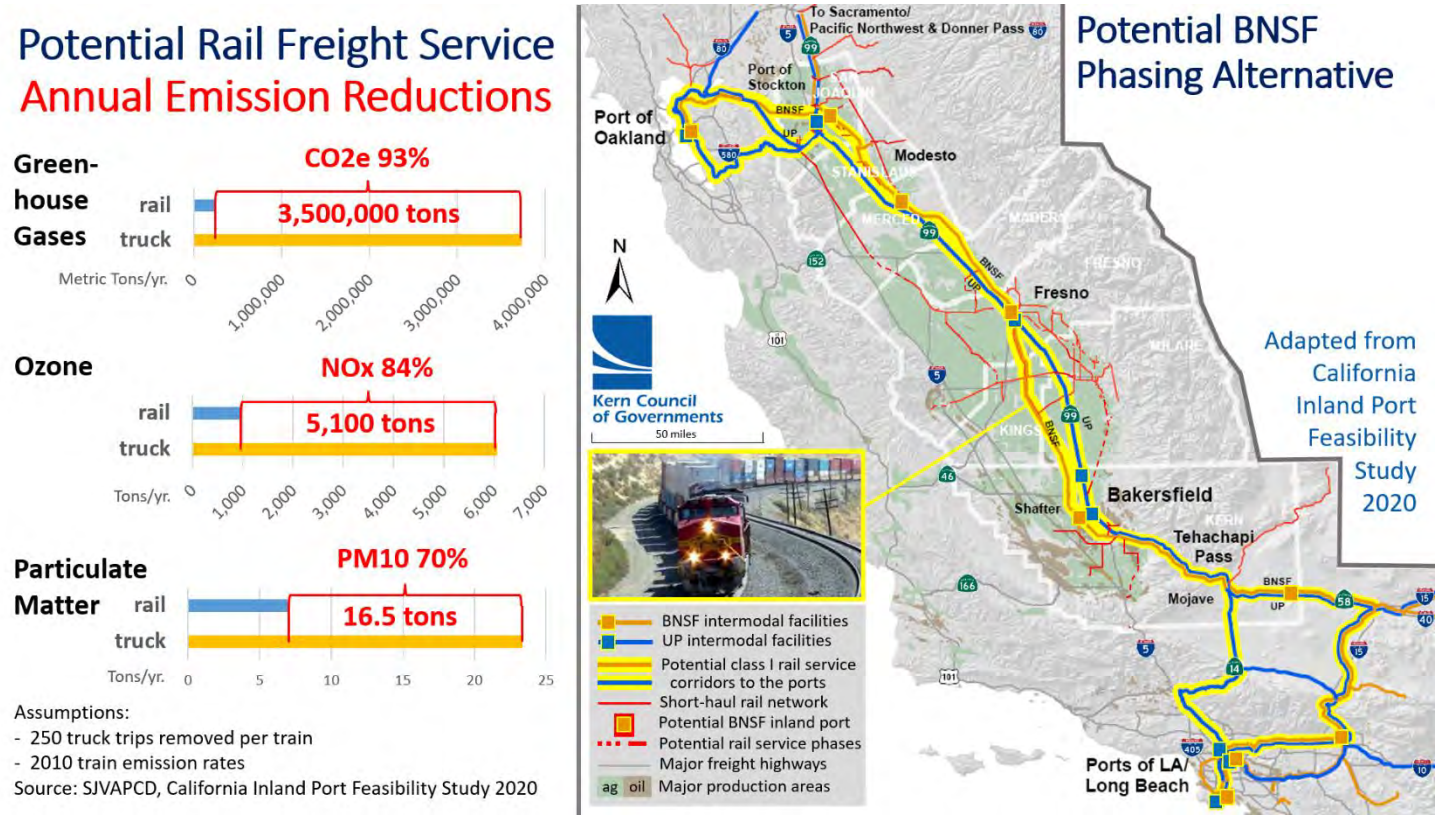


Figure 6 - 21: Potential Benefits of a California Inland Port Network for Rail Freight Shipments



BACKGROUND/ GOODS MOVEMENT STUDIES

Since 2007 the SJV region has coordinated on development of Goods movement plans, and identified freight flows for the region, including development of the San Joaquin Valley Truck Model tool and scenario testing. Since that time a number of goods movement studies have been completed that build on the previous work efforts and further refined the criteria and decision-making process while identifying vital goods movement networks for the multi-county region.

Previous and ongoing goods movement studies for the Valley:

- California Inland Port Study – Phase 2 (2023)
- Kern Area Regional Goods Movement Operations (KARGO) Sustainability Study – Phase 2 (2022)
- I-5 Freight Zero Emissions Route Operations (ZERO) Sustainability Study (2022)
- KARGO Sustainability Study – Phase 1 (2021)
- California Inland Port Feasibility Analysis – Phase 1 (2020)
- San Joaquin Valley I-5/SR99 Goods Movement Corridor Study (2017)
- San Joaquin Valley Goods Movement Sustainable Implementation Plan (2017)
- San Joaquin Valley Interregional Goods Movement Plan (2013)
- Updated State Route 99 Business Plan (2013)
- SR 223, 166, 119, 46 and 65 Truck Origin and Destination Studies (2011)
- East Side Business Plan (Short Haul Rail), Tulare County (2010)
- SR 58 Origin and Destination Truck Study (2009)
- Interstate 5 and State Route 99 Origin and Destination Study (2009)
- Draft San Joaquin Valley Regional Goods Movement Action Plan (2008)
- San Joaquin Valley Regional Goods Movement Action Plan (2007)
- California Interregional Intermodal System (CIRIS) Implementation Plan (2006)

Some of the recent goods movement studies are summarized below.

California Inland Port Feasibility Analysis (2020)

In a study led by the San Joaquin Valley Air Pollution Control District, a logistics consultant looked at the market for rail service between a system of inland ports and the ports in L.A./Long Beach and Oakland. The service envisioned a container unit train(s) that would travel the 500-mile route between the two seaports, make one or more stops in the San Joaquin Valley *[Figure 6-21].* The study showed enough freight to support 2 to 10 trains per week with 250 containers per train, with the highest number of trains traveling between the North Valley and the L.A./Long Beach Ports. The study also showed a potential market for transporting containers between the South Valley to the Port of Oakland, creating the potential for hauling containers both directions in a service that travels between both seaports.

Key Findings of the Market and Operating Cost Analysis:

- The current shipper market is quite robust, larger than most in the industry realized
- There are relatively balanced volumes for inbound and outbound cargos
- The northern portion of the Market Shed is very large
- The Preliminary Business Model suggests that a California inland port rail system can be feasible; but it is important to note that this is dependent on a range of critical factors and assumptions
- A significant number of issues need to be addressed for the project to advance and this needs to be reviewed in the context of a Developed Business Model
- The project requires close collaboration with the railroad companies and close coordination with the State of California
- The Inland Port would produce significant public policy benefits: 1) increased economic competitiveness, especially in the Central Valley region, 2) significantly reduced greenhouse gas air emissions, and 3) reductions in congestion and wear and tear of roadways
- The Inland Port will require public policy leadership from State government, air quality districts, counties and cities and seaports
- In the end, the Inland Port project would have a range of rather substantial economic and environmental impacts for markets and populations throughout the State.

By taking a certain portion of trucks off the road from this region, significant emissions reductions can be realized. Based upon the analysis done for this study, NOx emissions would be reduced by up to 83% while greenhouse gas emissions would be reduced by up to 93%. Moving large quantities of freight via rail provides significant benefits to the air quality of the region, as shown by the emissions reduction analysis section of this report. Additionally, by taking some of these trucks off the road, congestion on key transportation corridors such as I-5, 99 and 101 would be reduced, thereby improving the flow of traffic and the safety of the roadways in these regions *[Figure 6-21].*

San Joaquin Valley Goods Movement Sustainable Implementation Plan (2017)

The purpose of this study was to build on the work conducted in the SJV Interregional Goods Movement Plan and take the next steps to address issues raised in the SJV Interregional Goods Movement Plan (2013). This was accomplished by designating priority first and last-mile goods movement connectors and identifying any needed improvements to the connectors; identifying truck route and parking needs and strategies; identifying priority rural corridors; developing a framework for improving and maintaining the Valleywide truck model; and coordinating all of these efforts with the Valley Regional Transportation Planning Agencies' (RTPA) Sustainable Communities Strategies (SCS) and other planning efforts at the local, state, and federal level.

This study tackled several of the issues identified in the SJV Interregional Goods Movement Plan, including:

- Identifying high-priority, first- and last-mile connectors that emphasize improved connectivity to critical economic sectors. The study also identifies connector needs and recommends a plan of improvements and an approach to funding.
- Identifying areas of concern related to truck routing and parking and identifying truck route and parking needs and proposing policies, guidelines, and improvements to ensure truck routes are well planned, provide access and maintain continuity across jurisdictional lines. The study examined parking needs and shortages and proposes options to improving information about legal parking, encouraging the development and expansion of private truck stops and parking facilities, and identifying locations for new state or public parking facilities.
- Identifying rural and connecting urban priority corridors. This information will support the process by which the State will designate critical rural and urban corridors and their inclusion in the National Priority Freight Network as required by the FAST Act.
- Recommending improvements to the SJV goods movement model and a process to ensure that it is kept up to date with the best available data inputs and freight modeling best practices. To this end, the study developed a concept for institutionalizing freight modeling to support freight planning in the Valley so that good movement considerations become a part of the core analytical capabilities in each of the Valley Councils of Government. The revised model and supporting data can then be used to generate performance measures that are consistent with Federal and state guidance and that are linked to the SJV Interregional Goods Movement Plan Vision and Goals.

Connector Needs and Strategies

Performance metric data collected for select connectors revealed multiple needs that could improve safety and efficiency on connectors throughout the regional. Examples include:

- Improved signage for both passenger and commercial vehicle traffic.
- Safety analysis and improvement.
- Signal coordination on truck routes.
- Pavement quality improvements.
- Exploring design standards for heavy truck routes and connectors.

Truck Parking Recommendations

After reviewing previous reports and discussing the issue with public agencies, truck stop operators and truck drivers, several factors were identified that contribute to the truck parking problem in the San Joaquin Valley. The following recommendations to improve conditions should be considered:

- Planning and Funding
  - Improve data collection and analysis to have a better understanding of short-term and long-term parking demand.
  - Work with law enforcement to educate and train them about improved use of safe and available parking spaces.
  - Update plans and investment programs to include truck parking solutions, both for facilities and technology for truck parking information services.
  - MPOs should consider ways to incentivize land use decisions to facilitate private-sector expansion of existing facilities or opening of new ones.
  - Surplus public properties can be converted to truck stops.
  - Funding provided by FAST could be used to construct or expand truck parking facilities and deploy tools for commercial motor vehicle drivers to find safe, available places to park and rest.

- Demand Control
  - Policies that incentivize off-peak deliveries can reduce demand for long-term parking spaces.
  - Truck circulation is a problem in some older parking facilities that are not designed for larger trucks.
  - Shippers/receivers often demand that drivers leave the facility immediately after delivery.

Recommended Next Steps

The SJV Sustainable Implementation Plan has identified a system of truck corridors and connectors and recommendations for how to proceed with improvements on these roadways to address identified needs. In order to move forward with these recommendations, implementation actions should be taken in four key areas:

1. Taking steps to secure funding for near-term opportunities;
2. Conduct additional local analysis to prioritize corridor improvements, including truck parking;
3. Establish a process for regular input on connectors, priority corridors and truck routes; and
4. Work with Caltrans to adapt the statewide freight model for Valley applications.

Figure 6-22: SJV Freight Clusters

San Joaquin Valley I-5/SR99 Goods Movement Corridor Study (2017)

Interstate 5 (I-5) and State Route 99 (SR 99) play critical and unique roles as the major goods movement facilities in the San Joaquin Valley. At present, 92 percent of goods in the SJV are carried by truck, and this is not expected to change in the near future. I-5 and SR 99 carry the highest volumes of trucks in the SJV and in some locations, among the highest volumes in the state. This is a reflection of the traditional north-south orientation of freight flows in the SJV, associated with the through routing of trucks to connect the major coastal urban areas to the north and south of the SJV, the north-south orientation of the Valley's major urban centers, and the need to access major east-west interstate connections north and south of the San Joaquin Valley itself.

I-5 is the route that is favored for long-haul movements. It carries higher levels for through traffic and there has traditionally been less development along this route. However, new developments in warehousing and distribution centers and manufacturing are taking advantage of access to I-5. Increasing traffic that is being generated within the San Joaquin Valley uses I-5 for national

connections. SR 99 runs through each of the urban areas in the SJV and includes truck traffic distributing goods to/from these areas. It also provides connections to east-west routes that support the farm-to-market traffic and connections between farms and food processing that characterize the agricultural supply chain. It is the backbone of the intra-Valley goods movement and a major route for commuters who share the road with trucks in the urban centers.

A major effort and focus of this study involved identifying major truck generators in the San Joaquin Valley. This study identified seventeen major freight clusters responsible for a large percentage of truck trips within the SJV and to and from other regions in California *[Figure 6-22].* Each of these clusters consists of some combination of intermodal facilities, distribution centers, and/or large manufacturing firms. The clusters are distributed throughout the San Joaquin Valley, with four located in San Joaquin County, two in Stanislaus County, one each in Merced and Madera counties, one in Fresno County, one in Kings County, three in Tulare County, and four in Kern County.

- The San Joaquin Valley I-5/SR99 Goods Movement Corridor Study is divided into seven tasks, of which the Final Report incorporates Tasks 1, 2, 3, 4, and 7. Tasks 5 and 6 covered coordination in support of the other tasks. The Tasks covered in the Final Report are: Establish the need for streamlining goods movement.
- Name specific “pain points” and priorities for mitigation.
- Identify mitigating projects and programs.
- Identify mitigating projects and programs.
- Evaluate the feasibility of implementing projects and programs.
- Analyze potential for technical demonstration of specified technology.

GOODS MOVEMENT PROJECTS

The three key basis for selection of the projects are as follows: 1) they are located on I-5 or SR 99 corridors and would improve economic efficiency and productivity, alleviate mobility and safety related goods movement issues, as well as support the growth of agricultural and industrial land uses; 2) they are located on connectors between I-5 and SR 99 corridors and would meaningfully increase network redundancy and alleviate congestion on the SR 99 corridor, along which a majority of freight clusters are located; and/or 3) they are located on key ingress/egress routes of the San Joaquin Valley region and would likely enhance its economic opportunities of handling trade and logistics for the ports and large populations in the Bay Area and Southern California.

Information collected for the projects includes: 1) location and route, 2) project ID, 3) project title and description, 4) project type, 5) project cost, 6) timeline for implementation, and 7) source of project information. The following provides information about projects planned along I-5 and SR 99, as well as along some major east/west or north/south connectors between I-5 and SR 99 that may alleviate SR 99 congestion.

The projects with an implementation timeline of 0-5 years in each San Joaquin Valley County, including local updates since the 2017 Goods Movement Corridor Study, are as follows:

Fresno

- California High-Speed Rail Project-SR 99 Re-Alignment
- Mountain View and SR 99 Overcrossing: Widen Overcrossing and Improve Ramps
- NB SR 99 Herndon Off Ramp: Signalize & Widen Ramp
- Widen I-5 between Kings County and Merced County lines
- Widen SR 99 from 6 to 8 lanes from Central Ave to Bullard Ave.

Kern

- SR46: I-5 to Lost Hills Disadvantaged Community Safety Improvements/Gap Closure - Phase 4
- SR58, 46, 99, 14, 395, I-5 Federal Clean Transportation EV Charging/Alt. Fuel Corridors
- SR58 Centennial Corridor Gap Connector—Out of Direction Travel/VMT Reduction Project
- SR58 Tehachapi Grade Safety Improvements, Truck Climbing/Passing Lanes; HSR Realignment
- SR58 Safety Conversion of Expressway Segments to Freeway at SR 223 & California City Blvd
- Intermodal Rail Inland Port "Last-Mile" Connector Improvements (SR99, 43, 7th Standard Rd)
- Metropolitan Bakersfield Railroad Separation-of-Grade Safety Program

Madera

- SR99: 4-Lane Freeway to 6-Lane Freeway Ave 12 to Ave 17
- SR99: Madera 6 Lane
- SR99: Reconstruct Interchange
- SR99: South Madera 6 Lane
- Widen SR99: In Fresno & Madera Counties, from south of Grantland Ave UC to north of Avenue 7

Merced

- Highway 99: Livingston Widening Northbound
- Highway 99: Livingston Widening Southbound
- Widen SR 152 between SR 99 and US 101 (in Merced County)

San Joaquin

- I-5 at Louise Avenue Interchange
- I-5 at Roth Road Interchange
- Widen I-5 between SR 120 and I-205
- Widen I-5 from 1 mile north of SR 12 to SR 120
- Widen SR 99 from French Camp Rd to Mariposa Rd 6 to 8 lanes, with new interchange
- SR 99 at Austin Road Interchange

- SR 99 at Eight Mile Road Interchange
- SR 99 at Gateway Boulevard Interchange
- SR 99 at Main Street/UPRR Interchange (Ripon)
- SR 99 at Morada Interchange
- SR 99 at Raymus Expressway Interchange
- SR 99 at Turner Road Interchange Operational Improvements
- Widen SR 12 between I-5 and SR 99
- Widen SR 120 between I-5 and SR 99, with new interchange at SR 99

Stanislaus

- SR 99 Interchange Ramp and Auxiliary Lane Improvements
- SR 99 & Hammett Rd
- SR 99 & Briggsmore Interchange
- SR 99 Reconstruct Interchange at Fulkerth Road
- SR 99 Reconstruct to 8-lane Interchange - Phase II
- I-5 to Rogers Road: Interchange Improvements and Widen Sperry Ave
- Widen SR 99 from 6 to 8 lanes in Stanislaus County
- Widen SR 132 connecting SR 99 and I-580

Tulare

- State Route 99/Betty Drive Interchange

Kings County did not have any projects with an implementation timeline of 0-5 years.

Strategic Goals, Objectives, I-5/SR 99 Strategic Program

The study identified seven strategic goals with related objectives for the SJV region based on various state and regional transportation planning documents.

Strategic Goals, Objectives

- Improve Economic Competitiveness:
  - Vitalize/Revitalize commercial vehicle corridors.
  - Increase transportation choices for freight uses.
  - Improve access to key economic centers.
  - Reduce the cost of exporting products from the region, thereby increasing demand for those products and related processing/manufacturing jobs.
- Preserve Infrastructure:
  - Conduct preventative maintenance and rehabilitation on freight transportation system.
  - Maximize utilization of available supply for freight uses.
  - Manage freight demand within existing supply.
  - Preserve land for future freight uses.
- Improve Mobility and Travel Time Reliability:
  - Integrate multiple modes for freight uses.
  - Minimize congestion and increase operational efficiency for freight uses.

    - Increase network redundancy for freight uses.
- Improve Safety and Security:
    - Minimize crashes and damages for freight uses.
    - Improve operations on freight transportation system.
    - Improve incident management and network resiliency on freight transportation system.
    - Stay informed about the current level of threat to security on freight transportation system.
- Improve Environment:
    - Stay informed about the current commercial vehicle environmental laws and regulations and improve their enforcement.
    - Conserve energy and natural resources for freight uses.
    - Minimize commercial vehicle emissions.
    - Improve development and implementation of mitigation measures for freight investments.
    - Improving environmental justice for freight investments.
- Use Innovative Technology and Practices:
    - Develop commercial vehicle alternate fuel technology and fueling infrastructure.
    - Develop new commercial vehicle to commercial vehicle communications technology applications.
    - Develop new commercial vehicle operator information systems.
    - Develop institutional arrangements and business relationships to optimize freight transportation system usage and costs.
- Plan and Collaborate to Fund Investments:
    - Develop freight projects list, timeline for implementation and public funding gap information.
    - Conduct studies to evaluate benefits of key freight transportation system investments.
    - Coordinate with other public agencies and private sector for freight project or service development and associated land use planning.

CONCLUSIONS/THE FUTURE OF GOODS MOVEMENT IN THE SAN JOAQUIN VALLEY

The most recent statewide, regional, and local transportation plans were used to compile a master list of goods movement related projects and programs on I-5 and SR 99 corridors in the San Joaquin Valley region. These included projects on I-5 and SR 99, key connectors between the two corridors and key ingress/egress routes of the region that connect to I-80 via Sacramento Valley, San Francisco Bay Area, Central Coast, Southern California and I-40/I-15 corridors via Tehachapi Pass.

County level analysis of truck volume and peak period travel speed data on I-5 and SR 99 showed critical mobility and reliability issues on segments and critical freight access interchanges. County

level analysis of truck involved crash severity data on I-5 and SR 99 showed critical safety and reliability issues on segments and critical freight access interchanges.

The literature review on ITS solutions for truck parking showed options for real-time parking detection technologies, compared their physical and operational capabilities, and summarized past tested public-private-partnership opportunities for truck parking.

The California Inland Ports Feasibility Analysis has identified a potential business case for container rail service between the state's major seaports and the San Joaquin Valley with as many as 10 trains per week between the Northern San Joaquin Valley to the Ports of L.A. at 30 percent market saturation. The ability to divert truck trips to rail improves GHG emissions, reduces wear and tear on the highways, improves highway safety, and delays the need for interregional goods movement related highway capacity improvements. Fresno COG is leading phase 2 of the California Inland Port Study being funded by Caltrans. One of the recommendations of the Phase 1 study was the need to form a statewide inland port authority with representatives from the seaports, the inland port interests, affected state agencies, shippers, receivers, and the railroads.

Through the cooperative efforts of the San Joaquin Valley eight-county coalition and the goods movement planning efforts, the SJV is seriously looking at all the existing conditions, growth implications and environmental impacts on our communities to develop a strategic and comprehensive understanding and strategies for implementing an efficient goods movement system.

Throughout the goods movement planning process, public and private stakeholders have met and discussed the criteria and metrics for evaluating projects to enhance the socioeconomic status of the San Joaquin Valley via improvements in our transportation systems, especially the status of disadvantaged communities. During the planning process the regional planning agencies worked with regional freight stakeholders from throughout the SJV to understand the issues, challenges, bottlenecks, and opportunities of the Valley's multi-modal goods movement system, including a three-tiered stakeholder outreach process to public, private, and other freight system stakeholders.

The supply chain and logistics trends of key industries, their current needs, and how they will impact goods movement in the future based on travel modeling, as well as creating simplified supply chain diagrams to illustrate the transportation system needs of industries should be expanded.

The goods movement planning processes provides the eight-county region with data-driven, multimodal project lists that reflect the combined goods movement vision of the entire of the region.

4. VALLEY WIDE PLANNING EFFORTS

SAN JOAQUIN VALLEY REGIONAL POLICY COUNCIL

The eight valley Regional Transportation Planning Agencies have a long history of successfully coordinating and collaborating to address issues of regional significance in the San Joaquin Valley. This approach was formalized with the voluntary creation of the San Joaquin Valley Regional Policy Council (Regional Policy Council).

This Council was established in 2006 to discuss and build regional consensus on issues of SJV importance. In 2009 the San Joaquin Valley Air Pollution Control District was added as a member, and in 2021 the San Joaquin Joint Powers Authority was added, resulting in ten member agencies.

The Council consists of two elected officials and one alternate appointed from each of the eight regional planning agencies' governing boards in the San Joaquin Valley. This body provides a forum for our Valley to communicate and coordinate easily and effectively on issues that impact the region such as:

- Intercity Passenger Rail
- State Route 99
- Goods Movement
- Short Haul Rail
- Air Quality/Transportation Planning
- Valleywide Model Improvement Plan
- AB 32, SB 375 Implementation
- Regional Energy Planning
- Regional Transportation Plans
- Annual Policy Conference

In addition, the Regional Policy Council also fosters and supports the development of relationships between the San Joaquin Valley and the California Transportation Commission, the California Air Resources Board, the California Partnership for the San Joaquin Valley, Caltrans, Federal Highway Administration, and other state and federal agencies.

VALLEY VOICE

Valley Voice is a valley-wide advocacy program which consists of annual trips to Washington, D.C. and Sacramento.

The goals of the Valley Voice program are to:

- Communicate the Valley's legislative priorities.
- Obtain more state and federal funding for regional priorities.
- Advocate for legislation or changes to existing legislation that will benefit the valley.

The Valley Voice delegation is comprised of representatives from the San Joaquin Valley Regional Policy Council. Each year, the RTPAs develop state and federal legislative platforms that are reviewed and approved by the Regional Policy Council. The Washington, DC trip is typically scheduled in September, and the Sacramento trip is typically scheduled for February/March.

VALLEY VOICE SACRAMENTO 2021 – ISSUES

Build Out the System to Maximize Previous Investments

Aggressively pursue funding

- Complete the State highway network in our region. The Policy Council will remain diligent in competing for additional state funds, including COVID-relief stimulus, to complete gap closures to improve safety, congestion management, and goods movement projects. This includes building out SR 99 to a minimum of six lanes, consistent with the Caltrans adopted State Route 99 Business Plan, and addressing east-west connector routes such as Highways 41, 46, 120, 132, 198, and Interstate 205.
- Maintain funding eligibility for highway capacity projects to receive state funding. This includes the SB-1 competitive programs, as well as other state grant programs such as the State Transportation Improvement Prog

Pragmatically Address Air Quality and Mobility Goals Through Operational Improvements
Continue to partner with the State of California to implement innovative and strategic initiatives to meet air quality goals

- Electric Zero Emission Vehicles and Infrastructure - Governor Newsom's FY 2020-21 January Budget proposes $1 billion in zero-emission vehicle infrastructure and $465 million in rebates for ZEV purchases. The San Joaquin Valley needs a region-wide initiative to support this effort so that the residents of our disadvantaged communities can afford the cost of electric vehicles and have access to electric vehicle charging stations.
- Create greater incentives for businesses to expand or relocate to help reduce vehicle miles traveled, given that thousands commute from the Valley into the Bay Area and LA

Basin on a daily basis. Increase broadband access and other incentives to encourage telecommuting.

- Support movement of freight by rail to ease congestion and enhance safety.
- Provide adequate funding to replace heavy duty equipment.

Transit Funding Reform

Support potential changes to the Transportation Development Act that will assist local public transportation systems with funding eligibility

- The Policy Council will continue to monitor the CTA TDA working group and support modifications to the TDA process as appropriate to ensure that transit operators are provided with flexibility to continue accessing funding to maintain and expand service.

Enhance Passenger Rail Infrastructure and Service

Provide enhanced passenger rail service connecting the San Joaquin Valley to the Bay Area and Southern California. Maintain and increase funding for commuter and intercity passenger rail.

- The Policy Council supports increases in funding from CalSTA through the State Rail Assistance and Transit Capital and Intercity Rail Program in support of all passenger rail in the San Joaquin Valley.

VALLEY VOICE WASHINGTON DC 2021 – ISSUES

State Route 99

State Route 99 – also known as the backbone of California – is a major goods movement state highway connecting southern and northern California through the major cities of the San Joaquin Valley. SR 99 is on the National Primary Freight Network and has high truck volumes. Lack of capacity for SR 99 results in congestion, fatal accidents, and poor air quality.

The Valley Voice delegation encourages Congress and the Administration to support robust federal investments for this critical corridor.

Reauthorization Policy Principles

Valley Voice supports passage of a multiyear surface transportation reauthorization such as the Infrastructure Investment and Jobs Act (IIJA). Understanding that the House is likely to consider that bill without further amendment, we urge members of our congressional delegation to make use of the budget reconciliation process to advance the following policy priorities and secure additional federal resources for our local needs:

- Investments in water infrastructure and storage capacity.
- Robust investments in emissions reduction such as the Congestion Mitigation and Air Quality
- Improvement Program (CMAQ) and Surface Transportation Block Grant (STBG) Program.
- Investments in passenger rail, electric vehicle (EV) infrastructure, clean vehicles, and climate
- resiliency programs.
- Investments in agriculture conservation, drought, and forestry programs to prevent wildfires.
- Investments in workforce development and job training.

Support Pending Federal Grant Applications

The Valley Voice delegation encourages Congress and the Administration's support for the following projects seeking federal grant assistance through programs administered by the U.S. Department of Transportation:

- State Route 99 Madera South---Operational Improvement Project
- California Inland Port Study
- North Lathrop Transfer Station and Lathrop Wye Project
- West Coast Electric Highway Corridor
- Kings County Zero---Emission Fleet Conversion Project

OTHER COLLABORATIVE PLANNING EFFORTS

For decades the Valley RTPAs have explored the mutual benefits and economies of scale in working together on voluntary planning efforts. Oftentimes the funding for these projects is the result of a successful grant application that is submitted on behalf of all the Valley RTPAs. Developing the themes and consensus for the grant application requires a high level of coordinated effort between the Executive Directors and the governing boards. Some impressive examples of this voluntary collaboration between the Valley RTPAs include the San Joaquin Valley Blueprint, the San Joaquin Valley Greenprint, and the San Joaquin Valley Tribal Transportation Environmental Justice Study. Each of the above-named studies represents countless hours of conference calls, face to face meetings, working with Valleywide and local stakeholders, and often times retaining a subject matter consultant(s) between the Valley RTPAs to develop a specific product.

The San Joaquin Valley Blueprint is an outstanding example of this voluntary collaborative planning effort. A commitment to work together and submit a grant application in 2006 grew into a seven-year cooperative valleywide and regional planning effort to identify smart growth strategies for the Valley communities. This planning effort involved all levels of government and the opportunity for local citizens in all eight counties to participate. From this unprecedented level of outreach, several other planning efforts have emerged and continue to gain momentum. As a counterpart to the San Joaquin Valley Blueprint, the San Joaquin Valley Greenprint explored how to best preserve the vast productive acres of farmland and vital habitat in the region.

As part of the latter Blueprint effort, the Valley RTPAs worked with several other agencies to create the Blueprint Awards program. This award program began in 2010 and is used to recognize the outstanding achievements, the greater aesthetics or progressive details as demonstrated in a sustainable development project.

San Joaquin Valley Household Travel Survey

The San Joaquin Valley Household Travel Survey (VHTS) is another joint effort by the eight Valley MPOs. According to the federal conformity requirements, the travel models used by MPOs to demonstrate air quality conformity cannot be more than 10 years old. Many models in the SJV are close to 10 years old and need an update in a couple of years. The VHTS will collect travel data needed for the model update. Such data includes household demographic information, travel patterns and trip making characteristics. Week-day travel data will be collected with a targeted number of surveys for around 6,700 household in the San Joaquin Valley. A final report with detailed travel characteristics summary for each county in the SJV will be developed at the conclusion of the project. All the survey data collected will also be delivered to the Valley MPOs for integration into their travel demand models.

California Inland Port Feasibility Analysis Preliminary Business Model

The Valley MPOs are continuously evaluating infrastructure needs and developing project priorities, strategic programs, and policies to guide goods movement planning in the region. In 2019, the Central Valley Community Foundation initiated a California Inland Port Feasibility Analysis. The outcome of this study was a California Inland Port Feasibility Analysis Preliminary Business Model report, completed on April 8, 2020 which concluded that a San Joaquin Valley inland port would support new job creation and investment growth by repositioning the economic competitiveness of the SJV with a more robust and efficient distribution system and direct rail service to and from the deep-water seaports. The costs for shippers that manage global supply chains would be reduced, and the SJV would become much more attractive to high-value manufacturing sectors.

The MPOs in the San Joaquin Valley have each contributed toward the study to help advance the project to the next phase which will analyze the feasibility of developing a new, intermodal rail spine to connect seaports to key markets via the San Joaquin Valley. This California “Inland Port”

system would cut greenhouse gases, significantly improve air quality, reduce road congestion, boost traffic safety, and advance California's extraordinarily large intra-state freight movement system, and develop a business proposition for the railroad companies and the State for action and investment.

In conclusion, the San Joaquin Valley Regional Transportation Planning Agencies have a strong history of working together on other collaborative voluntary planning efforts and will continue to do so as resources allow.

5. VALLEY SUCCESS IN IMPLEMENTATION

PASSENGER RAIL IN THE SAN JOAQUIN VALLEY

Figure 6 - 23: Amtrak San Joaquins Route

Passenger rail service has been an area of extensive activity for the San Joaquin Valley with two existing services currently operating and the first segment of the California High-Speed Rail System under construction, which began in Fresno in 2015. The two existing passenger rail services include the Amtrak San Joaquins route that runs the length of the San Joaquin Valley and the Altamont Corridor Express (ACE) that connects the northern San Joaquin Valley with the San Francisco Bay Area.

The Amtrak San Joaquins route provides service from the San Francisco Bay Area and Sacramento through the SJV to Bakersfield. The San Joaquins runs multiple times daily between the San Francisco Bay Area (or Sacramento) and Bakersfield, where Amtrak Thruway buses connect to Southern California destinations. Other stops along the way include Stockton, Modesto, Merced, Martinez, and Fresno. Thruway bus connections to San Francisco are made at Emeryville. The seventh daily round trip of the San Joaquins was added on June 20, 2016, which was the first new round trip between Oakland and Bakersfield in 22 years.

Figure 6 – 24: Altamont Corridor Express (ACE) Route

The Altamont Corridor Express (ACE) is a commuter rail service that connects Stockton to San Jose. The ACE service is named for the Altamont Pass, through which it runs. The 86-mile (138 km) route includes ten stops, with travel time about 2 hours and 12 minutes end-to-end. ACE runs four round trips daily with annual ridership of 1.5 million passengers. ACE trains depart Stockton in the morning with return departures from San Jose in the afternoon. ACE service has ten stations through San Joaquin, Alameda, and Santa Clara County with bus connections to other transit including Bay Area Rapid Transit (BART) in Pleasanton.

After breaking ground in 2015, construction of the California High-Speed Rail is well underway in the San Joaquin Valley. The California High-Speed Rail System will be the first high-speed rail system in the nation. The California High-Speed Rail Authority ("Authority") is proposing an Initial Operating Section (IOS) from Merced to Bakersfield. The Merced to Fresno Project Section is part of the first phase of the high-speed rail system. The Authority plans to begin operations of service by the end of 2028 at which time Merced will become the southern terminus for San Joaquins Amtrak rail service. This project section is approximately 171-miles and generally parallels the Union Pacific Railroad (UPRR) tracks and State Route 99 between Merced and Fresno with stations in downtown Merced, Madera, Fresno, Hanford and Bakersfield. The system will eventually extend to San Jose, Sacramento and San Diego, totaling 800 miles with up to 24 stations. In addition, the Authority is working with regional partners to implement a statewide rail modernization plan that will invest billions of dollars in local and regional rail lines to meet the state's 21st century transportation needs.

COORDINATION

Figure 6 - 25: California High-Speed Rail Statewide Rail Modernization

The Central Valley Rail Policy Working Group

Coordination of passenger rail service in the San Joaquin Valley has involved a significant number of stakeholders from the local, state, and federal agencies to the private railroads and public. The Central Valley Rail Policy Working Group consists of 20 agencies and has been involved in coordinated planning for passenger rail service between Merced and Sacramento since 2006.

Recent activities of the Central Valley Rail Policy Working Group have included support of the High-Speed Rail Authority (HSRA) in the implementation of high-speed rail through the SJV and the San Joaquin Valley Joint Powers Authority (SJPPA) in support of enhanced San Joaquins Amtrak service. These activities have involved:

- Partnering with the HSRA throughout the project development process
- Providing guidance on local issues, development plans, and policies
- Assisting in developing and evaluating alternatives
- Participation in public involvement activities and events
- Serving as liaisons to local communities
- Supporting Amtrak service expansion to 9 daily round trips in the San Joaquin Valley
- Expanding through-way bus services
- Support of the Valley Rail Sacramento Extension Project

San Joaquin Joint Powers Authority

A short-term goal for the service outlined in the 2021 SJJPA Business Plan is to increase to nine daily round trips and double trips from Stockton to Sacramento from two to four daily trips.

With the passage of Assembly Bill (AB) 1779 in August 2012, regional government agencies were authorized to form the San Joaquin Joint Powers Authority (SJJPA) to take over the administration and management of the existing Amtrak San Joaquins Rail Service from the state. The SJJPA was established in March 2013 and is comprised of ten Member Agencies that make up the SJJPA Board including: Alameda County, Contra Costa Transportation Authority, Fresno Council of Governments, Kings County Association of Governments, Madera County Transportation

Commission, Merced County Association of Governments, Sacramento Regional Transit, San Joaquin Regional Rail Commission, Stanislaus Council of Governments and Tulare County Association of Governments. An Interagency Transfer Agreement between the SJJPA and the State was signed on June 29, 2015. Under the provisions of AB 1779, the state will continue to provide the funding necessary for service operations, administration and marketing. Furthermore, Caltrans Division of Rail and Mass Transit will remain responsible for the development of the Statewide Rail Plan and the coordination and integration between the three state-supported intercity passenger rail services.

The primary role of SJJPA is the day-to-day management of the San Joaquins Amtrak System. The SJJPA will be responsible for managing the High-Speed Rail IOS for the Merced to Bakersfield Segment. Recent activities of the SJJPA have included focusing on short-term service improvements , pre of the High-Speed Rail Authority (HSRA) in the implementation of high-speed rail through the Central Valley and the San Joaquin Valley Joint Powers Authority (SJPPA) in support of enhanced San Joaquins Amtrak service. These activities have involved:

- Supporting Amtrak service expansion to 9 daily round trips in the San Joaquin Valley
- Expanding through-way bus services with a variety of transit services providers
- Advancing renewable diesel engine initiative for commuter rail emission reduction
- Relocation of the Madera's Amtrak Station
- Reducing overall run times between Bakersfield and Norther California destinations
- Launching Merced to San Jose Thruway Bus Route Pilot Program
- Strategic Integration with High-Speed Rail service
- Merced Intermodal Track Connector (MITC) Project
- Stockton Diamond Grade Separation Project
- South of Merced Planning Studies

Looking Forward

Figure 6 – 26: ACEforward Proposed Service

Senate Bill 132 was adopted in April 2017, assigning $400 million for the purpose of extending the Altamont Corridor Express into Ceres and Merced by the year 2027. Senate Bill 132 aligns with the San Joaquin Regional Rail Commission (SJRRC) Valley Rail Ceres-Merced Extensions planning effort, which supports both the enhancement of exiting ACE service between Stockton and San Jose as well as extend ACE service to Manteca, Modesto, Turlock and Merced. The Ceres-Merced Extension effort has involved extensive coordination through the Central Valley Rail Policy Working Group with the hope to realize portions of the ACE service extension to Merced by as early as 2025. The San Joaquin Valley transportation partners will also

continue to work with the California HSRA to support the implementation of high-speed rail within the SJV as the initial operating phases are complete and services are initiated.

The Valley Rail Sacramento Extension Project would expand Amtrak San Joaquins and Altamont Corridor Express (ACE) passenger rail services to the greater Sacramento area through the construction of six new rail stations and track improvements along the Union Pacific Railroad (UPRR) Sacramento Subdivision train tracks. The Project includes the potential implementation of two new roundtrips of San Joaquins service operating on the Sacramento, Fresno, and BNSF Stockton Subdivisions, as well as an extension of existing ACE service to the proposed Natomas Station. The Project also includes service from the proposed Natomas Station to the Ceres ACE Station included in the ACE Extension Lathrop to Ceres/Merced project. The six new stations would be constructed in the following locations: Lodi, south Sacramento (to be named the "North Elk Grove" station), City College, Midtown Sacramento, Old North Sacramento, and Natomas/Sacramento Airport (with a shuttle connection to and from the Sacramento International Airport).

Proposition 1B, Senate Bill 1 and State Route 99 Bond Program

The State Route 99 Business Plan has focused mainly on major facility improvements that would typically be funded through the State Transportation Improvement Program (STIP) or similar federally funded programs. The Business Plans establishes a strategic approach to achieving the functional goals for the corridor predicated on the Interregional Transportation Strategic Plan, Transportation Concept Reports, Corridor System Management Plans and Regional Transportation Plans. The most significant obstacle to improving State Route 99 has been insufficient funding. Neither the STIP nor the SHOPP have had funding levels adequate to maintain, much less, improve State Route 99.

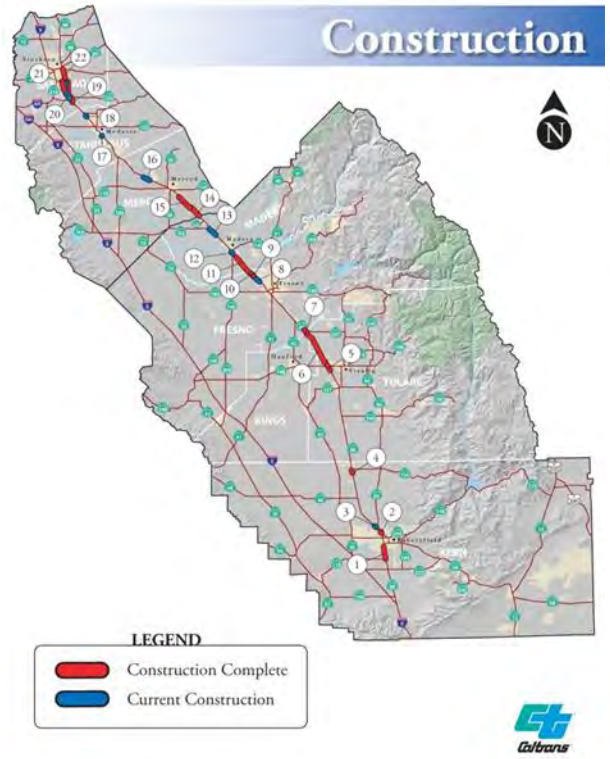
California's Proposition 1B Transportation Bond Measure of 2006 contained nearly $20 billion in funding for transportation projects. $1 billion for State Route 99 was included in Proposition 1B however the amount made a small dent in the nearly $6 billion in immediate needs identified in Caltrans' 2020 State Route 99 Business Plan. Far greater funding is needed, however, to bring the "Main Street" and the primary goods movement corridor of the San Joaquin Valley up to a full six lanes from Bakersfield to Sacramento. Widening to at least six lanes has been a long-term goal of the Valley and is necessary to accommodate the forecasted growth and avoid major congestion problems along the SR 99 corridor in the future. As the Proposition 1B program nears its sunset date, the recent update of the SR 99 business plan paints a clear picture of the continuing needs for upgrading and improving the roadway and interchanges.

In anticipation of the expiration of Proposition 1B, Senate Bill 1 (SB 1) the "Road Repair and Accountability Act of 2017" was signed into law in 2017. The SB 1 package augmented the SHOPP and the STIP funds and contained statewide grants. While the SHOPP was most greatly reinforced by SB 1, the STIP was also replenished. Before SB 1, the California Transportation Commission (CTC) needed to cut and delay $1.5 billion in STIP projects due to lack of funding, including State Route 99 projects identified in the Business Plan. With the passage of SB 1 the funding is

stabilized. Grant programming in the SB 1 package includes the Trade Corridor Enhancement Program (TCEP) that distributes $300 million annually for projects related to transportation infrastructure vital to California's trade and freight economy.

SB 1 adds $54 billion in funding over 10 years to the state's transportation budget. Caltrans will receive half of SB 1 revenue: $26 billion. The other half will go to local roads, transit agencies, and an expansion of the state's network of pedestrian and bicycle routes. Over 10 years, SB 1 will allocate $15 billion to improve the condition of the state highway system, with an additional $4 billion to fix or replace bridges and culverts. The new revenue from SB 1 gives Caltrans a massive boost in addressing safety projects, deficiencies, and deferred maintenance. Yet, according to the CTC, the program is oversubscribed by $52.1 million for counties in the San Joaquin Valley.

Figure 6 – 27: State Route 99 Business Plan



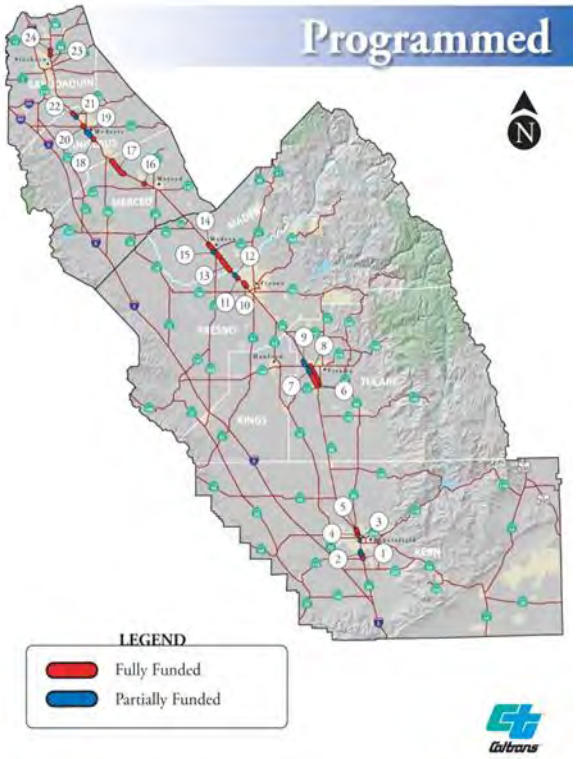


Figure 3.6
Status of Priority Category 2 Candidate Projects:
Major Capacity Increasing Improvements
(Capital Costs Greater than $8 million)

Caltrans

In 2013, Caltrans and the 8 Valley MPOs completed the second update to the 99 Business Plan. Here are the highlights:

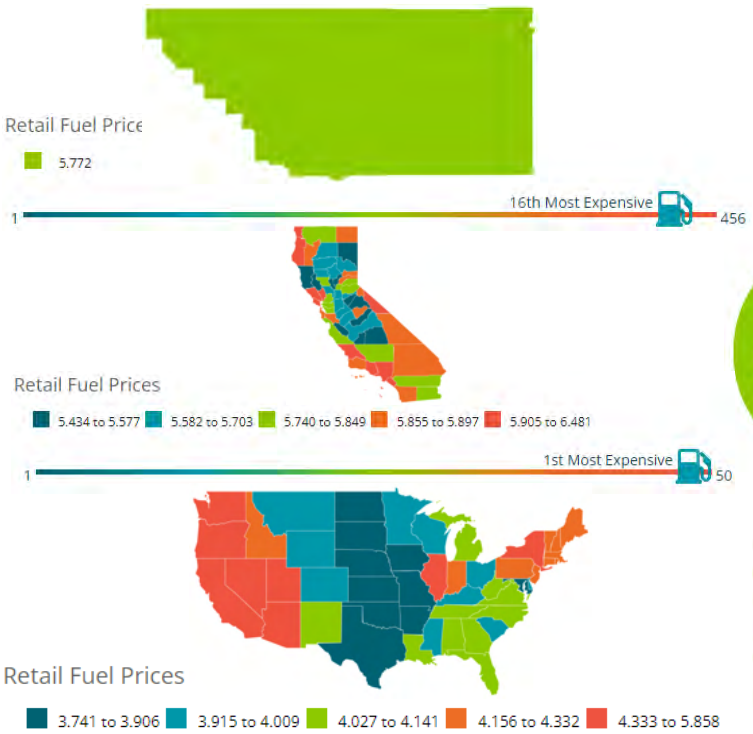
- $1Billion funded by Proposition 1B
- Construction/Complete - 20 Projects - $1.3 Billion funded
- Programed/Partially Funded - 24 Projects - $1.4 Billion funded
- Candidates Remaining - 19 Major Projects - $3.5 Billion unfunded
- New Emphasis on operational improvements including: carpool facilities / ramp metering, reduced truck congestion , 511 Travel Info System, CalVans public vanpool service, privately subsidized express bus service saving 1.4M VMT/yr, new park & ride lots.

APPENDIX G

CIP EXPENDITURE PLAN BY SUB AREAS

KERN FUEL PRICE FACT SHEET - MARCH 2022

Kern average price for regular gasoline is currently $1.51 /gallon higher than the national average.



LIVE TICKING AVG as of 1:40 PM EST 03/22
$5.749 /gal
Bakersfield - CA

LIVE TICKING AVG as of 1:35 PM EST 03/22
$5.859 /gal
California

LIVE TICKING AVG as of 1:25 PM EST 03/22
4.238 /gal
United States

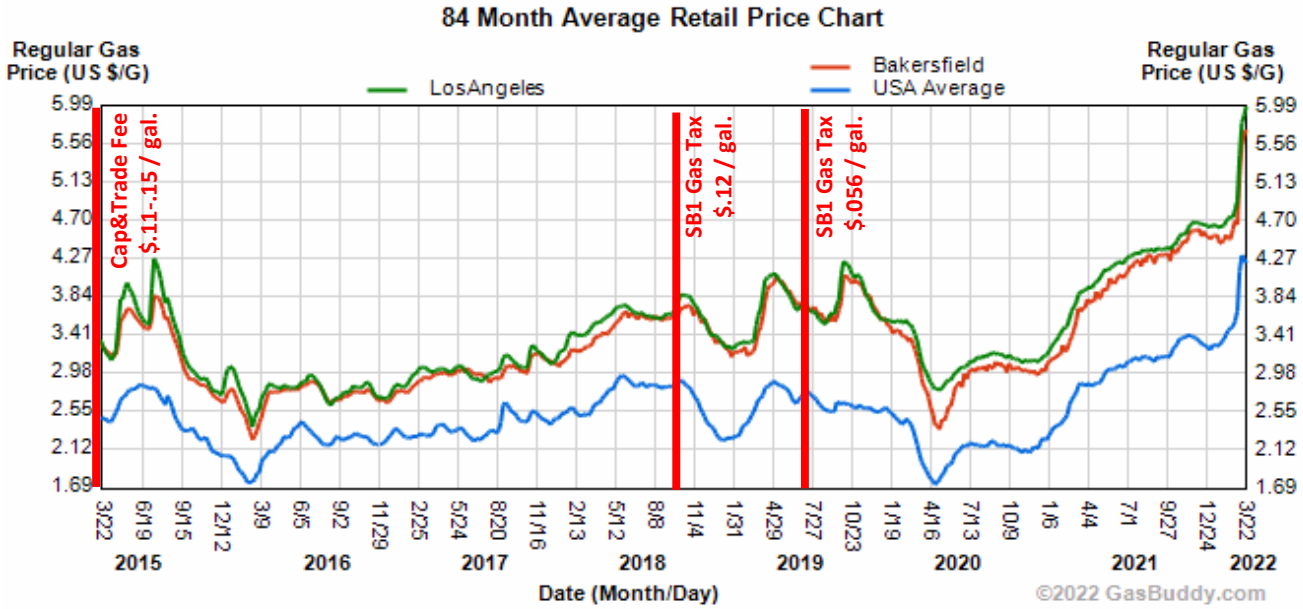
Regular Unleaded Gas Prices Compared to the Live Ticking Average:

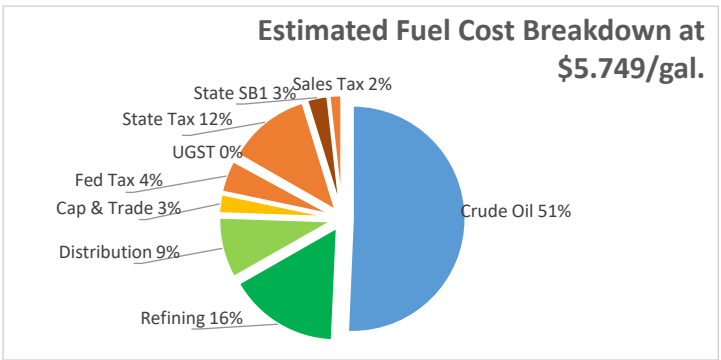
- Prices are Up 2.2 ¢ from Yesterday's Avg* of $5.727
- Prices are Up 9.0 ¢ from Last Week's Avg* of $5.659
- Prices are Up 114.3 ¢ from Last Month's Avg* of $4.606
- Prices are Up 201.2 ¢ from Last Year's Avg* of $3.737

- Prices are Steady + 0.4 ¢ from Yesterday's Avg* of $5.856
- Prices are Up 9.2 ¢ from Last Week's Avg* of $5.768
- Prices are Up 112.2 ¢ from Last Month's Avg* of $4.738
- Prices are Up 197.8 ¢ from Last Year's Avg* of $3.882

- Prices are Down 0.0 ¢ from Yesterday's Avg* of 4.248
- Prices are Down 0.1 ¢ from Last Week's Avg* of 4.315
- Prices are Up 0.7 ¢ from Last Month's Avg* of 3.54
- Prices are Up 1.4 ¢ from Last Year's Avg* of 2.876

https://fuelinsights.gasbuddy.com/





$5.75/Gal. Gas	
Crude Oil	$2.36
Refining	$1.79
Distribution	$0.47
Cap & Trade	$0.13
Fed Tax	$0.18
UGST	$0.02
State Tax	$0.57
State SB1	$0.12
Sales Tax	$0.11
Fuel Cost	$5.75
Tax-Fee Rate	17.4%
Tax-fee/Gal.	$1.00

DRAFT COUNTYWIDE TRANSPORTATION EXPENDITURE PLAN - Next 20+ Years Existing Tranportation Revenue + Potential New Revenue: California's Public Utilities Code Section 180206(a) states, "A county transportation expenditure plan shall be prepared for the expenditure of the revenues expected to be derived from the tax imposed pursuant to this chapter, together with other federal, state, and local funds expected to be available for transportation improvements..."		**Transportation Revenue Programs (existing + potential new)**					
		Early Expenditures					
		Fix-It-First, Keep-It-Local / Cost-Efficient street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control Measures (TCMs)	**Advanced Tech, Safe, Clean Transportation** safer; healthy; efficient; air quality; pedestrian; bicycle; senior/disabled and advanced tech transit; transportation enhancements	**Ready-To-Go, Regional Projects** first 1-15 years of the plan - Includes major roadway and other major projects funded in the RTP ready or nearing readiness	**Early Expenditure Total** Fix-It-First, Advanced Tech, Ready-To-Go; all funding sources	**Next-In-Line, Regional Projects** reinvests anticipated cost savings as projects are environmentally cleared, designed and made ready; unfunded projects identified in the RTP/CIP	**Total Expendatures All Programs** all funded and unfunded projects
	notes	**Annual Over 20 Year Period ($ estimates x 1,000)**					
Revenue	LOCAL funds available from existing sources	1	$119,115	$7,055	$80,470	$206,639	$0	$206,639
	STATE funds available from existing sources	1	$31,250	$30,150	$49,250	$110,650	$0	$110,650
	FEDERAL funds available from existing sources	1	$13,600	$22,980	$31,504	$68,084	$0	$68,084
	TOTAL funds available from existing sources	1	$163,965	$60,185	$161,224	$385,374	$0	$385,374
	Potential new revenue	1	**$42,500**	**$10,300**	**$33,128**	**$85,928**	**$0**	**$85,928**
		1	49.5%	12.0%	38.6%	100.0%		
	50% increase in leveraged new state and federal matching funds	2	$0	$5,150	$16,564	$21,714	$0	$21,714
	13% cost savings from inflation (building 5 years sooner)	3	$0	$0	$25,225	$25,225	$0	$25,225
	New revenue leverages 50% more funds		$0	$5,150	$41,788	$46,938	$0	$46,938
	Total existing and potential new revenue sources		**$206,465**	**$75,635**	**$236,141**	**$518,240**	**$0**	**$518,240**
			39.8%	14.6%	45.6%	100.0%		
Expenditures	**Needed to improve road conditions and lower maintenance cost (80+ PCI in 20 years)**	4	-$124,398	$0	$0	-$124,398	$0	-$124,398
	15% cost savings from pavement technology (higher up-front cost/cheaper longterm)	4	-$1,393	$0	$0	-$1,393	$0	-$1,393
	Efficiency adjusted cost with new pavement technology savings (recycled, rubberized...)	4	-$125,791	$0	$0	-$125,791	$0	-$125,791
	Needed for wideings, signalization and other transportation control measures	1	-$80,674	$0	$0	-$80,674	$0	-$80,674
	Year of Expenditure (YOE) Cost with potential new revenue (5 years sooner)		-$206,465	-$67,395	-$153,663	-$427,522	-$494,354	-$921,877
	Apply cost savings/match to Next-In-Line Projects		$0	$0	$0	$0	**$46,938**	**$46,938**
	Remaining unfunded projects		$0	$0	$0	$0	-$447,416	-$874,938
	Leveraged cost savings + new revenue + existing sources		**$206,465**	**$75,635**	**$261,365**	**$543,465**	**$46,938**	**$565,179**
Benefits	**Total jobs generated by all transportation expenditures over 20 years (avg. 5 yrs./job)**	5	31,900	10,900	30,040	72,840	7,260	76,740
	New jobs generated by new revenue expenditures over 20 years (avg. 5 yrs./job)	5	6,600	1,600	5,100	13,300	7,300	17,200
	New non transportation sector jobs from expend. over 20 years (Induced jobs=34%)	5	11,000	3,800	10,300	25,100	2,500	26,400
	Potential jobs saved (6%) from good road maintenance over 20 years	6	21,150					
	Total state/federal funds leveraged (20 yrs.)	2	$938,770					
	Road maint. cost increase avoided (20 yrs.)	4	$1,940,767					
	Increased Annual County Production (GDP) created by induced jobs	5	$6,411,768					
	Annual new local government sales tax revenue for public safety, libraries, etc. (based on GDP)	7	$51,294					
	8% - 22% annual savings in vehicle maintenance & fuel costs (x 1.88 veh./hhold)	8	$517 to $1423					
	Average annual cost of 1/2 cent retail sales tax per household	9	**$269**					

[1] Kern COG Regional Transportation Plan/Capital Improvement Program
[2] Conservative estimate, other regions leveraged a 50% match with Self Help measure
[3] Assumes a conservative 3% per year inflation rate. The construciton cost index has gone up 6-7% annually over the past 30 years
[4] Funding needed to bring pavement condition index (PCI) back up to 80+ from the current 63 PCI average for the County. Does not include rehabilitation to bring back up to 85 PCI. Avoided costs based on funding roads at current levels for next 20 years.
[5] Assumes 38,638 jobs per billion dollars spent on transportation projects - FHWA Highways Administration. Induced GDP=induced jobs x Kern median income ($48,574) http://ops.fhwa.dot.gov/freight/freight_analysis/highway_ops/hiway_ops2.htm
[6] Based on a 2014 Oregon Study that forecasts a 6% loss in Gross Domestic Product if roads are allowed to deteriorate further. Assumes similar affect on employment.
[7] Sales tax revenue based on increased GDP from induced jobs x 8% sales tax. Consevativly it does not account incaome and property tax receipts.
[8] Transportation Research Bureu NCHRP 720, Estimating the Effects of Pavement Condition on Vehicle Operating Costs, http://www.trb.org/Main/Blurbs/166904.aspx
[9] California Board of Equalization, California Department of Finance, 2015

KERN COUNTY SUBAREA SUMMARY

County Subarea				
RTP 20+ Year Expenditure Program Summary By Subarea Together with Forecast of Existing and Potential New Funding Sources		**Year of Expenditure (YOE) with new revenue**	**Percent of expenditures county-wide[1]**	**Leveraged cost savings from maintenance /inflation2**
		Over 20 Year Period ($ estimates x 1,000)		
Countywide				
Early Expenditures	**Fix-It-First, Keep-It-Local / Cost-Efficient**	**$4,129,291**	**48.3%**	**$1,940,767**
	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control Measures (TCMs)			
	Advanced Tech, Safe, Clean Transportation	**$1,347,892**	**15.8%**	**$0**
	safer; healthy; efficient; air quality; pedestrian; bicycle; senior/disabled and advanced tech transit; transportation enhancements			
	Ready-To-Go, Regional Projects	**$3,073,262**	**35.9%**	**$504,491**
	first 1-15 years of the plan - Includes major roadway and other major projects funded in the RTP ready or nearing readiness			
	Early Expenditures Subtotal (fully funded)	**$8,550,445**	**100.0%**	**$2,445,258**
	Next-In-Line, Regional Projects	**$9,887,089**		**$3,273,047**
	reinvests anticipated cost savings as projects are environmentally cleared, designed and made ready; unfunded projects identified in the RTP/CIP			
	[1]Total Expenditure Plan	**$18,437,534**		**$5,718,305**

Subareas

Arvin-Lamont				
Early Expend.	**Fix-It-First, Keep-It-Local / Cost-Efficient**	$218,070		$102,493
	Advanced Tech, Safe, Clean Transportation	$71,654		$0
	Ready-To-Go, Regional Projects Benefiting Subarea	$240,826		$37,374
	Early Expenditures Subtotal	**$530,550**	**6.2%**	**$139,867**
	Next-In-Line, Regional Projects Benefiting Subarea	$467,180		$150,924
	[1]All Projects Benefiting Subarea	**$997,731**	**5.4%**	**$290,791**
	Share of County Population		4.5%	
Frazier Park				
Early Expend.	**Fix-It-First, Keep-It-Local / Cost-Efficient**	$69,829		$32,820
	Advanced Tech, Safe, Clean Transportation	$15,448		$0
	Ready-To-Go, Regional Projects Benefiting Subarea	$144,548		$67,219
	Early Expenditures Subtotal	**$229,825**	**2.7%**	**$100,039**
	Next-In-Line, Regional Projects Benefiting Subarea	$167,692		$113,519
	[1]All Projects Benefiting Subarea	**$397,517**	**2.2%**	**$213,557**
	Share of County Population		1.0%	
Indian Wells Valley				
Early Expend.	**Fix-It-First, Keep-It-Local / Cost-Efficient**	$164,077		$77,116
	Advanced Tech, Safe, Clean Transportation	$45,689		$0
	Ready-To-Go, Regional Projects Benefiting Subarea	$274,316		$52,684
	Early Expenditures Subtotal	**$484,082**	**5.7%**	**$129,800**
	Next-In-Line, Regional Projects Benefiting Subarea	$585,900		$188,929
	[1]All Projects Benefiting Subarea	**$1,069,982**	**5.8%**	**$318,729**
	Share of County Population		4.1%	
Lake Isabella				
Early Expend.	**Fix-It-First, Keep-It-Local / Cost-Efficient**	$213,806		$100,489
	Advanced Tech, Safe, Clean Transportation	$22,837		$0
	Ready-To-Go, Regional Projects Benefiting Subarea	$346,731		$70,969
	Early Expenditures Subtotal	**$583,375**	**6.8%**	**$171,458**
	Next-In-Line, Regional Projects Benefiting Subarea	$568,200		$183,558
	[1]All Projects Benefiting Subarea	**$1,151,575**	**6.2%**	**$355,016**
	Share of County Population		2.0%	

KERN COUNTY SUBAREA SUMMARY

County Subarea	RTP 20+ Year Expenditure Program Summary By Subarea Together with Forecast of Existing and Potential New Funding Sources	Year of Expenditure (YOE) with new revenue	Percent of expenditures county-wide[1]	Leveraged cost savings from maintenance /inflation2
		Over 20 Year Period ($ estimates x 1,000)		
Metro Bakersfield				
Early Expend.	**Fix-It-First, Keep-It-Local / Cost-Efficient**	$1,873,539		$880,563
Early Expend.	**Advanced Tech, Safe, Clean Transportation**	$892,357		$0
Early Expend.	**Ready-To-Go, Regional Projects Benefiting Subarea**	$2,440,239		$340,447
Early Expend.	**Early Expenditures Subtotal**	**$5,206,134**	**60.9%**	**$1,221,011**
Early Expend.	**Next-In-Line, Regional Projects Benefiting Subarea**	$6,154,188		$2,013,585
Early Expend.	**[1]All Projects Benefiting Subarea**	**$11,360,322**	**61.6%**	**$3,234,596**
Early Expend.	Share of County Population		61.5%	
North Kern				
Early Expend.	**Fix-It-First, Keep-It-Local / Cost-Efficient**	$795,940		$374,092
Early Expend.	**Advanced Tech, Safe, Clean Transportation**	$160,515		$0
Early Expend.	**Ready-To-Go, Regional Projects Benefiting Subarea**	$328,521		$92,464
Early Expend.	**Early Expenditures Subtotal**	**$1,284,975**	**15.0%**	**$466,556**
Early Expend.	**Next-In-Line, Regional Projects Benefiting Subarea**	$2,168,193		$702,460
Early Expend.	**[1]All Projects Benefiting Subarea**	**$3,453,168**	**18.7%**	**$1,169,015**
Early Expend.	Share of County Population		14.8%	
Southeast Kern				
Early Expend.	**Fix-It-First, Keep-It-Local / Cost-Efficient**	$356,667		$167,633
Early Expend.	**Advanced Tech, Safe, Clean Transportation**	$59,915		$0
Early Expend.	**Ready-To-Go, Regional Projects Benefiting Subarea**	$259,199		$47,801
Early Expend.	**Early Expenditures Subtotal**	**$675,781**	**7.9%**	**$215,434**
Early Expend.	**Next-In-Line, Regional Projects Benefiting Subarea**	$893,656		$268,968
Early Expend.	**[1]All Projects Benefiting Subarea**	**$1,569,437**	**8.5%**	**$484,402**
Early Expend.	Share of County Population		5.3%	
Taft-Maricopa				
Early Expend.	**Fix-It-First, Keep-It-Local / Cost-Efficient**	$196,345		$92,282
Early Expend.	**Advanced Tech, Safe, Clean Transportation**	$31,292		$0
Early Expend.	**Ready-To-Go, Regional Projects Benefiting Subarea**	$229,616		$54,684
Early Expend.	**Early Expenditures Subtotal**	**$457,252**	**5.3%**	**$146,966**
Early Expend.	**Next-In-Line, Regional Projects Benefiting Subarea**	$1,125,511		$373,006
Early Expend.	All Projects in Subarea	$961,025		$309,711
Early Expend.	**[1]All Projects Benefiting Subarea**	**$1,582,764**	**8.6%**	**$519,972**
Early Expend.	Share of County Population		2.6%	
Tehachapi				
Early Expend.	**Fix-It-First, Keep-It-Local / Cost-Efficient**	$241,018		$113,279
Early Expend.	**Advanced Tech, Safe, Clean Transportation**	$48,185		$0
Early Expend.	**Ready-To-Go, Regional Projects Benefiting Subarea**	$220,971		$50,029
Early Expend.	**Early Expenditures Subtotal**	**$510,175**	**6.0%**	**$163,307**
Early Expend.	**Next-In-Line, Regional Projects Benefiting Subarea**	$1,478,246		$467,229
Early Expend.	**[1]All Projects Benefiting Subarea**	**$1,988,421**	**10.8%**	**$630,536**
Early Expend.	Share of County Population		4.3%	

[1]Projects Benefitting Subareas do not add to 100% because some projects benefit more than one subarea.

[2]Leveraged cost savings subject to amount of new revenue sources that become available.

ARVIN-LAMONT SUBAREA

Subarea Includes the City of Arvin, unincorporated communities (county areas) of Lamont, Di Georgio and Weedpatch		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new reven**	**Maint./Inflation Savings**
Fix-It-First, Keep-It-Local / Cost-Efficient				
Arvin - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Tra**	**$ 13,392**	**$ 13,392**	**$ 6,294**
Arvin - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans	$ 40,340	$ 40,340	$ 18,960
County Areas - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Tra**	**$ 30,276**	**$ 30,276**	**$ 14,230**
County Areas - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans	$ 103,807	$ 103,807	$ 48,789
State Highways - existing funds	State Highway Operations and Protection Program (SHOPP)	$ 30,256	$ 30,256	$ 14,220
Fix-It-First, Keep-It-Local / Cost-Efficier	**Sub-total Projects in Subarea**	**$ 218,070**	**$ 218,070**	**$ 102,493**
Regional Projects				
Ready-To-Go, Regional Projects				
Route 184	Panama Rd to Rt 58 - widen to four lanes	$ 9,005	$ 10,500	$ 1,495
Route 184	[2]Morning Dr to Rt 178 - widen to four lanes	$ 4,459	$ 5,000	$ 541
Route 184	[2]At Union Pacific Railroad - construct grade separation	$ 23,865	$ 26,400	$ 2,535
Route 184	[2]Rt 58 to Rt 178 - widen to four lanes	$ 78,184	$ 90,000	$ 11,816
Route 119	[2]Cherry Ave to Elk Hills Rd (Phase 1, bypass) - widen to four lanes	$ 97,396	$ 115,000	$ 17,604
Route 119	[2]I-5 to Buena Vista - widen to four lanes	$ 27,916	$ 31,300	$ 3,384
Ready-To-Go, Regional Projects	**[2]Sub-Total including zone of Benefit**	**$ 240,826**	**$ 278,200**	**$ 37,374**
Next-In-Line, Regional Projects				
Route 223	[1]Rt 99 to Rt 184 - widen to four lanes	$ 52,160	$ 69,011	$ 16,851
Wheeler Ridge Road	[1]I-5 to Rt 223 - widen to four lanes	$ 97,801	$ 129,395	$ 31,595
Route 223	East Arvin city limits to Rt 58 - widen to four lanes	$ 48,900	$ 64,698	$ 15,797
Route 184	[2]Rt 184 / Morning Dr. @ UPRR - construct grade separation	$ 52,152	$ 69,000	$ 16,848
East Beltway	[2]Rt 58 to Morning Drive - construct new expressway	$ 151,166	$ 200,000	$ 48,834
Interstate 5	[2]From Fort Tejon to Rt 99 - widen to ten lanes	$ 65,001	$ 86,000	$ 20,999
Next-In-Line, Regional Projects	**[2]Sub-Total including zone of Benefit**	**$ 467,180**	**$ 618,104**	**$ 150,924**
Advanced Tech, Safe, Clean Transportation				
Arvin - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 4,875**	**$ 4,875**	**$ -**
Arvin - existing funds	Cost-efficient, safe, clean transportion	$ 20,487	$ 20,487	$ -
Arvin - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 4,919**	**$ 4,919**	**$ -**
Arvin - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 12,450**	**$ 12,450**	**$ -**
Arvin - Corridor Improvement	A St (Simpson St to Franklin St) .9 mi.	$ 235	$ 235	$ -
Arvin - Complete Streets	Comanche Dr (Varsity Av to Franklin St) 1.5 mi.	$ 863	$ 863	$ -
Arvin - Crossing Improvements	El Camino Real (S Comanche Rd to Tejon Hwy) 1. mi.	$ 86	$ 86	$ -
Arvin - High-Visibility Crosswalk	Franklin St - Meyer St	$ 11	$ 11	$ -
Arvin - Corridor Improvement	Franklin St (Walnut Dr to Tejon Hwy) .8 mi.	$ 209	$ 209	$ -
Arvin - Crossing Improvements	Haven Dr (Comanche Dr to Varsity Av) 1. mi.	$ 86	$ 86	$ -
Arvin - High-Visibility Crosswalk	Hood St - Butte Av	$ 11	$ 11	$ -
Arvin - High-Visibility Crosswalk	Hood St - Meyer St	$ 11	$ 11	$ -
Arvin - High-Visibility Crosswalk	Meyer St - Hanson Ln	$ 3	$ 3	$ -
Arvin - Crossing Improvements	Meyer St (Ellen Wy to El Camino Real) .2 mi.	$ 19	$ 19	$ -
Arvin - Sidewalk Improvement	Meyer St (Ellen Wy to Hwy 223) 1.3 mi.	$ 240	$ 240	$ -
Arvin - Crossing Improvements	Meyer St (Varsity Av to Hwy 223) .5 mi.	$ 42	$ 42	$ -
Arvin - Crossing Improvements	N Hill St (Varsity Av to Hwy 223) .5 mi.	$ 42	$ 42	$ -
Arvin - Crossing Improvements	Sycamore Rd (Comanche Dr to Tejon Hwy) 1. mi.	$ 87	$ 87	$ -
Arvin - Sidewalk Improvement	Tejon Hwy (Hwy 223 to Sycamore Rd) 1. mi.	$ 190	$ 190	$ -
Arvin - High-Visibility Crosswalk	Varsity Av - Shared-use Path	$ 3	$ 3	$ -

Arvin - Corridor Improvement	Varsity Av (Comanche Dr to Carmel St) .7 mi.	$ 191	$ 191	$ -
Arvin - Corridor Improvement	Walnut Dr (Bear Mountain Blvd to Olsen St) .8 mi.	$ 226	$ 226	$ -
Caltrans - Crossing Improvements	Bear Mountain Blvd (Comanche Dr to Derby St) 1. mi.	$ 86	$ 86	$ -
Arvin - Complete Streets/ITS Improve	Other Future developments funded by a transportation impact fee and mitigation	$ 9,810	$ 9,810	$ -
Arvin - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 3,119**	**$ 3,119**	**$ -**
Arvin - Class III Bike Route	5th Av (N Hill St to N A St) .1 mi.	$ 1	$ 1	$ -
Arvin - Class II Bike Ln	A St (Olson Wy to 5th Av) 1.1 mi.	$ 97	$ 97	$ -
Arvin - Complete Streets	Campus Dr (Grapevine Dr to Varsity Rd) .5 mi.	$ 284	$ 284	$ -
Arvin - Class III Bike Route	Campus Dr (Sunset Blvd to Richardson Rd) .5 mi.	$ 5	$ 5	$ -
Arvin - Class II Bike Ln	Comanche Dr (Mark St to Sycamore Rd) 1. mi.	$ 90	$ 90	$ -
Arvin - Class II Buffered Bike Ln	Franklin St (Walnut Dr to S Derby St) .8 mi.	$ 137	$ 137	$ -
Arvin - Class III Bike Route	Grapevine Dr (Campus Dr to N Hill St) .1 mi.	$ 1	$ 1	$ -
Arvin - Class II Bike Ln	Haven Dr (Comanche Dr to Tejon Hwy) 1. mi.	$ 91	$ 91	$ -
Arvin - Class II Bike Ln	Mark St (Comanche Dr to Walnut Dr) .2 mi.	$ 23	$ 23	$ -
Arvin - Class III Bike Route	Meyer St (El Camino Real to Sycamore Rd) .5 mi.	$ 5	$ 5	$ -
Arvin - Class II Bike Ln	Meyer St (Hwy 223 to Sycamore Rd) 1. mi.	$ 90	$ 90	$ -
Arvin - Class II Bike Ln	N Comanche St (Bear Mountain Rd to Varsity Av) .5 mi.	$ 44	$ 44	$ -
Arvin - Class III Bike Route	N Hill St (Grapevine Dr to 5th Av) .1 mi.	$ 1	$ 1	$ -
Arvin - Class I Shared Use Path	North City Path (Bear Mountain Blvd to Varsity Av) .5 mi.	$ 445	$ 30	$ (415)
Arvin - Class II Bike Ln	Olsen St (A St to Meyer St) .5 mi.	$ 46	$ 123	$ 77
Arvin - Class III Bike Route	Sycamore Rd (Comanche Dr to Rancho Dr) .5 mi.	$ 5	$ 5	$ -
Arvin - Class II Bike Ln	Sycamore Rd (Comanche Dr to Tejon Hwy) 1. mi.	$ 91	$ 91	$ -
Arvin - Class II Bike Ln	Sycamore Rd (Towerline Rd to Tejon Hwy) 1. mi.	$ 92	$ 92	$ -
Arvin - Class II Bike Ln	Tejon Hwy (Hwy 223 to Burkett Blvd) 2.5 mi.	$ 225	$ 225	$ -
Arvin - Class II Bike Ln	Varsity Av (N Comanche Dr to Tejon Hwy) 1. mi.	$ 91	$ 91	$ -
Arvin - Class II Bike Ln	Walnut Dr (W Sycamore Rd to Alderette Dr) 1.2 mi.	$ 110	$ 110	$ -
Caltrans - Class IV Cycle Track	Bear Mtn Blvd SR 223 (Tejon Hwy to Comanche Dr) 1. mi.	$ 303	$ 303	$ -
Caltrans - Class II Bike Ln	E Bear Mtn Blvd SR 223 (Comanche Dr to Union St) 12.6 mi.	$ 1,138	$ 1,138	$ -
Caltrans - Class II Bike Ln	SR 223 (Malovich Rd to Tejon Hwy) .5 mi.	$ 46	$ 46	$ -
County Areas -potential new funds	**Cost-efficient, safe, clean transportion**	**$ 4,350**	**$ 4,350**	**$ -**
County Areas - existing funds	Cost-efficient, safe, clean transportion	$ 41,942	$ 41,942	$ -
County Areas - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 10,048**	**$ 10,048**	**$ -**
County Areas - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 8,481**	**$ 8,481**	**$ -**
Caltrans - Corridor Improvement	Weedpatch Hwy (Brundage Ln to E Bear Mountain Blvd) 10. mi.	$ 2,763	$ 2,763	$ -
Kern County - Corridor Improvement	Hall Rd (San Emidio St to Habecker Rd) .5 mi.	$ 141	$ 141	$ -
Kern County - Corridor Improvement	Myrtle Av (Panama Ln to Wharton Av) .9 mi.	$ 259	$ 259	$ -
Kern County - Corridor Improvement	Panama Rd (Wible Rd to Main St) 7. mi.	$ 1,936	$ 1,936	$ -
Kern County - Corridor Improvement	San Diego St (Burgundy Av to Wharton Av) .7 mi.	$ 190	$ 190	$ -
Kern County - High-Visibility Crosswa	Wharton Av - Main St	$ 11	$ 11	$ -
Kern County - Corridor Imp. lights	Santa Ana St (Hall Rd to Wharton Av) .4 mi.	$ 118	$ 118	$ -
Kern County - Corridor Imp. lights	Santa Barbara St (Hall Rd to Wharton Av) .4 mi.	$ 119	$ 119	$ -
Kern County - Corridor Imp. lights	Santa Clara St (Hall Rd to Wharton Av) .4 mi.	$ 122	$ 122	$ -
Kern County - Sidewalk/Corridor Imp	Hope Ln (Tatum St to Habecker Rd) .1 mi.	$ 19	$ 19	$ -
Kern County - Sidewalk/Corridor Imp	Tatum St (Hope Ln to Hall Rd) .09 mi.	$ 19	$ 19	$ -
Kern County - Sidewalk/Corridor Imp	Wilson (Hope Ln to end of street) .04 mi.	$ 21	$ 21	$ -
Kern County - Sidewalk/Corridor Imp	Hall Rd (San Emidio to Habecker Rd) 1. mi.	$ 141	$ 141	$ -
Kern County - Sidewalk Improvement	Bonita Rd (Main St to Habecker Rd) .5 mi.	$ 97	$ 97	$ -
Kern County - Sidewalk Improvement	Buena Vista Blvd (May Street to Buena Vista Blvd Mobile Park) .7 mi.	$ 140	$ 140	$ -
Kern County - Sidewalk Improvement	Carnation Ave (Mc Kee Road to Panama Road) .5 mi.	$ 95	$ 95	$ -
Kern County - Sidewalk Improvement	Collision St (Main St to Carnation Av) .2 mi.	$ 48	$ 48	$ -
Kern County - Sidewalk Improvement	Di Giorgio Rd (Fairfax Rd to Main St) 1. mi.	$ 190	$ 190	$ -
Kern County - Sidewalk Improvement	Di Giorgio Rd (Pierce Drive to Weedpatch Highway) .7 mi.	$ 143	$ 143	$ -

Kern County - Sidewalk Improvement	Dunnsmere St (San Diego Street to Weedpatch Highway) .2 mi.	$ 46	$ 46	$ -
Kern County - Sidewalk Improvement	Field St (Di Giorgio Rd to Tri Duncan Avenue) .5 mi.	$ 96	$ 96	$ -
Kern County - Sidewalk Improvement	Habecker Rd (Panama Rd to Segrue Rd) .7 mi.	$ 142	$ 142	$ -
Kern County - Sidewalk Improvement	Hall Rd (San Diego St to Main St) .3 mi.	$ 48	$ 48	$ -
Kern County - Sidewalk Improvement	Man O War St (Whirlaway St to Main St) .3 mi.	$ 59	$ 59	$ -
Kern County - Sidewalk Improvement	McKee Rd (Main St to Carnation Av) .3 mi.	$ 49	$ 49	$ -
Kern County - Sidewalk Improvement	Mtn View Rd (RR xing to Sherman Rd) .8 mi.	$ 146	$ 146	$ -
Kern County - Sidewalk Improvement	Panama Rd (Gilbert Street to Habecker Rd) .7 mi.	$ 133	$ 133	$ -
Kern County - Sidewalk Improvement	Panama Rd (Habecker Rd to Main St) .5 mi.	$ 98	$ 98	$ -
Kern County - Sidewalk Improvement	Reynolds St (Whirlaway St to Main St) .3 mi.	$ 56	$ 56	$ -
Kern County - Sidewalk Improvement	Segrue Rd (San Emidio St to Habecker Rd) 1. mi.	$ 181	$ 181	$ -
Kern County - Sidewalk Improvement	Montal St (CA-184 to Carnation Ave) 0.3 mi.	$ 49	$ 49	$ -
Kern County - Sidewalk Improvement	Bertal St (CA-184 to Carnation Ave) 0.3 mi.	$ 46	$ 46	$ -
Kern County - Sidewalk Improvement	Burger Way (San Diego St to San Fernando St) 0.1 mi.	$ 27	$ 27	$ -
Kern County - Sidewalk Improvement	Carnation Ave (Panama Rd to Collison St) 0.3 mi.	$ 660	$ 660	$ -
Kern County - Sidewalk Improvement	Collison St (CA-184 to Carnation Ave) 0.3 mi.	$ 48	$ 48	$ -
Kern County - Sidewalk Improvement	Emperor Ave (Howard to San Diego St) 0.1 mi.	$ 23	$ 23	$ -
Kern County - Sidewalk Improvement	Gilbert St (Emperor Ave to Panama Rd) 0.1 mi.	$ 25	$ 25	$ -
Kern County - Sidewalk Improvement	Howard St (Emperor Ave to Panama Rd) 0.1 mi.	$ 25	$ 25	$ -
Kern County - Sidewalk Improvement	Lana St (CA-184 to Carnation Ave) 0.3 mi.	$ 48	$ 48	$ -
Kern County - Sidewalk Improvement	Ribier Ave (San Emideo St to End of street) 0.1 mi.	$ 27	$ 27	$ -
Kern County - Sidewalk Improvement	San Diego St (Delight Ave to Burgundy Ave) 0.2 mi.	$ 190	$ 190	$ -
Kern County - Sidewalk Improvement	San Fernando St (Delight Ave to Mataro Ct) 0.2 mi.	$ 33	$ 33	$ -
Kern County - Sidewalk Improvement	San Gorgonio (Panama Rd to Delight Ave) 203 ft. mi.	$ 10	$ 10	$ -
Kern County - Sidewalk Improvement	Delight Ave (San Emideo St to San Diego St) 0.2 mi.	$ 40	$ 40	$ -
Kern County - Sidewalk Improvement	San Emidio St (Delight Ave to End of street) 0.2 mi.	$ 54	$ 54	$ -
Kern County - Sidewalk Improvement	Wharton Av (San Emidio St to Myrtle Av) .7 mi.	$ 132	$ 132	$ -
Kern County - Complete Streets/ITS I	Other Future developments funded by a transportation impact fee and mitigation	$ 2,185	$ 2,185	$ -
County Areas - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 23,413**	**$ 23,413**	**$ -**
Caltrans - Bikeway Study	SR 184 (Panama Rd to Di Giorgio Rd) 1. mi.	$ 150	$ 150	$ -
Caltrans - Class II Bike Ln	Weedpatch Hwy SR 184 (Brundage Ln to Mtn View Rd) 5.3 mi.	$ 476	$ 476	$ -
Caltrans - Class I Shared Use Path	Weedpatch Hwy SR 184 (Mtn View Rd to Panama Rd) 1. mi.	$ 907	$ 907	$ -
Kern County - Class I Shared Use Path	Arvin Edison Canal (Green Garden Dr to Fairfax Rd) 8.8 mi.	$ 7,922	$ 7,922	$ -
Kern County - Class II Bike Ln	Buena Vista Blvd (Comanche Dr to Union Av) 9.1 mi.	$ 817	$ 817	$ -
Kern County - Class II Bike Ln	Comanche Dr (Muller Rd to Kern Canyon Rd) 5.9 mi.	$ 534	$ 534	$ -
Kern County - Class II Bike Ln	Comanche Dr (Panama Ln to Muller Rd) 7.5 mi.	$ 678	$ 678	$ -
Kern County - Class II Buffered Bike L	Cottonwood Rd (Casa Loma Dr to Panama Rd) 5. mi.	$ 900	$ 900	$ -
Kern County - Class II Buffered Bike L	Di Giorgio Rd (Pierce Dr to S Vineland Rd) 1.8 mi.	$ 320	$ 320	$ -
Kern County - Class II Bike Ln	Di Giorgio Rd (Union Av to Pierce Dr) 4.3 mi.	$ 384	$ 384	$ -
Kern County - Class II Bike Ln	DiGiorgio Rd (Vineland Rd to Comanche Dr) 3. mi.	$ 273	$ 273	$ -
Kern County - Class III Bike Route	Edison Rd (Edison Hwy to SR 223) 9.7 mi.	$ 87	$ 87	$ -
Kern County - Class III Bike Route	Fairfax Rd (Panama Rd to SR 223) 4. mi.	$ 36	$ 36	$ -
Kern County - Class II Buffered Bike L	Fairfax Rd (Wilson Rd to Panama Rd) 6.6 mi.	$ 1,185	$ 1,185	$ -
Kern County - Class III Bike Blvd	Habecker Rd (Panama Rd to Di Giorgio Rd) 1. mi.	$ 50	$ 50	$ -
Kern County - Class III Bike Blvd	Hall Rd (Main St to Habecker Rd) .4 mi.	$ 21	$ 21	$ -
Kern County - Class II Bike Ln	Hall Rd (SR 184 to Habecker Rd) .5 mi.	$ 46	$ 46	$ -
Kern County - Class II Bike Ln	Hermosa Rd (Fairfax Rd to Comanche Dr) 5. mi.	$ 453	$ 453	$ -
Kern County - Class II Bike Ln	Main St (DiGiorgio Rd to Bear Mountain Blvd) 3. mi.	$ 271	$ 271	$ -
Kern County - Class II Bike Ln	Mountain View Rd (Fairfax Rd to Comanche Dr) 5. mi.	$ 454	$ 454	$ -
Kern County - Class II Bike Ln	Muller Rd (Comanche Dr to Oswell St) 6. mi.	$ 544	$ 544	$ -
Kern County - Class III Bike Blvd	Myrtle Av (Di Giorgio Rd to Panama Rd) 1. mi.	$ 50	$ 50	$ -
Kern County - Complete Streets	Palm Av (San Gorgonio St to Williams St) .6 mi.	$ 360	$ 360	$ -

Kern County - Class II Buffered Bike Li	Panama Ln (Comanche Dr to Cottonwood Rd) 8.1 mi.	$ 1,450	$ 1,450	$ -
Kern County - Class II Bike Ln	Panama Rd (Habecker Rd to S Comanche Dr) 3.5 mi.	$ 318	$ 318	$ -
Kern County - Class II Buffered Bike Li	Panama Rd (Main St to Habecker Rd) .5 mi.	$ 93	$ 93	$ -
Kern County - Class III Bike Blvd	San Diego St (Di Giorgio Rd to Panama Rd) 1.1 mi.	$ 54	$ 54	$ -
Kern County - Class III Bike Blvd	Segrue Rd (San Emidio St to Habecker Rd) .9 mi.	$ 48	$ 48	$ -
Kern County - Class II Bike Ln	Sunset Blvd (Weedpatch Hwy to Vineland Rd) 1. mi.	$ 93	$ 93	$ -
Kern County - Class II Buffered Bike Li	Taft Hwy (Enos Ln to Weedpatch Hwy) 19.1 mi.	$ 3,446	$ 3,446	$ -
Kern County - Class II Bike Ln	Vineland Rd (Pioneer Dr to SR 223) 11. mi.	$ 993	$ 993	$ -
Advanced Tech, Safe, Clean Transporta	**Sub-total Projects in Subarea**	**$ 71,654**	**$ 71,654**	$ -

ARVIN-LAMONT SUBAREA	**Total Projects Benefiting Subarea**	**$ 997,731**	**$ 1,186,029**	**$ 290,791**

Notes:

A. Inflation savings assumes a 3% inflation rate per year

B. Road maintenance (local program reconstruction) savings assumes an average of 47% reduction in maintenace costs when pavement condition index is kept above 75

C. The projects in each phase or category are not necessarily listed by priority

D. The regional projects have been approved by Kern COG (cities/County) in the adopted 2014 RTP

[1] Project was in the 2006 transportation measure expenditure plan

[2] Project outside subarea that benefits the subarea

Abbreviations: YOE = Year of Expenditure, RTP = Regional Transportation Plan, TCMs = Transportation Control Measures that help reduce air pollution (congestion relief, signal syncronizing, etc.)

FRAZIER PARK SUBAREA

Subarea includes: unincorporated communities Frazier Park, Pine Mountain Club, Lebec and Lake of the Woods		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenu**	**Maint./Inflation Savings**
Fix-It-First, Keep-It-Local / Cost-Efficient				
County Areas - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportatic**	**$ 9,824**	**$ 9,824**	$ 4,617
County Areas - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation	$ 33,683	$ 33,683	$ 15,831
State Highways - existing funds	State Highway Operations and Protection Program (SHOPP)	$ 26,322	$ 26,322	$ 12,371
Fix-It-First, Keep-It-Local / Cost-Efficient	**Sub-total Projects in Subarea**	**$ 69,829**	**$ 69,829**	**$ 32,820**
Regional Projects				
Ready-To-Go, Regional Projects				
Frazier Park	Park & Ride/snowpark facility near Frazier Mt Park Blvd-Phase I	$ 4,890	$ 6,470	$ 1,580
Ready-To-Go, Regional Projects	**Sub-Total including zone of Benefit**	**$ 144,548**	**$ 146,128**	**$ 67,219**
Next-In-Line, Regional Projects				
Wheeler Ridge Road	[1]I-5 to Rt 223 - widen to four lanes	$ 97,801	$ 129,395	$ 31,595
Frazier Park	Park and Ride facility near Frazier Park Blvd - Phase II	$ 4,890	$ 6,470	$ 1,580
Interstate 5	From Fort Tejon to Rt 99 - widen to ten lanes	$ 65,001	$ 86,000	$ 20,999
Next-In-Line, Regional Projects	**Sub-Total including zone of Benefit**	**$ 167,692**	**$ 221,865**	**$ 54,173**
Advanced Tech, Safe, Clean Transportation				
County Areas - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 2,089**	**$ 2,089**	**$ -**
County Areas - existing funds	Cost-efficient, safe, clean transportion	$ 13,358	$ 13,358	$ -
County Areas - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 6,685**	**$ 6,685**	**$ -**
County Areas - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 5,120**	**$ 5,120**	**$ -**
Kern County - Corridor Improvement	Frazier Mountain Park Rd (Monterey Trail to Camelia Trail) .4 mi.	$ 109	$ 109	$ -
Kern County - Sidewalk Improvement	Monterey Trail (Park Dr to Mount Pinos Wy) .2 mi.	$ 36	$ 36	$ -
Kern County - Sidewalk Improvement	Mount Pinos Wy (Johnson Rd to Pomeroy Trail) .9 mi.	$ 162	$ 162	$ -
Kern County - Complete Streets/ITS Improvem	Other Future developments funded by a transportation impact fee and mitigation	$ 4,814	$ 4,814	$ -
County Areas - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 1,553**	**$ 1,553**	**$ -**
Kern County - Class I Shared Use Path	Falcon Wy (Peace Valley Rd to Frazier Mtn HS) 1. mi.	$ 932	$ 932	$ -
Kern County - Class II Bike Ln	Frazier Mtn Pk Rd (N Peace Vy Rd to Tecuya Mtn Rd) 6. mi.	$ 537	$ 537	$ -
Kern County - Class II Bike Ln	Peace Valley Rd (Frazier Mtn Park Rd to Falcon Wy) .6 mi.	$ 54	$ 54	$ -
Kern County - Class III Bike Route	Frazier Mountain Park Rd (Ivins Dr to Tecuya Mtn Rd) 1. mi.	$ 9	$ 9	$ -
Kern County - Class III Bike Route	Monterey Trail (Mt Pinos Wy to Park Dr) .2 mi.	$ 2	$ 2	$ -
Kern County - Class III Bike Route	Mt Pinos Wy (Frazier Mtn Pk Rd to Frazier Mtn Pk Rd) 2.1 mi.	$ 19	$ 19	$ -
Advanced Tech, Safe, Clean Transportation	**Sub-total Projects in Subarea**	$ 15,448	$ 15,448	$ -

FRAZIER PARK SUBAREA	**Total Projects Benefiting Subarea**	**$ 397,517**	**$ 453,270**	**$ 154,212**

Notes:

A. Inflation savings assumes a 3% inflation rate per year

B. Road maintenance (local program reconstruction) savings assumes an average of 47% reduction in maintenace costs when pavement condition index is kept above 75

C. The projects in each phase or category are not necessarily listed by priority

D. The regional projects have been approved by Kern COG (cities/County) in the adopted 2014 RTP

1 Project was in the 2006 transportation measure expenditure plan

2 Project outside subarea that benefits the subarea

Abbreviations: YOE = Year of Expenditure, RTP = Regional Transportation Plan, TCMs = Transportation Control Measures that help reduce air pollution (congestion relief, signal syncronizing, etc.)

INDIAN WELLS VALLEY SUBAREA

Subarea includes: City of Ridgecrest and the unincorporated communities of Inyokern, Johannesburg, and Randsburg		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Fix-It-First, Keep-It-Local / Cost-Efficient				
Ridgecrest - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control**	**$ 23,781**	**$ 23,781**	**$ 11,177**
Ridgecrest - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control Me	$ 67,427	$ 67,427	$ 31,691
County Areas - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control**	**$ 7,907**	**$ 7,907**	**$ 3,716**
County Areas - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control Me	$ 27,111	$ 27,111	$ 12,742
State Highways - existing funds	State Highway Operations and Protection Program (SHOPP)	$ 37,852	$ 37,852	$ 17,790
Fix-It-First, Keep-It-Local / Cost-Efficient	**Sub-total Projects in Subarea**	**$ 164,077**	**$ 164,077**	**$ 77,116**
Regional Projects				
Ready-To-Go, Regional Projects				
Route 14	[1]Redrock / Inyokern Rd to Rt 178 - widen to four lanes (Phase1)	$ 42,000	$ 42,000	$ -
Route 14	[1]Redrock / Inyokern Rd to Rt 178 - widen to four lanes (Phase 2)	$ 40,166	$ 42,000	$ 1,834
Route 14	[1]Redrock / Inyokern Rd to Rt 178 - widen to four lanes (Phase 3)	$ 25,533	$ 32,000	$ 6,467
US 395	Between Rt 178 and China Lake Blvd - construct passing lanes	$ 15,117	$ 20,000	$ 4,883
Passenger Rail	[2]Metrolink extension - Palmdale/Lancaster to Rosamond w/bus connector to Ridgecrest	$ 151,500	$ 191,000	$ 39,500
Ready-To-Go, Regional Projects	**[2]Sub-Total including zone of Benefit**	**$ 274,316**	**$ 327,000**	**$ 52,684**
Next-In-Line, Regional Projects				
Richmond Rd	[1]E Ridgecrest Blvd - widen to four lanes	$ 4,890	$ 6,470	$ 1,580
Mahan St	Inyokern to South China Lake Blvd - widen to four lanes	$ 24,450	$ 32,349	$ 7,899
Bowman Rd	China Lake to San Bernardino Blvd - reconstruct	$ 3,260	$ 4,313	$ 1,053
S. China Lake Blvd	Rt 395 to College Heights - reconstruct	$ 27,710	$ 36,662	$ 8,952
US 395	San Bdo County Line to Rt 14 - widen to four lanes	$ 184,422	$ 244,000	$ 59,578
Passenger Rail	[2]Metrolink extension - Phase II Rosamond to Mojave, Cal City w/bus connector to Ridgecrest	$ 341,168	$ 451,035	$ 109,868
Next-In-Line, Regional Projects	**[2]Sub-Total including zone of Benefit**	**$ 585,900**	**$ 774,829**	**$ 188,929**
Advanced Tech, Safe, Clean Transportation				
Ridgecrest - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 6,521**	**$ 6,521**	**$ -**
Ridgecrest - existing funds	Cost-efficient, safe, clean transportion	$ 27,761	$ 27,761	$ -
Ridgecrest - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 6,934**	**$ 6,934**	**$ -**
Ridgecrest - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 10,576**	**$ 10,576**	**$ -**
Ridgecrest - Bicycle Signal	Inyokern Rd - N China Lake Blvd	$ 25	$ 25	$ -
Ridgecrest - Corridor Improvement	Norma St (W Inyokern Rd to Sydnor Av) .8 mi.	$ 207	$ 207	$ -
Ridgecrest - Crossing Improvements	N China Lake Blvd (E Inyokern Rd to Bowman Rd) 3. mi.	$ 254	$ 254	$ -
Ridgecrest - Crossing Improvements	Norma St (Sydnor Av to Bowman Rd) 2.3 mi.	$ 193	$ 193	$ -
Ridgecrest - Crossing Improvements	Ridgecrest Blvd (Downs St to S Gateway Blvd) 2. mi.	$ 171	$ 171	$ -
Ridgecrest - High-Visibility Crosswalk	Bowman Rd - Sunland St	$ 11	$ 11	$ -
Ridgecrest - High-Visibility Crosswalk	Drummond Av - French Av	$ 11	$ 11	$ -
Ridgecrest - High-Visibility Crosswalk	Inyokern Rd - N China Lake Blvd	$ 11	$ 11	$ -
Ridgecrest - High-Visibility Crosswalk	Las Flores Av - Sierra View St	$ 11	$ 11	$ -
Ridgecrest - Sidewalk Improvement	Bowman St (Downs St to S Mahan St) .5 mi.	$ 93	$ 93	$ -
Ridgecrest - Sidewalk Improvement	China Lake Blvd (Bowman Rd to Downs St) 1.3 mi.	$ 255	$ 255	$ -
Ridgecrest - Sidewalk Improvement	Downs St (Bowman Rd to W Springer Av) 1. mi.	$ 188	$ 188	$ -
Ridgecrest - Sidewalk Improvement	S Mahan St (W Springer Av to Bowman St) 1. mi.	$ 188	$ 188	$ -
Ridgecrest - Sidewalk Improvement	Sandquist Rd (Inyokern Rd to E St) .4 mi.	$ 72	$ 72	$ -
Ridgecrest - Sidewalk Improvement	W Springer Av (Downs St to S Mahan St) .5 mi.	$ 92	$ 92	$ -
Ridecreast - Complete Streets/ITS Improven	Other Future developments funded by a transportation impact fee and mitigation	$ 8,795	$ 8,795	$ -
Ridgecrest - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 10,252**	**$ 10,252**	**$ -**
Caltrans - Class II Bike Ln	Ridgecrest Blvd SR 178 (Richmd Rd to San Bdno Blvd) .8 mi.	$ 70	$ 70	$ -
Caltrans - Class II Buffered Bike Ln	E Rcrest Blvd SR 178 (N Chna Lk Blvd to S Richmd Rd) 1.2 mi.	$ 221	$ 221	$ -
Ridgecrest - Class I Shared Use Path	Bowman Path (Brady St to S Downs St) 1. mi.	$ 889	$ 889	$ -
Ridgecrest - Class I Shared Use Path	Bowman Path (Richmond Rd to San Bernardino Blvd) 1.1 mi.	$ 949	$ 949	$ -
Ridgecrest - Class I Shared Use Path	E Javis Av (S Gateway Blvd to College Heights Blvd) 1. mi.	$ 902	$ 902	$ -
Ridgecrest - Class I Shared Use Path	Jarvis Av (S Downs St to Lacey St) .5 mi.	$ 447	$ 447	$ -

INDIAN WELLS VALLEY SUBAREA

Subarea includes: City of Ridgecrest and the unincorporated communities of Inyokern, Johannesburg, and Randsburg		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Ridgecrest - Class I Shared Use Path	W Kendall Av (S Downs St to S Del Rosa Dr) .8 mi.	$ 735	$ 735	$ -
Ridgecrest - Class II Bike Ln	Bowman Rd (Gateway Blvd to San Bernardino Blvd) 1. mi.	$ 92	$ 92	$ -
Ridgecrest - Class II Bike Ln	Dolphin Av (S Mahan St to S China Lake Blvd) .9 mi.	$ 84	$ 84	$ -
Ridgecrest - Class II Bike Ln	Drummond Av (N Mahan St to N Down St) .5 mi.	$ 45	$ 45	$ -
Ridgecrest - Class II Bike Ln	E Dolphin Av (S China Lake Blvd to S Gateway Blvd) 1.5 mi.	$ 137	$ 137	$ -
Ridgecrest - Class II Bike Ln	E Las Flores Av (French Av to N China Lake Blvd) .3 mi.	$ 26	$ 26	$ -
Ridgecrest - Class II Bike Ln	Inyokern Rd (Hawk to Mahan St) 10.1 mi.	$ 912	$ 912	$ -
Ridgecrest - Class II Bike Ln	Javis Av (College Heights Blvd to Lacey St) .5 mi.	$ 45	$ 45	$ -
Ridgecrest - Class II Bike Ln	Kendall Av (S Del Rosa Dr to S Gateway Blvd) 1.2 mi.	$ 107	$ 107	$ -
Ridgecrest - Class II Bike Ln	Mahan St (W Inyokern Rd to W Springer Av) 4. mi.	$ 361	$ 361	$ -
Ridgecrest - Class II Bike Ln	Norma St (Bowman Rd to W Upjohn Av) .5 mi.	$ 47	$ 47	$ -
Ridgecrest - Class II Bike Ln	Richmond Rd (Inyokern Rd to Ridgrecrest Blvd) 2. mi.	$ 183	$ 183	$ -
Ridgecrest - Class II Bike Ln	Ridgecrest Blvd (S Brady St to S Norma Streeet) 1.5 mi.	$ 136	$ 136	$ -
Ridgecrest - Class II Bike Ln	S Gateway Blvd (E Upjohn Av to Ridgecrest Blvd) .5 mi.	$ 45	$ 45	$ -
Ridgecrest - Class II Bike Ln	S Gateway Blvd (Bowman Rd to E Kendall Av) 1.6 mi.	$ 142	$ 142	$ -
Ridgecrest - Class II Bike Ln	Saratoga Av (Lauritsen Rd to Blue Ridge Rd) .9 mi.	$ 82	$ 82	$ -
Ridgecrest - Class II Bike Ln	Springer Av (Jack Ranch Rd to S Gateway Blvd) 4. mi.	$ 357	$ 357	$ -
Ridgecrest - Class II Bike Ln	Sunland St (E Upjohn Av to E Kendall Av) 2. mi.	$ 181	$ 181	$ -
Ridgecrest - Class II Bike Ln	W Upjohn Av (Brady St to S Downs St) 1. mi.	$ 91	$ 91	$ -
Ridgecrest - Class II Buffered Bike Ln	Downs St (Inyokern Rd to Springer Av) 4. mi.	$ 721	$ 721	$ -
Ridgecrest - Class II Buffered Bike Ln	Drummond Av (N China Lake Blvd to French Av) .6 mi.	$ 112	$ 112	$ -
Ridgecrest - Class II Buffered Bike Ln	French Av (Drummond Av to N China Lake Blvd) .8 mi.	$ 140	$ 140	$ -
Ridgecrest - Class II Buffered Bike Ln	Norma St (W Upjohn Av to W Inyokern Rd) 2.5 mi.	$ 453	$ 453	$ -
Ridgecrest - Class III Bike Blvd	Gold Canyon St (Ridgecrest Blvd to Richmond Rd) 1.3 mi.	$ 64	$ 64	$ -
Ridgecrest - Class III Bike Blvd	Rowe St (Knox Rd to Richmond Rd) 1. mi.	$ 51	$ 51	$ -
Ridgecrest - Class III Bike Route	N Brady St (China Lake Blvd to Inyokern Rd) 4.7 mi.	$ 42	$ 42	$ -
Ridgecrest - Class III Bike Route	Norma St (Bowman Rd to S China Lake Blvd) .4 mi.	$ 4	$ 4	$ -
Ridgecrest - Class III Bike Route	Pilot Plant Rd (Richmond Rd to East City Limits) .7 mi.	$ 6	$ 6	$ -
Ridgecrest - Class III Bike Route	S Richmond Rd (E Ridgecrest Blvd to Upjohn Av) .6 mi.	$ 6	$ 6	$ -
Ridgecrest - Class III Bike Route	W Las Flores Av (N Brady St to N Mahan St) .5 mi.	$ 5	$ 5	$ -
Ridgecrest - Class III Bike Route	W Ridgecrest Blvd (N Norma St to N China Lake Blvd) .5 mi.	$ 5	$ 5	$ -
Ridgecrest - Class IV Cycle Track	S China Lake Blvd (W Springs Av to E Inyokern Rd) 4.5 mi.	$ 1,360	$ 1,360	$ -
County Areas - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 2,008**	**$ 2,008**	**$ -**
County Areas - existing funds	Cost-efficient, safe, clean transportion	$ 9,399	$ 9,399	$ -
County Areas - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 2,987**	**$ 2,987**	**$ -**
County Areas - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 3,225**	**$ 3,225**	**$ -**
Kern County - Complete Streets/ITS Improve	Other Future developments funded by a transportation impact fee and mitigatior	$ 112	$ 112	$ -
Kern County - Complete Streets/ITS Improve	Other Future developments funded by a transportation impact fee and mitigatior	$ 3,113	$ 3,113	$ -
County Areas - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 3,188**	**$ 3,188**	**$ -**
Kern County - Class I Shared Use Path	S Downs St (S China Lake Blvd to Skylark Av) 1.1 mi.	$ 1,019	$ 1,019	$ -
Kern County - Class I Shared Use Path	S Gateway Blvd (E Kendall Av to E Javis Av) .5 mi.	$ 458	$ 458	$ -
Kern County - Class III Bike Route	Bowman Rd (Jacks Ranch Rd to Brady St) 1. mi.	$ 9	$ 9	$ -
Kern County - Class III Bike Route	Drummond Av (Jacks Ranch Rd to Mahan St) 1.5 mi.	$ 13	$ 13	$ -
Kern County - Class III Bike Route	Jacks Ranch Rd (Ridgecrest Blvd to Springer Av) 2. mi.	$ 18	$ 18	$ -
Kern County - Class III Bike Route	Skylark Av (Kendall Av to Down St) 1.2 mi.	$ 11	$ 11	$ -
Kern County - Class III Bike Route	Brown Road from SR 14 to US 395 - 20 miles - Class III Signage Only	$ 300	$ 300	$ -
Kern County - Class III Bike Route	Brown Road from US 395 Northern Overpass to US 395 Southern Overpass - 0.3 miles - Class III Signage Only	$ 4	$ 4	$ -
Kern County - Class III Bike Route	Athel Avenue from Us 395 to Brown Road - 2.6 miles - Class III Signage Only	$ 39	$ 39	$ -
Kern County - Inyokern - Class II Bike Lane	Brown Road from US 395 to Ridgecrest Blvd. - 8.2 miles - Pave Shoulder	$ 656	$ 656	$ -
Kern County - Inyokern - Class II Bike Lane	Brown Road from Athel Avenue to US 395 - 7.8 miles - Pave Shoulder	$ 624	$ 624	$ -
Kern County - Inyokern - Class II Bike Lane	Brown Road from US 395 Northern Overpass to US 395 Southern Overpass - 0.3 miles - Pave Shoulder	$ 20	$ 20	$ -
Kern County - Inyokern - Class II Bike Lane	Broadway from Orchard Avenue to Plains Avenue - 0.5 miles	$ 16	$ 16	$ -
Kern County - Inyokern - Other	Inyokern Road from SR 178 Ridgecrest City Limits to SR 14 - 9.2 miles - Other	$ -	$ -	$ -
Advanced Tech, Safe, Clean Transportation	**Sub-total Projects in Subarea**	**$ 45,689**	**$ 45,689**	**$ -**

INDIAN WELLS VALLEY SUBAREA

Subarea includes: City of Ridgecrest and the unincorporated communities of Inyokern, Johannesburg, and Randsburg		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
INDIAN WELLS VALLEY SUBAREA	**Total Projects Benefiting Subarea**	**$ 1,069,982**	**$ 1,311,595**	**$ 318,729**

Notes:

A. Inflation savings assumes a 3% inflation rate per year

B. Road maintenance (local program reconstruction) savings assumes an average of 47% reduction in maintenace costs when pavement condition index is kept above 7

C. The projects in each phase or category are not necessarily listed by priority

D. The regional projects have been approved by Kern COG (cities/County) in the adopted 2014 RTP

1 Project was in the 2006 transportation measure expenditure plan

2 Project outside subarea that benefits the subarea

Abbreviations: YOE = Year of Expenditure, RTP = Regional Transportation Plan, TCMs = Transportation Control Measures that help reduce air pollution (congestion relief, signal syncronizing, etc.

LAKE ISABELLA SUBAREA

Subrea includes the unincoprated communities (county areas) of Lake Isabella, Kernville, Wofford Heights, Glennville, Woody, Alta Sierra, Bodfish, Havilah, South Lake, Mountian Mesa, Squirrel Mtn. Valley, Bella Vista, Weldon, Onyx, and Walker Basin		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new revenu**	**Maint./Inflation Savings**
Fix-It-First, Keep-It-Local / Cost-Efficient				
County Areas - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transpor**	$ 32,012	$ 32,012	$ 15,046
County Areas - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transporta	$ 109,760	$ 109,760	$ 51,587
State Highways - existing funds	State Highway Operations and Protection Program (SHOPP)	$ 72,034	$ 72,034	$ 33,856
Fix-It-First, Keep-It-Local / Cost-Efficient	**Sub-total Projects in Subarea**	**$ 213,806**	**$ 213,806**	$ 100,489
Regional Projects				
Ready-To-Go, Regional Projects				
Route 178	[2]Miramonte to Rancheria - widen existing highway	$ 16,169	$ 19,800	$ 3,631
Route 178	[2]Vineland to Miramonte - new interchange; widen existing freeway	$ 97,178	$ 119,000	$ 21,822
Route 178	[2]Near Oswell St to Vineland Rd - widen existing freeway	$ 14,768	$ 17,000	$ 2,232
Route 178	[2]Existing west terminus to Oswell St - widen to eight lanes (HOV)	$ 112,107	$ 140,500	$ 28,393
Route 184	[2]Morning Dr to Rt 178 - widen to four lanes	$ 4,459	$ 5,000	$ 541
Route 184	[2]At Union Pacific Railroad - construct grade separation	$ 23,865	$ 26,400	$ 2,535
Route 184	[2]Rt 58 to Rt 178 - widen to four lanes	$ 78,184	$ 90,000	$ 11,816
Ready-To-Go, Regional Projects	**Sub-Total including zone of Benefit**	**$ 346,731**	**$ 417,700**	**$ 70,969**
Next-In-Line, Regional Projects				
Sierra Way	[1]Lake Isabella at South Fork Bridge - reconstruct bridge	$ 39,120	$ 51,758	$ 12,638
East Expressway Corridor	[2]Comanche Rd - Rt 178 to Rt 58 - construct new expressway	$ 151,166	$ 200,000	$ 48,834
Route 178	Vineland to China Garden - new freeway	$ 377,914	$ 500,000	$ 122,086
Next-In-Line, Regional Projects	**Sub-Total including zone of Benefit**	$ 568,200	$ 751,758	$ 183,558
Advanced Tech, Safe, Clean Transportation				
County Areas - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 4,020**	**$ 4,020**	**$ -**
County Areas - existing funds	Cost-efficient, safe, clean transportion	$ 18,817	$ 18,817	$ -
County Areas - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 5,979**	**$ 5,979**	**$ -**
County Areas - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 8,216**	**$ 8,216**	**$ -**
Kern County - Corridor Improvement	Nugget Av (Suhre St to Golden Spur St) .3 mi.	$ 84	$ 84	$ -
Kern County - High-Visibility Crosswalk	Lake Isabella Blvd - Crestview Av	$ 11	$ 11	$ -
Kern County - High-Visibility Crosswalk	Lake Isabella Blvd - Elizabeth Norris Rd	$ 11	$ 11	$ -
Kern County - Sidewalk Improvement	Erskine Creek Rd (Lake Isabella Blvd to Hall Ct) 1.4 mi.	$ 272	$ 272	$ -
Kern County - Sidewalk Improvement	Lake Isabella Blvd (Erskine Creek Rd to Lakeland St) 1.7 mi.	$ 318	$ 318	$ -
Kern County - Sidewalk Improvement	Lake Isabella Blvd (Lakeland Street to Kilbreth Dr) 1.2 mi.	$ 234	$ 234	$ -
Kern County - Sidewalk Improvement	Webb Av (Lake Isabella Blvd to School) .9 mi.	$ 167	$ 167	$ -
Kern County - Complete Streets/ITS Imp	Other Future developments funded by a transportation impact fee and mitigation	$ 7,118	$ 7,118	$ -
County Areas - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 4,622**	**$ 4,622**	**$ -**
Caltrans - Class II Bike Ln	SR 178 (North Community Limits to Lk Is Blvd) 2.3 mi.	$ 205	$ 205	$ -
Caltrans - Class III Bike Route	Wofford Hts Blvd SR 155 (Lk Is Blvd to Sawmill Rd) 4.6 mi.	$ 41	$ 41	$ -
Kern County - Class I Shared Use Path	Borel Canal Pth (Lk Is Blvd/Bfish Cyn Rd to Lk Is Blvd) 3.6 mi.	$ 3,264	$ 3,264	$ -
Kern County - Class I Shared Use Path	Kernville Path (Pasadena Ln to Borel Canal) .1 mi.	$ 68	$ 68	$ -
Kern County - Class I Shared Use Path	N Lake Isabella Connector (Gldn Spur St to Borel Canal) .1 mi.	$ 90	$ 90	$ -
Kern County - Class II Bike Ln	Bodfish Canyon Rd (Jordan Rd to Lake Isabella Blvd) 2.9 mi.	$ 263	$ 263	$ -
Kern County - Class II Bike Ln	Erskine Creek Rd (Lake Isabella Blvd to Morella Rd) 1.6 mi.	$ 149	$ 149	$ -
Kern County - Class II Bike Ln	Lake Isabella Blvd (Lakeland St to SR 178) .5 mi.	$ 42	$ 42	$ -
Kern County - Class II Bike Ln	Nugget Av (Golden Spur St to Lake Isabella Blvd) .2 mi.	$ 20	$ 20	$ -
Kern County - Class II Buffered Bike Ln	Lake Isabella Blvd (Lakeland St to Erskine Creek Rd) 1.7 mi.	$ 302	$ 302	$ -

LAKE ISABELLA SUBAREA

Subrea includes the unincoprated communities (county areas) of Lake Isabella, Kernville, Wofford Heights, Glennville, Woody, Alta Sierra, Bodfish, Havilah, South Lake, Mountian Mesa, Squirrel Mtn. Valley, Bella Vista, Weldon, Onyx, and Walker Basin		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new revenu**	**Maint./Inflation Savings**
Kern County - Class II Buffered Bike Ln	Lake Isabella Blvd (Erskine Creek Rd to Edith Av) .9 mi.	$ 161	$ 161	$ -
Kern County - Class III Bike Route	Alta Sierra Av (Lake Isabella Blvd to Edna St) .6 mi.	$ 6	$ 6	$ -
Kern County - Class III Bike Route	Edna St (Alta Sierra Av to Erskine Creek Rd) .2 mi.	$ 2	$ 2	$ -
Kern County - Class III Bike Route	Pasadena Ln (Schick Rd to Erskine Creek Rd) .5 mi.	$ 5	$ 5	$ -
Kern County - Class III Bike Route	Webb Av (Lake Isabella Rd to Borel Canal) .8 mi.	$ 7	$ 7	$ -
Advanced Tech, Safe, Clean Transportati	**Sub-total Projects in Subarea**	$ 22,837	$ 22,837	$ -

LAKE ISABELLA SUBAREA	**Total Projects Benefiting Subarea**	**$ 1,151,575**	**$ 1,406,101**	**$ 355,016**

Notes:

A. Inflation savings assumes a 3% inflation rate per year

B. Road maintenance (local program reconstruction) savings assumes an average of 47% reduction in maintenace costs when pavement condition index is kept above 75

C. The projects in each phase or category are not necessarily listed by priority

D. The regional projects have been approved by Kern COG (cities/County) in the adopted 2014 RTP

1 Project was in the 2006 transportation measure expenditure plan

2 Project outside subarea that benefits the subarea

Abbreviations: YOE = Year of Expenditure, RTP = Regional Transportation Plan, TCMs = Transportation Control Measures that help reduce air pollution (congestion relief, signal syncronizing, etc.)

METRO BAKERSFIELD SUBAREA

Subrea includes: City of Bakersfield and unincorporated communites (county areas) of East Bakersfield, Oildale, Greenfield, and Rosedale		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Fix-It-First, Keep-It-Local / Cost-Efficient				
Bakersfield - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trar**	$ 299,205	$ 299,205	$ 140,626
Bakersfield - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transp	$ 860,303	$ 860,303	$ 404,342
County Areas - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trar**	$ 138,275	$ 138,275	$ 64,989
County Areas - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transp	$ 474,105	$ 474,105	$ 222,829
State Highways - existing funds	State Highway Operations and Protection Program (SHOPP)	$ 101,651	$ 101,651	$ 47,776
Fix-It-First, Keep-It-Local / Cost-Efficien	**Sub-total Projects in Subarea**	**$ 1,873,539**	**$ 1,873,539**	**$ 880,563**
Regional Projects				
Ready-To-Go, Regional Projects				
Route 58 - recently completed	[1]Rosedale Hwy - Calloway Dr to Rt 99 - widen existing highway	$ 29,000	$ 29,000	$ -
Route 178 - recently completed	[1]Vineland Rd to east of Miramonte Dr - widen existing highway	$ 54,000	$ 54,000	$ -
Hageman Flyover	[1]Knudsen Dr to Rt 204 - construct extension	$ 68,900	$ 68,900	$ -
24th St Improvements	[1]Rt 178 (24th/23rd St) from SR-99 to M Street - widen existing highway	$ 55,000	$ 55,000	$ -
Centennial Corridor	[1]I-5 to Rt-58/Cottonwood Rd - element of the Bakersfield Beltway System - construct new freeway and/or operational improvements	$ 698,000	$ 698,000	$ -
Route 58	[1]Rosedale Hwy - Rt 43 to Allen Rd - widen existing highway	$ 53,335	$ 59,000	$ 5,665
Route 58	[1]Rosedale Hwy @ Minkler Spur / Landco - construct grade separation	$ 24,408	$ 27,000	$ 2,592
Route 58	[1]Union Ave to Fairfax Rd - widen to eight lanes	$ 42,849	$ 47,400	$ 4,551
West Corridor	[1]Rosedale Hwy to 1/2 mile north of 7th Standard Rd - construct new facility	$ 98,068	$ 115,793	$ 17,725
West Corridor	[1]Rosedale Hwy to Westside Parkway - construct new facility	$ 79,187	$ 93,500	$ 14,313
Route 178 - recently completed	[1]Near Oswell St to Vineland Rd - widen existing freeway	$ 14,768	$ 17,000	$ 2,232
Route 178	[1]Existing west terminus to Oswell St - widen to eight lanes (HOV)	$ 112,107	$ 140,500	$ 28,393
Route 178 - recently completed	[1]Vineland to Miramonte - new interchange; widen existing freeway	$ 97,178	$ 119,000	$ 21,822
Route 178 - recently completed	[1]Miramonte to Rancheria - widen existing highway	$ 16,169	$ 19,800	$ 3,631
West Corridor	[1]Pacheco Rd to Westside Parkway - construct new facility	$ 64,229	$ 115,793	$ 51,564
West Corridor	[1]Taft Hwy to Pacheco Rd - construct new facillity	$ 68,025	$ 90,000	$ 21,975
Route 99	Hosking Ave - construct interchange	$ 31,000	$ 31,000	$ -
Route 99	Olive Drive - construct interchange upgrades	$ 6,100	$ 6,100	$ -
7th Standard Rd	Rt 43 to Santa Fe Way - widen existing roadway	$ 11,857	$ 14,000	$ 2,143
Route 65	James Rd to Merle Haggard Dr - widen to four lanes	$ 2,869	$ 3,000	$ 131
Route 184	Panama Rd to Rt 58 - widen to four lanes	$ 9,005	$ 10,500	$ 1,495
Route 184	Morning Dr to Rt 178 - widen to four lanes	$ 4,459	$ 5,000	$ 541
Route 184	At Union Pacific Railroad - construct grade separation	$ 23,865	$ 26,400	$ 2,535
Route 184	Rt 58 to Rt 178 - widen to four lanes	$ 78,184	$ 90,000	$ 11,816
Route 204	Airport Drive to Rt 178 - widen existing highway	$ 43,885	$ 55,000	$ 11,115
Route 204	F St - construct interchange	$ 41,575	$ 61,700	$ 20,125
Route 58	At various locations - ramp improvements (HOV - ramp metering)	$ 22,322	$ 24,000	$ 1,678
Route 99	Beardsley Canal to 7th Standard Rd - widen to eight lanes	$ 74,150	$ 90,800	$ 16,650
Route 99	At Olive Drive - reconstruct interchange	$ 88,196	$ 108,000	$ 19,804
Route 99	At Snow Rd - construct new interchange	$ 112,858	$ 138,200	$ 25,342
Route 99	At various locations - ramp improvements (HOV - ramp metering)	$ 23,715	$ 24,000	$ 285
Route 178	At Rt 204 and 178 - reconstruct freeway ramps (HOV - ramp metering)	$ 40,831	$ 50,000	$ 9,169
Route 178	At various locations - ramp improvements (HOV - ramp metering)	$ 26,331	$ 21,000	$ (5,331)

METRO BAKERSFIELD SUBAREA

Subrea includes: City of Bakersfield and unincorporated communites (county areas) of East Bakersfield, Oildale, Greenfield, and Rosedale		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
SR 58	[2]General Beale Rd to E. of Broome Rd - Construct truck climbing lanes	$ 71,501	$ 99,000	$ 27,499
Route 119	[2]Cherry Ave to Elk Hills Rd (Phase 1, bypass) - widen to four lanes	$ 97,396	$ 115,000	$ 17,604
Route 119	[2]I-5 to Buena Vista - widen to four lanes	$ 27,916	$ 31,300	$ 3,384
Metro HOV Ramps	Install HOV Ramps and metering improvements at various locations	$ 27,000	$ 27,000	$ -
Centennial Corridor	At Route 99 & 58 - Construct operational improvements			
Centennial Corridor	Stockdale Hwy from SR 43 to Heath Road - widen existing highway			
Various Locations	Construct Bike Boulevard projects			
Various Locations	Construct Intersection enhancement projects			
Ready-To-Go, Regional Projects	**[2]Sub-Total including zone of Benefit**	**$ 2,440,239**	**$ 2,780,686**	**$ 340,447**
Next-In-Line, Regional Projects				
West Corridor-South	[1]Taft Hwy to I-5 - extend freeway	$ 75,583	$ 100,000	$ 24,417
West Corridor-North	[1]7th Standard Rd to Rt 99 -extend freeway	$ 75,583	$ 100,000	$ 24,417
Route 58	[1]Future Rt 58 from I-5 to Heath Rd at Stockdale Hwy - construct new freeway	$ 377,914	$ 500,000	$ 122,086
Santa Fe Way	[1]Hageman to Los Angeles Ave - widen to four lanes	$ 96,171	$ 127,239	$ 31,068
South Corridor	[1]I-5 to Rt 58 - new expressway	$ 453,945	$ 610,000	$ 156,055
Route 58	[1]Rosedale Highway - I-5 to Rt 43 - widen to four lanes	$ 23,431	$ 31,000	$ 7,569
East Corridor - Comanche Road	[2]Rt 178 to Rt 58 - construct new expressway	$ 151,166	$ 200,000	$ 48,834
Route 204	(Golden State Ave) Rt 99 to M St - construct operational improvements	$ 75,583	$ 100,000	$ 24,417
Route 184	Rt 184 / Morning Dr. @ UPRR - construct grade separation	$ 52,152	$ 69,000	$ 16,848
Beale Road	L St/Beale @ BNSF - construct grade separation	$ 52,152	$ 69,000	$ 16,848
Q Street	Q St @ UPRR near Golden State Hwy - construct grade separation	$ 44,594	$ 59,000	$ 14,406
Comanche Drive	Comanche Dr. @ UPRR - construct grade separation	$ 44,594	$ 59,000	$ 14,406
Olive Drive	Olive Dr. @ UPRR - construct grade separation	$ 52,152	$ 69,000	$ 16,848
Renfro Road	Renfro Rd @ BNSF - construct grade separation	$ 44,594	$ 59,000	$ 14,406
Kratzmeyer Road	Kratzmeyer Rd @ BNSF - construct grade separation	$ 44,594	$ 59,000	$ 14,406
Airport Drive	Airport Dr. @ UPRR - construct grade separation	$ 52,152	$ 69,000	$ 16,848
7th Standard Rd	I-5 to Santa Fe Way - widen to four lanes	$ 68,461	$ 90,577	$ 22,116
Route 99	Rt 99 @ Minkler Spur - construct grade separation	$ 52,152	$ 69,000	$ 16,848
Bakersfield	Phase 1 Metro Bakersfield Light/Commuter Rail System (2012 Long Range Transit Plan)	$ 1,860,430	$ 2,500,000	$ 639,570
Route 65	Merle Haggard Dr to County Line - widen to four lanes	$ 163,259	$ 216,000	$ 52,741
Route 178	[2]Vineland to China Garden - new freeway	$ 377,914	$ 500,000	$ 122,086
SR 58	[2]General Beale Rd to E. of Broome Rd - Construct truck climbing lanes	$ 71,501	$ 99,000	$ 27,499
Interstate 5	[2]From Fort Tejon to Rt 99 - widen to ten lanes	$ 65,001	$ 86,000	$ 20,999
Interstate 5	[2]7th Standard Rd Interchange - reconstruct	$ 40,815	$ 54,000	$ 13,185
Route 43	[2]7th Standard Rd to Euclid Ave - widen to four lanes	$ 27,966	$ 37,000	$ 9,034
Route 58	[2]East of Tehachapi to General Beale Rd - truck auxillary lanes / escape ramp	$ 65,001	$ 86,000	$ 20,999
Route 58	[2]Near General Beale Rd - new truck weigh station	$ 8,314	$ 11,000	$ 2,686
Route 58	[2]General Beale Rd - construct new interchange	$ 40,815	$ 54,000	$ 13,185
Route 65	[2]Merle Haggard Dr to County Line - widen to four lanes	$ 163,259	$ 216,000	$ 52,741
Route 119	[2]Tupman Rd to I-5 - widen to four lanes	$ 45,350	$ 60,000	$ 14,650
Route 119	[2]Rt 33 to Cherry Ave - widen to four lanes	$ 40,815	$ 54,000	$ 13,185
Route 223	[2]Rt 99 to Rt 184 - widen to four lanes	$ 52,160	$ 69,011	$ 16,851
Route 223	[2]East Arvin city limits to Rt 58 - widen to four lanes	$ 48,900	$ 64,698	$ 15,797
Burbank Street	[2]Burbank St @ BNSF - construct grade separation	$ 44,594	$ 59,000	$ 14,406

METRO BAKERSFIELD SUBAREA

Subrea includes: City of Bakersfield and unincorporated communites (county areas) of East Bakersfield, Oildale, Greenfield, and Rosedale		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Lerdo Highway	[2]Lerdo Hwy / Beech Ave @ BNSF - construct grade separation	$ 52,152	$ 69,000	$ 16,848
North Corridor - Shafter	[2]I-5 to SR 65 - Burbank Street Alignment - construct new highway	$ 372,086	$ 500,000	$ 127,914
Santa Fe Way	[2]Hageman to Los Angeles Ave - widen to four lanes	$ 94,688	$ 127,239	$ 32,551
Wheeler Ridge Road	[2]I-5 to Rt 223 - widen to four lanes	$ 97,801	$ 129,395	$ 31,595
Zachary Rd	[2]7th Standard Rd to Lerdo Hwy - widen to four lanes	$ 26,080	$ 34,505	$ 8,425
Amtrak Stations - NW Bksfld, Shafter	[2]Up to 4 Amtrak San Joaquins stops on BNSF - platform, track turnout, park&ride, ticket both	$ 27,024	$ 34,049	$ 7,024
Intermodal rail hub - Delano	[2]RailEx Expansion Phase 2 (Draft SJV Interregional Goods Movement Plan IGM)	$ 8,107	$ 10,215	$ 2,107
Intermodal rail hub - Shafter	[2]Shafter Inland Port Phases 2 & 3 (Draft SJV IGMP)	$ 81,073	$ 102,146	$ 21,073
BNSF/UP grade separations	[2]SR 43 corridor in Wasco, Shafter	$ 330,412	$ 444,000	$ 113,588
Freight Rail	[2]Double-track sections from Bakersfield to Mojave	$ 111,700	$ 111,700	$ -
Route 58	Business 58 OC to Edwards Air Force Base OC - improve access to EAFB (Phase 1)			
Route 58	Near Beale-Bena - Construct truck climbing lanes - (Future Candidate SHOPP project)			
Western Urban Corridor	White Lane to Westside Parkway - construct new facility			
Western Urban Corridor	Taft Hwy to White Lane - construct new facillity			
Next-In-Line, Regional Projects	**Sub-Total including zone of Benefit[2]**	**$ 6,154,188**	**$ 8,167,773**	**$ 2,013,585**
Advanced Tech, Safe, Clean Transportation				
Bakersfield - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 88,095**	**$ 88,095**	**$ -**
Bakersfield - existing funds	Cost-efficient, safe, clean transportion	$ 567,760	$ 567,760	$ -
Bakersfield - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 286,406**	**$ 286,406**	**$ -**
Metro Bus Service	Full size advanded technology buses	$ 232,500	$ 232,500	$ -
Metro/county Bus Service	2 Transit Maintenance Stations	$ 60,000	$ 60,000	$ -
Metro Bus Service	3 transfer stations	$ 15,000	$ 15,000	$ -
Metro Passenger Rail	Amtrak Station - Phase II	$ 13,000	$ 13,000	$ -
Passenger Rail	High Speed Rail Station - Bakersfield - other funding source			
Bakersfield - Incorporated	Various Feasibility Studies for Other Bike and Pedestrian Related Improvements	$ 775	$ 775	$ -
Bakersfield - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 141,550**	**$ 141,550**	**$ -**
Bakersfield - Corridor Improvement	Brimhall Rd (Renfro Rd to Coffee Rd) 4. mi.	$ 1,104	$ 1,104	$ -
Bakersfield - Corridor Improvement	Calloway Dr (Olive Dr to Harris Rd) 7.7 mi.	$ 2,120	$ 2,120	$ -
Bakersfield - Corridor Improvement	Chester Av (Beardsley Av to 30th St) 1.4 mi.	$ 390	$ 390	$ -
Bakersfield - Corridor Improvement	Clay Patrick Farr Wy (Hageman Rd to Rosedale Hwy) 1.1 mi.	$ 290	$ 290	$ -
Bakersfield - Corridor Improvement	Columbus St (Chester Av to Panorama Dr) 4.7 mi.	$ 1,287	$ 1,287	$ -
Bakersfield - Corridor Improvement	Fairfax Rd (Brundage Ln to Muller Rd) 1.9 mi.	$ 514	$ 514	$ -
Bakersfield - Corridor Improvement	Flower St (Union Av to Mt Vernon St) 2.1 mi.	$ 570	$ 570	$ -
Bakersfield - Corridor Improvement	Hosking Av (99 FreeWy to Cottonwood Rd) 2.3 mi.	$ 643	$ 643	$ -
Bakersfield - Corridor Improvement	Jewetta Av (Olive Dr to Rosedale Hwy) 2.5 mi.	$ 674	$ 674	$ -
Bakersfield - Corridor Improvement	Jewetta Av (Rosedale Hwy to Pecos River Dr) 1.4 mi.	$ 378	$ 378	$ -
Bakersfield - Corridor Improvement	Kratzmeyer Rd (Enos Ln to Nord Av) 3. mi.	$ 831	$ 831	$ -
Bakersfield - Corridor Improvement	Ming Av (Old River Rd to Gossford Rd) 1.2 mi.	$ 339	$ 339	$ -
Bakersfield - Corridor Improvement	Morning Dr (College Av to Brundage Ln) 2. mi.	$ 551	$ 551	$ -
Bakersfield - Corridor Improvement	Mr Vernon Av (Panorama Dr to Columbus St) 1. mi.	$ 288	$ 288	$ -
Bakersfield - Corridor Improvement	Olive Dr (Renfro Rd to Sanford Dr) 6.5 mi.	$ 1,776	$ 1,776	$ -
Bakersfield - Corridor Improvement	Oswell St (Edison Hwy to Brundage Ln) .9 mi.	$ 247	$ 247	$ -
Bakersfield - Corridor Improvement	Panama Ln (Union Av to Cottonwood Rd) 1. mi.	$ 274	$ 274	$ -
Bakersfield - Corridor Improvement	Panama Rd (Wible Rd to Main St) 7. mi.	$ 1,936	$ 1,936	$ -
Bakersfield - Corridor Improvement	Panorama Dr (Columbus St to Morning Dr) 5.8 mi.	$ 1,587	$ 1,587	$ -

METRO BAKERSFIELD SUBAREA

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Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Bakersfield - Corridor Improvement	Pensinger Rd (Buena Vista Rd to Wible Rd) 5.1 mi.	$ 1,396	$ 1,396	$ -
Bakersfield - Corridor Improvement	Renfro Rd (Rosedale Hwy to Stockdale Hwy) 2. mi.	$ 551	$ 551	$ -
Bakersfield - Corridor Improvement	Wall St Paseo (F St to 322' East of R St) .9 mi.	$ 234	$ 234	$ -
Bakersfield - Corridor Improvement	Wible Rd (Rosedale Hwy to Taft Hwy/Panama Rd) 5.9 mi.	$ 1,632	$ 1,632	$ -
Bakersfield - Corridor Improvement	Wilson Rd (Wible Rd to H St) 1. mi.	$ 278	$ 278	$ -
Bakersfield - Crossing Improvements	18th St (F St to Mill Creek Park) .8 mi.	$ 72	$ 72	$ -
Bakersfield - Crossing Improvements	21st St (F St to M St) .5 mi.	$ 40	$ 40	$ -
Bakersfield - Crossing Improvements	28th St (F St to Golden State Av) .5 mi.	$ 40	$ 40	$ -
Bakersfield - Crossing Improvements	Ashe Rd (McKee Rd to Taft Highway) .5 mi.	$ 43	$ 43	$ -
Bakersfield - Crossing Improvements	Baker St (E California Av to Niles St) 1. mi.	$ 83	$ 83	$ -
Bakersfield - Crossing Improvements	Chester Av (Golden State Av to Planz Rd) 4.4 mi.	$ 375	$ 375	$ -
Bakersfield - Crossing Improvements	Chester Av (China Grade Loop to Planz Rd) 1.5 mi.	$ 128	$ 128	$ -
Bakersfield - Crossing Improvements	Echo Av (Castro Ln to Benton St) .4 mi.	$ 30	$ 30	$ -
Bakersfield - Crossing Improvements	F St (30th St to Truxton Av) .9 mi.	$ 79	$ 79	$ -
Bakersfield - Crossing Improvements	Gossford Rd (Stockdale Hwy to Panama Ln) 4. mi.	$ 341	$ 341	$ -
Bakersfield - Crossing Improvements	H St (Brundage Ln to Golden State Av) 2.4 mi.	$ 200	$ 200	$ -
Bakersfield - Crossing Improvements	Hosking Av (Stine Rd to Golden State Hwy) 1.7 mi.	$ 143	$ 143	$ -
Bakersfield - Crossing Improvements	L St (Brundage Ln to Golden State Av) 2.2 mi.	$ 184	$ 184	$ -
Bakersfield - Crossing Improvements	Monitor St (Merrimac Av to Berkshire Rd) 2.3 mi.	$ 192	$ 192	$ -
Bakersfield - Crossing Improvements	Oak St (24th St to Rosa Parks Hwy) 1.9 mi.	$ 166	$ 166	$ -
Bakersfield - Crossing Improvements	Oswell St (Edison Hwy to Columbus St) 2.3 mi.	$ 197	$ 197	$ -
Bakersfield - Crossing Improvements	Pacheco Rd (Stine Rd to Monitor St) 2.5 mi.	$ 216	$ 216	$ -
Bakersfield - Crossing Improvements	Panama Ln (Stine Rd to S Union Av) 3. mi.	$ 257	$ 257	$ -
Bakersfield - Crossing Improvements	Planz Rd (Stine Rd to S H St) 2. mi.	$ 171	$ 171	$ -
Bakersfield - Crossing Improvements	Truxtun Av (Oak St to Mt Vernon Av) 4.2 mi.	$ 357	$ 357	$ -
Bakersfield - Crossing Improvements	Union Av (21st St to California Av) .7 mi.	$ 56	$ 56	$ -
Bakersfield - Crossing Improvements	White Ln (Buena Vista Rd to S Union Av) 7.3 mi.	$ 618	$ 618	$ -
Bakersfield - High-Visibility Crosswalk	Renfro Rd - Johnson Rd	$ 11	$ 11	$ -
Bakersfield - High-Visibility Crosswalk	Wharton Av - Main St	$ 11	$ 11	$ -
Bakersfield - Sidewalk Improvement	Belle Terrace (Dawn Street to Cottonwood Road) 1.3 mi.	$ 255	$ 255	$ -
Bakersfield - Sidewalk Improvement	Coffee Rd Path (Truxtun Avenue to Kern River Parkway) .1 mi.	$ 12	$ 12	$ -
Bakersfield - Sidewalk Improvement	Mt Vernon Av (California Ave to Brundage Lane) 1. mi.	$ 190	$ 190	$ -
Bakersfield - Sidewalk Improvement	N Chester Av (Universe Avenue to Kern River Bike Trail) 2.1 mi.	$ 391	$ 391	$ -
Bakersfield - Sidewalk Improvement	Pacheco Rd (Gordon St to Sparks St) .6 mi.	$ 123	$ 123	$ -
Bakersfield - Sidewalk Improvement	Potomac Av (Collins Way to Oswell St) 1.7 mi.	$ 325	$ 325	$ -
Bakersfield - Sidewalk Improvement	S Chester Av (Ming Av to Union Av) 1.7 mi.	$ 323	$ 323	$ -
Bakersfield - Sidewalk Improvement	Santa Fe Way (Reina Rd to Hageman Rd) 1.3 mi.	$ 247	$ 247	$ -
Bakersfield - Sidewalk Improvement	Stine Rd (Stockdale Hwy to Park Circle Dr) .8 mi.	$ 150	$ 150	$ -
Bakersfield - Sidewalk Improvement	Verdugo Ln (Hageman Rd to Rosedale Hwy) 1. mi.	$ 187	$ 187	$ -
Bakersfield - Sidewalk Improvement	Virginia Av (Oswell Street to Sterling Rd) .5 mi.	$ 95	$ 95	$ -
Bakersfield - Sidewalk Improvement	Virginia St (Niles Street to Ridge Rd) .6 mi.	$ 113	$ 113	$ -
Caltrans - Corridor Improvement	23rd St (24th St to Q St) 1. mi.	$ 278	$ 278	$ -
Caltrans - Corridor Improvement	24th St (Oak St to Q St) 1.6 mi.	$ 436	$ 436	$ -
Caltrans - Corridor Improvement	Golden State Av (Kern River Pkwy Bike Trail to 24th St) 1.5 mi.	$ 419	$ 419	$ -
Caltrans - Corridor Improvement	Ming Av (Gosford Rd to S Union Av) 5.2 mi.	$ 1,423	$ 1,423	$ -
Caltrans - Corridor Improvement	Rosedale Hwy (Camino Del Rio Court to Oak St) .5 mi.	$ 149	$ 149	$ -
Caltrans - Corridor Improvement	Weedpatch Hwy (Brundage Ln to E Bear Mountain Blvd) 10. mi.	$ 2,763	$ 2,763	$ -

METRO BAKERSFIELD SUBAREA

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Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Caltrans - Crossing Improvements	Rosedale Hwy (Camino Del Rio Court to Nord Av) 8.5 mi.	$ 726	$ 726	$ -
Bakersfield - Complete Streets/ITS Im	Other Future developments funded by a transportation impact fee and mitigation	$ 109,047	$ 109,047	$ -
Bakersfield - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 139,804**	**$ 139,804**	**$ -**
Bakersfield - Bikeway Study	Chester Av (Norris Rd to California Av) 3.6 mi.	$ 536	$ 536	$ -
Bakersfield - Bikeway Study	F St (Golden State Av to 16th St) 1.1 mi.	$ 168	$ 168	$ -
Bakersfield - Bikeway Study	Ming Av (Gossford Rd to S Union Av) 5.2 mi.	$ 779	$ 779	$ -
Bakersfield - Class I Shared Use Path	Almondale Park Path (Meadow Creek St to Verdugo Ln) .1 mi.	$ 127	$ 127	$ -
Bakersfield - Class I Shared Use Path	Arvin Edison Canal (Green Garden Dr to Fairfax Rd) 8.8 mi.	$ 7,922	$ 7,922	$ -
Bakersfield - Class I Shared Use Path	B'Field Cmns Connection (Coffee Rd to NW Canal Path) .4 mi.	$ 392	$ 392	$ -
Bakersfield - Class I Shared Use Path	Bike/Ped Bridge (36th Street to Jeffrey Street) .2 mi.	$ 201	$ 201	$ -
Bakersfield - Class I Shared Use Path	Bike/Ped Bridge - Yokuts Park Bridge 1	$ 3,000	$ 3,000	$ -
Bakersfield - Class I Shared Use Path	Bike/Ped Bridge - Beach Park Bridge 1	$ 3,000	$ 3,000	$ -
Bakersfield - Class I Shared Use Path	Bike/Ped Bridge - Beach Park Bridge 2	$ 3,000	$ 3,000	$ -
Bakersfield - Class I Shared Use Path	Bike/Ped Bridge - Kern River Pkwy Park Bridge 1	$ 3,000	$ 3,000	$ -
Bakersfield - Class I Shared Use Path	Bike/Ped Bridge - Kern River Pkwy Park Bridge 2	$ 3,000	$ 3,000	$ -
Bakersfield - Class I Shared Use Path	Campus Park Court (White Ln to Hemmingway Pl) .1 mi.	$ 90	$ 90	$ -
Bakersfield - Class I Shared Use Path	Columbus Path (Shared Use Path to Jewett Av) .4 mi.	$ 332	$ 332	$ -
Bakersfield - Class I Shared Use Path	Friant Kern Canal (7th Std Rd to Kern R Pkwy Bike Trl) 7.9 mi.	$ 7,080	$ 7,080	$ -
Bakersfield - Class I Shared Use Path	Gosford Rd Canal (Stockdale Hwy to Panama Ln) 4.5 mi.	$ 4,084	$ 4,084	$ -
Bakersfield - Class I Shared Use Path	Kern Island Canal (Taft Hwy to California Av) 7.4 mi.	$ 6,649	$ 6,649	$ -
Bakersfield - Class I Shared Use Path	Kern R Pkwy Bike Trl (Oildale Dr to Kern R Pkwy Bk Trl) .3 mi.	$ 283	$ 283	$ -
Bakersfield - Class I Shared Use Path	Mill Creek Park (Golden St Av to Kern R, Pkwy Bike Trl) 1.6 mi.	$ 1,465	$ 1,465	$ -
Bakersfield - Class I Shared Use Path	N Rosedale Park Path (Campfire Dr to Jewetta Av) .2 mi.	$ 162	$ 162	$ -
Bakersfield - Class I Shared Use Path	NE Bakersfield Path (Paladino Dr to Morning Dr Path) 2.7 mi.	$ 2,431	$ 2,431	$ -
Bakersfield - Class I Shared Use Path	NW Canal Path (7th Std Rd to Kern R Pkwy Bike Trl) 6.2 mi.	$ 5,596	$ 5,596	$ -
Bakersfield - Class I Shared Use Path	Old River Rd Canal (Taft Hwy to Stockdale Hwy) 7.8 mi.	$ 6,983	$ 6,983	$ -
Bakersfield - Class I Shared Use Path	Panorama Connection (Panorama Dr to Carrier Canal) .1 mi.	$ 54	$ 54	$ -
Bakersfield - Class I Shared Use Path	Polo Pk Shared Path (Old Farm Rd to Bay Meadows Ln) .4 mi.	$ 333	$ 333	$ -
Bakersfield - Class I Shared Use Path	Q St Canal (California Av to Truxtun Av) .3 mi.	$ 290	$ 290	$ -
Bakersfield - Class I Shared Use Path	Qualridge Path (NW Canal Path to Oak St) 3.3 mi.	$ 3,010	$ 3,010	$ -
Bakersfield - Class I Shared Use Path	Rail ROW Path (7th Std Rd to 99/Friant Kern Canal) 2.2 mi.	$ 2,004	$ 2,004	$ -
Bakersfield - Class I	Rail ROW Path from 7th Standard Road to E. Norris Road - 2.23 miles			
Bakersfield - Class I	Panorama Class I Connecti from Kern River Parkway to Panorama Drive - 0.06 miles			
Bakersfield - Class I	Calloway Shared Path from Balvanera Drive to Noriega Road - 0.28 miles			
Bakersfield - Class I	Truxtun Shared Path link from Coffee Road to Quailridge Road - 0.15 miles			
Bakersfield - Class II Bike Ln	Access Rd (Union Av to Monte Vista Dr) .3 mi.	$ 23	$ 23	$ -
Bakersfield - Class II Bike Ln	Akers Rd (McKee Rd to Taft Hwy) .5 mi.	$ 46	$ 46	$ -
Bakersfield - Class II Bike Ln	Allen Rd (Pensinger Road to Highway 119) 4. mi.	$ 360	$ 360	$ -
Bakersfield - Class II Bike Ln	Ashe Rd (Phisto Pl to Taft Hwy) 1.5 mi.	$ 135	$ 135	$ -
Bakersfield - Class II Bike Ln	Ashe Rd (SR 119 to SR 223) 4. mi.	$ 361	$ 361	$ -
Bakersfield - Class II Bike Ln	Auburn St (Fairfax Rd to Morning Dr) .9 mi.	$ 82	$ 82	$ -
Bakersfield - Class II Bike Ln	Baker St (Bernard St to California Av) 1.6 mi.	$ 141	$ 141	$ -
Bakersfield - Class II Bike Ln	Beale Av (Grace Street to 21st Street) 1. mi.	$ 90	$ 90	$ -
Bakersfield - Class II Bike Ln	Bear Mountain Blvd (Coles Levee Rd to Unioin Av) 13. mi.	$ 1,171	$ 1,171	$ -
Bakersfield - Class II Bike Ln	Berkshire Rd (Colony St to Madison Av) 1.8 mi.	$ 162	$ 162	$ -
Bakersfield - Class II Bike Ln	Bernard St (Union Av to Haley St) 1.5 mi.	$ 133	$ 133	$ -
Bakersfield - Class II Bike Ln	Buena Vista Blvd (Comanche Dr to Union Av) 9.1 mi.	$ 817	$ 817	$ -

METRO BAKERSFIELD SUBAREA

Subrea includes: City of Bakersfield and unincorporated communites (county areas) of East Bakersfield, Oildale, Greenfield, and Rosedale		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Bakersfield - Class II Bike Ln	Buena Vista Rd (Coulter Rd to SR 119) 1.5 mi.	$ 135	$ 135	$ -
Bakersfield - Class II Bike Ln	Campus Park Dr (Buena Vista Rd to White Ln) 1.6 mi.	$ 144	$ 144	$ -
Bakersfield - Class II Bike Ln	Clay Patrick Farr Wy (Hageman Rd to Rosedale Hwy) .8 mi.	$ 74	$ 74	$ -
Bakersfield - Class II Bike Ln	Coffee Rd (7th Std Rd to Norris Rd) 1.5 mi.	$ 134	$ 134	$ -
Bakersfield - Class II Bike Ln	College Av (College Av to Kern Canyon Rd) 1.5 mi.	$ 138	$ 138	$ -
Bakersfield - Class II Bike Ln	Columbus St (Union Av to River Blvd) 1. mi.	$ 90	$ 90	$ -
Bakersfield - Class II Bike Ln	Comanche Dr (Muller Rd to Kern Canyon Rd) 5.9 mi.	$ 534	$ 534	$ -
Bakersfield - Class II Bike Ln	Di Giorgio Rd (Union Av to Pierce Dr) 4.3 mi.	$ 384	$ 384	$ -
Bakersfield - Class II Bike Ln	District Blvd (Chaney Ln to Stine Rd) 2.6 mi.	$ 238	$ 238	$ -
Bakersfield - Class II Bike Ln	E Pacheco Rd (Gasoline Alley to Monitor Street) .3 mi.	$ 28	$ 28	$ -
Bakersfield - Class II Bike Ln	Ellington St (11th Av to Woollomes Av) 1.6 mi.	$ 146	$ 146	$ -
Bakersfield - Class II Bike Ln	F St (Golden State Av to 16th St) 1.2 mi.	$ 105	$ 105	$ -
Bakersfield - Class II Bike Ln	Flower St (Mount Vernon Av to Alta Vista Dr) 1.7 mi.	$ 149	$ 149	$ -
Bakersfield - Class II Bike Ln	Gosford Rd (Panama Ln to McCutchen Rd) 1. mi.	$ 90	$ 90	$ -
Bakersfield - Class II Bike Ln	Gossford Rd (SR 119 to SR 223) 4. mi.	$ 361	$ 361	$ -
Bakersfield - Class II Bike Ln	Haley St (SR 178 to Niles St) .9 mi.	$ 78	$ 78	$ -
Bakersfield - Class II Bike Ln	Haley St (Panorama Dr to Columbus St) .9 mi.	$ 78	$ 78	$ -
Bakersfield - Class II Bike Ln	Harris Rd-Gasoline Alley (Wible Rd to Pacheco Rd) .7 mi.	$ 63	$ 63	$ -
Bakersfield - Class II Bike Ln	Hosking Av (Union Av to Cottonwood Rd) 1. mi.	$ 88	$ 88	$ -
Bakersfield - Class II Bike Ln	Jewetta Av (Palm Avenue to Brimhall Road) .5 mi.	$ 45	$ 45	$ -
Bakersfield - Class II Bike Ln	Kentucky St (Mt Vernon Avenue to Oswell Street) 2.8 mi.	$ 254	$ 254	$ -
Bakersfield - Class II Bike Ln	Kern Canyon Rd (Vineland Rd to Bedford Green Dr) .7 mi.	$ 65	$ 65	$ -
Bakersfield - Class II Bike Ln	Kratzmeyer Rd (Enos Ln to Allen Rd) 6. mi.	$ 541	$ 541	$ -
Bakersfield - Class II Bike Ln	Lake Ming Rd (Rudal Rd to Alfred Harrell Hwy) .3 mi.	$ 31	$ 31	$ -
Bakersfield - Class II Bike Ln	Laurelglen Blvd (Brookside Dr to Gosford Rd) .2 mi.	$ 18	$ 18	$ -
Bakersfield - Class II Bike Ln	M St (17th St to 30th St) .8 mi.	$ 76	$ 76	$ -
Bakersfield - Class II Bike Ln	Main St (DiGiorgio Rd to Bear Mountain Blvd) 3. mi.	$ 271	$ 271	$ -
Bakersfield - Class II Bike Ln	Martin Luther King Jr Blvd (Truxtun Av to SR 58) 1.4 mi.	$ 130	$ 130	$ -
Bakersfield - Class II Bike Ln	Masterson St (Comanche Dr to Kern Canyon Rd) 2.4 mi.	$ 215	$ 215	$ -
Bakersfield - Class II Bike Ln	McCutchen Rd (Buena Vista Rd to Stine Rd) 4. mi.	$ 364	$ 364	$ -
Bakersfield - Class II Bike Ln	McKee Rd (Ashe Rd to Ruggiano St) 2.8 mi.	$ 249	$ 249	$ -
Bakersfield - Class II Bike Ln	Mohawk St (Hageman Rd to SR 58) 1.3 mi.	$ 113	$ 113	$ -
Bakersfield - Class II Bike Ln	Monitor St (Hosking Av to SR 119) 1. mi.	$ 90	$ 90	$ -
Bakersfield - Class II Bike Ln	Mount Vernon Av (Panorama Dr to Columbus St) 1.5 mi.	$ 139	$ 139	$ -
Bakersfield - Class II Bike Ln	Mountain Ridge Rd (Panama Ln to Taft Hwy) 2. mi.	$ 179	$ 179	$ -
Bakersfield - Class II Bike Ln	Mtn Vista Dr (Sharktooth Peak Dr to Berkshire Rd) .8 mi.	$ 71	$ 71	$ -
Bakersfield - Class II Bike Ln	N St (23rd St to California Av) .8 mi.	$ 72	$ 72	$ -
Bakersfield - Class II Bike Ln	Nord Av (7th Std Rd to Stockdale Hwy) 6. mi.	$ 540	$ 540	$ -
Bakersfield - Class II Bike Ln	Old Farm Rd (Snow Rd to Hageman Rd) 2. mi.	$ 179	$ 179	$ -
Bakersfield - Class II Bike Ln	Old River Rd (Pensinger Rd to Taft Hwy) 2.5 mi.	$ 225	$ 225	$ -
Bakersfield - Class II Bike Ln	Oswell St (Columbus St to Pico Av) .7 mi.	$ 65	$ 65	$ -
Bakersfield - Class II Bike Ln	Palm Av (Westdale Dr to Calloway Dr) 3. mi.	$ 269	$ 269	$ -
Bakersfield - Class II Bike Ln	Palm Av (Renfro Rd to Heath Rd) 1. mi.	$ 90	$ 90	$ -
Bakersfield - Class II Bike Ln	Panama Ln (SR 43 to Buena Vista Rd) 7. mi.	$ 631	$ 631	$ -
Bakersfield - Class II Bike Ln	Patton Wy (Snow Rd to Hageman Rd) 1.8 mi.	$ 158	$ 158	$ -
Bakersfield - Class II Bike Ln	Planz Rd (Madison St to Muller Rd) 2.5 mi.	$ 226	$ 226	$ -
Bakersfield - Class II Bike Ln	Potomac Av (S King Street to Monticello Avenue) 2.5 mi.	$ 225	$ 225	$ -

METRO BAKERSFIELD SUBAREA

Subrea includes: City of Bakersfield and unincorporated communites (county areas) of East Bakersfield, Oildale, Greenfield, and Rosedale		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Bakersfield - Class II Bike Ln	Q St (Columbus St to 24th St) 1.2 mi.	$ 106	$ 106	$ -
Bakersfield - Class II Bike Ln	Redbank Rd (Fairfax Rd to Edison Rd) 3. mi.	$ 272	$ 272	$ -
Bakersfield - Class II Bike Ln	River Run Blvd (Ming Avenue to Buena Vista Road) .9 mi.	$ 83	$ 83	$ -
Bakersfield - Class II Bike Ln	Rudd Av (Palm Av to Brimhall Rd) .5 mi.	$ 45	$ 45	$ -
Bakersfield - Class II Bike Ln	S P St (Brundage Ln to Ming Av) 1.5 mi.	$ 132	$ 132	$ -
Bakersfield - Class II Bike Ln	Snow Rd (Calloway Dr to SR 99) 2.3 mi.	$ 208	$ 208	$ -
Bakersfield - Class II Bike Ln	Snow Rd (Allen Rd to Norris Rd) 1.4 mi.	$ 122	$ 122	$ -
Bakersfield - Class II Bike Ln	Stine Rd (SR 119 to SR 223) 4. mi.	$ 361	$ 361	$ -
Bakersfield - Class II Bike Ln	Stockdale Hwy (Claudia Autumn Dr to Enos Ln) 4.8 mi.	$ 429	$ 429	$ -
Bakersfield - Class II Bike Ln	Verdugo Ln (Olive Dr to Glenn St) 2.6 mi.	$ 237	$ 237	$ -
Bakersfield - Class II Bike Ln	Washington St (Edison Hwy to Casa Loma Dr) 2.3 mi.	$ 207	$ 207	$ -
Bakersfield - Class II Bike Ln	Wible Rd (SR 119 to SR 223) 4. mi.	$ 362	$ 362	$ -
Bakersfield - Class II Bike Ln	Knudsen Drive from Olive Drive to Hageman Road - 0.47 miles			
Bakersfield - Class II Bike Ln	Brimhall Road from Renfro Road to Allen Road - 1.01 miles			
Bakersfield - Class II Bike Ln	Santa Fe Way from 7th Stnard Road to Hageman Road - 4.14 miles			
Bakersfield - Class II Bike Ln	Mountain Ridge Rd from Panama Ln to Taft Hwy - 2 miles			
Bakersfield - Class II Bike Ln	Reina Road from Renfro Road to Verdugo Lane - 2.04 miles			
Bakersfield - Class II Bike Ln	Allen Road from Snow Road to Hageman Road - 1.89 miles			
Bakersfield - Class II Bike Ln	Panama Lane from Interstate 5 to Gosford Road - 2.02 miles			
Bakersfield - Class II Buffered Bike Ln	34th St (Chester Av to Union Av) .9 mi.	$ 161	$ 161	$ -
Bakersfield - Class II Buffered Bike Ln	34th St (Chester Av to Union Av) .9 mi.	$ 161	$ 161	$ -
Bakersfield - Class II Buffered Bike Ln	4th St, Virginia Av (King St to Oswell St) 2.5 mi.	$ 451	$ 451	$ -
Bakersfield - Class II Buffered Bike Ln	Allen Rd (Snow Rd to White Ln) 7. mi.	$ 1,260	$ 1,260	$ -
Bakersfield - Class II Buffered Bike Ln	Camino Media (Old River Rd to Gosford Rd) 1.3 mi.	$ 235	$ 235	$ -
Bakersfield - Class II Buffered Bike Ln	Casa Loma Dr (Union Av to Fairfax Rd) 4. mi.	$ 720	$ 720	$ -
Bakersfield - Class II Buffered Bike Ln	Chester Av (California Av to Planz Rd) 3.1 mi.	$ 564	$ 564	$ -
Bakersfield - Class II Buffered Bike Ln	Coffee Rd (Snow Rd to Rosedale Hwy) 3. mi.	$ 540	$ 540	$ -
Bakersfield - Class II Buffered Bike Ln	Cottonwood Rd (Casa Loma Dr to Panama Rd) 5. mi.	$ 900	$ 900	$ -
Bakersfield - Class II Buffered Bike Ln	Fairfax Rd (Wilson Rd to Panama Rd) 6.6 mi.	$ 1,185	$ 1,185	$ -
Bakersfield - Class II Buffered Bike Ln	Fruitvale Av (Rosedale Hwy to Hageman St) 3. mi.	$ 540	$ 540	$ -
Bakersfield - Class II Buffered Bike Ln	Gosford Rd (Stockdale Hwy to Panama Ln) 4. mi.	$ 717	$ 717	$ -
Bakersfield - Class II Buffered Bike Ln	Hagerman Rd (Jenkins Rd to Jewetta Av) 1.5 mi.	$ 274	$ 274	$ -
Bakersfield - Class II Buffered Bike Ln	Harris Rd (Buena Vista Rd to Wible Rd) 5.1 mi.	$ 914	$ 914	$ -
Bakersfield - Class II Buffered Bike Ln	Hosking Av (Stine Rd to S Union Av) 3. mi.	$ 545	$ 545	$ -
Bakersfield - Class II Buffered Bike Ln	Manor St (N Chester Av to Columbus St) 3.4 mi.	$ 621	$ 621	$ -
Bakersfield - Class II Buffered Bike Ln	Ming Av (Old River Rd to Gosford Rd) 3. mi.	$ 541	$ 541	$ -
Bakersfield - Class II Buffered Bike Ln	Monterey St (Alta Vista Dr to Williams St) 1.3 mi.	$ 226	$ 226	$ -
Bakersfield - Class II Buffered Bike Ln	Mount Vernon (Brundage Ln to Muller Rd) 2. mi.	$ 358	$ 358	$ -
Bakersfield - Class II Buffered Bike Ln	Oswell St (Brundage Ln to Planz Rd) 2. mi.	$ 361	$ 361	$ -
Bakersfield - Class II Buffered Bike Ln	Panama Ln (Comanche Dr to Cottonwood Rd) 8.1 mi.	$ 1,450	$ 1,450	$ -
Bakersfield - Class II Buffered Bike Ln	Panama Rd (Main St to Habecker Rd) .5 mi.	$ 93	$ 93	$ -
Bakersfield - Class II Buffered Bike Ln	Renfro Rd (Santa Fe Wy to Culiacan Av) 4.1 mi.	$ 734	$ 734	$ -
Bakersfield - Class II Buffered Bike Ln	River Blvd (Panorama Dr to Bernard St) 1.3 mi.	$ 232	$ 232	$ -
Bakersfield - Class II Buffered Bike Ln	S H St (Berkshire Rd to Ming Av) 3.5 mi.	$ 629	$ 629	$ -
Bakersfield - Class II Buffered Bike Ln	Santa Fe Wy (7th Std Road to Hageman Road) 4.1 mi.	$ 746	$ 746	$ -
Bakersfield - Class II Buffered Bike Ln	Stine Rd (Hosking Av to Mohawk St) 5.5 mi.	$ 999	$ 999	$ -
Bakersfield - Class II Buffered Bike Ln	Taft Hwy (Enos Ln to Weedpatch Hwy) 19.1 mi.	$ 3,446	$ 3,446	$ -

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Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Bakersfield - Class II Buffered Bike Ln	Union Av (SR 58 to SR 119) 5. mi.	$ 899	$ 899	$ -
Bakersfield - Class II Buffered Bike Ln	White Ln (S Allen Rd to S Union Av) 8.3 mi.	$ 1,487	$ 1,487	$ -
Bakersfield - Class III Bike Blvd	17th St (A Street to Truxtun Avenue) 1.3 mi.	$ 63	$ 63	$ -
Bakersfield - Class III Bike Blvd	18th St (Oak St to Baker St) 2.5 mi.	$ 127	$ 127	$ -
Bakersfield - Class III Bike Blvd	18th St (21st Street to 17th Street) .5 mi.	$ 27	$ 27	$ -
Bakersfield - Class III Bike Blvd	21st St (Kern River Pkwy Bike Trail to Oak St) .3 mi.	$ 16	$ 16	$ -
Bakersfield - Class III Bike Blvd	22nd St (F St to Q St) .7 mi.	$ 36	$ 36	$ -
Bakersfield - Class III Bike Blvd	30th St (Alder St to Chester Av) .3 mi.	$ 17	$ 17	$ -
Bakersfield - Class III Bike Blvd	36th St (Chester Avenue to San Dimas Path) .6 mi.	$ 30	$ 30	$ -
Bakersfield - Class III Bike Blvd	A St (California Av to Terrace Wy) 1.3 mi.	$ 63	$ 63	$ -
Bakersfield - Class III Bike Blvd	Appletree/Hahn Route (Wilson Rd to Wible Rd) 1.8 mi.	$ 90	$ 90	$ -
Bakersfield - Class III Bike Blvd	Baker St (California Avenue to S King Street) .4 mi.	$ 18	$ 18	$ -
Bakersfield - Class III Bike Blvd	Bank St/2nd St (Oak Street to S. P Street) 1.6 mi.	$ 80	$ 80	$ -
Bakersfield - Class III Bike Blvd	Belle Terrace (H St to Cottonwood Rd) 2. mi.	$ 101	$ 101	$ -
Bakersfield - Class III Bike Blvd	Berkshire Rd (Ashe Rd to Santana Sun Dr) 2.4 mi.	$ 119	$ 119	$ -
Bakersfield - Class III Bike Blvd	BRd Oak Av (St Gobain St to Oak Grove St) .2 mi.	$ 8	$ 8	$ -
Bakersfield - Class III Bike Blvd	Camino Grande (Alfred Harrell to NE Bakersfield Path) 1.3 mi.	$ 65	$ 65	$ -
Bakersfield - Class III Bike Blvd	Chamber Blvd (Allen Rd to Grand Lakes Av) 3. mi.	$ 152	$ 152	$ -
Bakersfield - Class III Bike Blvd	Charger Av (La Costa St to Auburn St) 1.2 mi.	$ 59	$ 59	$ -
Bakersfield - Class III Bike Blvd	Chinon/Limoges Rte (McInnes Blvd to Hagn Oks Blvd) .4 mi.	$ 18	$ 18	$ -
Bakersfield - Class III Bike Blvd	Chippewa/Yorkshire (Constitution Av to Verdugo Ln) .9 mi.	$ 44	$ 44	$ -
Bakersfield - Class III Bike Blvd	Christmas Tree Ln (Mt Vernon Av to Panorama Dr) 1.7 mi.	$ 83	$ 83	$ -
Bakersfield - Class III Bike Blvd	Coventry/Benton Route (Larson Ln to Ming Av) 1.4 mi.	$ 70	$ 70	$ -
Bakersfield - Class III Bike Blvd	Edgemont Dr (Half Moon Dr to Wilson Rd) .3 mi.	$ 15	$ 15	$ -
Bakersfield - Class III Bike Blvd	El Capitan Bike Route (Noriega Rd to Old Farm Rd) .4 mi.	$ 22	$ 22	$ -
Bakersfield - Class III Bike Blvd	El Portal Dr (Laurelglen Blvd to Westwold Dr) .2 mi.	$ 9	$ 9	$ -
Bakersfield - Class III Bike Blvd	Ewoldsen (Oak Grove Street to N Half Moon Drive) .6 mi.	$ 31	$ 31	$ -
Bakersfield - Class III Bike Blvd	Exodus Ln (Kelvin grove to Iron Oak Wy) .2 mi.	$ 12	$ 12	$ -
Bakersfield - Class III Bike Blvd	Greenwich/Balvanera (Verdugo Ln to Calloway Dr) .6 mi.	$ 28	$ 28	$ -
Bakersfield - Class III Bike Blvd	Haggin Oaks Blvd (Ming Av to Limoges Wy) .5 mi.	$ 26	$ 26	$ -
Bakersfield - Class III Bike Blvd	Half Moon Dr (Olympia Dr to Olympia Dr) 2.1 mi.	$ 106	$ 106	$ -
Bakersfield - Class III Bike Blvd	Hawaii/Wailea (Allen Rd to Noriega Rd) .4 mi.	$ 19	$ 19	$ -
Bakersfield - Class III Bike Blvd	Height St (178 Overcrossing to River Blvd) .7 mi.	$ 37	$ 37	$ -
Bakersfield - Class III Bike Blvd	High Oak Dr (Mountain Oak Dr to Scarlet Oak Dr) .2 mi.	$ 10	$ 10	$ -
Bakersfield - Class III Bike Blvd	Iron Crk/Goose Crk CT (Allen Rd to Jasmine Pk Dr) 3.7 mi.	$ 183	$ 183	$ -
Bakersfield - Class III Bike Blvd	Jeffrey St (River Blvd to Kern Island Canal) 1.1 mi.	$ 55	$ 55	$ -
Bakersfield - Class III Bike Blvd	Jewett Av (Columbus St to 30th St) .8 mi.	$ 40	$ 40	$ -
Bakersfield - Class III Bike Blvd	K St (Garces Memorial Circle to 17th St) .9 mi.	$ 43	$ 43	$ -
Bakersfield - Class III Bike Blvd	Kahala/Constitution Rou (Hawaii Ln to Sundance Wy) 1.3 mi.	$ 67	$ 67	$ -
Bakersfield - Class III Bike Blvd	Kelvin Grove (Exodus Ln to Elizabeth Grove Court) .2 mi.	$ 11	$ 11	$ -
Bakersfield - Class III Bike Blvd	King St (California Av to SR 58) 1.1 mi.	$ 54	$ 54	$ -
Bakersfield - Class III Bike Blvd	Knudsen Dr (Norris Rd to Hageman Rd) .9 mi.	$ 44	$ 44	$ -
Bakersfield - Class III Bike Blvd	La Costa St (Christmas Tree Ln to Auburn St) .7 mi.	$ 34	$ 34	$ -
Bakersfield - Class III Bike Blvd	La France Dr (Castro Lane to El Toro Drive) 1. mi.	$ 51	$ 51	$ -
Bakersfield - Class III Bike Blvd	Laurel Pk/Wrangler (Bay Meadows Ln to Calloway Dr) 1.8 mi.	$ 92	$ 92	$ -
Bakersfield - Class III Bike Blvd	Madison St (SR 58 to White Ln) 2.4 mi.	$ 119	$ 119	$ -
Bakersfield - Class III Bike Blvd	Marella Wy (Garnsey Av to Montclair Street) .5 mi.	$ 27	$ 27	$ -

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Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Bakersfield - Class III Bike Blvd	Mc Innes Blvd (Scarlet Oak Blvd to St Gobain Blvd) .2 mi.	$ 8	$ 8	$ -
Bakersfield - Class III Bike Blvd	McCray St/Oildale Dr (Willow Dr to W China Grd Lp) 1.9 mi.	$ 96	$ 96	$ -
Bakersfield - Class III Bike Blvd	McInnes/Westwold Path (McInnes Blvd to Wwold Dr) .2 mi.	$ 8	$ 8	$ -
Bakersfield - Class III Bike Blvd	Meacham Rd (Hageman Rd to Clay Patrick Farr Wy) 2.3 mi.	$ 115	$ 115	$ -
Bakersfield - Class III Bike Blvd	Mezzadro/Alderbrk/Lavina (Allen Rd to Allen Rd) 3.6 mi.	$ 182	$ 182	$ -
Bakersfield - Class III Bike Blvd	Mirador/Camino Real (178 OverXing Path to Rdige Rd) .6 mi.	$ 28	$ 28	$ -
Bakersfield - Class III Bike Blvd	Mountain Oak Rd (White Oak Dr to High Oak Dr) .1 mi.	$ 5	$ 5	$ -
Bakersfield - Class III Bike Blvd	Mountain Park Dr (Kern R Pkwy to River Run Blvd) .2 mi.	$ 9	$ 9	$ -
Bakersfield - Class III Bike Blvd	Mtn Oak/McInnes (Pk Path to McInnes - Wwold Path) .3 mi.	$ 17	$ 17	$ -
Bakersfield - Class III Bike Blvd	N St (Brundage Ln to California Av) 1. mi.	$ 49	$ 49	$ -
Bakersfield - Class III Bike Blvd	Noble Av Route (River Blvd to Columbus St) 2.3 mi.	$ 115	$ 115	$ -
Bakersfield - Class III Bike Blvd	Noriega Rd (Renfro Rd to Calloway Dr) 2.7 mi.	$ 137	$ 137	$ -
Bakersfield - Class III Bike Blvd	Nutmeg Dr (Half Moon Dr to Wilson Rd) .2 mi.	$ 10	$ 10	$ -
Bakersfield - Class III Bike Blvd	Oak Grove (Westwold Dr to BRd Oak Av) .1 mi.	$ 4	$ 4	$ -
Bakersfield - Class III Bike Blvd	Old Town/Nantucket (Allen Rd to Jewetta Av) 3.3 mi.	$ 166	$ 166	$ -
Bakersfield - Class III Bike Blvd	Olympia Dr (Laurelglen Blvd to Half Moon Dr) .5 mi.	$ 24	$ 24	$ -
Bakersfield - Class III Bike Blvd	Outingdale Dr (El Portal Dr to Ashe Rd) .7 mi.	$ 36	$ 36	$ -
Bakersfield - Class III Bike Blvd	Paul Av (Jewetta Avenue to Treasure Island Street) .9 mi.	$ 45	$ 45	$ -
Bakersfield - Class III Bike Blvd	Pin Oak Blvd (Bear Creek Rd to District Blvd) 1.1 mi.	$ 57	$ 57	$ -
Bakersfield - Class III Bike Blvd	Polo Dr (Dapple Wy to Meadow Creek St) .3 mi.	$ 13	$ 13	$ -
Bakersfield - Class III Bike Blvd	Quailwood/Quailridge (Truxtun Av to Stockdale Hwy) 1. mi.	$ 51	$ 51	$ -
Bakersfield - Class III Bike Blvd	Quantico Av (California Av to Brundage Ln) 1. mi.	$ 50	$ 50	$ -
Bakersfield - Class III Bike Blvd	Reina Rd (Allen Rd to Verdugo Ln) 1.5 mi.	$ 76	$ 76	$ -
Bakersfield - Class III Bike Blvd	Reliance Dr (Panama Ln to Reliance Dr) 2.2 mi.	$ 108	$ 108	$ -
Bakersfield - Class III Bike Blvd	Ridge Oak Dr (Old River Rd to Mountain Oak Road) .3 mi.	$ 14	$ 14	$ -
Bakersfield - Class III Bike Blvd	Riverlakes Dr (Elizabeth Grove to Coffee Rd) 1.7 mi.	$ 87	$ 87	$ -
Bakersfield - Class III Bike Blvd	Sage Dr (Half Moon Bay Drive to Wilson Road) .2 mi.	$ 10	$ 10	$ -
Bakersfield - Class III Bike Blvd	San Dimas St (36th Street to 38th St) .2 mi.	$ 10	$ 10	$ -
Bakersfield - Class III Bike Blvd	Scarlet Oak Blvd (High Oak Dr to Mc Innes Blvd) .2 mi.	$ 11	$ 11	$ -
Bakersfield - Class III Bike Blvd	St Gobain St (Mc Innes Blvd to BRd Oak Av) .2 mi.	$ 8	$ 8	$ -
Bakersfield - Class III Bike Blvd	Stellar Av (Old Farm Road to Campfire Drive) .3 mi.	$ 17	$ 17	$ -
Bakersfield - Class III Bike Blvd	Sundale Av (Ming Av to Stine Rd) 1.7 mi.	$ 85	$ 85	$ -
Bakersfield - Class III Bike Blvd	Toluca Dr Route (Renfro Rd to Allen Rd) 1.5 mi.	$ 74	$ 74	$ -
Bakersfield - Class III Bike Blvd	University Av (Panorama Dr to Columbus St) .7 mi.	$ 34	$ 34	$ -
Bakersfield - Class III Bike Blvd	Watts Dr (Union Av to Cottonwood Rd) .5 mi.	$ 25	$ 25	$ -
Bakersfield - Class III Bike Blvd	Wenatchee Av (Panorama Drive to Columbus Street) 1. mi.	$ 51	$ 51	$ -
Bakersfield - Class III Bike Blvd	Westwold Dr (Oak Grove St to El Portal Dr) .8 mi.	$ 40	$ 40	$ -
Bakersfield - Class III Bike Blvd	White Ln (Union Av to Cottonwood Rd) 1. mi.	$ 49	$ 49	$ -
Bakersfield - Class III Bike Blvd	White Oak Dr (Old River Rd to Mountain Oak Rd) .2 mi.	$ 12	$ 12	$ -
Bakersfield - Class III Bike Blvd	Yarnell (Paul Avenue to Calloway Drive) .3 mi.	$ 15	$ 15	$ -
Bakersfield - Class III Bike Route	H St (Taft Hwy to Bear Mountain Blvd) 4.2 mi.	$ 38	$ 38	$ -
Bakersfield - Class III Bike Route	Paladino Dr (Morning Dr to Alfred Harrell Hwy) 2.4 mi.	$ 22	$ 22	$ -
Bakersfield - Class III Bike Route	Rancheria Rd (Equestrian Center to Kern Canyon Rd) .4 mi.	$ 3	$ 3	$ -
Bakersfield - Class III Bike Route	Reina Rd (Nord Av to Allen Rd) 3. mi.	$ 27	$ 27	$ -
Bakersfield - Class III Bike Route	Olympia Drive from S. Laurel Glen Boulevard to Half Moon Bay Drive - 0.49 miles			
Bakersfield - Class III Bike Route	Old Walker Pass Road from Comanche Drive to Rancheria Road - 1.46 miles			
Bakersfield - Class III Bike Route	Kahala - Constitution Rou from Hawaii Lane to Jewetta Avenue - 1.34 miles			

METRO BAKERSFIELD SUBAREA

Subrea includes: City of Bakersfield and unincorporated communites (county areas) of East Bakersfield, Oildale, Greenfield, and Rosedale		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Bakersfield - Class III Bike Route	Mezzadro/Alderbrk/Lavina from Allen Road to Allen Road - 3.63 miles			
Bakersfield - Class III Bike Route	Yarnell Bike Route from Paul Avenue to Calloway Drive - 0.31 miles			
Bakersfield - Class III Bike Route	Hawaii - Wailea from Allen Road to Noriega Road - 0.38 miles			
Bakersfield - Class III Bike Route	Mountain Park Dr from Kern River Parkway to River Run Boulevard - 0.18 miles			
Bakersfield - Class III Bike Route	Rose Petal Street from Brandy Rose Street to Ridge Oak Drive - 0.2 miles			
Bakersfield - Class III Bike Route	River Run Boulevard from Ming Avenue to Buena Vista Road - 0.93 miles			
Bakersfield - Class IV Cycle Track	21st St (Oak St to King St) 2.7 mi.	$ 801	$ 801	$ -
Bakersfield - Complete Streets	California Av (Mohawk St to Dr MLK Jr Blvd) 5.4 mi.	$ 3,092	$ 3,092	$ -
Bakersfield - Complete Streets	Golden State Av (21st St to 24th St) .3 mi.	$ 185	$ 185	$ -
Bakersfield - Complete Streets	Mt Vernon Av (E Brundage Ln to Columbus St) 3. mi.	$ 1,733	$ 1,733	$ -
Bakersfield - Complete Streets	Niles St (Union Av to Vineland Rd) 6.1 mi.	$ 3,513	$ 3,513	$ -
Bakersfield - Complete Streets	Palm St (Oak St to King St) 2.5 mi.	$ 1,462	$ 1,462	$ -
Bakersfield - Complete Streets	Stockdale/Brundage Ln (Old River Rd to S Fairfax Rd) 10.3 mi.	$ 5,949	$ 5,949	$ -
Bakersfield - Complete Streets	Union Av (W Columbus St to Ming Av) 4. mi.	$ 2,304	$ 2,304	$ -
Bakersfield/Caltrans - Class II Bike Ln	Morning Dr (Paladino Dr to Edison Hwy) 4.9 mi.	$ 445	$ 445	$ -
Bakersfield/Kern - Class I Shared Use	Alfred Harrell Hwy Path (Morning Dr to Existing Class I) 2.1 mi.	$ 1,853	$ 1,853	$ -
Bakersfield/Shftr - Class I Shared Use	7th Standard Rd (Nord Av to Rail Row Path) 6.5 mi.	$ 5,829	$ 5,829	$ -
Caltrans - Bikeway Study	SR 184 (Panama Rd to Di Giorgio Rd) 1. mi.	$ 150	$ 150	$ -
Caltrans - Class I Shared Use Path	Bike/Ped Bridge SR 178 (Height St to Mirador Dr) .1 mi.	$ 92	$ 92	$ -
Caltrans - Class I Shared Use Path	Weedpatch Hwy SR 184 (Mtn View Rd to Panama Rd) 1. mi.	$ 907	$ 907	$ -
Caltrans - Class II Bike Ln	E Bear Mtn Blvd SR 223 (Comanche Dr to Union St) 12.6 mi.	$ 1,138	$ 1,138	$ -
Caltrans - Class II Bike Ln	Kern Canyon Rd SR 178 (View St to Ranchiera Rd) 2.2 mi.	$ 198	$ 198	$ -
Caltrans - Class II Bike Ln	Rosedale Hwy SR 58 (Enos Ln to Allen Rd) 6. mi.	$ 542	$ 542	$ -
Caltrans - Class II Bike Ln	SR 43/Enos Ln (Lerdo Hwy to Panama Ln) 14.2 mi.	$ 1,275	$ 1,275	$ -
Caltrans - Class II Bike Ln	SR 58 (Calloway Dr to Landco Dr) 3.4 mi.	$ 304	$ 304	$ -
Caltrans - Class II Bike Ln	SR 65 (James Rd to Merle Haggard Dr) 2.3 mi.	$ 203	$ 203	$ -
Caltrans - Class II Buffered Bike Ln	SR 58 (Allen Rd to Calloway Dr) 1.5 mi.	$ 269	$ 269	$ -
Caltrans - Class II Bike Ln	Weedpatch Hwy SR 184 (Brundage Ln to Mtn View Rd) 5.3 mi.	$ 476	$ 476	$ -
Bakersfield - Feasibility Studies	Various Feasibility Studies for Other Bike and Pedestrian Related Improvements			
Bakersfield - bike facilities	Various Locations - Construct Bike Boulevard projects			
Bakersfield - Intersection Enhanceme	Various Locations - Construct Intersection enhancement projects			
County Areas - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 38,501**	**$ 38,501**	**$ -**
County Areas - existing funds	Cost-efficient, safe, clean transportion	$ 198,001	$ 198,001	$ -
County Areas - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 93,039**	**$ 93,039**	**$ -**
County Areas - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 52,523**	**$ 52,523**	**$ -**
Kern County - Corridor Improvement	Brundage Ln (Fairfax Rd to VineLn Rd) 1.9 mi.	$ 528	$ 528	$ -
Kern County - Corridor Improvement	Hall Rd (San Emidio St to Habecker Rd) .5 mi.	$ 141	$ 141	$ -
Kern County - Corridor Improvement	McCray St (Merle Haggard Dr to China Grade Loop) 1. mi.	$ 267	$ 267	$ -
Kern County - Corridor Improvement	Merle Haggard Dr (Pegasus Rd to Chester Av) 3.1 mi.	$ 844	$ 844	$ -
Kern County - Corridor Improvement	Myrtle Av (Panama Ln to Wharton Av) .9 mi.	$ 259	$ 259	$ -
Kern County - Corridor Improvement	Pioneer Dr (Oswell St to Morning Dr) .6 mi.	$ 153	$ 153	$ -
Kern County - Corridor Improvement	San Diego St (Burgundy Av to Wharton Av) .7 mi.	$ 190	$ 190	$ -
Kern County - Crossing Improvements	Airport Dr (Norris Rd to Roberts Ln) .7 mi.	$ 63	$ 63	$ -
Kern County - Crossing Improvements	Decatur St (N Chester Av to Sandord Dr) 1.3 mi.	$ 107	$ 107	$ -
Kern County - Crossing Improvements	E Fairview Rd (Hughes Ln to Farrel Dr) 2.2 mi.	$ 185	$ 185	$ -
Kern County - Crossing Improvements	Garber Wy (Bryant St to Malibar Av) .4 mi.	$ 32	$ 32	$ -
Kern County - Crossing Improvements	McCray St, Oildale Dr (W China Grade Loop to Roberts Ln) 1.3 mi.	$ 108	$ 108	$ -

METRO BAKERSFIELD SUBAREA

Subrea includes: City of Bakersfield and unincorporated communites (county areas) of East Bakersfield, Oildale, Greenfield, and Rosedale		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Kern County - Crossing Improvements	Pioneer Dr (Oswell St to Normandy Dr) 1.5 mi.	$ 124	$ 124	$ -
Kern County - Crossing Improvements	Roberts Ln (Sanford Ln to Manor St) 1.8 mi.	$ 150	$ 150	$ -
Kern County - Crossing Improvements	W China Grade Loop (Airport Dr to N Chester Av) 1. mi.	$ 86	$ 86	$ -
Kern County - Sidewalk Improvement	Alta Vista Dr (Bernard Street to Panorama Drive) 1.1 mi.	$ 218	$ 218	$ -
Kern County - Sidewalk Improvement	Belle Terrace (Stine Road to H Street) 1.5 mi.	$ 288	$ 288	$ -
Kern County - Sidewalk Improvement	Bonita Rd (Main St to Habecker Rd) .5 mi.	$ 97	$ 97	$ -
Kern County - Sidewalk Improvement	Buena Vista Blvd (May Street to Buena Vista Blvd Mobile Park) .7 mi.	$ 140	$ 140	$ -
Kern County - Sidewalk Improvement	Carnation Ave (Mc Kee Road to Panama Road) .5 mi.	$ 95	$ 95	$ -
Kern County - Sidewalk Improvement	China Grade Loop (Chester Avenue to Manor Street) .5 mi.	$ 95	$ 95	$ -
Kern County - Sidewalk Improvement	College Av (Mt. Vernon Ave to Oswell St) 1. mi.	$ 190	$ 190	$ -
Kern County - Sidewalk Improvement	Collision St (Main St to Carnation Av) .2 mi.	$ 48	$ 48	$ -
Kern County - Sidewalk Improvement	Columbus St (Loma Linda Drive to Alta Vista Drive) .2 mi.	$ 47	$ 47	$ -
Kern County - Sidewalk Improvement	Di Giorgio Rd (Pierce Drive to Weedpatch Highway) .7 mi.	$ 143	$ 143	$ -
Kern County - Sidewalk Improvement	Di Giorgio Rd (Fairfax Rd to Main St) 1. mi.	$ 190	$ 190	$ -
Kern County - Sidewalk Improvement	Dunnsmere St (San Diego Street to Weedpatch Highway) .2 mi.	$ 46	$ 46	$ -
Kern County - Sidewalk Improvement	Field St (Di Giorgio Rd to Tri Duncan Avenue) .5 mi.	$ 96	$ 96	$ -
Kern County - Sidewalk Improvement	Habecker Rd (Panama Rd to Segrue Rd) .7 mi.	$ 142	$ 142	$ -
Kern County - Sidewalk Improvement	Hall Rd (San Diego St to Main St) .3 mi.	$ 48	$ 48	$ -
Kern County - Sidewalk Improvement	Madison St (Belle Terrace to Casa Loma Drive) .4 mi.	$ 68	$ 68	$ -
Kern County - Sidewalk Improvement	Man O War St (Whirlaway St to Main St) .3 mi.	$ 59	$ 59	$ -
Kern County - Sidewalk Improvement	McKee Rd (H St to Shannon Dr) .5 mi.	$ 100	$ 100	$ -
Kern County - Sidewalk Improvement	McKee Rd (Main St to Carnation Av) .3 mi.	$ 49	$ 49	$ -
Kern County - Sidewalk Improvement	Mtn View Rd (RR xing to Sherman Rd) .8 mi.	$ 146	$ 146	$ -
Kern County - Sidewalk Improvement	Panama Rd (Habecker Rd to Main St) .5 mi.	$ 98	$ 98	$ -
Kern County - Sidewalk Improvement	Panama Rd (Gilbert Street to Habecker Rd) .7 mi.	$ 133	$ 133	$ -
Kern County - Sidewalk Improvement	Pioneer Dr (Normandy Drive to Morning Dr) 1.4 mi.	$ 274	$ 274	$ -
Kern County - Sidewalk Improvement	Reynolds St (Whirlaway St to Main St) .3 mi.	$ 56	$ 56	$ -
Kern County - Sidewalk Improvement	Sanford Dr (Castaic Av to McKinley Av) .3 mi.	$ 54	$ 54	$ -
Kern County - Sidewalk Improvement	Segrue Rd (San Emidio St to Habecker Rd) 1. mi.	$ 181	$ 181	$ -
Kern County - Sidewalk Improvement	Shannon Dr (Astor Av to McKee Rd) .3 mi.	$ 48	$ 48	$ -
Kern County - Sidewalk Improvement	Sterling Rd (Hillburn Rd to Niles St) .3 mi.	$ 48	$ 48	$ -
Kern County - Sidewalk Improvement	Union Av (McKee Rd to Taft Hwy) .5 mi.	$ 96	$ 96	$ -
Kern County - Sidewalk Improvement	Wharton Av (San Emidio St to Myrtle Av) .7 mi.	$ 132	$ 132	$ -
Kern County - Complete Streets/ITS Ir	Other Future developments funded by a transportation impact fee and mitigation	$ 45,865	$ 45,865	$ -
County Areas - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 52,440**	**$ 52,440**	**$ -**
Non-motorized Bakersfield	Construct Class I, II or Class IIII Bike Path; striping; signage	$ 34,972	$ 34,972	$ -
Kern County - Bikeway Study	Truxtun Av (Oak St to Washington St) 3.5 mi.	$ 530	$ 530	$ -
Kern County - Class I Shared Use Path	Bike/Ped Bridge SR 99 (Wood Lane to Wood Lane) .1 mi.	$ 51	$ 51	$ -
Kern County - Class I Shared Use Path	Norris Rd (Snow Rd to Manor St) 3.3 mi.	$ 3,009	$ 3,009	$ -
Kern County - Class II Bike Ln	Beardsley Av (McCray Street to Chester Avenue) .5 mi.	$ 46	$ 46	$ -
Kern County - Class II Bike Ln	Braeburn Dr (Country Club Dr to College Av) .6 mi.	$ 55	$ 55	$ -
Kern County - Class II Bike Ln	Breckenridge Rd (Weedpatch Hwy to Comanche Dr) 4.3 mi.	$ 386	$ 386	$ -
Kern County - Class II Bike Ln	Brimhall Rd (Enos Ln to Rudd Av) 4.5 mi.	$ 407	$ 407	$ -
Kern County - Class II Bike Ln	Brundage Ln (Madison St to Edison Hwy) 1.9 mi.	$ 170	$ 170	$ -
Kern County - Class II Bike Ln	Calloway Dr (Rosedale Hwy to Brimhall Rd) 1. mi.	$ 92	$ 92	$ -
Kern County - Class II Bike Ln	China Grade Loop (Carrere St to Manor St) .4 mi.	$ 38	$ 38	$ -

METRO BAKERSFIELD SUBAREA

Subrea includes: City of Bakersfield and unincorporated communites (county areas) of East Bakersfield, Oildale, Greenfield, and Rosedale		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Kern County - Class II Bike Ln	Comanche Dr (Panama Ln to Muller Rd) 7.5 mi.	$ 678	$ 678	$ -
Kern County - Class II Bike Ln	Day Av (Manor St to N Chester Av) .5 mi.	$ 45	$ 45	$ -
Kern County - Class II Bike Ln	DiGiorgio Rd (Vineland Rd to Comanche Dr) 3. mi.	$ 273	$ 273	$ -
Kern County - Class II Bike Ln	Douglas St (McCray St to Chester Av) .5 mi.	$ 44	$ 44	$ -
Kern County - Class II Bike Ln	Edison Hwy (Mt Vernon Av to Comanche Dr) 7.8 mi.	$ 705	$ 705	$ -
Kern County - Class II Bike Ln	Edison Rd (Breckenridge Road to Edison Highway) .8 mi.	$ 75	$ 75	$ -
Kern County - Class II Bike Ln	Hageman Rd (Jenkins Rd to Nord Av) 2.5 mi.	$ 226	$ 226	$ -
Kern County - Class II Bike Ln	Hall Rd (SR 184 to Habecker Rd) .5 mi.	$ 46	$ 46	$ -
Kern County - Class II Bike Ln	Heath Rd (Hageman Rd to Stockdale Hwy) 3. mi.	$ 270	$ 270	$ -
Kern County - Class II Bike Ln	Hermosa Rd (Fairfax Rd to Comanche Dr) 5. mi.	$ 453	$ 453	$ -
Kern County - Class II Bike Ln	Houghton Rd (Old River Rd to Union Av) 6. mi.	$ 543	$ 543	$ -
Kern County - Class II Bike Ln	James Rd (SR 65 to Chester Av) 3.5 mi.	$ 314	$ 314	$ -
Kern County - Class II Bike Ln	McCray St (Merle Haggard Rd to Day Av) .4 mi.	$ 36	$ 36	$ -
Kern County - Class II Bike Ln	Meacham Rd (Nord Av to Allen Rd) 3. mi.	$ 271	$ 271	$ -
Kern County - Class II Bike Ln	Merle Haggard Rd (Chester Av to Airport Dr) 1. mi.	$ 89	$ 89	$ -
Kern County - Class II Bike Ln	Mountain View Rd (Fairfax Rd to Comanche Dr) 5. mi.	$ 454	$ 454	$ -
Kern County - Class II Bike Ln	Muller Rd (Comanche Dr to Oswell St) 6. mi.	$ 544	$ 544	$ -
Kern County - Class II Bike Ln	N Chester Av (McKelvey Av to Manor St) .3 mi.	$ 23	$ 23	$ -
Kern County - Class II Bike Ln	Old Farm Rd (Rosedale Hwy to Mia Virginia Court) .5 mi.	$ 46	$ 46	$ -
Kern County - Class II Bike Ln	Old River Rd (Taft Hwy to Shafter Rd) 4. mi.	$ 362	$ 362	$ -
Kern County - Class II Bike Ln	Panama Rd (Habecker Rd to S Comanche Dr) 3.5 mi.	$ 318	$ 318	$ -
Kern County - Class II Bike Ln	Pegasus Dr (Merle Haggard Dr to Norris Rd) 1.8 mi.	$ 158	$ 158	$ -
Kern County - Class II Bike Ln	Pioneer Dr (Vineland Rd to Oswell St) 3. mi.	$ 270	$ 270	$ -
Kern County - Class II Bike Ln	Roberts Ln (Norris Rd to Sequoia Dr) 1.7 mi.	$ 157	$ 157	$ -
Kern County - Class II Bike Ln	Roberts Ln (Chester Av to Manor St) .5 mi.	$ 48	$ 48	$ -
Kern County - Class II Bike Ln	Sunset Blvd (Weedpatch Hwy to Vineland Rd) 1. mi.	$ 93	$ 93	$ -
Kern County - Class II Bike Ln	Superior Rd (SR 58 to Stockdale Hwy) 2. mi.	$ 181	$ 181	$ -
Kern County - Class II Bike Ln	Vineland Rd (Pioneer Dr to SR 223) 11. mi.	$ 993	$ 993	$ -
Kern County - Class II Bike Ln	Union Avenue from Panama Road to Bear Mountain Blvd - 4 miles			
Kern County - Class II Bike Ln	Santa Fe Way from Driver Road to Riverside Street - 3.6 miles			
Kern County - Class II Bike Ln	Rudd Avenue from Palm Avenue to Brimhall Road - 0.5 miles			
Kern County - Class II Bike Ln	Roberts Lane from Norris Road to Washington Avenue - 0.5 miles			
Kern County - Class II Bike Ln	Roberts Lane from Washington Avenue to Standford Drive - 0.7 miles			
Kern County - Class II Bike Ln	River Blvd from Panorama Drive to Bernard Street - 1.3 miles			
Kern County - Class II Bike Ln	Pioneer Drive from Oswell Steet to Morning Drive - 2 miles			
Kern County - Class II Bike Ln	Patton Way from Snow Road to Hageman Road - 1.8 miles			
Kern County - Class II Bike Ln	Panama Road from Weedpatch Hwy to S Comanche Drive - 4 miles			
Kern County - Class II Bike Ln	Palm Avenue from Heath Road to Renfro Road - 1 miles			
Kern County - Class II Buffered Bike Lr	Airport Dr (Roberts Ln to Merle Haggard Dr) 2.2 mi.	$ 403	$ 403	$ -
Kern County - Class II Buffered Bike Lr	California Av (Mt Vernon Av to Edison Hwy) .6 mi.	$ 101	$ 101	$ -
Kern County - Class II Buffered Bike Lr	Chester Av (Merle Haggard Rd to Norris Rd) 1.4 mi.	$ 253	$ 253	$ -
Kern County - Class II Buffered Bike Lr	Di Giorgio Rd (Pierce Dr to S Vineland Rd) 1.8 mi.	$ 320	$ 320	$ -
Kern County - Class II Buffered Bike Lr	Olive Dr (Coffee Rd to Victor St) 1.7 mi.	$ 304	$ 304	$ -
Kern County - Class II Buffered Bike Lr	S Union Av (Panama Rd to Bear Mountain Blvd) 4. mi.	$ 723	$ 723	$ -
Kern County - Class III Bike Blvd	Baldwin Rd (Terrace Wy to Ming Av) .8 mi.	$ 38	$ 38	$ -
Kern County - Class III Bike Blvd	Breckenridge Rd (End of Street to Comanche Drive) 4.5 mi.	$ 224	$ 224	$ -
Kern County - Class III Bike Blvd	C Club Dr/H Mann Av/Pentz St (College Av to Ctr St) .8 mi.	$ 40	$ 40	$ -

METRO BAKERSFIELD SUBAREA

Subrea includes: City of Bakersfield and unincorporated communites (county areas) of East Bakersfield, Oildale, Greenfield, and Rosedale		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenu**	**YOE w/o new reven**	**Maint./Inflation Savings**
Kern County - Class III Bike Blvd	Castro Ln (Wood Lane to La France Drive) .1 mi.	$ 6	$ 6	$ -
Kern County - Class III Bike Blvd	Center St (Pentz St to Pesanta Rd) .8 mi.	$ 38	$ 38	$ -
Kern County - Class III Bike Blvd	China Grade Loop (City Limit to Alfred Harrell Highway) .9 mi.	$ 47	$ 47	$ -
Kern County - Class III Bike Blvd	Culver St (Sterling Rd to Pasante Rd) .1 mi.	$ 6	$ 6	$ -
Kern County - Class III Bike Blvd	Edwards Av (Mt Vernon Avenue to Oswell Street) 1.2 mi.	$ 59	$ 59	$ -
Kern County - Class III Bike Blvd	Ferguson Av (Chester Av to Manor St) .5 mi.	$ 24	$ 24	$ -
Kern County - Class III Bike Blvd	Floral Dr (Camino Real to Mt Vernon Avenue) .1 mi.	$ 6	$ 6	$ -
Kern County - Class III Bike Blvd	Habecker Rd (Panama Rd to Di Giorgio Rd) 1. mi.	$ 50	$ 50	$ -
Kern County - Class III Bike Blvd	Hall Rd (Main St to Habecker Rd) .4 mi.	$ 21	$ 21	$ -
Kern County - Class III Bike Blvd	Iron Oak Wy (Norris Rd to Exodus Ln) .1 mi.	$ 5	$ 5	$ -
Kern County - Class III Bike Blvd	Myrtle Av (Di Giorgio Rd to Panama Rd) 1. mi.	$ 50	$ 50	$ -
Kern County - Class III Bike Blvd	Norris Rd (Coffee Rd to Knudsen Dr) 1.8 mi.	$ 91	$ 91	$ -
Kern County - Class III Bike Blvd	Palm Av (Wagis Av to Heath Rd) .5 mi.	$ 25	$ 25	$ -
Kern County - Class III Bike Blvd	Pesante Rd (Culver St to Center St) .1 mi.	$ 3	$ 3	$ -
Kern County - Class III Bike Blvd	Round Mountain Rd (End of Street to China Grd Lp) 9.8 mi.	$ 489	$ 489	$ -
Kern County - Class III Bike Blvd	San Diego St (Di Giorgio Rd to Panama Rd) 1.1 mi.	$ 54	$ 54	$ -
Kern County - Class III Bike Blvd	Segrue Rd (San Emidio St to Habecker Rd) .9 mi.	$ 48	$ 48	$ -
Kern County - Class III Bike Blvd	Shafter Rd (Old River Rd to H St) 5. mi.	$ 250	$ 250	$ -
Kern County - Class III Bike Blvd	Shalimar Dr (Pioneer Dr to Niles St) .5 mi.	$ 25	$ 25	$ -
Kern County - Class III Bike Blvd	Sterling Rd (Brundage Ln to College Av) 2. mi.	$ 100	$ 100	$ -
Kern County - Class III Bike Blvd	Terrace Wy (A St to Baldwin Rd) .1 mi.	$ 3	$ 3	$ -
Kern County - Class III Bike Blvd	Valencia Dr (Pioneer Dr to College Av) 1. mi.	$ 50	$ 50	$ -
Kern County - Class III Bike Blvd	Wood Ln (99 Overcrossing to Castro Lane) .3 mi.	$ 13	$ 13	$ -
Kern County - Class III Bike Blvd	Wood Ln (Stine Road to 99 Overcrossing) .5 mi.	$ 24	$ 24	$ -
Kern County - Class III Bike Blvd	Woodrow Av (Roberts Ln to N Chester Av) 1.8 mi.	$ 92	$ 92	$ -
Kern County - Class III Bike Route	Airport Dr (Bksfld-Glennville Rd to Merle Haggard Dr) 1.9 mi.	$ 17	$ 17	$ -
Kern County - Class III Bike Route	Edison Rd (Edison Hwy to SR 223) 9.7 mi.	$ 87	$ 87	$ -
Kern County - Class III Bike Route	Fairfax Rd (Panama Rd to SR 223) 4. mi.	$ 36	$ 36	$ -
Kern County - Class III Bike Route	Olive Dr (Sequoia Dr to N Chester Av) .7 mi.	$ 7	$ 7	$ -
Kern County - Class IV Cycle Track	Olive Dr (Victor St to Sequoia Dr) 1.6 mi.	$ 478	$ 478	$ -
Kern County - Complete Streets	Palm Av (San Gorgonio St to Williams St) .6 mi.	$ 360	$ 360	$ -
Advanced Tech, Safe, Clean Transporta	**Sub-total Projects in Subarea**	**$ 892,357**	**$ 892,357.01**	$ -

METRO BAKERSFIELD SUBAREA	**Total Projects Benefiting Subarea**	**$ 11,360,322**	**$ 13,714,355**	**$ 3,234,596**
	Total Projects in Sub Area	$ 8,842,981	$ 10,430,097	$ 2,467,679

Notes:

A. Inflation savings assumes a 3% inflation rate per year

B. Road maintenance (local program reconstruction) savings assumes an average of 47% reduction in maintenace costs when pavement condition index is kept above 75

C. The projects in each phase or category are not necessarily listed by priority

D. The regional projects have been approved by Kern COG (cities/County) in the adopted 2014 RTP

1 Project was in the 2006 transportation measure expenditure plan

2 Project outside subarea that benefits the subarea

Abbreviations: YOE = Year of Expenditure, RTP = Regional Transportation Plan, TCMs = Transportation Control Measures that help reduce air pollution (congestion relief, signal syncronizing, etc.)

NORTH KERN SUBAREA

Subarea includes: Cities of Delano, McFarland, Shafter and Wasco and the unincorporated communities (and surrounding county areas) of Buttonwillow, Lost Hills, Belridge and Pond.		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Fix-It-First, Keep-It-Local / Cost-Efficient				
Delano - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans**	**$ 36,283**	**$ 36,283**	**$ 17,053**
Delano - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transp	$ 107,565	$ 107,565	$ 50,555
McFarland - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans**	**$ 10,404**	**$ 10,404**	**$ 4,890**
McFarland - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transp	$ 30,581	$ 30,581	$ 14,373
Shafter - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans**	**$ 17,082**	**$ 17,082**	**$ 8,028**
Shafter - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transp	$ 47,470	$ 47,470	$ 22,311
Wasco - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans**	**$ 18,642**	**$ 18,642**	**$ 8,762**
Wasco - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transp	$ 54,912	$ 54,912	$ 25,808
County Areas - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans**	**$ 68,106**	**$ 68,106**	**$ 32,010**
County Areas - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transp	$ 233,518	$ 233,518	$ 109,753
State Highways - existing funds	State Highway Operations and Protection Program (SHOPP)	$ 171,378	$ 171,378	$ 80,548
Fix-It-First, Keep-It-Local / Cost-Efficier	**Sub-total Projects in Subarea**	**$ 795,940**	**$ 795,940**	**$ 374,092**
Regional Projects				
Ready-To-Go, Regional Projects				
7th Standard Rd	Rt 43 to Santa Fe Way - widen existing roadway	$ 11,857	$ 14,000	$ 2,143
Route 46	[1]Brown Material Rd to I-5 - interchange upgrade at I-5 - Phase 4A	$ 27,000	$ 27,000	$ -
Route 46	[1]Brown Material Rd to I-5 - interchange upgrade at I-5 - Phase 4B			
Route 46	Brown Material Rd to I-5 - interchange upgrade at I-5 - Phase 4C			
Route 65	James Rd to Merle Haggard Dr - widen to four lanes	$ 2,869	$ 3,000	$ 131
Route 99	Beardsley Canal to 7th Standard Rd - widen to eight lanes	$ 74,150	$ 90,800	$ 16,650
Route 99	[2]Olive Drive - construct interchange upgrades	$ 6,100	$ 6,100	$ -
Route 99	Kern Ave - reconstruct pedestrian bridge (SHOPP)	$ 5,391	$ 5,391	$ -
Hageman Flyover	[1,2]Knudsen Dr to Rt 204 - construct extension	$ 68,900	$ 68,900	$ -
West Beltway	[1,2]Pacheco Rd to Westside Parkway - construct new facility	$ 64,229	$ 115,793	$ 51,564
West Beltway	[1,2]Taft Hwy to Pacheco Rd - construct new facillity	$ 68,025	$ 90,000	$ 21,975
Freight Rail	Shafter Intermodal Rail Facility			
Ready-To-Go, Regional Projects	**Sub-Total including zone of Benefit**	**$ 328,521**	**$ 420,984**	**$ 92,464**
Next-In-Line, Regional Projects				
Route 46	[1]I-5 to Jumper Ave - widen to four lanes	$ 89,188	$ 118,000	$ 28,812
Route 46	[1]Jumper Ave (North) to Rt 43 - widen to four lanes	$ 98,258	$ 130,000	$ 31,742
Route 46	[1]Rt 43 to Rt 99 - widen to four lanes	$ 52,908	$ 70,000	$ 17,092
Woollomes Ave.	[1]Rt 99 - widen bridge to four lanes; reconstruct ramps	$ 101,281	$ 134,000	$ 32,719
Santa Fe Way	[1]Hageman to Los Angeles Ave - widen to four lanes	$ 94,688	$ 127,239	$ 32,551
Route 46	Rt 46 @ BNSF - construct grade separation	$ 29,855	$ 39,500	$ 9,645
Route 46	Near Lost Hills at Interstate 5 - upgrade and widen interchange	$ 98,258	$ 130,000	$ 31,742
Interstate 5	7th Standard Rd Interchange - reconstruct	$ 40,815	$ 54,000	$ 13,185
Route 43	7th Standard Rd to Euclid Ave - widen to four lanes	$ 27,966	$ 37,000	$ 9,034
Route 65	Merle Haggard Dr to County Line - widen to four lanes	$ 163,259	$ 216,000	$ 52,741
Route 99	Gleenwood/High St - construct new overpass	$ 29,855	$ 39,500	$ 9,645
Route 99	Pond Rd - reconstruct grade separation / interchange	$ 55,100	$ 72,901	$ 17,800
Route 99	Perkins Ave - reconstuct hook ramps	$ 5,909	$ 7,818	$ 1,909
Route 99	Sherwood Ave - reconstruct hook ramps	$ 5,909	$ 7,818	$ 1,909

NORTH KERN SUBAREA

Subarea includes: Cities of Delano, McFarland, Shafter and Wasco and the unincorporated communities (and surrounding county areas) of Buttonwillow, Lost Hills, Belridge and Pond.		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Route 99	Sherwood Ave - pedestrian bridge/improvements	$ 4,075	$ 5,391	$ 1,316
Route 99	Hanawalt - construct new grade separation / interchange	$ 66,091	$ 88,811	$ 22,720
Route 99	Whistler grade separation / interchange - reconstruct	$ 55,100	$ 72,901	$ 17,800
Route 155	Rt 99 to Browning Rd - four lanes; reconstruct	$ 24,186	$ 32,000	$ 7,814
Route 155	Rt 155 @ UPRR - construct grade separation	$ 29,855	$ 39,500	$ 9,645
Garces Highway	Interstate 5 to Rt 99 - widen to four lanes	$ 218,422	$ 288,983	$ 70,562
Cecil Ave.	Wasco Pond Rd to Albany St - widen to four lanes	$ 13,454	$ 17,800	$ 4,346
Kimberlina Road	Kimberlina Rd @ BNSF - construct grade separation	$ 44,594	$ 59,000	$ 14,406
Elmo Highway	Elmo Hwy @ UPRR - construct grade separation	$ 52,152	$ 69,000	$ 16,848
Lerdo Highway	Lerdo Hwy / Beech Ave @ BNSF - construct grade separation	$ 52,152	$ 69,000	$ 16,848
Burbank Street	Burbank St @ BNSF - construct grade separation	$ 44,594	$ 59,000	$ 14,406
Zachary Rd	7th Standard Rd to Lerdo Hwy - widen to four lanes	$ 26,080	$ 34,505	$ 8,425
7th Standard Rd	[2]I-5 to Santa Fe Way - widen to four lanes	$ 68,461	$ 90,577	$ 22,116
7th Standard Rd	[2]Rt 43 to Santa Fe Way - widen existing roadway	$ 11,857	$ 14,000	$ 2,143
Route 204	[2](Golden State Ave) Rt 99 to M St - construct operational improvements	$ 75,583	$ 100,000	$ 24,417
North Corridor - Shafter	I-5 to SR 65 - Burbank Street Alignment - construct new highway	$ 372,086	$ 500,000	$ 127,914
Amtrak Stations - NW Bksfld, Shafter	Up to 4 Amtrak San Joaquins stops on BNSF - platform, track turnout, park&ride, ticket both,	$ 27,024	$ 34,049	$ 7,024
Intermodal rail hub - Delano	RailEx Expansion Phase 2 (Draft SJV Interregional Goods Movement Plan IGM)	$ 8,107	$ 10,215	$ 2,107
Intermodal rail hub - Shafter	Shafter Inland Port Phases 2 & 3 (Draft SJV IGMP)	$ 81,073	$ 102,146	$ 21,073
Next-In-Line, Regional Projects	**Sub-Total including zone of Benefit**	**$ 2,168,193**	**$ 2,870,653**	**$ 702,460**
	Sub-total Projects Subarea	**$ 1,993,188**	**$ 2,638,837**	**$ 645,649**
Advanced Tech, Safe, Clean Transportation				
Delano - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 12,316**	**$ 12,316**	**$ -**
Delano - non-potential new funds	Cost-efficient, safe, clean transportion	$ 51,758	$ 51,758	$ -
Delano - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 12,425**	**$ 12,425**	**$ -**
Delano - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 29,672**	**$ 29,672**	**$ -**
Delano - Bulbouts	10th Av - Main St	$ 60	$ 60	$ -
Delano - Bulbouts	13th Av - Main St	$ 60	$ 60	$ -
Delano - Bulbouts	Garces Hwy - S Lexington St	$ 60	$ 60	$ -
Delano - Corridor Improvement	11th Av (Timmons Av to Randolph St) 2.3 mi.	$ 623	$ 623	$ -
Delano - Corridor Improvement	Albany St (County Line Rd to Woollomes Av) 3. mi.	$ 825	$ 825	$ -
Delano - Corridor Improvement	Ellington St (Cecil Av to Garces Hwy) 1. mi.	$ 280	$ 280	$ -
Delano - Corridor Improvement	Jefferson St (Cecil Av to Garces Hwy) 1. mi.	$ 280	$ 280	$ -
Delano - Corridor Improvement	Woollomes Av (Albany St to Ellington St) .8 mi.	$ 218	$ 218	$ -
Delano - High-Visibility Crosswalk	Cecil Av - Clinton St	$ 11	$ 11	$ -
Delano - RRFB	Norwalk St - 17th Av	$ 30	$ 30	$ -
Kern County - Sidewalk Improvement	Mathews Av (Christina Street to Melcher Road) .3 mi.	$ 1,500	$ 1,500	$ -
Delano - Complete Streets/ITS Improv	Other Future developments funded by a transportation impact fee and mitigation	$ 25,724	$ 25,724	$ -
Delano - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 9,661**	**$ 9,661**	**$ -**
Delano - Class II Bike Ln	11th St (Randolph St to Albany St) 1.5 mi.	$ 136	$ 136	$ -
Delano - Class II Bike Ln	20th St (Girard St to Browning Rd) 1.5 mi.	$ 135	$ 135	$ -
Delano - Class II Bike Ln	Albany St (Garces Hwy to Woollomes Av) 1. mi.	$ 90	$ 90	$ -
Delano - Class II Bike Ln	Cecil Av (Hiett Av to Albany St) 5. mi.	$ 45	$ 45	$ -
Delano - Class II Bike Ln	Garces Hwy (Hiett Av to Albany St) 5. mi.	$ 45	$ 45	$ -
Delano - Class II Bike Ln	Girard St (20th St to County Line Rd) .5 mi.	$ 45	$ 45	$ -
Delano - Class II Bike Ln	Hiett Rd (Cecil Av to SR 155) 1. mi.	$ 90	$ 90	$ -

NORTH KERN SUBAREA

Subarea includes: Cities of Delano, McFarland, Shafter and Wasco and the unincorporated communities (and surrounding county areas) of Buttonwillow, Lost Hills, Belridge and Pond.		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Delano - Class II Bike Ln	High St (SR 155 to Woollomes Av) 1.1 mi.	$ 95	$ 95	$ -
Delano - Class II Bike Ln	Randolph St (Garces St to County Line Rd) 2. mi.	$ 180	$ 180	$ -
Delano - Class II Bike Ln	S Lexington St (Schuster Rd to Garces Hwy) 2.1 mi.	$ 186	$ 186	$ -
Delano - Class II Bike Ln	Ellington St (11th Av to Woollomes Av) 1. mi.	$ 146	$ 146	$ -
Delano - Class II Bike Ln	Dover Pkwy (Millenium Pkwy to Garzoli Av) .6 mi.	$ 54	$ 54	$ -
Delano - Class II Bike Ln	Schuster Rd (Lexington St to Browning Rd) .6 mi.	$ 54	$ 54	$ -
Delano - Class II Bike Ln	Hiett Av (County Line Rd to Cecil Av) 1. mi.	$ 90	$ 90	$ -
Delano - Class II Bike Ln	Garzoli Av (Woollomes Av to Pond Rd) 2. mi.	$ 180	$ 180	$ -
Delano - Class II Buffered Bike Ln	Browning St (Garces Hwy to 9th Av) .5 mi.	$ 90	$ 90	$ -
Delano - Class II Buffered Bike Ln	Browning St (9th Av to County Line Rd) 1.5 mi.	$ 271	$ 271	$ -
Delano - Class II Buffered Bike Ln	High St (Garces Hwy to Girard St) 1.7 mi.	$ 309	$ 309	$ -
Delano - Class III Bike Blvd	Clinton St (Cecil Av to Garces Hwy) 1. mi.	$ 51	$ 51	$ -
Delano - Class III Bike Blvd	Lexington St (Garces Hwy to Cecil Av) 1. mi.	$ 50	$ 50	$ -
Delano - Class III Bike Blvd	Norwalk Av (Cecil Av to County Line Rd) 1. mi.	$ 50	$ 50	$ -
Delano - Class III Bike Route	11th Av (Albany St to Hiett Av) .5 mi.	$ 5	$ 5	$ -
Delano - Class III Bike Route	20th Av (Albany St to Belmont St) .1 mi.	$ 1	$ 1	$ -
Delano - Class III Bike Route	9th St (High St to Browning Rd) 1.3 mi.	$ 12	$ 12	$ -
Delano - Class III Bike Route	Belmont St (20th Av to Cecil Av) .5 mi.	$ 5	$ 5	$ -
Delano - Class III Bike Route	Browning Rd (SR 155 to Skyline Rd) 2. mi.	$ 18	$ 18	$ -
Delano - Class III Bike Route	County Line Rd (Hiett Av to Veneto St) 3. mi.	$ 27	$ 27	$ -
Delano - Class III Bike Route	Melcher Rd (County Line Rd to Cecile Wy) 1. mi.	$ 9	$ 9	$ -
Delano - Class III Bike Route	Veneto St (County Line Rd to 20th St) .5 mi.	$ 5	$ 5	$ -
Delano - Class III Bike Route	Garzoli Av (Pond Rd to Delano City Limit) .5 mi.	$ 50	$ 50	$ -
Delano - Complete Streets	Cecil Av (Browning Rd to Albany St) 2. mi.	$ 1,146	$ 1,146	$ -
Delano - Complete Streets	Garces Hwy (Albany St to Browning Rd) 2. mi.	$ 1,140	$ 1,140	$ -
Delano - Complete Streets	Lexington St (Garces Hwy to Cecil Av) 1. mi.	$ 575	$ 575	$ -
Delano - Complete Streets	Albany St (County Line Rd to Garces Hwy) 2. mi.	$ 1,150	$ 1,150	$ -
Delano - Complete Streets	Woolomes Av (Albany St to Lexington St) 1. mi.	$ 575	$ 575	$ -
Kern County - Class II Bike Ln	Garzoli Av (Peterson Rd to Delano City Limit) .8 mi.	$ 68	$ 68	$ -
	Lake Woollomes Loop from Lake Woollomes to Lake Woollomes - 5.3 miles - Class I	$ 2,104	$ 2,104	$ -
	Stradley Avenue from SR 155 to Sherwood Avenue - 6 miles - Class II	$ 179	$ 179	$ -
	Pond Road from Benner Avenue to Stradley Avenue - 3 miles - Class II	$ 91	$ 91	$ -
	Mast Avenue from Garces Hwy to Airport Avenue - 1 miles - Class II	$ 30	$ 30	$ -
	Airport Avenue from Mast Avenue to Proposed Woollomes - 2.7 miles - Class II	$ 81	$ 81	$ -
McFarland - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 3,406**	**$ 3,406**	**$ -**
McFarland - non-potential new funds	Cost-efficient, safe, clean transportion	$ 14,286	$ 14,286	$ -
McFarland - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 3,407**	**$ 3,407**	**$ -**
McFarland - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 4,898**	**$ 4,898**	**$ -**
McFarland - Corridor Improvement	5th St (Perkins Av to Sherwood Av) .5 mi.	$ 137	$ 137	$ -
McFarland - Corridor Improvement	Browning Rd (Glenwood Av to Sherwood Av) .7 mi.	$ 187	$ 187	$ -
McFarland - Corridor Improvement	E Kern Av (McFarland Bridge to Wiley St) .5 mi.	$ 135	$ 135	$ -
McFarland - Corridor Improvement	Perkins Av Access Ramp (West Perkins Av to Christopher Court) .3 mi.	$ 89	$ 89	$ -
McFarland - Corridor Improvement	Sherwood Av Access Ramp (West Sherwood Av to East Sherwood Av) .3 mi.	$ 90	$ 90	$ -
McFarland - High-Visibility	2nd St - Kern Av	$ 11	$ 11	$ -
McFarland - High-Visibility	Mast Av - Cliff Av	$ 11	$ 11	$ -
McFarland - High-Visibility	Taylor Av - Mast Av	$ 11	$ 11	$ -
McFarland - Sidewalk Improvement	1st St (W Kern Av to W Sherwood Av) .2 mi.	$ 47	$ 47	$ -
McFarland - Sidewalk Improvement	1st St (W Perkins Av to W Kern Av) .3 mi.	$ 49	$ 49	$ -
McFarland - Sidewalk Improvement	W Kern Av (9th St to 1st St) .6 mi.	$ 108	$ 108	$ -

NORTH KERN SUBAREA

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Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
McFarland - Sidewalk Improvement	W Perkins Av (Garzoli Av to Frontage Rd) .7 mi.	$ 130	$ 130	$ -
McFarland - Complete Streets/ITS Imp	Other Future developments funded by a transportation impact fee and mitigation	$ 3,894	$ 3,894	$ -
McFarland - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 5,980**	**$ 5,980**	**$ -**
McFarland - Class I Shared Use Path	Union Pacific RR (Sherwood Av to Elmo Hwy) 1.1 mi.	$ 1,004	$ 1,004	$ -
McFarland - Class II Bike Ln	Browning Rd (Elmo Hwy to W Taylor Av) 1.5 mi.	$ 135	$ 135	$ -
McFarland - Class II Bike Ln	Davis Av (Elmo Hwy to Perkins Av) .5 mi.	$ 45	$ 45	$ -
McFarland - Class II Bike Ln	Elmo Hwy (Browning Rd to West City Limits) 3.5 mi.	$ 315	$ 315	$ -
McFarland - Class II Bike Ln	Frontage Rd (Sherwood Av to Taylor Av) .6 mi.	$ 54	$ 54	$ -
McFarland - Class II Bike Ln	Frontage Rd (Hail Ln to Perkins Av) .3 mi.	$ 27	$ 27	$ -
McFarland - Class II Bike Ln	Hail Ln (Garzoli Av to Frontage Rd) .7 mi.	$ 59	$ 59	$ -
McFarland - Class II Bike Ln	Kendra St (Elmo Hwy to Perkins Av) .5 mi.	$ 45	$ 45	$ -
McFarland - Class II Bike Ln	Mast Av (Taylor Av to Whisler Rd) 1.5 mi.	$ 135	$ 135	$ -
McFarland - Class II Bike Ln	Perkins Av (Garzoli Av to Stradley Av) 1. mi.	$ 90	$ 90	$ -
McFarland - Class II Bike Ln	Sherwood Access Ramps (SR 49/99 to Sherwood Av) .3 mi.	$ 23	$ 23	$ -
McFarland - Class II Bike Ln	Sherwood Av (Wiley St to Driver Rd) .7 mi.	$ 65	$ 65	$ -
McFarland - Class II Bike Ln	Taylor Av (Mast Av to Frontage Rd) .4 mi.	$ 36	$ 36	$ -
McFarland - Class II Bike Ln	Taylor Av (SR 99 to Driver Rd) 1.1 mi.	$ 100	$ 100	$ -
McFarland - Class II Bike Ln	W Kern Av (5th St to Garzoli Av) .4 mi.	$ 35	$ 35	$ -
McFarland - Class II Buffered Bike Ln	E Perkins Av (Industrial St to Bowman Rd) .7 mi.	$ 128	$ 128	$ -
McFarland - Class II Buffered Bike Ln	E Sherwood Av (Industrial St to Wiley St) .4 mi.	$ 76	$ 76	$ -
McFarland - Class II Buffered Bike Ln	Garzoli Av (Hanahwalt Av to Elmo Hwy) 2. mi.	$ 359	$ 359	$ -
McFarland - Class II Buffered Bike Ln	Perkins Av (Garzoli Av to Frontage Rd) .7 mi.	$ 123	$ 123	$ -
McFarland - Class II Buffered Bike Ln	Perkins Av Access Ramp (W Prkns Av to E Prkns Av) .3 mi.	$ 53	$ 53	$ -
McFarland - Class III Bike Blvd	3rd St (Perkins Av to Sherwood Av) .5 mi.	$ 25	$ 25	$ -
McFarland - Class III Bike Blvd	5th St (Hail Ln to Ebell St) .9 mi.	$ 44	$ 44	$ -
McFarland - Class III Bike Blvd	E Kern Av (McFarland Bridge to Wiley St) .5 mi.	$ 24	$ 24	$ -
McFarland - Class III Bike Blvd	Ebell St (5th St to Mast Av) .1 mi.	$ 5	$ 5	$ -
McFarland - Class III Bike Blvd	W Kern Av (1st St to 5th St) .3 mi.	$ 17	$ 17	$ -
McFarland - Complete Streets	W Sherwood Av (1st St to Garzoli Av) .8 mi.	$ 440	$ 440	$ -
Kern County - Class II Bike Ln	Bowman Rd (Peterson Rd to Whisler Rd) 4. mi.	$ 360	$ 360	$ -
Kern County - Class II Bike Ln	Driver Rd (Whisler Rd to Peterson Rd) 4. mi.	$ 359	$ 359	$ -
Kern County - Class II Bike Ln	Garzoli Av (Peterson Rd to Elmo Hwy) 1. mi.	$ 90	$ 90	$ -
Kern County - Class II Bike Ln	Garzoli Av (Hanawalt Av to Whisler Rd) 1. mi.	$ 90	$ 90	$ -
Kern County - Class II Bike Ln	Hanawalt Av (SR 99 to Stradley Av) 2. mi.	$ 181	$ 181	$ -
Kern County - Class II Bike Ln	Hanawalt Av (SR 99 to Driver Rd) 1. mi.	$ 90	$ 90	$ -
Kern County - Class II Bike Ln	Nill Av (Garzoli Av to SR 99) 1.1 mi.	$ 100	$ 100	$ -
Kern County - Class II Bike Ln	Perkins Av (Bowman Rd to Driver Rd) .5 mi.	$ 45	$ 45	$ -
Kern County - Class II Bike Ln	Peterson Rd (Stradley Av to Garzoli Av) 1. mi.	$ 89	$ 89	$ -
Kern County - Class II Bike Ln	Peterson Rd (Driver Rd to Scheitlin Av) 1.5 mi.	$ 139	$ 139	$ -
Kern County - Class II Bike Ln	Scheitlin Av (Peterson Rd to Elmo Hwy) 1.1 mi.	$ 101	$ 101	$ -
Kern County - Class II Bike Ln	Sherwood Av (Stradley Av to Garzoli Av) 1. mi.	$ 90	$ 90	$ -
Kern County - Class II Bike Ln	Stradley Av (Peterson Rd to Whisler Rd) 4. mi.	$ 360	$ 360	$ -
Kern County - Class II Bike Ln	Taylor Av (Stradley Av to Garzoli Av) 1. mi.	$ 91	$ 91	$ -
Kern County - Class II Bike Ln	Whisler Rd (Stradley Av to Driver Rd) 3.1 mi.	$ 275	$ 275	$ -
	Sherwood Avenue from Stradley Avenue to S Garzoli Avenue - 1 miles - Class II	$ 30	$ 30	$ -
	Perkins Avenue from Stradley Avenue to S Garzoli Avenue - 1 miles - Class II	$ 30	$ 30	$ -
Shafter - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 4,194**	**$ 4,194**	**$ -**
Shafter - non-potential new funds	Cost-efficient, safe, clean transportion	$ 17,625	$ 17,625	$ -

NORTH KERN SUBAREA

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Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Shafter - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 4,231**	**$ 4,231**	**$ -**
Shafter - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 8,259**	**$ 8,259**	**$ -**
Caltrans - Corridor Improvement	Lerdo Hwy (Shafter Av to Hwy 43) .4 mi.	$ 121	$ 121	$ -
Shafter - Crossing Improvements	E Munzer St (E Lerdo Hwy to Shafter Av) .2 mi.	$ 20	$ 20	$ -
Shafter - Crossing Improvements	James St (E Lerdo Hwy to Shafter Av) .4 mi.	$ 36	$ 36	$ -
Shafter - Crossing Improvements	Shafter Av (W Munzer St to Poso Av) .2 mi.	$ 18	$ 18	$ -
Shafter - High-Visibility Crosswalk	Central Av - Calloway St	$ 11	$ 11	$ -
Shafter - High-Visibility Crosswalk	Kern St - Central Av	$ 3	$ 3	$ -
Shafter - High-Visibility Crosswalk	N Shafter Av - BNSF Railroad	$ 11	$ 11	$ -
Shafter - Complete Streets/ITS Impro	Other Future developments funded by a transportation impact fee and mitigation	$ 8,039	$ 8,039	$ -
Shafter - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 5,135**	**$ 5,135**	**$ -**
Caltrans - Complete Streets	Central Valley Hwy SR 43 (Mayer Ln to Beech Av) 2.5 mi.	$ 1,430	$ 1,430	$ -
Kern County - Class III Bike Route	Kimberlina Rd (Central Av to Shafter Av) 4.6 mi.	$ 41	$ 41	$ -
Shafter - Class II Bike Ln	Beech Av (SR 43 to 7th Std Rd) 4.8 mi.	$ 435	$ 435	$ -
Shafter - Class II Bike Ln	Fresno Av (Palm Av to Cherry Av) 6.1 mi.	$ 545	$ 545	$ -
Shafter - Class II Bike Ln	Poplar Av (Fresno Av to Riverside St) 2. mi.	$ 181	$ 181	$ -
Shafter - Class II Buffered Bike Ln	E Lerdo Hwy (Cherry Av to Mannel Av) 1.5 mi.	$ 275	$ 275	$ -
Shafter - Class II Buffered Bike Ln	E Tulare Av (Mannel Av to N Beech Av) .5 mi.	$ 90	$ 90	$ -
Shafter - Class II Buffered Bike Ln	Lerdo Hwy (Poplar Av to SR 43) 1.4 mi.	$ 258	$ 258	$ -
Shafter - Class II Buffered Bike Ln	Los Angeles Av (Mettler Av to Thompson St) .7 mi.	$ 134	$ 134	$ -
Shafter - Class II Buffered Bike Ln	Mannel Av (E Tulare Av to E Lerdo Hwy) .5 mi.	$ 90	$ 90	$ -
Shafter - Class II Buffered Bike Ln	Shafter Av (Redwood Dr to Lerdo Hwy) .7 mi.	$ 135	$ 135	$ -
Shafter - Class II Buffered Bike Ln	Shafter Av (Lerdo Hwy to Riverside St) 1. mi.	$ 180	$ 180	$ -
Shafter - Class III Bike Blvd	E Tulare Av (Shafter Av to Mannel Av) .5 mi.	$ 25	$ 25	$ -
Shafter - Class III Bike Blvd	James St (Shafter Av to E Lerdo Hwy) .4 mi.	$ 21	$ 21	$ -
Shafter - Class III Bike Blvd	Mark Av (Knight St to N Valley St) .4 mi.	$ 20	$ 20	$ -
Shafter - Class III Bike Blvd	N Beech Av (E Tulare Av to E Lerdo Hwy) .5 mi.	$ 25	$ 25	$ -
Shafter - Class III Bike Blvd	N Wall St (Richland Dr to W Tulare Av) .2 mi.	$ 8	$ 8	$ -
Shafter - Class III Bike Blvd	Poso Av (N Valley St to Shafter Av) .2 mi.	$ 12	$ 12	$ -
Shafter - Class III Bike Blvd	Schnaidt St (W Los Angeles St to Mark Av) .7 mi.	$ 37	$ 37	$ -
Shafter - Class III Bike Blvd	Valley St (Poso Av to Rodriguez Av) .7 mi.	$ 34	$ 34	$ -
Shafter - Class III Bike Route	Beech Av (Fresno Av to Tulare Av) .5 mi.	$ 5	$ 5	$ -
Shafter - Class III Bike Route	Burbank St (Drr Rd to Zachary Av) 1. mi.	$ 9	$ 9	$ -
Shafter - Class III Bike Route	Cherry Av (Fresno Av to Riverside St) 2. mi.	$ 18	$ 18	$ -
Shafter - Class III Bike Route	Drr Rd (Riverside St to Burbank St) 1. mi.	$ 9	$ 9	$ -
Shafter - Class III Bike Route	E Los Angeles Av (Thompson St to SR 43) .8 mi.	$ 7	$ 7	$ -
Shafter - Class III Bike Route	Mannel Av (Redwood Dr to E Tulare Av) .2 mi.	$ 2	$ 2	$ -
Shafter - Class III Bike Route	Redwood Dr (Shafter Av to Mannel Av) .5 mi.	$ 5	$ 5	$ -
Shafter - Class III Bike Route	Riverside St (SR 99 to Drr Rd) 5.1 mi.	$ 46	$ 46	$ -
Shafter - Class III Bike Route	Shafter Av (Kimberlina Rd to Redwood Dr) 3.3 mi.	$ 30	$ 30	$ -
Shafter - Class III Bike Route	Zachary Av (Burbank St to 7th Std Rd) 2. mi.	$ 18	$ 18	$ -
Shafter - Complete Streets	Kern Av (Sunset Av to State Av) .3 mi.	$ 170	$ 170	$ -
	Shafter Avenue from Sierra Avenue (Shafter) to Kimberlina Road - 3.3 miles - Class II	$ 98	$ 98	$ -
	Riverside Street from Central Valley Hwy to Driver Road - 2.6 miles - Class II	$ 78	$ 78	$ -
	Riverside Street from Poplar Avenue to Charry Avenue - 2.5 miles - Class II	$ 75	$ 75	$ -
	Poplar Avenue from Fresno Avenue to Riverside Street - 2 miles - Class II	$ 60	$ 60	$ -
	Palm Avenue from Kimberlina Road to Fresno Avenue - 3 miles - Class II	$ 90	$ 90	$ -
	Palm Avenue from Lupine Court to Kimberlina Road - 1.5 miles - Class II	$ 45	$ 45	$ -

NORTH KERN SUBAREA

Subarea includes: Cities of Delano, McFarland, Shafter and Wasco and the unincorporated communities (and surrounding county areas) of Buttonwillow, Lost Hills, Belridge and Pond.		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
	Magnolia Avenue from McCombs Road to Kimbelina Road - 4 miles - Class II	$ 121	$ 121	$ -
	Kimberlina Road from Magnolia Avenue to Shafter Avenue - 5.1 miles - Class II	$ 152	$ 152	$ -
	Fresno Avenue from Palm Avenue to Shafter Avenue - 4.1 miles - Class II	$ 122	$ 122	$ -
Shafter - Freight Rail	**Shafter Intermodal Rail Facility**	**$ 30,000**	**$ 30,000**	**$ -**
Wasco - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 6,151**	**$ 6,151**	**$ -**
Wasco - existing funds	Cost-efficient, safe, clean transportion	$ 25,828	$ 25,828	$ -
Wasco - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 6,183**	**$ 6,183**	**$ -**
Wasco - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 3,736**	**$ 3,736**	**$ -**
Caltrans - Sidewalk Improvement	Paso Robles Hwy (46) (Central Av to F St) 1.4 mi.	$ 261	$ 261	$ -
Wasco - Corridor Improvement	1st St (Peters St to E St) .9 mi.	$ 254	$ 254	$ -
Wasco - Corridor Improvement	7th St (Magnolia Av to Griffith Av) 1.5 mi.	$ 413	$ 413	$ -
Wasco - Corridor Improvement	F St (Filburn Av to Poso Dr) .5 mi.	$ 137	$ 137	$ -
Wasco - Corridor Improvement	Palm Av (Gromer Av to Filburn St) 2. mi.	$ 551	$ 551	$ -
Wasco - Corridor Improvement	Poso Av (Central Av to G St) 1.5 mi.	$ 408	$ 408	$ -
Wasco - Crossing Improvements	7th St (Griffith Av to G St) .4 mi.	$ 38	$ 38	$ -
Wasco - Crossing Improvements	8th St (D St to G St) .2 mi.	$ 19	$ 19	$ -
Wasco - Sidewalk Improvement	F St, Hwy (43) (Paso Robles Hwy (46) to Poso Av) 1. mi.	$ 190	$ 190	$ -
Wasco - Complete Streets/ITS Improv	Other Future developments funded by a transportation impact fee and mitigation	$ 1,465	$ 1,465	$ -
Wasco - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 15,909**	**$ 15,909**	**$ -**
Caltrans - Class II Bike Ln	SR 46 (East City Limits to SR 43) .6 mi.	$ 52	$ 52	$ -
Caltrans - Class IV Cycle Track	SR 46 (Central Av to F St) 1.4 mi.	$ 411	$ 411	$ -
Wasco - Class I Shared Use Path	Filburn/Central Av Path (Palm Av to North Palm Av) 2.5 mi.	$ 2,237	$ 2,237	$ -
Wasco - Class I Shared Use Path	Filburn/McCombs Path (I-5 N to SR 43) 22.6 mi. (partial funding)	$ 7,210	$ 7,210	$ -
Wasco - Class I Shared Use Path	Wasco Av & SR 46 (Filburn Av to Palm Av) 2.5 mi.	$ 2,235	$ 2,235	$ -
Wasco - Class II Bike Ln	6th St (Broadway St to D St) .1 mi.	$ 9	$ 9	$ -
Wasco - Class II Bike Ln	Central Av (Flower St to Poso Av) .3 mi.	$ 25	$ 25	$ -
Wasco - Class II Bike Ln	Central Av (Filburn St to Jackson St) .5 mi.	$ 44	$ 44	$ -
Wasco - Class II Bike Ln	D St (Filburn St to 4th St) 1.3 mi.	$ 113	$ 113	$ -
Wasco - Class II Bike Ln	E St (6th St to SR 46) .4 mi.	$ 37	$ 37	$ -
Wasco - Class II Bike Ln	Filburn St (Central Av to G St) 1.4 mi.	$ 130	$ 130	$ -
Wasco - Class II Bike Ln	Jackson St (Central Av to Shared Use Path) 1.5 mi.	$ 133	$ 133	$ -
Wasco - Class II Buffered Bike Ln	4th St (F St to G St) .1 mi.	$ 13	$ 13	$ -
Wasco - Class II Buffered Bike Ln	6th St (D St to Wasco Av) .5 mi.	$ 83	$ 83	$ -
Wasco - Class II Buffered Bike Ln	7th St (Central Av to Griffith Av) 1. mi.	$ 180	$ 180	$ -
Wasco - Class II Buffered Bike Ln	Central Av (Paso Robles Hwy SR 46 to Posos Av) 1. mi.	$ 180	$ 180	$ -
Wasco - Class II Buffered Bike Ln	Palm Av (Gromer Av to Jackson St) 2.5 mi.	$ 451	$ 451	$ -
Wasco - Class II Buffered Bike Ln	Poplar Av (Filburn St to Sunset St) .8 mi.	$ 148	$ 148	$ -
Wasco - Class III Bike Blvd	16th St (Shamrock Court to G St) .5 mi.	$ 28	$ 28	$ -
Wasco - Class III Bike Blvd	1st St (Peters St to E St) .9 mi.	$ 46	$ 46	$ -
Wasco - Class III Bike Blvd	5th St (Woodside Dr to G St) 1.4 mi.	$ 71	$ 71	$ -
Wasco - Class III Bike Blvd	7th St (G St to Griffith Av) .5 mi.	$ 23	$ 23	$ -
Wasco - Class III Bike Blvd	9th Pl (Beckes St to D St) 1. mi.	$ 49	$ 49	$ -
Wasco - Class III Bike Blvd	9th St (G St to D St) .2 mi.	$ 11	$ 11	$ -
Wasco - Class III Bike Blvd	Beckes St (Camellia St to SR 46) 1.2 mi.	$ 61	$ 61	$ -
Wasco - Class III Bike Blvd	Krista St (Beckes St to Central Av) .3 mi.	$ 13	$ 13	$ -
Wasco - Class III Bike Blvd	Poplar Av (Sunset Av to SR 46) .7 mi.	$ 33	$ 33	$ -
Wasco - Class IV Cycle Track	SR 43 (Paso Robles Hwy SR 46 to Filburn St) 1.5 mi.	$ 448	$ 448	$ -
Wasco - Complete Streets	Griffith St (Gromer Av to Jackson St) 2.5 mi.	$ 1,438	$ 1,438	$ -

NORTH KERN SUBAREA

Subarea includes: Cities of Delano, McFarland, Shafter and Wasco and the unincorporated communities (and surrounding county areas) of Buttonwillow, Lost Hills, Belridge and Pond.		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
	Central Avenue from Filburn Avenue to Kimberlina Road - 1.5 miles - Class II - other (SHOPP	$ -	$ -	$ -
	Hwy 46 from Gun Club Road to Magnolia Ave - 8 miles - Caltrans Shoulder - other (SHOPP)	$ -	$ -	$ -
County Areas - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 4,392**	**$ 4,392**	**$ -**
County Areas - existing funds	Cost-efficient, safe, clean transportion	$ 20,560	$ 20,560	$ -
County Areas - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 6,533**	**$ 6,533**	**$ -**
County Areas - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 9,038**	**$ 9,038**	**$ -**
Buttonwillow - High-Visibility Crossw	Buttonwillow Dr - W 1st St	$ 6	$ 6	$ -
Buttonwillow - Corridor Improvemen	Tracy Av (Willow Dr to Hwy 58) .4 mi.	$ 118	$ 118	$ -
Lost Hills - Bicycle and Ped Bridge	Lost Hills Rd (Lost Hill Park to Woodward Av) 1. mi.	$ 5,000	$ 5,000	$ -
Kern County - Complete Streets/ITS I	Other Future developments funded by a transportation impact fee and mitigation	$ 3,915	$ 3,915	$ -
County Areas - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 4,989**	**$ 4,989**	**$ -**
Caltrans - Class I Shared Use Path	McKittrick Hwy SR 58 (Wasco Wy to Interstate 5) 3.7 mi.	$ 3,335	$ 3,335	$ -
Caltrans - Complete Streets	SR 58 (Buttonwillow Dr to Meadow St) .9 mi.	$ 518	$ 518	$ -
Buttonwillow - Class I Shared Use Pat	East Side Canal (Milo Av to McKittrick Hwy SR 58) .4 mi.	$ 332	$ 332	$ -
Buttonwillow - Class I Shared Use Pat	Irrigation Ditch (Buttonwillow Dr to Cotton Av) .6 mi.	$ 535	$ 535	$ -
Buttonwillow - Class II Bike Ln	Main St (McKittrick Hwy SR 58 to Irrigation Ditch) .2 mi.	$ 18	$ 18	$ -
Buttonwillow - Class II Bike Ln	Tracy Av (Willow Dr to SR 58) .4 mi.	$ 39	$ 39	$ -
Buttonwillow - Class II Buffered Bike	1st St (Buttonwillow Dr to Miller Dr) .5 mi.	$ 89	$ 89	$ -
Buttonwillow - Class III Bike Blvd	Buttonwillow Dr (McKittrick Hwy SR 58 to 4th St) .5 mi.	$ 27	$ 27	$ -
Buttonwillow - Class III Bike Blvd	Cotton Av (Miller Rd to Meadow St) .3 mi.	$ 13	$ 13	$ -
Buttonwillow - Class III Bike Blvd	Meadow St (Milo Av to Cotton Av) .1 mi.	$ 3	$ 3	$ -
Buttonwillow - Class III Bike Route	Buttonwillow Dr (Irrigation Ditch to Sullivan Rd) .7 mi.	$ 6	$ 6	$ -
Buttonwillow - Class III Bike Route	Milo Av (Leslie St to Meadow St) .1 mi.	$ 1	$ 1	$ -
Buttonwillow - Class III Bike Route	Mirasol Av (2nd St to South Community Limits) .4 mi.	$ 3	$ 3	$ -
Buttonwillow - Class III Bike Route	Old Tracy Av (Sullivan Rd to SR 58) .7 mi.	$ 6	$ 6	$ -
Buttonwillow - Class III Bike Route	Sullivan Rd (Buttonwillow Dr to Old Tracy Av) 3.6 mi.	$ 32	$ 32	$ -
Buttonwillow - Class III Bike Route	Wasco Wy (7th Std Rd to SR 58) 3.4 mi.	$ 31	$ 31	$ -
Tupman	Tule Elk Reserve Path from Tupman Path to Tule Elk Reserve State Park - 1.3 miles - Other	$ -	$ -	$ -
	Sub-total Projects in Subarea	**$ 160,515**	**$ 160,515**	**$ -**

NORTH KERN SUBAREA	**Total Projects Benefiting Subarea**	**$ 3,453,168**	**$ 4,248,092**	**$ 1,169,015**

Notes:

A. Inflation savings assumes a 3% inflation rate per year

B. Road maintenance (local program reconstruction) savings assumes an average of 47% reduction in maintenace costs when pavement condition index is kept above 75

C. The projects in each phase or category are not necessarily listed by priority

D. The regional projects have been approved by Kern COG (cities/County) in the adopted 2014 RTP

1 Project was in the 2006 transportation measure expenditure plan

2 Project outside subarea that benefits the subarea

Abbreviations: YOE = Year of Expenditure, RTP = Regional Transportation Plan, TCMs = Transportation Control Measures that help reduce air pollution (congestion relief, signal syncronizing, etc.)

SOUTHEAST KERN SUBAREA

Subarea includes: City of California City and the unincorporated communities (and surrounding county areas) of Rosamond, Mojave, Boron, North Edwards, Fremont Valley, Cantil, and Johannesburg/Randsburg		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Fix-It-First, Keep-It-Local / Cost-Efficient				
California City - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trar**	**$ 24,894**	**$ 24,894**	**$ 11,700**
California City - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transp	$ 63,603	$ 63,603	$ 29,893
County Areas - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trar**	**$ 43,879**	**$ 43,879**	**$ 20,623**
County Areas - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transp	$ 150,449	$ 150,449	$ 70,711
State Highways - existing funds	State Highway Operations and Protection Program (SHOPP)	$ 73,842	$ 73,842	$ 34,706
Fix-It-First, Keep-It-Local / Cost-Efficient	**Sub-total Projects in Subarea**	**$ 356,667**	**$ 356,667**	**$ 167,633**
Regional Projects				
Ready-To-Go, Regional Projects				
Passenger Rail - Rosamond	Metrolink extension - Lancaster to Rosamond - bus connector to Mojave/Cal City/Teh.	$ 151,500	$ 191,000	$ 39,500
Route 14	[2]Redrock / Inyokern Rd to Rt 178 - widen to four lanes (Phase1)	$ 42,000	$ 42,000	$ -
Route 14	[2]Redrock / Inyokern Rd to Rt 178 - widen to four lanes (Phase 2)	$ 40,166	$ 42,000	$ 1,834
Route 14	[2]Redrock / Inyokern Rd to Rt 178 - widen to four lanes (Phase 3)	$ 25,533	$ 32,000	$ 6,467
Ready-To-Go, Regional Projects	**Sub-Total including zone of Benefit**	**$ 259,199**	**$ 307,000**	**$ 47,801**
Next-In-Line, Regional Projects				
Twenty Mule Team Rd	[1]California City Blvd to Rt 58 - widen to four lanes	$ 16,300	$ 21,566	$ 5,266
North Gate Road	[1]California City Blvd to North Edwards - construct new four lane road	$ 45,640	$ 60,385	$ 14,744
K Street	[1]Mojave - extend K St to Rt 14	$ 9,780	$ 12,940	$ 3,159
Rosamond Blvd	[1]Rosamond Blvd @ UPRR - construct grade separation	$ 52,152	$ 69,000	$ 16,848
California City Blvd	Rt 14 east six miles - widen to four lanes	$ 16,628	$ 22,000	$ 5,372
K Street	K St @ UPRR - construct grade separation	$ 52,152	$ 69,000	$ 16,848
Teh. Willow Springs Rd	Rt 58 to Rosamond Blvd - widen to four lanes	$ 114,101	$ 150,961	$ 36,861
US 395	San Bdo County Line to Rt 14 - widen to four lanes	$ 184,422	$ 244,000	$ 59,578
Passenger Rail - Mojave, Cal City, Teh.	Metrolink Service Extension - Tehachapi Corridor (2012 Commuter Rail study)	$ 312,536	$ 393,773	$ 81,236
Route 58	[2]Dennison Rd - construct interchange	$ 24,942	$ 33,000	$ 8,058
Route 58	[2]East of Tehachapi to General Beale Rd - truck auxillary lanes / escape ramp	$ 65,001	$ 86,000	$ 20,999
Next-In-Line, Regional Projects	**Sub-Total including zone of Benefit**	**$ 893,656**	**$ 1,162,624**	**$ 268,968**
Advanced Tech, Safe, Clean Transportation				
California City - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 3,251**	**$ 3,251**	**$ -**
California City - existing funds	Cost-efficient, safe, clean transportion	$ 13,668	$ 13,668	$ -
California City - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 3,284**	**$ 3,284**	**$ -**
California City - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 4,807**	**$ 4,807**	**$ -**
Redwood Blvd / Neuralia Rd-California	Corridor Improvement - 2.9 mile - Pedestrian Improvement Corridor	$ 807	$ 807	$ -
N Loop Blvd / Hacienda Blvd-Lake	Corridor Improvement - 1.3 mile - Pedestrian Improvement Corridor	$ 351	$ 351	$ -
90th St / Fir Av--	High-Visibility Crosswalk - 1. mile - High-visibility crosswalk	$ 3	$ 3	$ -
Catalpa Av / 90th St--	High-Visibility Crosswalk - 4. mile - High-visibility crosswalk	$ 11	$ 11	$ -
Complete Streets/ITS Improvements	Other future developments funded by mitigation, fees, etc.	$ 3,636	$ 3,636	$ -
California City - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 5,577**	**$ 5,577**	**$ -**
California City Blvd / Hwy 14-Yerba Blvd	Class III Bike Route - 6.8 mile - Class III Bicycle Route	$ 61	$ 61	$ -
Mendiburu Path / California City Blvd-88	Class I Shared Use Path - 1.6 mile - Add new off-St class I shared use path	$ 1,445	$ 1,445	$ -
California City Blvd / Yerba Blvd-Californ	Complete Streets - 3.6 mile - Narrow traffic lanes and add buffered bike lane to existing bil	$ 2,047	$ 2,047	$ -
California City Blvd / Redwood Blvd-San	Class III Bike Route - .8 mile - Class III Bicycle Route	$ 8	$ 8	$ -
Hacienda Blvd / North Loop Blvd-Califor	Class II Bike Lane - .6 mile - Class II Bicycle Lane	$ 51	$ 51	$ -
Neuralia Rd / Redwood Blvd-Poppy Blvd	Class II Bike Lane - 1.5 mile - Add new class II bike lane	$ 135	$ 135	$ -

SOUTHEAST KERN SUBAREA

Subarea includes: City of California City and the unincorporated communities (and surrounding county areas) of Rosamond, Mojave, Boron, North Edwards, Fremont Valley, Cantil, and Johannesburg/Randsburg		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
S Loop Blvd / California City Blvd-Hacien	Class II Bike Lane - 1.2 mile - Extend new class II bike lane	$ 108	$ 108	$ -
North City Path / 88th St-Hacienda Blvd	Class I Shared Use Path - .2 mile - Add new off-St class I shared use path	$ 199	$ 199	$ -
Proctor Blvd / Randsburg Mojave Rd-Col	Class II Bike Lane - .5 mile - Class II Bicycle Lane	$ 43	$ 43	$ -
Redwood Blvd / California City Blvd-Haci	Class II Bike Lane - 1.4 mile - Maintain existing (covered in sand). Add bike lane on S side of	$ 122	$ 122	$ -
California City Blvd / S College Blvd-Proc	Class II Bike Lane - .7 mile - Fill gap in existing bikeWy	$ 64	$ 64	$ -
Hacienda Blvd / Mendiburu Rd-N Loop B	Class III Bike Route - .6 mile - Add new class III bike route	$ 5	$ 5	$ -
Hacienda Blvd / Redwood Blvd-Sequoia	Class II Bike Lane - 1. mile - Class II Bicycle Lane	$ 90	$ 90	$ -
Mendiburu Rd / Hacienda Blvd-Randsbu	Class III Bike Route - 2.1 mile - Add new class III bike route	$ 19	$ 19	$ -
Redwood Blvd / Airway Blvd-Neuralia Rd	Class II Bike Lane - .7 mile - Extend new class II bike lane	$ 67	$ 67	$ -
92nd St / Fir Av-S Loop Blvd	Class III Bike Boulevard - .2 mile - Add new class III bike Blvd	$ 11	$ 11	$ -
Conklin Blvd / Mendiburu Rd-North Loop	Class III Bike Boulevard - .6 mile - Class III Bicycle Blvd	$ 28	$ 28	$ -
Conklin Blvd, Heather Av / California City	Class II Bike Lane - .5 mile - Add class II bike lane to connect to central park lake	$ 43	$ 43	$ -
Neuralia Rd / Redwood Blvd-Sequoia Blv	Class II Bike Lane - 1. mile - Class II Bicycle Lane	$ 91	$ 91	$ -
Randsburg Mojave Rd / Mcintosh Wy-Ho	Class II Bike Lane - .7 mile - Extend new class II bike lane	$ 65	$ 65	$ -
Redwood Blvd / Proctor Blvd-California (	Class II Bike Lane - .7 mile - Class II Bicycle Lane	$ 64	$ 64	$ -
Yerba Blvd / Mendiburu Rd-California Ci	Class III Bike Route - 1. mile - Class III Bicycle Route	$ 9	$ 9	$ -
90th St / California City Blvd-Catalpa Av	Class II Bike Lane - .2 mile - Add new class II bike lane	$ 16	$ 16	$ -
Airway Blvd / Redwood Blvd-Sequoia Blv	Class II Bike Lane - 1. mile - Class II Bicycle Lane	$ 91	$ 91	$ -
Forest Blvd / Neuralia Rd-Desert Butte B	Class III Bike Route - 2.6 mile - Class III Bicycle Route	$ 23	$ 23	$ -
Mendiburu Rd / Baron Blvd-Rusche Blvd	Class III Bike Route - 2.5 mile - Class III Bicycle Route	$ 23	$ 23	$ -
Rusche Blvd / Mendiburu Rd-Bolden Dr	Class III Bike Route - .3 mile - Class III Bicycle Blvd	$ 2	$ 2	$ -
Catalpa Av / 92nd St-90th St	Class III Bike Boulevard - .2 mile - Add new class III bike Blvd	$ 12	$ 12	$ -
92nd St / Catalpa Av-Fir Av	Class III Bike Boulevard - .1 mile - Add new class III bike Blvd	$ 6	$ 6	$ -
Desert Butte Blvd / Forest Blvd-Sequoia	Class III Bike Route - .4 mile - Class III Bicycle Route	$ 4	$ 4	$ -
Division Rd / Midway Rd-Ironwood St	Class III Bike Route - 1. mile - Class III Bicycle Route	$ 9	$ 9	$ -
Fir Av / 92nd St-92nd St	Class III Bike Boulevard - .1 mile - Add new class III bike Blvd	$ 5	$ 5	$ -
Neuralia Rd / Mendiburu Rd-Poppy Blvd	Class III Bike Route - .5 mile - Class III Bicycle Route	$ 5	$ 5	$ -
Sequoia Blvd / Neuralia Rd-Desert Butte	Class III Bike Route - 2.5 mile - Class III Bicycle Route	$ 23	$ 23	$ -
County Areas - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 7,568**	**$ 7,568**	**$ -**
County Areas - existing funds	Cost-efficient, safe, clean transportion	$ 35,428	$ 35,428	$ -
County Areas - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 11,257**	**$ 11,257**	**$ -**
County Areas - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 12,241**	**$ 12,241**	**$ -**
Mojave - active transportation	**Safe complete streets, pedestrian enhancements**			
O St / Cerro Gordo St-Park St	Corridor Improvement - .5 mile - Pedestrian Improvement Corridor	$ 129	$ 129	$ -
M St / Belshaw St-Shasta St	Corridor Improvement - .4 mile -	$ 100	$ 100	$ -
Douglas Av / Koch St-Mojave West Park	Corridor Improvement - .3 mile - Pedestrian Improvement Corridor	$ 82	$ 82	$ -
Q St / Belshaw St--	Fence Removing - 1. mile - Provide access	$ 1	$ 1	$ -
Gregory Dr / Pat Av--	High-Visibility Crosswalk - 4. mile -	$ 11	$ 11	$ -
Hwy 14 / Cypress-Silver Queen	Corridor Improvement - 5.4 mile - Pedestrian Improvement Corridor	$ 2,500	$ 2,500	$ -
Hwy 58 / Sierra Hwy-Nadene St	Corridor Improvement - .7 mile - Pedestrian Improvement Corridor	$ 180	$ 180	$ -
Hwy 58 / Kern County Fire Department--	High-Visibility Crosswalk - 4. mile -	$ 11	$ 11	$ -
Rosamond - active transportation	**Safe complete streets, pedestrian enhancements**			
20th St W / Marie Av-Rosamond Blvd	Sidewalk Improvement - 1. mile - Sidewalk Gap Closure	$ 190	$ 190	$ -
35th St W / Holiday Av-Felsite Av	Sidewalk Improvement - 1.5 mile - Sidewalk Gap Closure	$ 283	$ 283	$ -
Rosamond Blvd / Mojave Tropico Rd-10t	Sidewalk Improvement - 4.5 mile - Sidewalk Gap Closure	$ 860	$ 860	$ -
Mojave Tropico Rd / Rosamond Blvd-Col	Sidewalk Improvement - .3 mile - Sidewalk Gap Closure	$ 52	$ 52	$ -
Sierra Hwy / Hillcrest Av-Orange St	Sidewalk Improvement - 1. mile - Sidewalk Gap Closure	$ 195	$ 195	$ -
San Diego St / Burgundy Av-Wharton Av	Corridor Improvement - .5 mile - Pedestrian Improvement Corridor	$ 141	$ 141	$ -

SOUTHEAST KERN SUBAREA

Subarea includes: City of California City and the unincorporated communities (and surrounding county areas) of Rosamond, Mojave, Boron, North Edwards, Fremont Valley, Cantil, and Johannesburg/Randsburg		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Park Rd / Madre St-Santa Maria Dr	Sidewalk Improvement - .2 mile - Close sidewalk gaps	$ 38	$ 38	$ -
County Aeras Complete Streets/ITS Impro	Other future developments funded by mitigation, fees, etc.	$ 7,469	$ 7,469	$ -
County Areas - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 11,929**	**$ 11,929**	**$ -**
Mojave - bike facilities				
Oak Creek Rd / Koch St-West City Limits	Class II Bike Lane - 3.1 mile - Class II Bicycle Lane	$ 282	$ 282	$ -
Sierra Hwy / Arroyo Av-Silver Queen Rd	Class I Shared Use Path - 5.3 mile - Class I Multi-Use Path (Previously Proposed)	$ 4,736	$ 4,736	$ -
Holt St / Arroyo Av-Purdy Av	Class II Bike Lane - 3. mile - Class II Bicycle Lane	$ 274	$ 274	$ -
K St / Oak Creek-Mojave Barstow Hwy	Class II Bike Lane - .8 mile - Class II Bicycle Lane (Previously Proposed)	$ 73	$ 73	$ -
Inyo St / Q St-Sierra Hwy	Class III Bike Boulevard - .5 mile - Class III Bike Blvd	$ 25	$ 25	$ -
Koch St / Arroyo Av-Purdy Av	Class II Bike Lane - 3.1 mile - Class II Bicycle Lane	$ 277	$ 277	$ -
O St / Park St-Cerro Gordo St	Class II Bike Lane - .5 mile - Class II Bicycle Lane (Previously Proposed)	$ 42	$ 42	$ -
Shasta St / Sierra Hwy-O St	Class III Bike Boulevard - .3 mile - Class III Bike Blvd	$ 16	$ 16	$ -
M St / Belshaw St-Park St	Class III Bike Boulevard - .5 mile - Class III Bike Blvd	$ 27	$ 27	$ -
Purdy Av / DPW Easement-East Commu	Class III Bike Route - 3.8 mile - Class III Bicycle Route	$ 34	$ 34	$ -
40th St / Arroyo Av-Purdy Av	Class II Bike Lane - 3.1 mile - Class II Bicycle Lane	$ 277	$ 277	$ -
Belshaw St / Q St-Mojave Barstow Hwy	Class III Bike Boulevard - .5 mile - Class III Bike Blvd	$ 27	$ 27	$ -
Douglas Av / Holt St-Koch St	Class II Bike Lane - .5 mile -	$ 45	$ 45	$ -
United St / Purdy Av-Silver Queen Rd	Class III Bike Route - 2. mile - Class III Bicycle Route	$ 18	$ 18	$ -
Arroyo Av / 40th St-Hwy 14	Class III Bike Route - 1.4 mile -	$ 13	$ 13	$ -
Camelot Blvd / Rutan Rd-Hwy 14	Class III Bike Route - 2. mile - Class III Bicycle Route	$ 18	$ 18	$ -
Silver Queen Rd / United St-Backus Rd	Class III Bike Route - 6.1 mile - Class III Bicycle Route	$ 55	$ 55	$ -
Rosamond - bike facilities				
Backus Rd / Lone Butte Rd-Mojave-Trop	Class III Bike Route - 3.6 mile - Class III Bicycle Route	$ 32	$ 32	$ -
Rosamond Blvd / 60th St W-county line	Class II Buffered Bike Lane - 5.6 mile - Class II Buffered Bicycle Lane	$ 999	$ 999	$ -
20th St W / Av A-Rosamond Blvd	Class II Buffered Bike Lane - 3. mile - Class II Buffered Bicycle Lane	$ 542	$ 542	$ -
Sierra Hwy / W Av A-Hook Rd	Class II Buffered Bike Lane - 3.6 mile - Class II Buffered Bicycle Lane	$ 656	$ 656	$ -
15th St W / Rosamond Blvd-Hook Av	Class II Bike Lane - .6 mile - Class II Bicycle Lane	$ 57	$ 57	$ -
35th St W / Felsite Av-Holiday Av	Class II Buffered Bike Lane - 1.5 mile - Class II Buffered Bicycle Lane	$ 267	$ 267	$ -
Glendower St / Rosamond Blvd-Hillcrest	Class III Bike Boulevard - .5 mile - Class III Bicycle Blvd	$ 25	$ 25	$ -
40th St / Rosamond Blvd-Holiday Av	Class II Buffered Bike Lane - 1.1 mile - Class II Buffered Bicycle Lane	$ 201	$ 201	$ -
Frontage Rd / Felsite Av-Rosamond Blvd	Class II Bike Lane - .6 mile - Class II Bicycle Lane	$ 55	$ 55	$ -
Rosamond Blvd / 90th St-60th St	Class II Bike Lane - 3. mile - Class II Bicycle Lane	$ 271	$ 271	$ -
Sierra Hwy / Felsite Av-Backus Rd	Class III Bike Route - 5.6 mile - Class III Bicycle Route	$ 51	$ 51	$ -
25th St / Rosamond Blvd-Holiday Av	Class II Bike Lane - 1.1 mile - Class II Bicycle Lane	$ 99	$ 99	$ -
30th St W / Patti Rose Av-Felsite Av	Class II Buffered Bike Lane - 1.4 mile - Class II Buffered Bicycle Lane	$ 247	$ 247	$ -
Felsite Av / 35th St W-Frontage Rd	Class II Buffered Bike Lane - 1.2 mile - Class II Buffered Bicycle Lane	$ 222	$ 222	$ -
Hillcrest Av / HAvn St-Sierra Hwy	Class III Bike Boulevard - .4 mile - Class III Bicycle Blvd	$ 18	$ 18	$ -
Holiday Av / 40th St-35th St	Class III Bike Boulevard - .2 mile - Class III Bicycle Blvd	$ 12	$ 12	$ -
60th St / Rosamond Blvd-Av A	Class II Bike Lane - 3. mile - Class II Bicycle Lane	$ 271	$ 271	$ -
Desert Cloud Av / 35th St-Howard St	Class III Bike Boulevard - .2 mile - Class III Bicycle Blvd	$ 13	$ 13	$ -
Mojave-Tropico Rd / Backus Rd-Rosamo	Class III Bike Route - 6.3 mile - Class III Bicycle Route	$ 57	$ 57	$ -
80th St / Rosamond Blvd-Av A	Class II Bike Lane - 3. mile - Class II Bicycle Lane	$ 270	$ 270	$ -
90th St / Rosamond Blvd-Av A	Class II Bike Lane - 3. mile - Class II Bicycle Lane	$ 270	$ 270	$ -
Av A / 90th St-Sierra Hwy	Class II Bike Lane - 7.6 mile - Class II Bicycle Lane	$ 688	$ 688	$ -
Hook Av / 15th St W-United St	Class II Bike Lane - .5 mile - Class II Bicycle Lane	$ 44	$ 44	$ -
Tehachapi-Willow Springs Rd / Favorito	Class II Bike Lane - 2.6 mile - Class II Bicycle Lane	$ 230	$ 230	$ -
Elder Av / 80th St-60th St	Class III Bike Route - 2. mile - Class III Bicycle Route	$ 18	$ 18	$ -
Holiday Av / 80th St-60th St	Class III Bike Route - 2. mile - Class III Bicycle Route	$ 18	$ 18	$ -

SOUTHEAST KERN SUBAREA

Subarea includes: City of California City and the unincorporated communities (and surrounding county areas) of Rosamond, Mojave, Boron, North Edwards, Fremont Valley, Cantil, and Johannesburg/Randsburg		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Marie Av / Hwy 14-Sierra Hwy	Class III Bike Boulevard - .4 mile - Class III Bicycle Blvd	$ 18	$ 18	$ -
Orange St / Granite St-Sierra Hwy	Class III Bike Boulevard - .3 mile - Class III Bicycle Blvd	$ 14	$ 14	$ -
Buss St / Janine Av-Summer Breeze Av	Class III Bike Boulevard - .1 mile - Class III Bicycle Blvd	$ 5	$ 5	$ -
Howard St / Summer Breeze Av-Desert C	Class III Bike Boulevard - .1 mile - Class III Bicycle Blvd	$ 7	$ 7	$ -
Janine Av / Buss St-30th St	Class III Bike Boulevard - .2 mile - Class III Bicycle Blvd	$ 9	$ 9	$ -
Summer Breeze Av / Howard St-Buss St	Class III Bike Boulevard - .1 mile - Class III Bicycle Blvd	$ 4	$ 4	$ -
Advanced Tech, Safe, Clean Transportatio	**Sub-total Projects in Subarea**	**$ 59,915**	**$ 59,915**	**$ -**

SOUTHEAST KERN SUBAREA	**Total Projects Benefiting Subarea**	**$ 1,569,437**	**$ 1,886,206**	**$ 484,402**

Notes:

A. Inflation savings assumes a 3% inflation rate per year

B. Road maintenance (local program reconstruction) savings assumes an average of 47% reduction in maintenace costs when pavement condition index is kept above 75

C. The projects in each phase or category are not necessarily listed by priority

D. The regional projects have been approved by Kern COG (cities/County) in the adopted 2014 RTP

1 Project was in the 2006 transportation measure expenditure plan

2 Project outside subarea that benefits the subarea

Abbreviations: YOE = Year of Expenditure, RTP = Regional Transportation Plan, TCMs = Transportation Control Measures that help reduce air pollution (congestion relief, signal syncronizing, etc.)

TAFT-MARICOPA SUBAREA

Subarea includes: Cities of Taft and Maricopa and the unincorporated communities (county areas) of Ford City, South Taft, Taft Heights, Dustin Acres, Valley Acres, McKittrick, Tupman and Mettler		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Saving**
Fix-It-First, Keep-It-Local / Cost-Efficient				
Taft - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Tra**	**$ 8,331**	**$ 8,331**	**$ 3,915**
Taft - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans	$ 23,422	$ 23,422	$ 11,008
Maricopa - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Tra**	**$ 1,136**	**$ 1,136**	$ 534
Maricopa - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans	$ 3,127	$ 3,127	$ 1,470
County Areas - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Tra**	**$ 24,324**	**$ 24,324**	$ 11,432
County Areas - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Trans	$ 83,398	$ 83,398	$ 39,197
State Highways - existing funds	State Highway Operations and Protection Program (SHOPP)	$ 52,607	$ 52,607	$ 24,725
Fix-It-First, Keep-It-Local / Cost-Efficie	**Sub-total Projects in Subarea**	**$ 196,345**	**$ 196,345**	**$ 92,282**
Regional Projects				
Ready-To-Go, Regional Projects				
Route 119	Elk Hills - County Rd to Tupman Ave - widen to four lanes (Phase 2)	$ 36,280	$ 48,000	$ 11,720
Route 119	I-5 to Buena Vista - widen to four lanes	$ 27,916	$ 31,300	$ 3,384
Route 119	Cherry Ave to Elk Hills Rd (Phase 1, bypass) - widen to four lanes	$ 97,396	$ 115,000	$ 17,604
West Corridor	[2]Taft Hwy to Pacheco Rd - construct new facillity	$ 68,025	$ 90,000	$ 21,975
Ready-To-Go, Regional Projects	**Sub-Total including zone of Benefit**	**$ 229,616**	**$ 284,300**	**$ 54,684**
Next-In-Line, Regional Projects				
Route 119	[1]Tupman Rd to I-5 - widen to four lanes	$ 45,350	$ 60,000	$ 14,650
Route 58	[2]Future Rt 58 from I-5 to Heath Rd at Stockdale Hwy - construct new freeway	$ 377,914	$ 500,000	$ 122,086
Route 119	Rt 33 to Cherry Ave - widen to four lanes	$ 40,815	$ 54,000	$ 13,185
Route 33	Welch St to Midway Rd - widen to four lanes	$ 66,513	$ 88,000	$ 21,487
Route 166	Basic School Rd - reconstruct intersection grade	$ 391	$ 518	$ 126
Interstate 5	From Fort Tejon to Rt 99 - widen to ten lanes	$ 65,001	$ 86,000	$ 20,999
South Corridor	[2]I-5 to Rt 58 - new expressway	$ 453,945	$ 610,000	$ 156,055
West Corridor-South	[2]Taft Hwy to I-5 - extend freeway	$ 75,583	$ 100,000	$ 24,417
Next-In-Line, Regional Projects	**Sub-Total including zone of Benefit**	**$ 1,125,511**	**$ 1,498,518**	**$ 373,006**
Advanced Tech, Safe, Clean Transportation				
Taft - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 2,185**	**$ 2,185**	**$ -**
Taft - non-potential new funds	Cost-efficient, safe, clean transportion	$ 9,574	$ 9,574	$ -
Taft - Transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 2,595**	**$ 2,595**	**$ -**
Taft - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 4,536**	**$ 4,536**	**$ -**
Caltrans - Corridor Improvement	Kern Av (Cascade Pl to Taft Hwy) 1.2 mi.	$ 337	$ 337	$ -
Taft - High-Visibility Crosswalk	E Main St - Highway 119	$ 11	$ 11	$ -
Taft - High-Visibility Crosswalk	Kern St - 6th St	$ 11	$ 11	$ -
Taft - Corridor Improvement	10th St (Ash St to Main St) .6 mi.	$ 176	$ 176	$ -
Taft - Corridor Improvement	6th St (Ash St to Main St) .8 mi.	$ 219	$ 219	$ -
Taft - Crossing Improvements	San Emidio St (N 10th St to 1st St) .8 mi.	$ 68	$ 68	$ -
Taft - Sidewalk Improvement	Ash St (10th Street to 4th St) .7 mi.	$ 136	$ 136	$ -
Taft - Sidewalk Improvement	Olive Av (Supply Row to South St) .5 mi.	$ 92	$ 92	$ -
Taft - Sidewalk Improvement	Wood St (S 10th St to SR 33) 1.1 mi.	$ 211	$ 211	$ -
Taft - Complete Streets/ITS Improve	Other future developments funded by mitigation, fees, etc.	$ 3,274	$ 3,274	$ -
Taft - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 2,444**	**$ 2,444**	**$ -**
Caltrans - Class II Bike Ln	SR 119 (Midway Rd to South City Limits) 6.6 mi.	$ 596	$ 596	$ -
Caltrans - Class II Bike Ln	SR 33 (Kern St to SR 119) .5 mi.	$ 41	$ 41	$ -

TAFT-MARICOPA SUBAREA

Subarea includes: Cities of Taft and Maricopa and the unincorporated communities (county areas) of Ford City, South Taft, Taft Heights, Dustin Acres, Valley Acres, McKittrick, Tupman and Mettler		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Saving**
Caltrans - Class II Bike Ln	SR 33 (West City Limits to Cascade Pl) 1.2 mi.	$ 104	$ 104	$ -
Caltrans - Class II Buffered Bike Ln	Kern St SR 33 (Cascade Pl to 1st St) 1.2 mi.	$ 218	$ 218	$ -
Caltrans - Class III Bike Route	SR 33 (Cadet Rd to California St) 2.3 mi.	$ 20	$ 20	$ -
Taft - Class II Bike Ln	10th St (Center St to F St) .7 mi.	$ 67	$ 67	$ -
Taft - Class II Bike Ln	A St (Terrace Dr to S 10th St) .9 mi.	$ 80	$ 80	$ -
Taft - Class II Bike Ln	Ash St (N 10th St to Airport Rd) 1.9 mi.	$ 168	$ 168	$ -
Taft - Class II Bike Ln	Wood St (S 10th St to SR 33) 1.1 mi.	$ 99	$ 99	$ -
Taft - Class II Buffered Bike Ln	1st St (West Side Hwy SR 33 to Calvin St) .3 mi.	$ 57	$ 57	$ -
Taft - Class II Buffered Bike Ln	2nd St (Calvin St to Williams Wy) .3 mi.	$ 47	$ 47	$ -
Taft - Class II Buffered Bike Ln	6th St (Oak St to Ash St) 1.1 mi.	$ 191	$ 191	$ -
Taft - Class II Buffered Bike Ln	Cedar St (Division Rd to Airport Rd) 2.1 mi.	$ 376	$ 376	$ -
Taft - Class III Bike Blvd	2nd St (Calvin St to Supply Row) .6 mi.	$ 28	$ 28	$ -
Taft - Class III Bike Blvd	Harding Av (A St to E St) .4 mi.	$ 19	$ 19	$ -
Taft - Class III Bike Blvd	Oak St (Lierly Av to S 10th St) .2 mi.	$ 8	$ 8	$ -
Taft - Class III Bike Blvd	Olive Av (Supply Rd to South St) .5 mi.	$ 24	$ 24	$ -
Taft - Class III Bike Blvd	Phillippine St (Quail St to S 10th St) 1. mi.	$ 50	$ 50	$ -
Taft - Class III Bike Route	Airport Rd (Ash St to SR 119) 1.1 mi.	$ 10	$ 10	$ -
Taft - Class III Bike Route	Cadet Rd (SR 33 to Duval Rd) 2. mi.	$ 18	$ 18	$ -
Taft - Class III Bike Route	Church St (F St to Ranier Av) .9 mi.	$ 8	$ 8	$ -
Taft - Class III Bike Route	Gardner Field Rd (SR 33 to East City Limits) 4.2 mi.	$ 38	$ 38	$ -
Taft - Class III Bike Route	Midoil Rd (Thomas St to Terrace Dr) .7 mi.	$ 6	$ 6	$ -
Taft - Class IV Cycle Track	10th St (Center St to Ash St) .6 mi.	$ 171	$ 171	$ -
Maricopa - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 265**	**$ 265**	**$ -**
Maricopa - existing funds	Cost-efficient, safe, clean transportion	$ 1,371	$ 1,371	$ -
Maricopa - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 265**	**$ 265**	**$ -**
Maricopa - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 488**	**$ 488**	**$ -**
Caltrans - Corridor Improvement	California St (Main St to Poso St) .4 mi.	$ 116	$ 116	$ -
Caltrans - Corridor Improvement	Klipstein St (Fiester St to Stanislaus St) .4 mi.	$ 115	$ 115	$ -
Caltrans - Sidewalk Improvement	Poso St (Stanislaus St to S Kern St) .2 mi.	$ 34	$ 34	$ -
Maricopa - Sidewalk Improvement	Stanislaus St (School St to Klipstein St) .2 mi.	$ 43	$ 43	$ -
Mcopa. - Complete Streets/ITS Impr	Other future developments funded by mitigation, fees, etc.	$ 181	$ 181	$ -
Maricopa - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 618**	**$ 618**	**$ -**
Caltrans - Class II Bike Ln	SR 33/166 (Clark St to South City Limits) 1. mi.	$ 92	$ 92	$ -
Caltrans - Class II Buffered Bike Ln	California St SR 33 (Poso St to Kern St) .5 mi.	$ 92	$ 92	$ -
Caltrans - Class II Buffered Bike Ln	Maricopa Hwy SR 166/33 (Fresno St to Scott Dr) 1.1 mi.	$ 197	$ 197	$ -
Maricopa - Class I Shared Use Path	Wagy St (Maricopa Hwy to Welch St) .1 mi.	$ 119	$ 119	$ -
Maricopa - Class II Bike Ln	Hazelton St (Main St to Poso St) .3 mi.	$ 28	$ 28	$ -
Maricopa - Class II Bike Ln	Main St (Hazelton St to California St) .1 mi.	$ 9	$ 9	$ -
Maricopa - Class III Bike Blvd	Chico St (California St to Welch St) .1 mi.	$ 4	$ 4	$ -
Maricopa - Class III Bike Blvd	Elkhorn St (SR 33 to Fresno St) .4 mi.	$ 22	$ 22	$ -
Maricopa - Class III Bike Blvd	Fresno St (Poso St to Elkhorn St) .2 mi.	$ 8	$ 8	$ -
Maricopa - Class III Bike Blvd	Green St (Hazelton St to California St) .1 mi.	$ 7	$ 7	$ -
Maricopa - Class III Bike Blvd	Hazelton St (SR 166 to South City Limits) .3 mi.	$ 14	$ 14	$ -
Maricopa - Class III Bike Blvd	Union St (Maricopa Hwy SR 33 to Ruth St) .4 mi.	$ 18	$ 18	$ -
Maricopa - Class III Bike Blvd	Welch St (Chico St to Wagy St) .1 mi.	$ 5	$ 5	$ -
Maricopa - Class III Bike Route	Stanislaus St (Klipstein St to School St) .2 mi.	$ 2	$ 2	$ -
County Areas - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 2,881**	**$ 2,881**	**$ -**

TAFT-MARICOPA SUBAREA

Subarea includes: Cities of Taft and Maricopa and the unincorporated communities (county areas) of Ford City, South Taft, Taft Heights, Dustin Acres, Valley Acres, McKittrick, Tupman and Mettler		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Saving**
County Areas - existing funds	Cost-efficient, safe, clean transportion	$ 15,015	$ 15,015	$ -
County Areas - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 6,074**	**$ 6,074**	**$ -**
County Areas - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 1,182**	**$ 1,182**	**$ -**
Kern County - Sidewalk Improvemen	Cedar St (Lincoln Street to SR 119) 1. mi.	$ 187	$ 187	$ -
Kern County - Sidewalk Improvemen	Date St (Division Rd to Monroe St) .7 mi.	$ 137	$ 137	$ -
Kern County - Sidewalk Improvemen	Elm St (Lincoln Street to Harrison St) .5 mi.	$ 95	$ 95	$ -
Kern County - Sidewalk Improvemen	S 10th St (A Street to Buena Vista Place) .3 mi.	$ 61	$ 61	$ -
Kern - Complete Streets/ITS Improve	Other future developments funded by mitigation, fees, etc.	$ 704	$ 704	$ -
County Areas - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 7,759**	**$ 7,759**	**$ -**
Kern County - Class I Bike Path	Taft Path from Lake Webb to Gardner Field Road - 10.6 miles - Other	$ 7,000	$ 7,000	$ -
Kern County - Class I Bike Path	Gardner Field Road from County to Aqueduct - 1.5 miles - Other	$ 500	$ 500	$ -
Kern County - Class II Bike Ln	Division Rd (Ash St to Ironwood St) .9 mi.	$ 79	$ 79	$ -
Kern County - Class II Bike Ln	Grevillea St (Division Rd to Harrison St) .5 mi.	$ 45	$ 45	$ -
Kern County - Class II Bike Ln	Harrison St (Ash St to Grevillia St) .7 mi.	$ 59	$ 59	$ -
Kern County - Class III Bike Blvd	Lierly Av (South St to Oak St) .4 mi.	$ 21	$ 21	$ -
Kern County - Class III Bike Blvd	Taylor St (Grevillea St to Ash St) .8 mi.	$ 39	$ 39	$ -
Kern County - Class III Bike Route	Lincoln St (Midway Rd to Ironwood St) 1.1 mi.	$ 10	$ 10	$ -
Kern County - Class III Bike Route	Midway Rd (Division Rd to Taft Hwy) .6 mi.	$ 6	$ 6	$ -
Advanced Tech, Safe, Clean Transport	**Sub-total Projects in Subarea**	**$ 31,292**	**$ 31,292**	**$ -**

Total Projects in Sub Area	$ 961,025	$ 1,178,454	$ 309,711

Notes:

A. Inflation savings assumes a 3% inflation rate per year

B. Road maintenance (local program reconstruction) savings assumes an average of 47% reduction in maintenace costs when pavement condition index is kept above 75

C. The projects in each phase or category are not necessarily listed by priority

D. The regional projects have been approved by Kern COG (cities/County) in the adopted 2014 RTP

1 Project was in the 2006 transportation measure expenditure plan

2 Project outside subarea that benefits the subarea

Abbreviations: YOE = Year of Expenditure, RTP = Regional Transportation Plan, TCMs = Transportation Control Measures that help reduce air pollution (congestion relief, signal syncronizing, etc.)

TEHACHAPI SUBAREA

Subarea includes: City of Tehachapi and the unincorporated communities (and surrounding county areas) of Golden Hills, Bear Valley Springs, Stallion Springs, Cummings Valley, Alpine Forest, Sand Canyon, Bright Valley, Keene, Cantil, Paris-Loraine and Twin Oaks		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Fix-It-First, Keep-It-Local / Cost-Efficient				
Tehachapi - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control**	**$ 10,365**	**$ 10,365**	**$ 4,872**
Tehachapi - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control M	$ 30,393	$ 30,393	$ 14,285
County Areas - potential new funds	**street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control**	**$ 31,883**	**$ 31,883**	**$ 14,985**
County Areas - existing funds	street/bridge maintenance; reconstruction / pavement tech; widenings; signalization; Transportation Control M	$ 109,319	$ 109,319	$ 51,380
State Highways - existing funds	State Highway Operations and Protection Program (SHOPP)	$ 59,058	$ 59,058	$ 27,757
Fix-It-First, Keep-It-Local / Cost-Efficier	**Sub-total Projects in Subarea**	**$ 241,018**	**$ 241,018**	**$ 113,279**
Regional Projects				
Ready-To-Go, Regional Projects				
Route 58	[2]Union Ave to Fairfax Rd - widen to eight lanes	$ 42,849	$ 47,400	$ 4,551
Route 58	[2]At various locations - ramp improvements (HOV - ramp metering)	$ 26,622	$ 32,600	$ 5,978
Rosamond, Tehachapi	Metrolink extension phase I - Lancaster to Rosamond - bus connector to Tehachapi	$ 151,500	$ 191,000	$ 39,500
Ready-To-Go, Regional Projects	**Sub-Total including zone of Benefit**	**$ 220,971**	**$ 271,000**	**$ 50,029**
	Sub-total Projects in Subarea	**$ 151,500**	**$ 191,000**	**$ 39,500**
Next-In-Line, Regional Projects				
Route 58	[1]Dennison Rd - construct interchange	$ 24,942	$ 33,000	$ 8,058
Route 202	[1]Tucker to Woodford-Tehachapi Rd - widen to four lane	$ 7,335	$ 9,705	$ 2,370
Valley Blvd	[1]Tucker Rd to Curry St - widen to four lanes	$ 17,930	$ 23,723	$ 5,792
Rosamond, Mojave, Tehachapi, Cal City	Metrolink service extension phase 2 - Rosamond to Tehachapi & Cal City	$ 312,536	$ 393,773	$ 81,236
Route 58	East of Tehachapi to General Beale Rd - truck auxillary lanes / escape ramp	$ 65,001	$ 86,000	$ 20,999
Route 58	Near General Beale Rd - new truck weigh station	$ 8,314	$ 11,000	$ 2,686
Route 58	General Beale Rd - construct new interchange	$ 40,815	$ 54,000	$ 13,185
Red Apple Rd	Tucker Rd to Westwood Blvd - widen to four lanes	$ 3,260	$ 4,313	$ 1,053
Dennison Road	Green St/ Dennison Rd @ UPRR - construct grade separation	$ 52,152	$ 69,000	$ 16,848
Teh. Willow Springs Rd	Rt 58 to Rosamond Blvd - widen to four lanes	$ 114,101	$ 150,961	$ 36,861
Route 58	[2]Future Rt 58 from I-5 to Heath Rd at Stockdale Hwy - construct new freeway	$ 377,914	$ 500,000	$ 122,086
South Corridor	[2]I-5 to Rt 58 - new expressway	$ 453,945	$ 610,000	$ 156,055
Next-In-Line, Regional Projects	**Sub-Total including zone of Benefit**	**$ 1,478,246**	**$ 1,945,475**	**$ 467,229**
Advanced Tech, Safe, Clean Transportation				
Tehachapi - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 2,839**	**$ 2,839**	**$ -**
Tehachapi - existing funds	Cost-efficient, safe, clean transportion	$ 11,912	$ 11,912	$ -
Tehachapi - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 2,845**	**$ 2,845**	**$ -**
Tehachapi - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 3,244**	**$ 3,244**	**$ -**
Tehachapi - Corridor Improvement	Curry St (E St to Pinon St) .9 mi.	$ 251	$ 251	$ -
Tehachapi - Corridor Improvement	D St (Mt View Av to Robinson St) .7 mi.	$ 198	$ 198	$ -
Tehachapi - Corridor Improvement	East E St (Mt View Av to Snyder Av) 1.2 mi.	$ 329	$ 329	$ -
Tehachapi - Corridor Improvement	Green St (J St to C St) .5 mi.	$ 137	$ 137	$ -
Tehachapi - Corridor Improvement	Hayes St (H St to Pepper Dr) .3 mi.	$ 87	$ 87	$ -
Tehachapi - Corridor Improvement	I St (Curry St to Hayes St) .5 mi.	$ 141	$ 141	$ -
Tehachapi - Corridor Improvement	Mt View Av (Tehachapi Blvd to Valley Blvd) .5 mi.	$ 143	$ 143	$ -
Tehachapi - Corridor Improvement	Robinson St (E St to D St) .1 mi.	$ 21	$ 21	$ -
Tehachapi - Corridor Improvement	Tehachapi Blvd (Tucker Rd to Pauley St) 1. mi.	$ 277	$ 277	$ -
Tehachapi - Corridor Improvement	Valley Blvd (Curry St to Dennison Rd) 1. mi.	$ 277	$ 277	$ -
Tehachapi - High-Visibility Crosswalk	Dennison Rd - Tehachapi Blvd	$ 11	$ 11	$ -
Tehachapi - High-Visibility Crosswalk	Park Rd - Elementary School Entrance	$ 3	$ 3	$ -
Tehachapi - High-Visibility Crosswalk	S Hayes St - E Tehachapi Blvd	$ 3	$ 3	$ -
Tehachapi - Sidewalk Improvement	Hwy 202 (Woodford-Tehachapi Rd to Tucker Rd) 1.5 mi.	$ 291	$ 291	$ -
Tehachapi - Complete Streets/ITS Imp	Other future developments funded by mitigation, fees, etc.	$ 1,076	$ 1,076	$ -
Tehachapi - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 5,822**	**$ 5,822**	**$ -**

TEHACHAPI SUBAREA

Subarea includes: City of Tehachapi and the unincorporated communities (and surrounding county areas) of Golden Hills, Bear Valley Springs, Stallion Springs, Cummings Valley, Alpine Forest, Sand Canyon, Bright Valley, Keene, Cantil, Paris-Loraine and Twin Oaks		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Caltrans - Class II Bike Ln	Tucker Rd SR 202 (Enterprise Wy to Tehachapi Blvd) .7 mi.	$ 63	$ 63	$ -
Tehachapi - Class I Shared Use Path	Class I (Orchard Path to Highline Rd) .3 mi.	$ 283	$ 283	$ -
Tehachapi - Class I Shared Use Path	East City Path (Tucker Rd to Mount View Av) .5 mi.	$ 461	$ 461	$ -
Tehachapi - Class I Shared Use Path	Pinon St (Brandon Ln to Dennison Rd) .5 mi.	$ 476	$ 476	$ -
Tehachapi - Class I Shared Use Path	Tehachapi Blvd (Steuber Rd to Snyder Av) 1.4 mi.	$ 1,260	$ 1,260	$ -
Tehachapi - Class I Shared Use Path	Valley Blvd (S Snyder Av to Steuber Rd) 1.4 mi.	$ 1,241	$ 1,241	$ -
Tehachapi - Class II Bike Ln	Anita Dr (S Snyder Av to Dennison Rd) .4 mi.	$ 33	$ 33	$ -
Tehachapi - Class II Bike Ln	Challenger Dr (Burnett Rd to Capital Hills Pkwy) 1.1 mi.	$ 103	$ 103	$ -
Tehachapi - Class II Bike Ln	Cherry Ln (Tucker Rd to Elm St) .7 mi.	$ 63	$ 63	$ -
Tehachapi - Class II Bike Ln	Classico Dr (Pinon St to Alder Av) .1 mi.	$ 5	$ 5	$ -
Tehachapi - Class II Bike Ln	Dennison Rd (SR 58 to Highline Rd) 2.1 mi.	$ 192	$ 192	$ -
Tehachapi - Class II Bike Ln	E C St (Pepper Dr to S Snyder Av) .2 mi.	$ 14	$ 14	$ -
Tehachapi - Class II Bike Ln	E I St (N Curry St to N Mojave St) .4 mi.	$ 33	$ 33	$ -
Tehachapi - Class II Bike Ln	E J St (N Curry St to N Hayes St) .4 mi.	$ 39	$ 39	$ -
Tehachapi - Class II Bike Ln	E Orchard Pkwy (Classico Dr to S Curry St) .1 mi.	$ 11	$ 11	$ -
Tehachapi - Class II Bike Ln	E St (Mulberry St to S Mojave St) .7 mi.	$ 65	$ 65	$ -
Tehachapi - Class II Bike Ln	Enterprise Wy (Mill St to Tucker Rd) 1.1 mi.	$ 95	$ 95	$ -
Tehachapi - Class II Bike Ln	H St (N Mill St to S Hayes St) .6 mi.	$ 58	$ 58	$ -
Tehachapi - Class II Bike Ln	Industrial Pkwy (N Mill St to N Curry St) .2 mi.	$ 18	$ 18	$ -
Tehachapi - Class II Bike Ln	Mojavee St (J St to E H St) .1 mi.	$ 14	$ 14	$ -
Tehachapi - Class II Bike Ln	Mount View Av (W D St to Maple St) .1 mi.	$ 11	$ 11	$ -
Tehachapi - Class II Bike Ln	N Curry St (E J St to W H St) .1 mi.	$ 13	$ 13	$ -
Tehachapi - Class II Bike Ln	N Curry St (Industrial Pkwy to W J St) .1 mi.	$ 9	$ 9	$ -
Tehachapi - Class II Bike Ln	N Mill St (Challenger Dr to W H St) .8 mi.	$ 69	$ 69	$ -
Tehachapi - Class II Bike Ln	Pepper Dr (S Mojave St to E C St) .1 mi.	$ 12	$ 12	$ -
Tehachapi - Class II Bike Ln	Pinon St (S Curry St to Brandon Ln) .5 mi.	$ 43	$ 43	$ -
Tehachapi - Class II Bike Ln	Pinon St (Classico Dr to Applewood Dr) .1 mi.	$ 5	$ 5	$ -
Tehachapi - Class II Bike Ln	S Hayes St (Pepper Dr to E H St) .3 mi.	$ 28	$ 28	$ -
Tehachapi - Class II Bike Ln	S Snyder Av (E Tehachapi Blvd to Valley Blvd) .5 mi.	$ 42	$ 42	$ -
Tehachapi - Class II Bike Ln	Steuber Rd (E Tehachapi Blvd to Highline Rd) 1.2 mi.	$ 111	$ 111	$ -
Tehachapi - Class II Bike Ln	Tehachapi Willow Springs Rd (E Teh Blvd to Highline Rd) 1.1 mi.	$ 96	$ 96	$ -
Tehachapi - Class II Buffered Bike Ln	E Tehachapi Blvd (Dennison Rd to Teh Willow Spr Rd) 1. mi.	$ 183	$ 183	$ -
Tehachapi - Class II Buffered Bike Ln	Tucker Rd (Tehachapi Blvd to Highline Rd) 1.5 mi.	$ 276	$ 276	$ -
Tehachapi - Class II Buffered Bike Ln	W Tehachapi Blvd (Mt View Av to S Snyder Av) 1.2 mi.	$ 220	$ 220	$ -
Tehachapi - Class II Buffered Bike Ln	W Valley Blvd (McIntosh St to Las Colinas St) .3 mi.	$ 50	$ 50	$ -
Tehachapi - Class III Bike Blvd	Brentwood Dr (Clearview St to Cherry Ln) .9 mi.	$ 43	$ 43	$ -
Tehachapi - Class III Bike Blvd	Clearview St (Valley Blvd to White Oak Dr) .3 mi.	$ 13	$ 13	$ -
Tehachapi - Class III Bike Blvd	Elm St (Maple St to Cherry Ln) .5 mi.	$ 24	$ 24	$ -
Tehachapi - Class III Bike Blvd	Maple St (Mt View Av to S Mill St) .3 mi.	$ 15	$ 15	$ -
Tehachapi - Class III Bike Blvd	S Mojave St (E Tehachapi Blvd to Pepper Dr) .3 mi.	$ 13	$ 13	$ -
Tehachapi - Class III Bike Blvd	White Oak Dr (S Curry St to Clearview St) .2 mi.	$ 11	$ 11	$ -
Tehachapi - Class III Bike Route	Applewood Dr (Elm St to Pinon St) .2 mi.	$ 2	$ 2	$ -
Tehachapi - Class III Bike Route	Elm St (Cherry Ln to Applewood Dr) .2 mi.	$ 1	$ 1	$ -
Tehachapi - Class III Bike Route	Pinon St (Applewood Dr to S Curry St) .2 mi.	$ 2	$ 2	$ -
Tehachapi - Class III Bike Route	S Green St (H St to C St) .3 mi.	$ 3	$ 3	$ -
County Areas - potential new funds	**Cost-efficient, safe, clean transportion**	**$ 4,911**	**$ 4,911**	**$ -**
County Areas - existing funds	Cost-efficient, safe, clean transportion	$ 28,524	$ 28,524	$ -
County Areas - transit	**Senior/disabled & advanced technology transit, vanpools, shared ride, aviation**	**$ 9,064**	**$ 9,064**	**$ -**
County Areas - active transportation	**Safe complete streets, pedestrian enhancements**	**$ 16,066**	**$ 16,066**	**$ -**
Kern County - Corridor Improvement	San Diego St (Burgundy Av to Wharton Av) .5 mi.	$ 141	$ 141	$ -
Kern County - Sidewalk Improvement	Park Rd (Madre St to Santa Maria Dr) .2 mi.	$ 38	$ 38	$ -
Kern County - Complete Streets/ITS Ir	Other future developments funded by mitigation, fees, etc.	$ 15,888	$ 15,888	$ -
County Areas - bike facilities	**Construct Class I (trails), II (lanes) or Class III (routes) Bike Paths; striping; signage**	**$ 3,394**	**$ 3,394**	**$ -**

TEHACHAPI SUBAREA

Subarea includes: City of Tehachapi and the unincorporated communities (and surrounding county areas) of Golden Hills, Bear Valley Springs, Stallion Springs, Cummings Valley, Alpine Forest, Sand Canyon, Bright Valley, Keene, Cantil, Paris-Loraine and Twin Oaks		Cost Estimate ($ x 1,000)		
Project	**Scope**	**YOE w/ new revenue**	**YOE w/o new revenue**	**Maint./Inflation Savings**
Caltrans - Class II Bike Ln	W Valley Blvd SR 202 (Wford-Teh Rd to McIntosh St) 1.4 mi.	$ 126	$ 126	$ -
Caltrans - Class II Bike Ln	SR 202 (Cummnigs Valley Rd to Highline Rd) 3.4 mi.	$ 307	$ 307	$ -
Kern County - Class I Shared Use Path	Golden Hills Blvd (Highline Rd to W Valley Blvd) 1.1 mi.	$ 946	$ 946	$ -
Kern County - Class I Shared Use Path	Woodford-Tehachapi Rd (Highline Rd to W Valley Blvd) 1. mi.	$ 923	$ 923	$ -
Kern County - Class II Bike Ln	Banducci Rd (W Valley Blvd to Highline Rd) .2 mi.	$ 19	$ 19	$ -
Kern County - Class II Bike Ln	Cummings Valley Rd (SR 202 to Banducci Rd) 4.4 mi.	$ 398	$ 398	$ -
Bear Valley	Bear Valley Road from Cumberland Road to Hwy 202 - 6.8 miles - Other	$ 71	$ 71	$ -
Golden Hills	Woodford Tehachapi Road from Valley Blvd to Highline Road - 1 miles - Class II	$ 31	$ 31	$ -
Golden Hills	Valley Blvd from Tucker Road to Woodford Tehachapi Road - 1.5 miles - Class II	$ 46	$ 46	$ -
Golden Hills	SR 202 from Bear Valley Road to Woodford Tehachapi Road - 5.7 miles - Class II (see SHOPP funding)			
Golden Hills	Pellisier Road from Banducci Road to Giraudo Road - 2 miles - Class II	$ 60	$ 60	$ -
Golden Hills	Old Town Road from Mariposa Road to Tehachapi Road - 0.7 miles - Class II	$ 21	$ 21	$ -
Golden Hills	Highline Road from Tucker Road to Banducci Road - 3.1 miles - Class II	$ 92	$ 92	$ -
Golden Hills	Golden Hills Blvd. from Santa Barbara Drive to Highline Road - 1.1 miles - Class II	$ 33	$ 33	$ -
Golden Hills	Giraudo Road from Pellisier Road to Bailey Road - 0.5 miles - Class II	$ 15	$ 15	$ -
Golden Hills	Cummings Valley Road from Bailey Road to Bear Valley Road - 1 miles - Class II	$ 31	$ 31	$ -
Golden Hills	Cummings Valley Road from Bailey Road to SR 202 - 0.4 miles - Class II	$ 12	$ 12	$ -
Golden Hills	Bear Valley Road from SR 202 to Proposed Road - 1.5 miles - Class II	$ 44	$ 44	$ -
Golden Hills	Banducci Road from SR 202 to Highline Road - 0.2 miles - Class II	$ 6	$ 6	$ -
Golden Hills	Banducci Road from Comanche Point Road to Pellisier Road - 2.5 miles - Class II	$ 76	$ 76	$ -
Golden Hills	Bailey Road from Giraudo Road to Cummings Valley Road - 1.5 miles - Class II	$ 45	$ 45	$ -
Golden Hills	Stallion Springs Road/Comanche Point Road from Banducci Road to Banducci Road - 3.1 miles - Other	$ 92	$ 92	$ -
Advanced Tech, Safe, Clean Transporta	**Sub-total Projects in Subarea**	**$ 48,185**	**$ 48,185**	**$ -**

TEHACHAPI SUBAREA	**Total Projects Benefiting Subarea**	**$ 1,988,421**	**$ 2,505,678**	**$ 630,536**

Notes:

A. Inflation savings assumes a 3% inflation rate per year

B. Road maintenance (local program reconstruction) savings assumes an average of 47% reduction in maintenace costs when pavement condition index is kept above 75

C. The projects in each phase or category are not necessarily listed by priority

D. The regional projects have been approved by Kern COG (cities/County) in the adopted 2014 RTP

1 Project was in the 2006 transportation measure expenditure plan

2 Project outside subarea that benefits the subarea

Abbreviations: YOE = Year of Expenditure, RTP = Regional Transportation Plan, TCMs = Transportation Control Measures that help reduce air pollution (congestion relief, signal syncronizing, etc.)

APPENDIX H

RESPONSE TO COMMENTS

2022 Regional Transportation Plan

Comments and Responses

As part of development of the RTP, stakeholders, technical staff, and the public, were given opportunity to comment. The public review period was held April 22, 2022 to June 16, 2022.

California Air Resources Board (ARB) Letter Dated 6/16/22

Observed data and modeling results to substantiate the achievement of the 2020 GHG emission reduction target.

1. Provide further documentation on Table 4-7: Results of Greenhouse Gas Emissions and Vehicle Trip Reductions on how these numbers were derived.
Response: *Kern COG will provide this additional documentation as part of the submittal of the Final RTP/SCS and the accompanying technical data submittal to ARB, consistent with the ARB SCS Evaluation Guidelines.*

Additional information about SCS implementation and monitoring of strategy implementation

2. Provide further documentation on Table 4-8: Quantified SCS Strategy Types and Categories on how these numbers were derived to answer the following questions:

a. Are there actions Kern COG is taking to support local jurisdictions in implementing the growth pattern identified in the plan?
b. How have recent annexations in the region been accounted for in the Draft 2022 RTP/SCS, and what actions/commitments are in place to prevent development in these areas from increasing VMT?
c. Are there other local development regulations and practices in place to help align with the Draft 2022 RTP/SCS's sustainable development vision?
d. How is implementation of this strategy to promote a sustainable development pattern going, and how will Kern COG monitor strategy implementation over time?

Response: *Kern COG will provide this additional documentation as part of the submittal of the Final RTP/SCS and the accompanying technical data submittal to ARB, consistent with the ARB SCS Evaluation Guidelines.*

Quantification of benefits from the parking management program

3. Provide further clarification on Bakersfield's parking management program
Response: *Kern COG will provide this additional documentation as part of the submittal of the Final RTP/SCS and the accompanying technical data submittal to ARB, consistent with the ARB SCS Evaluation Guidelines.*

Information on RTP/SCS project funding

4. Provide additional project listings for 2018 and 2022 RTP by project type, cost, funding sources, project period and location.
Response: *Kern COG will provide this additional documentation as part of the submittal of the Final RTP/SCS and the accompanying technical data submittal to ARB, consistent with the ARB SCS Evaluation Guidelines.*

Inclusion of incremental progress results

5. Provide additional modeling to re-run the effects of exogenous variables on the incremental progress analysis.
Response: *Kern COG will provide this additional documentation as part of the submittal of the Final RTP/SCS and the accompanying technical data submittal to ARB, consistent with the ARB SCS Evaluation Guidelines.*

Further clarifications about induced travel

6. Provide the following additional information on the induced travel demand analysis: projects included in the analysis, HOV vs. general purpose lanes, accessibility index application method, information, and land use model calibration.
Response: *Kern COG will provide this additional documentation as part of the submittal of the Final RTP/SCS and the accompanying technical data submittal to ARB, consistent with the ARB SCS Evaluation Guidelines.*

California Department of Transportation Letter dated 6/16/22

TRANSPORTATION PLANNING-DISTRICT 6 BICYCLE AND COMPLETE STREETS

1. Existing Systems Under the Strategic Investments - page 5-68: Add Class IV separated bikeways.
Response: *The RTP reflects the recommendations of 5 publicly workshopped bicycle plans in the past 5 years on the Kern region. With the next update to the Kern Active Transportation Plan this type of bikeway will be considered.*

2. Strategic Investments - page 5-70: Include the “Towards an Active California State Bicycle and Pedestrian Plan.
Response: *The RTP reflects the recommendations of 5 publicly workshopped bicycle plans in the past 5 years on the Kern region. With the next update to the Kern Active Transportation Plan these plans will be considered.*

3. Add Caltrans Complete Streets Deputy Policy 37 to provide opportunities for complete streets in all project phases.
Response: *With the next update to the Kern Active Transportation Plan these plans will be considered.*

TRANSPORTATION PLANNING-DISTRICT 6 CLIMATE CHANGE

4. Chapter 1- page 1: Smart mobility and climate change issues thoroughly covered.
Response: *Thank you for your comment.*

5. Chapter 2 - page 3-28: Supports active transportation.
Response: *Thank you for your comment.*

OFFICE OF TRAFFIC OPERATIONS-DISTRICT 6

6. Chapter 3 – Discuss post-pandemic planning assumptions.
Response: *Long-term effect of the pandemic is discussed on pages 3-2 and 3-3.*

SYSTEM PLANNING-DISTRICT 6

7. 5 projects on the constrained project list are not on Caltrans D6 project lists.
Response: *One of the projects is in D9, some of the projects are funded by local impact fee and lump summed. Two of the projects are partially funded by HSR. Caltrans needs to add these projects to the lists.*

8. 11 Caltrans SHOPP projects are not in the RTP project list.
Response: *These projects are included as a lump sum as part of Table 6-1.*

9. Clean California and Broadband projects are not in the RtP project list.
Response: *The RTP focuses on listing capacity increasing projects.*

10. Chapter 5, Freight Movement Action Element - page 5-40 Include solar powered electric truck stop.
Response: *Electric trucks are discussed on page 5-47.*

11. Chapter 5, Freight Movement Action Element – Include SR 99 CMCP and Business Plan which include managed lanes.
Response: *Thank you for your comment.*

TECHNICAL PLANNING – DISTRICT 6

12. Chapter 1-Introduction: Page 1-3, FEDERAL SURFACE TRANSPORTATION SPENDING REAUTHORIZATIONS
Response: *Thank you for your comment.*

13. Chapter 2- Transportation Planning Policies: Comment on adding goal references to some o the actions in table 2.
Response: *Thank you for your comment.*

14. Chapter 5 Strategic Investments: Page 5-3 & Page 5-36, Constrained widening projects need to meet SB 743 compliance.
Response: *SB 743 is administered through the CEQA process.*

15. Chapter 5 Strategic Investments: Page 5-36, It is recommended SR 46 BNSF grade separation in Wasco be moved to constrained project list.
Response: *SR 46 BNSF grade separation project will be process with an amendment.*

16. Chapter 5 Page 5-52, Perhaps SR 58 improvements could be phased.
Response: *Thank you for your comment.*

17. Chapter 5 Page 5-67, Explore potential for VMT mitigation to help pay for commuter rail between Delano and Bakersfield.
Response: *Thank you for your comment.*

18. Appendix F – Valley-wide Overview: Caltrans recommends adding discussion of SR Comprehensive Multimodal Corridor Plan (CMCP) to section 4 Planning Efforts.
Response: *Thank you for your comment.*

OFFICE OF REGIONAL PLANNING HEADQUARTERS: Appendix A, KCOG RTP Checklist:

General Comments:

19. 4. (d)-Page 4-43 identify transportation network.
Response: *Revised reference to page 4-25.*

20. 4. (f)-Discussion of state housing goals.
Response: *Revised reference to page 4-30.*

Consultation/Cooperation:

21. 1.(j)-Document the effectiveness of procedures and strategies were reviewed for the participation plan.
Response: *The effectiveness is measures with performance measures discussed in the July 21st, 2022 RTP adoption staff report to the Kern COG TPPC located on-line at* https://www.kerncog.org/cog-tppc-meetings/ .

22. 6. – Mention California State Wildlife Action Plan.
Response: *Thank you for your comment. The Plan is covered in the RTP PEIR document on pages 2.0-18 and 4.4-48* https://www.kerncog.org/wp-content/uploads/2022/05/2022_RTP-SCS_PEIR.pdf

23. 11.- Mention Public Transit-Human Services Transportation Plan.
Response: *Revised reference to page 5-57.*

Modal Discussion:

24. 2. – Include a discussion of VMT in the highways section.
Response: *Thank you for your comment. This section on highways in one of the last sections in the action element based on importance to the plan. VMT and GHG reduction are the primary*

focus of the SCS in chapter 4 and provide important context to all the sections of the action element.

25. 3. – Change referenced pages to where a more robust discussion on mass transit is present.
Response: *Revised reference to pages 5-53 to 5-67.*

Financial:

27. 2. - Please change the page referenced to 6-7.
Response: *Revised reference to page 6-7.*

28. 4. - It is not clear which projects are or aren't regionally significant. Please delineate which projects are regionally significant.
Response: *The regionally significant projects are the "Major Highway Improvements" projects found on pages 5-30 to 5-31. Revised reference to pages to 5-30 to 5-31.*

29. 7. and 8. - There is no consistency statement in the pages referenced.
Response: *Kern COG added the required consistency statements for the RTIP and ITIP as a note on page 5-38. Revised reference to page 5-38.*

Environmental:

30. 1. and 5. – What does *SD stand for as referenced?
Response: *Still to be Determined. For item 1. revised reference to PEIR page 1.0-6, for item 5. Revised reference to PEIR page 1.0-13 to -16.*

31. 4. – Where does the RTP specify mitigation activities?
Response: *Revised reference to pages 5-31, -47, -52, -73, -82, -83, -90, -91, -125, -140.*

FEDERAL TRANSIT ADMINISTRATION

32. Page 5-4, Table 5.1 – Verify new busses are expansion busses.
Response: *Yes.*

33. Please indicate, which sections of the RTP address Public Transportation Performance Targets
Response: *Appendix D p. D-29, -30.*

34. Consider listing FTA Section 5339 Bus and Bus Facilities Formula funds as a revenue source for public transportation capital projects in Chapter 6.
Response: *Thank you for your comment.*

Caltrans District 9 E-mail dated 5/10/22

1. Add two projects to the unconstrained list in Table 5-2.

Response: *Kern COG added the two projects: New interchange at SR 14 & Purdy Rd, and 3 new railroad grade separations East of SR 14 at Silver Queen Rd., Backus Rd., and Dawn Rd..*

Tejon Ranch Letter dated 6/16/22

1. Verify that their developments are included in the assumptions for the plan.

Response: *Kern COG has made technical refinements to the growth forecast at the sub-jurisdictional (i.e., TAZ) level to reflect the Tejon projects. The 2022 RTP/SCS planning assumptions and growth forecasts account for full buildout of the approved and entitled TRCC, Grapevine, and TMV projects by the end of the planning period. The minor technical refinements are not substantial and do not affect the conclusions contained in the PEIR. The Kern COG models are used to provide gross estimates of regional environmental parameters (Vehicle Miles Traveled [VMT], criteria pollutant emissions and GHG emissions). However, the inputs to these models are subject to variability (location and density of land uses, travel patterns, fuel make up, pricing assumptions and many more). Because of this, minor changes to assumptions result in minor changes to modeling results that are not statistically significant. The technical refinements to the growth forecast were made at the sub-jurisdictional (i.e., TAZ) level to reflect the Tejon projects. These technical refinements do not result in substantial changes to the information presented in the Draft PEIR, including modeling results. While adjustments were made at the sub jurisdictional level, at the regional level, impacts would remain as presented in the Draft PEIR. The technical refinements do not result in any new significant impacts at the regional level because the changes are minor and occur at the sub jurisdictional level. A clarification was made to Ch. 3, p. 3-6 that the planning assumptions account for full buildout of the Tejon projects.*

Comment Letters

June 16, 2022

Mr. Ahron Hakimi
Executive Director
Kern Council of Governments
1401 19th Street, Suite 300, Bakersfield, California 93301
ahakimi@kerncog.org

Dear Mr. Hakimi:

California Air Resources Board (CARB) staff appreciates the opportunity to review and engage with the Kern Council of Government's (Kern COG) staff on its draft 2022 Regional Transportation Plan/Sustainable Communities Strategy (Draft 2022 RTP/SCS).

This work is more important than ever. CARB's second SB 150 progress report[1] shows that as of 2019 California as a whole and the Kern region are not on track to meet the greenhouse gas (GHG) emission reductions expected under Senate Bill (SB) 375 and that vehicle miles traveled (VMT) is increasing. Governor Newsom signed Executive Order N-19-19 to redouble the State's efforts to reduce GHG emissions, explicitly focusing on lowering VMT. To achieve the State's climate mandates, California needs significant and immediate changes to how we plan, fund, and build our communities and transportation systems.

The SCS plays a critical role in supporting the State's climate efforts, as well as local objectives to create a stronger economy, healthier environment, and improved quality of life. We appreciate Kern COG's work to explore additional regional strategies for reducing VMT and associated GHG emissions in its geographically, economically, and socially diverse region as we endeavor together to achieve these shared goals.

In reviewing the Draft 2022 RTP/SCS, CARB staff looked to identify whether additional information would be needed to conduct its final SCS GHG evaluation under SB 375. CARB's final evaluation of the SCS will focus on assessing whether GHG emission reductions are reasonably supported by the plan, as outlined in the *Final Sustainable Communities Strategy Program and Evaluation Guidelines* (SCS Evaluation Guidelines).[2] CARB staff requests that Kern COG make the following additional information available by the time it adopts its final 2022 RTP/SCS to support the final evaluation.

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[1] See CARB's *Draft 2022 Progress Report: California's Sustainable Communities and Climate Protection Act* at: *https://ww2.arb.ca.gov/resources/documents/tracking-progress*.

[2] In addition to the SCS Evaluation Guidelines, see also the *Final Sustainable Communities Strategy Program and Evaluation Guidelines Appendices* and the *SCS Submittal Package Summary Guide*.

Observed data and modeling results to substantiate the achievement of the 2020 GHG emission reduction target

Table 4-7: Results of Greenhouse Gas Emissions and Vehicle Trip Reductions in the Draft 2022 RTP/SCS contains information about 2020 GHG emissions. Kern COG needs to provide further documentation to CARB on how these numbers were derived. For CARB to evaluate the achievement of the 2020 target, Kern COG needs to provide CARB with evidence based on observed data to show how the 2020 GHG target was achieved, as well as modeled results and any off-model adjustments calculations made.

Additional information about SCS implementation and monitoring of strategy implementation

CARB staff appreciates Kern COG's inclusion of the SCS strategy table with implementing parties in *Table 4-8: Quantified SCS Strategy Types and Categories.* In addition to this information, CARB staff requests Kern COG provide further documentation of the policy, funding, and/or technical assistance commitments that will support the implementation of each strategy included in the Draft 2022 RTP/SCS. These implementation commitments could include a variety of actions, from coordination and leadership by the MPO to ongoing or planned actions by other entities. For example, one of Kern COG's key SCS strategies that it has carried over from previous SCSs is to promote a sustainable development pattern. In CARB's evaluation of Kern COG's previous 2018 SCS, staff highlighted the need for this 2022 RTP/SCS to include information on what actions the region will take to implement its vision of infill, compact development, transit-oriented development, and mixed uses. In particular, clarification from Kern COG on the following items would be helpful for CARB's final evaluation of the 2022 RTP/SCS.

- Are there actions Kern COG is taking to support local jurisdictions in implementing the growth pattern identified in the plan? According to forecast growth in population and urban/built-up area shown in the Draft 2022 RTP/SCS, new development from 2018-2046 will be almost four times the density of development from 1988-2018. Increased density is appropriate to reduced VMT as well as other benefits like reduced land consumption and lower infrastructure costs. However, it is unclear what policies or actions Kern COG is taking to support this change. While the elements of sustainable development patterns are frequently outside the direct control of MPOs, coordination and leadership from the MPO can be helpful to facilitate or at least allow the creation of new development areas with lower VMT. For example, supporting actions could include, but are not limited to, working with and providing information to local jurisdictions within the region on planning for priority development areas, monitoring project development in the region to support alignment, creating incentives for policy alignment for local jurisdictions, and/or developing local policy toolkits.
- How have recent annexations in the region been accounted for in the Draft 2022 RTP/SCS, and what actions/commitments are in place to prevent development in these areas from increasing VMT? Multiple jurisdictions in Kern County are seeking or have received approval for large annexations, such as the cities of McFarland (adding

2,138 acres) and Delano (adding 1,928 acres) in 2022. According to the Draft 2022 RTP/SCS, McFarland has a 4.5 percent forecast population growth through 2035 and existing capacity for 15.6 percent growth in housing units. Nonetheless, McFarland is increasing its land area by 110.9 percent. Similarly, according to the Draft 2022 RTP/SCS, Delano has a 15.5 percent forecast population growth through 2035 and a capacity for 41.4 percent growth in housing units. Delano is nonetheless increasing its area by a further 20.5 percent. Annexations that create development capacity in excess of forecasted growth, assuming growth areas would contain land use mixes similar to existing areas, risk enabling low density development that may generate high levels of VMT and appear to run counter to the achievement of the forecast increased development densities discussed above. The final 2022 RTP/SCS submittal should note any actions Kern COG and/or its local member jurisdictions are taking to avoid uncoordinated, low density, high VMT development in annexed areas.

- Are there other local development regulations and practices in place to help align with the Draft 2022 RTP/SCS's sustainable development vision? The effectiveness of the strategy to promote sustainable development patterns for reducing VMT and GHG emissions will depend largely on implementation actions by local member jurisdictions within the Kern COG region through their local development regulations, zoning, and development practices to create reasonable distances between homes and destinations and integration with transit options. In the final 2022 RTP/SCS submittal, Kern COG should note any actions its local member jurisdictions are taking to address these issues to help the region achieve the listed changes in development patterns. For instance, zoning practices can be used to allow distances between homes and destinations where walking or even bicycling are more reasonable options, as well as promote integration between development and transit. Other local regulations such as vehicular parking requirements can be looked at to determine whether modifications would help to encourage infill and remove incentives for spread out new development.

- How is implementation of this strategy to promote a sustainable development pattern going, and how will Kern COG monitor strategy implementation over time? Kern COG should provide updated information on the state of implementation of its sustainable development strategy (e.g., Transit Priority Areas, etc.) by documenting the level of success already achieved in getting local jurisdictions to apply the concepts in local general plans, and future activities such as information sharing and lobbying to convince local jurisdictions to include the designation in local plans. For example, current references in Appendix E to Transit Priority Areas appear to be out of date. In general, for each 2022 SCS GHG reduction strategy, including on-model and off-model strategies, Kern COG should document how it will track and measure implementation.

Quantification of benefits from the parking management program

The Draft 2022 RTP/SCS includes GHG emission reduction credit for a parking management program based on a study looking at standardized parking time limits and inventoried paid parking garages in downtown Bakersfield. As part of the final 2022 RTP/SCS submittal, Kern COG should clarify the current parking charges in Bakersfield and what policies or actions Kern COG is taking to support this change. In addition, Kern COG should document how it avoids double counting of reduced parking and increased transit ridership in Bakersfield.

Information on RTP/SCS project funding

In the Draft 2022 RTP/SCS, projects are sorted in Appendix G by geography and classified as fix-it-first, keep-it-local / cost-efficient; advanced tech, safe, clean transportation; ready-to-go, regional projects; and next-in-line, regional projects. In the final 2022 RTP/SCS submittal, CARB requests Kern COG submit project lists from the 2018 and 2022 SCSs classified by project type (e.g., road expansion, road maintenance, active transportation, transit, and other), cost, funding sources (local, regional, state, federal), project time period (e.g., base year through 2020, 2020 through 2035, and beyond 2035), and location (jurisdiction, intersections) in support of the final SCS evaluation investment analysis.

Inclusion of incremental progress results

A reporting component of CARB's SCS evaluation is the incremental progress analysis. Kern COG's latest Technical Methodology (version 3, from February 2, 2022) details how Kern COG intends to use exogenous variables to re-run the 2018 model to conduct this analysis. CARB requests that Kern COG include the results of the incremental progress analysis in its final 2022 RTP/SCS submission materials.

Further clarifications about induced travel

The Draft 2022 RTP/SCS project list shows a number of roadway expansion projects that will result in increased lane miles within the region. However, in contrast, the induced travel analysis per submittal to CARB staff on May 19, 2022[3] shows a cumulative decrease in lane miles. Further, the sensitivity analysis in that submittal[4] shows that with accessibility feedback,

[3] Page 9, table 1 of the induced travel estimation in the Kern COG travel demand and land use models – Version 2

[4] Page 9, table 2 of the induced travel estimation in the Kern COG travel demand and land use models – Version 2

VMT is reduced by 0.1 percent, which is contrary to the literature.[5] CARB staff are concerned with these results as they are counter to what is expected. To facilitate CARB's final 2022 RTP/SCS evaluation, Kern COG should provide the following additional information for evaluation of its results: identification of all transportation projects that were included in the analysis, documentation of how high-occupancy vehicle lanes were distinguished from general-purpose lanes, additional documentation of how Kern COG calculated its applied accessibility index (e.g., how were factors like location choices of households and jobs, socio-economic data of households, the location and quantity of new construction, and the price of land at each site included), as well as documentation of the process Kern COG used to weight, calibrate, and validate its land use model for calculating induced travel.

Next steps

CARB staff looks forward to continuing our collaboration with Kern COG staff and is committed to working together on potential approaches to address these requests. If you have any questions, please contact me at *lezlie.kimura@arb.ca.gov*.

Sincerely,

Lezlie Kimura Szeto

Lezlie Kimura Szeto, Manager
Sustainable Communities Policy and Planning Section

cc: see next page

[5] Volker JMB, Lee AE, Handy S. Induced Vehicle Travel in the Environmental Review Process. Transportation Research Record. 2020;2674(7):468-479. doi:10.1177/0361198120923365. *https://journals.sagepub.com/doi/abs/10.1177/0361198120923365?journalCode=trra&*

cc: Robert Ball, Deputy Director / Planning Director
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California Department of Transportation

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June 16, 2022

Draft 2022 RTP/SCS
Draft Program EIR

SENT VIA EMAIL

Mr. Ahron Hakimi
Executive Director
Kern Council of Governments
1401 19TH Street, Suite 300
Bakersfield, CA 93301

Dear Mr. Hakimi:

Thank you for the opportunity to review the Kern Council of Governments (KCOG) Draft 2022 Regional Transportation Plan (RTP). Caltrans, at District 6 and various divisions within our Department have reviewed the Draft RTP and collectively offer the following comments.

TRANSPORTATION PLANNING-DISTRICT 6

KCOG has demonstrated a strong commitment to support their 20-year planning horizon with focus on the region's transportation options, sustainable growth, economy, improving air quality, promoting the conservation of natural resources and undeveloped land, building healthier communities, and a safer quality of life for community members.

KCOG in partnership with their member agencies show extensive efforts to comply with state climate change goals. KCOG highlights new strategies, and existing methods which will benefit disadvantaged communities in the County of Kern.

KCOG addresses the four main required elements: Policy Element, Sustainable Communities Strategy (SCS), Action Element and Financial Element which conforms to the RTP Guidelines adopted by the California Transportation Commission (CTC) pursuant to Government Code 65080(d).

KCOG has encouraged public participation at every stage of the planning process. Continuing an on-going partnership with federal, state, local partners, and stakeholders to consult and cooperate with the public to assist in understanding issues,

options, and solutions. Community engagement and outreach are fundamental to the development of the 2022 RTP/SCS.

TRANSPORTATION PLANNING-DISTRICT 6 BICYCLE AND COMPLETE STREETS

Existing Systems Under the Strategic Investments - page 5-68:
Caltrans recommends inclusion of Class IV Separated Bikeways, sometimes referred to as "Cycle Tracks." Caltrans recommends adding pictures/examples of bicycle facilities.

Strategic Investments - page 5-70:
The Caltrans District 6 & 9 Bicycle Plans and Complete Streets Facilities under the Strategic Investments section should also include the *Towards an Active California State Bicycle and Pedestrian Plan 2017.* Please find link provided: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/f0020350-activeca-final-plan-2017-05-18-a11y.pdf

It is also recommended to add the new Caltrans Complete Streets Deputy Policy 37 (DP 37) adopted in December of 2021, which recognizes "opportunities for complete streets exist in all phases of project development from planning and design to construction, operations, and maintenance."
Please find link provided: DP 37:https://dot.ca.gov/-/media/dot-media/programs/sustainability/documents/dp-37-complete-streets-a11y.pdf

TRANSPORTATION PLANNING-DISTRICT 6 CLIMATE CHANGE

Chapter 1- page 1:
KCOG thoroughly examines smart mobility and climate change issues as well as discusses the roles of the SCS, AB 375 and AB 391 to reduce Greenhouse gases.

Chapter 2 - page 3-28:
KCOG acknowledges forms of active transportation that are already funded. Specifically, the commitment to "connect existing and future bikeways and pedestrian walkways", which support funding priority gateways for active transportation and pedestrian and bicycle activity.

OFFICE OF TRAFFIC OPERATIONS-DISTRICT 6

Chapter 3 (Planning Assumptions) discusses analysis of population growth trends within Kern County prior to the COVID-19 pandemic is listed. Caltrans recommends adding language throughout the document on the potential impacts to traffic demand, congestion, forecast, safety, land development, revenues, gas tax, project funding, and air quality post pandemic period.

SYSTEM PLANNING-DISTRICT 6

The Constrained Project List, non-motorized projects and HOV projects on the state highway included in the RTP are not identified in Caltrans project lists. These include:

1. Page 5-30, SR 58 Rosedale Hwy @ Minkler Spur
2. Page 5-30, SR 58 Truck climbing lanes
3. Page 5-30, SR 99 Olive Dr
4. Page 5-30, SR 184 UPRR grade separation
5. Page 5-30, SR 204 "F" St I/C

The following SHOPP projects are not included in KCOG's RTP:

1. EA 48470, SR 178 In Construction
2. EA 0R100, I-5 Grapevine I/C shows as unconstrained beyond 2046. Currently, in PA&ED
3. EA 0R190, SR 223/SR 184 Roundabout SHOPP Construction
4. EA 0V280, SR 184/Sunset Roundabout SHOPP Construction
5. EA 0V770, SR 155 USACE Lake Isabella Oversight Projects PS&E/RW
6. EA 0X760, SR 119 Left turn lane SHOPP PS&E/RW
7. EA 0X770, SR 43/SR 46 Roundabout SHOPP PS&E/RW
8. EA 0Y550, I-5/Lebec Roundabout Local PA&ED
9. EA 1A470, SR 43 Santa Fe Roundabout SHOPP PA&ED
10. EA 1A500, SR 155/Lexington Intersection Imp. Local PS&E/RW
11. EA 1C280, SR 43/7th Std Rd Roundabout Local PA&ED

Please note, the Clean California projects and broadband projects are not listed, perhaps due to the recent time of award or due to the type of funding.

From a Goods Movement perspective, KCOG's draft RTP includes a robust discussion of goods movement activity both by KCOG and partners, and for the broader Central Valley. Two points of information to offer:

Chapter 5, Freight Movement Action Element - page 5-40: Mentions alternative fuels but does not cite specific examples. KCOG is encouraged to include near the junction of SR 65 and SR 99, a solar-powered electric truck stop is proposed. Please find link provided: https://www.bakersfield.com/news/electric-truck-stop-proposed-near-bakersfield-would-be-first-of-its-kind/article_4df7b6b8-b1ac-11eb-91d8-2329004b5c32.html

As a point of information, the SR 99 Comprehensive Multimodal Corridor Plan (CMCP) will include as a key feature a commitment to develop and ultimately implement a

strategy for managed lanes on the freeway. It is recommended for KCOG to mention implementing the SR 99 Business Plan in partnership with 7 other Valley COGs.

TECHNICAL PLANNING – DISTRICT 6

Chapter 1-Introduction:
Page 1-3, FEDERAL SURFACE TRANSPORTATION SPENDING REAUTHORIZATIONS – It is recommended for KCOG to be more specific about the IIJA.

Chapter 2- Transportation Planning Policies:
Table 2, It is recommended the Action Item 4 ATP projects also claim Reliability/Safety and Livability/Quality of Life as goals? Maybe even Equity, especially since goal 4 mentions disadvantaged communities.

Caltrans recommends KCOG go through and review adding goals to the different actions. Many of the action items accomplish multiple goals. Safety is a top priority most of the Actions and should be able to list Safety as a goal.

Chapter 5 Strategic Investments:
Page 5-3, Constrained widening projects need to meet SB 743 compliance and account for VMT mitigation.

Page 5-36, It is recommended SR 46 BNSF grade separation in Wasco be moved to constrained project list since HSR is paying for this.

Page 5-36, Unconstrained widening projects need to meet SB 743 compliance and account for VMT mitigation.

Page 5-52, Perhaps SR 58 improvements could be phased. New Freeway through Metro Bakersfield is in construction and could be considered short term. The extension to I-5 and east improvements are long term.

Page 5-67, Explore potential for VMT mitigation to help pay for commuter rail between Delano and Bakersfield as described in last action under Long Term Actions.

Appendix F – Valleywide Overview:
Caltrans recommends adding discussion of SR Comprehensive Multimodal Corridor Plan (CMCP) to section 4 Planning Efforts. Caltrans may need to provide some language.

OFFICE OF REGIONAL PLANNING HEADQUARTERS

General Comments:
KCOG is commended for properly laying out the policy, action, and financial elements. Providing detailed maps on various aspects of the region gives the readers a great idea of how the efforts outlined in this plan will contribute to the plan's overall goals.

The following comments derive from the submitted Appendix A, KCOG RTP Checklist:

General:
4. (d)-Page 4-43 is referenced for this requirement however the page doesn't clearly identify a transportation network to service the needs of the region. Reconsider which pages are cited for this requirement.

4. (f)-There is little to no discussion of the state housing goals on the page cited. Please revise page number or add more information to the cited page.

Consultation/Cooperation:
1.(j)- Please document how the effectiveness of procedures and strategies were reviewed for the participation plan.

6. - There is no specific mention of the California State Wildlife Action Plan. Please reference the plan and how it was coordinated in the development of the RTP.

11.- There is no specific mention of the Public Transit-Human Services Transportation Plan. Please reference how the RTP was coordinated with this plan.

Modal Discussion:
2. - There's seems to be a dedicated focus on Level of Service (LOS) in the referenced pages. As we move towards planning based on Vehicle Miles Traveled (VMT), a robust discussion on VMT would be appropriate here as well.

3. - There is only a project list found in the referenced pages. Please add discussion on mass transportation in the pages referenced or change the referenced pages to where a robust discussion on mass transportation is present.

Financial:
2. - Please change the page referenced to "6-7".

4. - It is not clear which projects are or aren't regionally significant. Please delineate which projects are regionally significant.

7. and 8. - There is no consistency statement in the pages referenced.

Environmental:
1. and 5. - Please explain what "*SD" stand for as referenced for these questions.

4. - It is not clear where mitigation activities are found in the referenced chapter. Please make it clear where mitigation activities are specified.

FEDERAL TRANSIT ADMINISTRATION

Page 5-4, Table 5.1 – Under bus service, please clarify if "new buses" refers to "expansion buses". In the same table there is a line item for 120 Replacement Buses so just want to verify that the "new buses" are in fact expansion buses. If yes, please reword to "expansion".

Please indicate, which sections of the RTP address Public Transportation Performance Targets (i.e., Transit Asset Management and Public Transit Safety). How is funding linked to the region's goals of maintaining transit assets and public transit safety?

Consider listing FTA Section 5339 Bus and Bus Facilities Formula funds as a revenue source for public transportation capital projects in Chapter 6. Note, both the Bakersfield and Delano Urbanized Area receives funding annually from this FTA program for capital projects.

Thank you for considering our comments for inclusion in the Final KCOG 2022 Regional Transportation Plan. Caltrans acknowledge KCOG' continued partnership with all of their public and stakeholder involvement by demonstrating their strategy in emission-reduction targets, analyzing projected growth, housing needs, and improving transportation in their region. If you have any questions, please contact me (559) 840-6066.

Sincerely,

Lorena Mendibles

LORENA MENDIBLES, Chief
Transportation Planning – South

C: Michael Navarro, Alec Kimmel, Albert Lee, Eric Olson, Shane Gunn, Caltrans -D6
Jennifer Duran, Kevin Mariant, Gilbert Valencia, Jelani Young, Caltrans-HQ
Mervin Acebo-FTA

TEJON RANCH
COMPANY

June 16, 2022

Mr. Ahron Hakimi
Executive Director
Kern Council of Governments
1401 19th St., Ste. 300
Bakersfield, CA. 93301

Re: 2022 Draft RTP/SCS

Dear Mr. Hakimi,

Tejon Ranch Company, on behalf of itself and its affiliated entity Tejon Ranchcorp (collectively "Tejon Ranch"), thanks you for the opportunity to comment on the Draft 2022 Regional Transportation Plan and Sustainable Communities Strategy (Draft RTP/SCS) and the 2022 RTP/SCS Program Environmental Impact Report (PEIR).

Tejon Ranch Company is the owner of the 270,000-acre Tejon Ranch and is developing a series of communities in Southern Kern County that support the growth and economic diversification of the regional economy by providing significant employment opportunities and much needed housing in the midst of a statewide housing crisis. Our Tejon Ranch Commerce Center project (TRCC), Grapevine and Tejon Mountain Village (TMV) projects (collectively, "Projects") are all vested with Development Agreements that establish commercial and residential development amounts.

We respectfully request that buildout of our Projects (for Grapevine, 12,000 residential units and 5,100,000 square feet of commercial/retail uses), TMV (3,450 residential units, 750 hotel rooms, and 160,000 square feet of commercial/retail uses), and TRCC, again be included in the Plan.

Each of our Projects incorporate best practices for smart and sustainable growth which support a healthy jobs-housing balance, create significant economic development for the region, and prioritizes sustainability and conservation. As such, we appreciate that the Draft RTP/SCS recognizes the important opportunities the TRCC, Grapevine, and Tejon Mountain Village projects bring to the region. Indeed, the Draft RTP/SCS's discussion of sub regional forecast distributions and its Figure 4-9 identifies all three projects as significant residential centers, transit priority areas, and strategic employment centers. Figure 3-10 identifies the projects are part of the regions projected land use. Significantly, the Draft RTP/SCS expressly recognizes the Grapevine project and Tejon Ranch's Conservation and Land Use Agreement as regional planning success stories.

As you know, Government Code Section 65080(b)(2)(b) obligates the Draft 2022 RTP/SCS to "use the most recent planning assumptions considering local general plans and other factors" and to "identify the general location of uses, residential densities, and building intensities within the region." This requires that full buildout of our Projects be included in the 2022 RTP/SCS, as was the case for the existing 2018 RTP/SCS as well as the prior 2014 RTP/SCS.

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While we understand that the Department of Finance (DOF) has reduced development projections in Kern County pursuant to Government Code section 65584.01, we also note that this does not alter the statutory requirement separately set forth in Government Code Section 65080(b)(2)(b).

Thank you for the opportunity to comment, and request this important technical clarification, to the 2022 RTP/SCS.

Sincerely,

Derek C. Abbott
Executive Vice President Real Estate
Tejon Ranch Company