The San Joaquin Valley Interregional Goods Movement Plan

Executive Summary

The San Joaquin Valley (SJV) has always been California's geographic and agricultural production center, and its main source of exports. Now, the SJV is taking on new roles in California's goods movement economy. It is California's fastest-growing region, with a population of over 4 million that is anticipated to grow to more than 6 million people by 2035. It is the still the nation's number one agricultural producer, generating more than $35 billion every year in nuts, lettuce, tomatoes, wine, and other grains and agricultural products. It also plays a major role in the national and international distribution of processed foods and energy products, and has a burgeoning logistics and distribution industry. In fact, a number of companies have located large regional and national distribution centers in the SJV to take advantage of relatively inexpensive land and low cost labor, good access to the national rail and interstate highway networks, connections to major deepwater ports in Oakland, Los Angeles, and Long Beach, and proximity to major consumer markets in Southern California and the San Francisco Bay Area. As a growing and diversified region, efficient goods movement is important to the long-term success of the SJV economy.

Recognizing the importance of goods movement to the region, the eight San Joaquin Valley Council of Governments and Caltrans commissioned this San Joaquin Valley Interregional Goods Movement Plan. The goods movement plan summarized in this Executive Summary builds upon recent traffic, logistics, and long-term infrastructure improvement planning efforts throughout the study area. Building on these prior efforts and new analysis, the plan developed a comprehensive list of prioritized multimodal projects, strategic programs, and policies that will guide goods movement investments and policy in the region in the future.

While accommodating growth in goods movement demand is important to ensuring the economic health of the SJV region, this growth must be achieved in an environmentally sustainable manner. The plan includes strategies for improving the environmental performance of goods movement in the SJV and mitigating impacts on communities. The plan concludes with a discussion of funding and implementation strategies so the SJV regional transportation agencies can move forward with next steps to realize the vision embodied in this plan.

Kern Council of Governments

Excellence in Regional Planning
StanCOG
Stanislaus Council Of Governments

Fresno Council of Governments

TCAG
Tulare County Association of Governments

San Joaquin Council of Governments

MADERA CTC
Madera County Transportation Commission

MCAG
Merced County Association of Governments

Caltrans

Kings County Association of Governments

Plan Timeline and Milestones

The San Joaquin Valley Interregional Goods Movement Plan was completed over a 24-month time frame during 2011 to 2013. The work was completed following a nine-step process that was divided into three stages, as shown in the figure below:

- In **Phase I,** the team used available data, previous studies, and stakeholder outreach to establish existing goods movement conditions, the nature of regional freight demand, expected growth, and current operating conditions of the major transport modes.
- **Phase II** concentrated on developing strategies for freight mobility improvements and mitigation of adverse impacts, including an extensive list of priority projects in multiple categories.
- **Phase III** brings these efforts together in a final report constituting the recommended SJV goods movement plan and implementation strategy. The plan identifies funding options and also makes policy recommendations. Many of the funding strategies and policy recommendations necessitate action by other agencies both within and outside of the SJV. As such, the plan provides an agenda for advocacy that the SJV COGs can pursue over the coming years.

This SJV Inter-Regional Goods Movement Plan is intended to take the next steps to develop and implement the region's freight transportation vision. This effort, more than the prior Valley-wide goods movement planning efforts, is focused on developing actionable project recommendations and implementation plans.

San Joaquin Valley Goods Movement Plan: 9 – Task Methodology

Phase I: Assess Conditions

Task 1: Demographics, Economics, and Circulation
Task 2: Importance and Benefits of Freight Movement
Task 3: Stakeholder Outreach
Task 4: Goods Movement Data and Report
Task 5: Assess Growth in Freight Demand, Trends in Logistics Industry, and 2035 System Performance
Task 6: Evaluate Community, Environmental, and Economic Impacts of Freight Movement

Phase II: Strategy Development

Task 7: Identify and Evaluate Strategies for Improvement Freight Mobility
Task 8: Identify Strategies for Mitigating the Effect of Goods Movement on Communities and the Environment

Phase III: Recommendations

Task 9: Develop SJV Interregional Goods Movement Plan Report and Identify Institutional/Funding Arrangements Needed to Implement the Plan

Methodology to Create a Prioritized Project List

The priority project and strategy list was developed according to four main criteria as established by the project stakeholders:

1. The list should offer solutions to the goods movement issues that are facing the SJV, and as established by stakeholders or through technical work completed throughout this SJV Goods Movement Plan.
2. The list should be multimodal, and reflect the fact that goods movement in the SJV includes trucks, railcars, airplanes, and port facilities.
3. The list should represent the combined vision of the eight SJV counties. It should be geographically diverse, be built through significant stakeholder outreach, and reflect projects of regional significance.
4. The list should be prioritized using clearly identifiable information and data, so that the selection process is objective and recognizes the different categories of benefits provided by the regional goods movement system.

The six-step methodology used to create the priority project and strategy list relied on a mixture of quantitative analysis, qualitative assessment, and stakeholder feedback. In some cases, it was not possible to develop quantitative evaluation methodologies and in these cases, qualitative techniques were used during project prioritization.

Step 1: Establish High-Level Goals for Goods Movement in the San Joaquin Valley	Outreach to shippers, carriers, public agencies, environmental groups, ports, and more
Step 2: Develop Performance Measures	Focus on quantitative measures with readily-available data
Step 3: Create Preliminary "Master" Project List	Eight county RTPs, stakeholder interviews, TCIF, new projects
Step 4: Screen the Project List	Created list of regionally important projects (on key goods movement infrastructure, supporting key industries, or those identified by stakeholders)
Step 5: Analyze Project Performance Impacts	Using Valley-Wide Truck Model, Caltrans Cal B-C Model, IMPLAN, other sources
Step 6: Final Prioritization of the Projects/Strategies	Ranked according to performance impacts, High, Medium, and Low. List refined through extensive outreach and coordination with regional stakeholders

Prioritized Project List

In order to address the identified goods movement issues, the SJV Goods Movement study identified 50 priority projects, organized into seven categories:

1. Regional North-South Highway Capacity: Conventional capacity increases through widening, interchange improvements, and new construction.
2. East-West Connectors: Conventional capacity increases through widening, interchange improvements, and new construction.
3. Local "Last Mile" Connectors: Conventional capacity increases through widening, interchange improvements, and new construction.
4. Modal Capacity for Expected Flows: Rail and highway capacity increases to accommodate specific expected increases in existing freight flows.
5. Contingent Economic Development Opportunities: Rail and air cargo capacity increases or upgrades to support new or anticipated freight flows.
6. Inland Ports: Goods movement and economic development initiatives requiring both capital investment and operating subsidies.
7. Strategic Programs: Regional strategies encompassing multiple projects.

Priority Regional Highway Capacity Projects	
15a	Widen I-5 from 6 to 8 lanes from 1 mile north of SR-12 to SR-120
15b	Widen I-5 between SR 120 and I-205
15c	Widen I-5 from 4 to 6 Lanes from 1 mile north of SR-12 to the Sacramento County line
15d	Widen I-5 between Kings County and Merced County lines
99a	Widen SR 99 French Camp Rd to Mariposa Rd from 6 to 8 lanes, improve interchanges
99b	Widen SR 99 from 6 to 8 lanes in Stanislaus County
99c	Widen SR 99 from 4 to 6 lanes in Merced County
99d1	Ave 12-Ave 17, Widen to 6 Lanes and Interchange Improvements at Ave 17
99d2	Ave 7-Ave 12, Widen to 6 Lanes
99e	Widen SR 99 from 6 to 8 lanes from Central Avenue to Bullard Avenue
99f	Widen SR 99 from 4 to 6 lanes from SR 137 to SR 198
99g	Widen SR 99 from 4 to 6 lanes from Kern Co. Line to Prosperity Avenue
99h	Widen SR 99 from Beardsley Canal to 7th Standard road
105	Widen SR 41 to a 4 lane expressway – King Co. Line to Elkhorn Ave.
106	Widen SR 65 in Tulare County- SR 190 to County Line

Prioritized Project List *(continued)*

Priority East-West Connector Projects	
6	I-580 WB Truck climbing lane
13	North County Corridor New Interregional Expressway from SR 99 to SR 120/108
16	Widen SR 120 between I-5 and SR 99, new interchange at SR 99/SR 120
17	Widen SR 132 connecting SR 99 and I-580
18	SR 152 Bypass around the City of Los Banos
19	Widen SR 152 between SR 99 and U.S. 101
20	Widen SR 180 to 4 Lane Expressway Quality Avenue to Frankwood Avenue
26	Widen SR 12 from I-5 to SR 99
42	Construct New Route: SR 132 West Freeway project from SR 99 to I-580
51	Centennial Corridor SR 58 Upgrade I-5 to SR 99 and east
60	Widen SR 137 between Lindsay and Tulare
63	Widen SR 198 from 2 to 4 lanes from LNAS to I-5
69	Add SR 58 capacity east of Bakersfield (near Sandpatch grade)
Priority "Last Mile" Access Projects	
14	Port of Stockton Highway Access Improvements, Widen Navy Drive from 2 to 4 Lanes (Washington St. to Fresno Avenue)
22	SR 4 Extension (Cross-town Freeway) to the Port of Stockton – Phase II. New alignment from Navy Drive to Charter Way
41	Improve Roth Road connection between UP Lathrop Yard and SR 99 (Widen from 2 to 4 lanes)
Priority Modal Capacity Projects	
35	CCT Port of Stockton West Complex Trackage
37	CCT Lodi Branch Upgrade
73	New SR 58 Truck Weight Station
101	CCT New Trackage at Port of Stockton East Complex
102	New connection at Stockton Tower between UP and CCT
Priority Economic Development Projects	
33	Crows Landing Industrial Business Park and Airport Facility
34	CCT Rail Upgrade (for new aggregates business)
56	Mojave Airport Rail Access Improvements
89	SJVR -Short-Line Rail Improvements
91	Expansion of RailEx Facility at Delano
94	SJVR Expand Bakersfield Yard Capacity
Priority Inland Port Projects	
38	Altamont Pass Rail Corridor / SJV Rail Shuttle (CIRIS)
92	Shafter Inland Port Phase II and III
Priority Strategic Programs	
1	Truck Stop Electrification
2	Truck Route Signage
3	Additional Truck Rest Areas
4	Oversize or Overweight Vehicle Pilot Program or Research
5	Reexamine STAA Designated Routes
104	West Coast Green Highway Initiative

Why is Goods Movement Important in the SJV?

This plan recognizes that the efficient and safe movement of goods is a crucial aspect of daily life for residents and businesses alike in the SJV. For residents, goods movement is essential to deliver food to grocery stores, consumer goods to stores, furniture and goods to offices, and packages to people's homes – even tap water depends on the timely arrival of treatment chemicals.

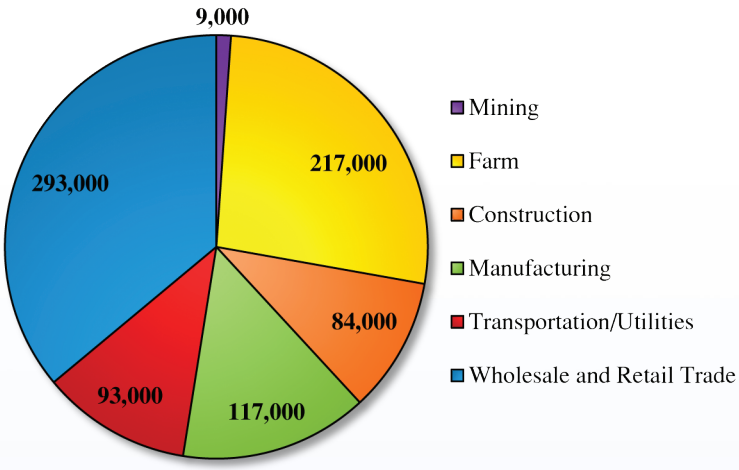
Likewise, goods movement-dependent industries rely heavily and visibly on transportation as a key part of their operations. This group of industries includes agriculture, manufacturing, wholesale (and retail) trade, construction, transportation and warehousing (including utilities), and mining sectors. They may receive daily shipments of raw supplies to support their production process, or send daily deliveries of refined or finished product to market.

Goods movement-dependent industries remain the foundation for many local area economies within the SJV region. In 2010, over 44% of the region's employment (564,000 jobs) was provided by goods movement-dependent industries. This amount is anticipated to grow – by 2040 it is anticipated that over 813,000 jobs will be provided by industries such as wholesale and retail trade (293,000 jobs), farming (217,000 jobs), manufacturing (117,000 jobs), and transportation and utilities (93,000 jobs).

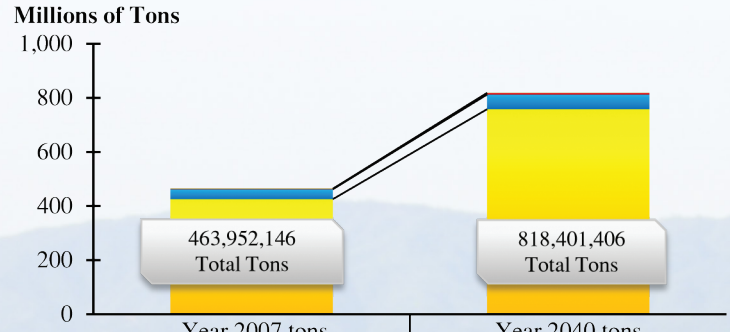
These industries also contribute billions to the region's economy. According to the United States Bureau of Labor Statistics, the Gross Domestic Product (GDP) for goods movement-dependent industries in the eight-county study area in 2010 was about $56 billion.

Growing industries and population mean that freight demand will grow in the future. In fact, freight volumes moving in the San Joaquin Valley are projected to grow from 500 million tons in 2007 to almost 800 million tons by 2040. Movements will continue to rely heavily on truck- by 2040 roughly 93% of all commodity movements will be carried by truck.

2040 Anticipated SJV Goods Movement Dependent Industry Employment



Source: California Forecast, 2011, Moody's economy.com (for mining employment).



	Year 2007 tons	Year 2040 tons
Air	11,034	11,034
Water	2,140,388	6,234,782
Rail	36,494,492	54,205,458
Truck	425,306,232	757,950,132

What is "The Goods Movement System" in the San Joaquin Valley?

The SJV is home to a variety of transportation facilities for moving goods ranging from Interstate and state highways, Class I and short line railroad facilities, intermodal terminals, inland ports and waterways, air cargo facilities, and other infrastructure that supports the movement of goods.

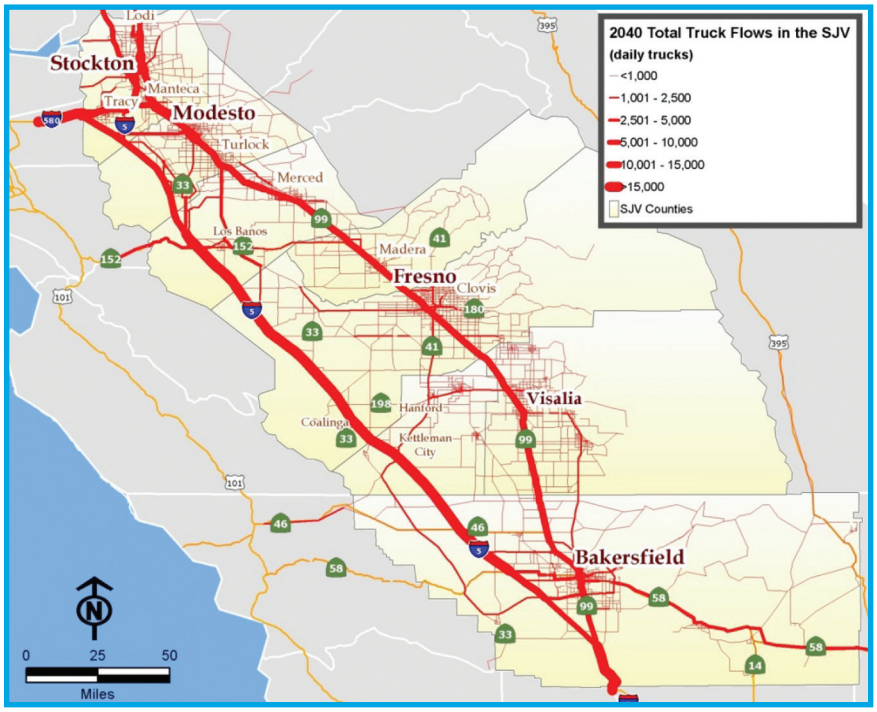
The **highway and local road system** is the primary freight infrastructure for the region, and trucking is the dominant freight mode. Truck movements are centered on the main north-south arteries, including I-5 and SR 99, as well as numerous east-west corridors such as SR 58, SR 120, SR 132, SR 180, I-580 to 205, SR 152, SR 46, and SR 198. In all, there are over 31,420 roadway miles in the SJV. Combined, they offer connections between the SJV and California's coastal population centers (major markets for the SJV's food products and distribution centers), as well as providing connections to the rural agricultural production areas.

The SJV is also served by two major **Class I railroads,** BNSF Railway (BNSF) and the Union Pacific Railroad (UP); and **short line and regional railroads,** including Sierra Northern Railway (SERA), California Northern Railroad (CNR), Stockton, Terminal & Eastern (STE), Central California Traction (CCT), Modesto & Empire Traction Company (MET), San Joaquin Valley Railroad Company (SJVR), and the West Isle Line (WFS).

The Ports of Oakland, West Sacramento, Los Angeles, Long Beach, and others are linked to SJV origins and destinations by truck. **The Port of Stockton** is located within the SJV, and is primarily a bulk commodity port. It also has extensive rail trackage operated by the CCT, with connections to UP and BNSF. The Port of Stockton is also one of three ports connected by the new California Marine Trade Corridor. This marine corridor started service in 2013, and offers container-on barge service between the Ports of Stockton, Sacramento, and Oakland.

The **air cargo system** in the SJV is comprised of seven airports – all of which offer limited commercial passenger airline and air cargo service: Fresno-Yosemite International, Inyokern Airport, Meadows Field (Bakersfield), Merced Regional Airport, Modesto Municipal Airport, Stockton Metropolitan Airport, and Visalia Municipal Airport.

What Issues are Facing the SJV's Goods Movement System?



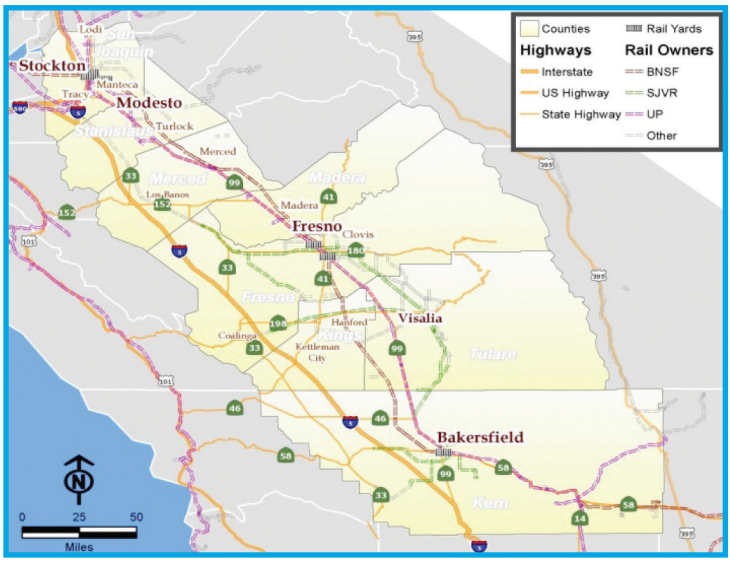
Source: SJV Truck Model

The technical analysis and stakeholder outreach completed throughout the San Joaquin Valley Interregional Goods Movement Plan revealed that there are numerous challenges facing the safety and efficiency of the region's goods movement system. Many of these challenges can be grouped around six main issues. Some issues and challenges deal with the safety or maintenance of the region's infrastructure, while others describe operational inefficiencies. These issues and challenges helped to guide the creation of performance measures and the project prioritization process that was a central part of this plan.

Issue #1: Increasing Population and Industry Activity Means Trucks and Cars Vying for Limited Roadways Access, Leading to Congestion and Bottlenecks throughout the Region.

By 2040, many of the region's main truck routes are projected to carry demand that exceeds their capacity – and to operate in a congested manner, despite programmed improvements. The region has several critical goods movement corridors (most notably I-5 and SR-99) that carry the highest volumes of trucks within the San Joaquin Valley. However, there are also many corridors and local roads that, though carrying smaller total volumes of trucks, are still vital to the region's goods movement. East-West corridors throughout the SJV (including SR 152, SR 58, SR 198, and SR 46) are especially important, as are numerous smaller facilities (such as farm-to-market roads and County roadways) that connect single industrial sites, farms, agricultural processing centers, or other freight-generating activities to the Statewide and National freight system. It is crucial that all of these corridors are maintained at a level where the safe, efficient movement of goods is possible.

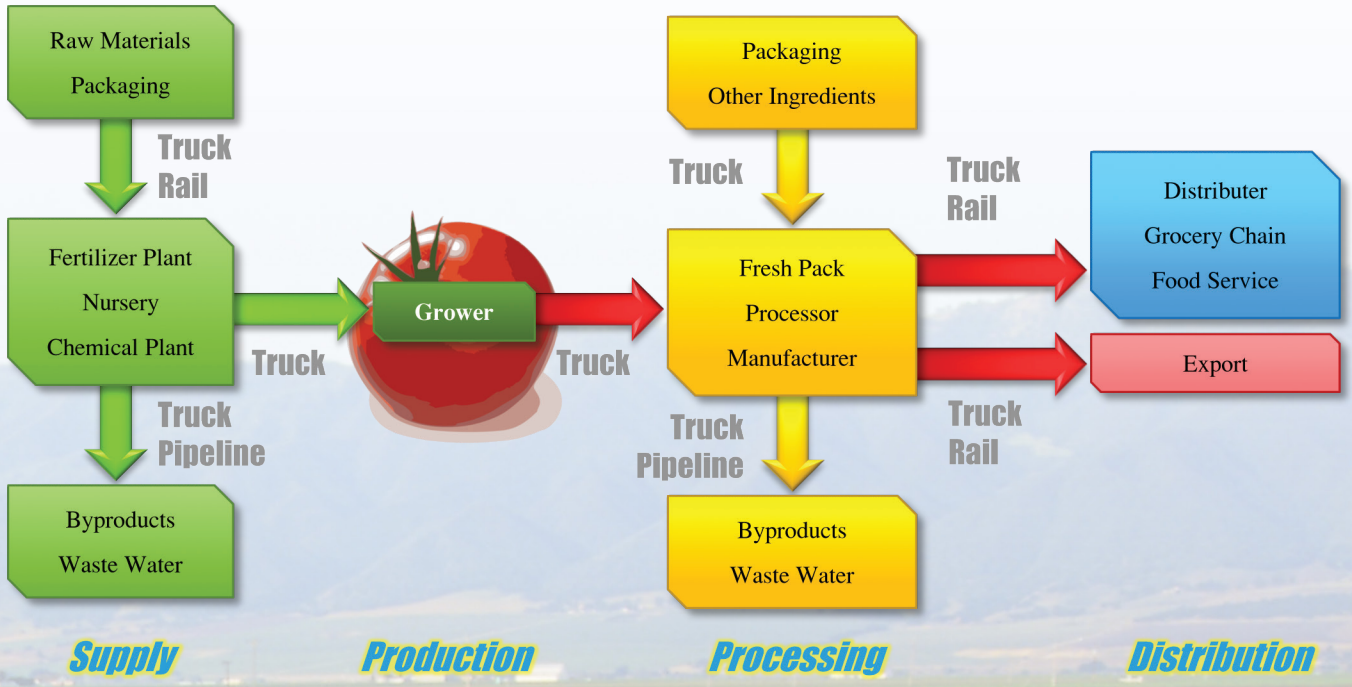
What Issues are Facing the SJV's Goods Movement System? *(continued)*



Source: National Transportation Atlas Database, Caltrans

Issue #2: Lack of Transportation Modal Choices. Goods Movement in the San Joaquin Valley is currently dominated by a single transportation mode – trucking. In 2007, of the 500 million tons of goods that moved into, out of, or within the region, more than 90% moved by truck. There are some good reasons for this, and trucks will always be a very important component to goods movement in the San Joaquin Valley (SJV). However, it is important to continue to study the potential of expanding other modes in the region – including short line rail, improved access to Class I rail, and increased use of air cargo.

In addition, the dependence on one mode could increase the supply chain costs of certain industries. Some industries, such as the tomato processing industry, use alternate modes such as rail for various stages of their supply chains. Maintaining the safety, usability, and efficiency of these modes is important to the economic health of these industries, and the region as a whole.

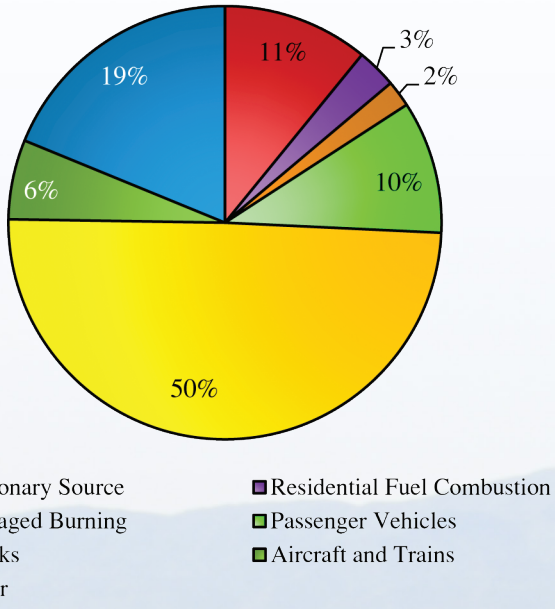


What Issues are Facing the SJV's Goods Movement System? (continued)

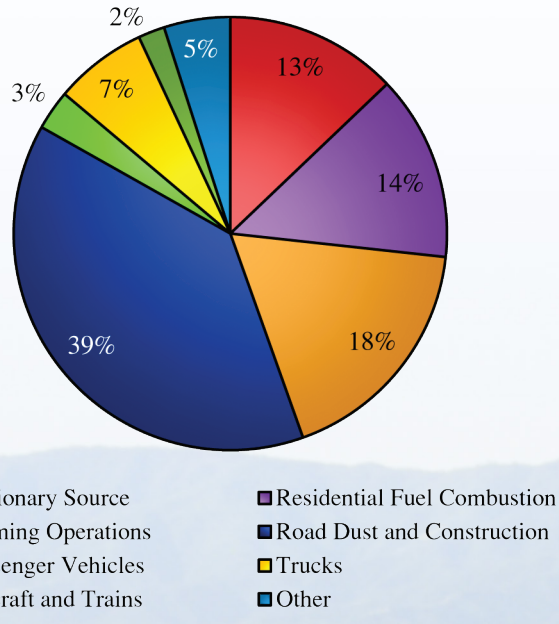
Issue #3: Environmental and Community Impacts of Goods Movement. Goods movement in the San Joaquin Valley results in several types of environmental and safety impacts to communities. Movement of trucks, trains, and airplanes all contribute to the region's air pollution problems, as well as the associated impacts to public health and the environment. In addition, safety concerns exist around at-grade rail crossings, as well as along some corridors not designed to safely carry high truck traffic, and places where truck parking shortages lead to illegally parked trucks. In 2010 (the most current data available) there were 752 truck-involved crashes recorded in the San Joaquin Valley. The sources of these accidents vary, and can include poor weather, driver fatigue, or lack of awareness of trucks by other roadway users. Finally, goods movement can lead to incompatible land uses – residents near distribution centers, rail yards, and other goods movement facilities can be impacted by light and noise pollution, as well as from runoff pollution to regional drinking water. In some cases, expanding urban/residential areas can move incompatible land uses into close contact, causing conflicts between residents and the goods movement facilities.

According to the San Joaquin Valley Air Pollution Control District (SJV APCD), emissions from trucks, trains, and aircraft account for about 9% of daily $PM_{2.5}$ and about 50% of daily NO_x in the Valley. Freight activities are not a major source of carbon monoxide (CO) pollution, and contribute a relatively small portion of the total sulfur dioxide (SO_2) and lead (Pb) to the atmosphere. For example, trucks were responsible for 4% of total SO_2 San Joaquin Valley emissions in 2012.

Daily NO_x Sources in the SJV



Daily Directly Emitted $PM_{2.5}$ Sources in the SJV

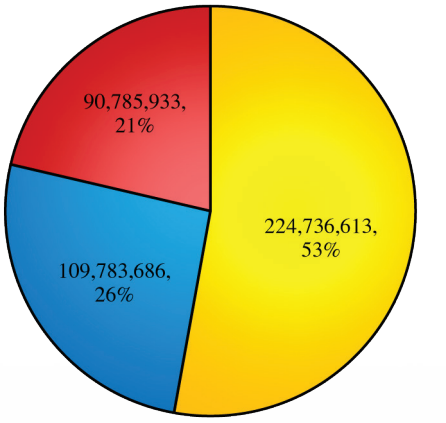


Source: San Joaquin Valley Unified Air Pollution Control District 2012 PM2.5 Plan.

What Issues are Facing the SJV's Goods Movement System? *(continued)*

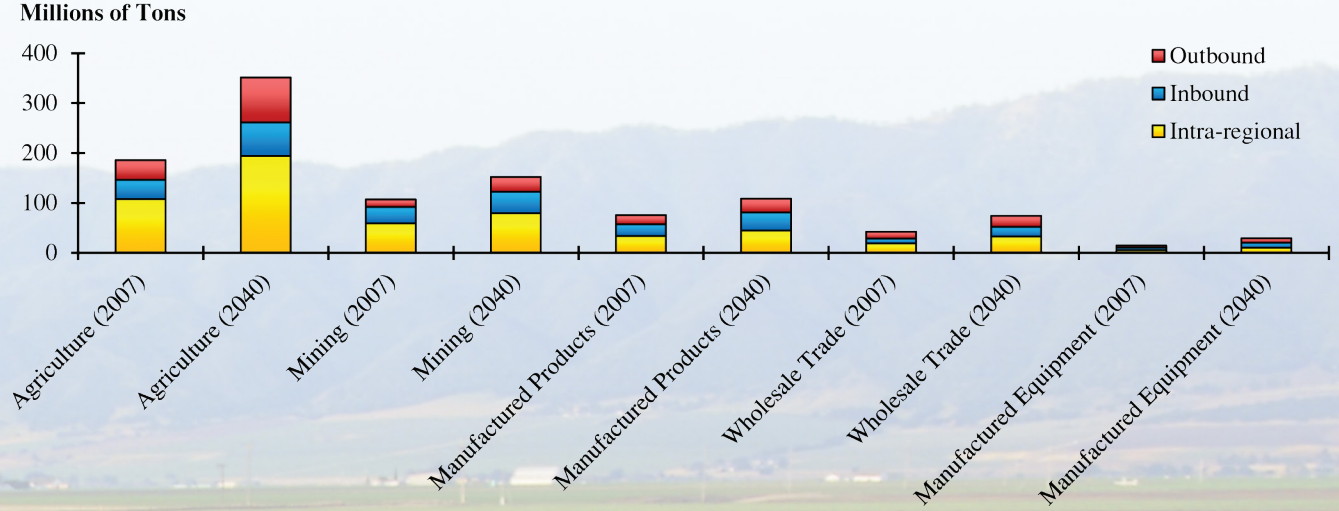
Issue #4: Maintain and Improve Connections to International Markets. Many of the SJV's agricultural and manufacturing products utilize the Port of Oakland, LA/Long Beach, and Stockton to access to national and international markets. This connectivity will become even more crucial as industries in the San Joaquin Valley strive to move up the value chain in agricultural production (through actions such as higher value crops, increased logistics, distribution and manufacturing processes). In addition, as industries within the San Joaquin Valley strive to move up the value chain in agricultural production, these links to domestic and international markets will become even more crucial. Institutional support for marketing SJV products include California's International Trade Coordinating Council, California Enterprise Zones, and Free Trade Zones established at several locations throughout the SJV.

Issue #5: The Importance of East-West Corridors and "Last Mile" facilities. Many of the SJV's east-west corridors (SR-152, SR-58, SR-120, and others) are outdated and require updating to keep pace with traffic volumes. This has important implications for goods movement, since 53% of all commodities moving into, out of, or within the region are "interregional." This means that 53% of all commodities are moving from one location in the SJV to another location in the SJV, often using the critical E-W corridor linkages.



Source: FHWA, FAF3.

"Last Mile" connectivity. Many of the SJV's agriculture and industrial facilities are located in rural regions, dispersed throughout the entire SJV. These industries rely heavily on intraregional trucking for their day-to-day business activities. This means that trucks associated with agriculture and industrial activities rely on many different types of roads, including smaller local roadways connecting rural farms and industrial plants that are not designed to carry heavy vehicle traffic. This creates issues of "last mile" connectivity, where roads to individual sites are under-maintained, capacity constrained, or unsafe. Some stakeholders report that companies have chosen to locate elsewhere because of this lack of intraregional transportation system connectivity.



What Issues are Facing the SJV's Goods Movement System? (continued)

Issue #6. Build a Transportation System to Encourage Economic Development. San Joaquin Valley stakeholders have expressed interest in diversifying and building the Valley's economy in several new directions, including:

- Higher- value crops including tree nuts (almonds, pistachios, walnuts);
- Logistics and warehousing/distribution;
- Light manufacturing (including biotech, alternative energy, packaging materials);
- Oil production; and
- Products for the export market, especially specialty agricultural products.

Transportation system investments, to the extent possible, should support these economic development trends, and recognize likely demographic shifts in the SJV that may help to predict industry growth or decline.

Other issues discussed throughout this San Joaquin Valley Interregional Goods Movement Plan.

Truck Parking Shortages. Truck parking shortages can result in illegal truck parking, sometimes located on residential streets and next to goods movement facilities. Illegally parked trucks can be a safety hazard, as well as contribute to noise and localized emissions. As a state, California ranks first in the nation in overall (private and public) commercial vehicle parking shortage. Recent truck parking estimates indicate that demand exceeds capacity at all public rest areas and at 88% of private truck stops on the State's highest-volume corridors (including I-5).

Pavement Wear and Tear. On average, one 80,000 pound truck does as much damage to roads as 750 3,800 pound cars.[1] This can contribute to the deterioration of roadway surfaces, in particular when trucks are using smaller connector facilities that are not intended for heavy truck usage (which is extremely prevalent in the SJV). Deterioration of roadway surfaces is a problem for truck owners/operators and the public sector alike.

Short Line Rail Capacity. There have been several occasions of short line rail abandonments or plans to discontinue service on parts of their system. In addition, rail car supply can be a perennial problem for customers that do not ship often or that ship in peak periods when the rail car supply is tight.

Port Access Concerns. Including the concern that limited rail capacity at the Port of Stockton may soon be exceeded. Ensuring access to the Port of Oakland is also of utmost priority, since it serves as the primary export port for the SJV. Several major industries in the SJV depend heavily on this link to reach international markets.

Underutilized Airport Capacity. The SJV has available, underutilized assets in the form of eight regional air cargo facilities.

[1] John Merris, *New Research on Pavement Damage Factors*, 2003. http://www.oregon.gov/ODOT/TD/EA/policy_notes/03_policy_notes/0603_new_resrch_on_pavement_damage.pdf.

SJV Goods Movement Priority Project List

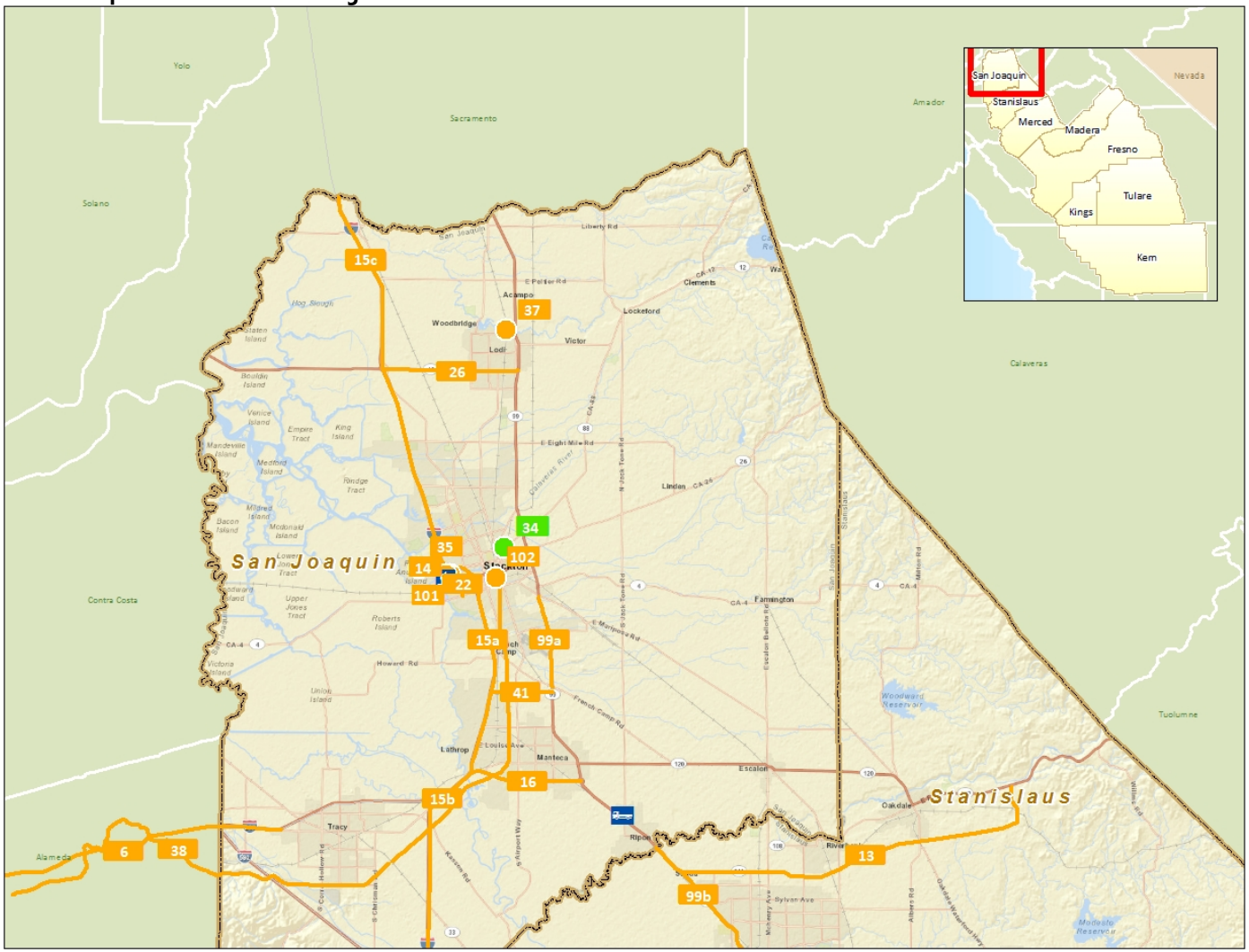
In order to address the identified goods movement issues, the SJV Goods Movement study identified 50 priority projects. These include projects on the highway system, local and connector road system, short line rail system, and projects that support the development of an inland port facility in the SJV. In addition, long-term environmental and economic development strategies and projects are included. The list is organized into seven project types.

1. **Regional North-South Highway Capacity:** Conventional capacity increases through widening, interchange improvements, and new construction.
2. **East-West Connectors:** Conventional capacity increases through widening, interchange improvements, and new construction.
3. **Local "Last Mile" Connectors:** Conventional capacity increases through widening, interchange improvements, and new construction.
4. **Modal Capacity for Expected Flows:** Rail and highway capacity increases to accommodate specific expected increases in existing freight flows
5. **Contingent Economic Development Opportunities:** Rail and air cargo capacity increases or upgrades to support new or hoped-for freight flows.
6. **Inland Ports:** Goods movement and economic development initiatives requiring both capital investment and operating subsidies.
7. **Strategic Programs:** Regional strategies encompassing multiple projects, including those focused on long-term sustainability and energy efficiency.

It is anticipated that this project list will be forwarded into statewide and national planning efforts, including the Caltrans Freight Mobility Plan and efforts that arise out of the Federal Moving Ahead for Progress in the 21st Century (MAP-21) process.

The 50 projects are displayed on 7 regional maps on the following pages.

Proposed Project Locations



San Joaquin County

Capacity Projects

Project	Route	Project Description
6	I-205/I 580	I-580 Truck Climbing Lanes
15a	I-5	Widen I-5 from 1 mile north of SR-12 to SR-120
15b	I-5	Widen I-5 Between SR 120 and I-205
15c	I-5	Widen I-5 from 4 to 6 Lanes from 1 mile north of SR-12 to the Sacramento County line
14	SR 4	Port of Stockton Highway Access Improvements. Widen Navy Drive from 2 to 4 Lanes (from Washington Street to Fresno Ave.)
26	SR 12	Widen SR 12 between I-5 and SR 99
16	SR 120	Widen SR 120 between I-5 and SR 99, with a new interchange at SR 99 /SR 120
22	SR 4	SR 4 Extension (Cross-town Freeway) to the Port of Stockton – Phase II
99a	SR 99	Widen SR 99 French Camp Rd to Mariposa Rd 6 to 8 lanes, New Interchange Structure
41	Roth Road	Improve Roth Road Connection Between UP Lathrop Yard and SR 99 (Widen from 2 to 4 Lanes)

Capacity Projects (Rail)

35	Port of Stockton West Complex Trackage
37	CCT Lodi Branch Upgrade (bridge trestle, upgrade 2.5 miles of rail)
38	Altamont Pass Rail Corridor/ SJV Rail Shuttle (CIRIS)
101	CCT New trackage at Port of Stockton East Complex
102	New connections at Stockton Tower between UP and CCT

Operations Projects

34	CCT Rail Upgrades (For New Aggregates Business)

0 4 8 Miles

Truck Stops (> 50 spaces)

Rest Areas

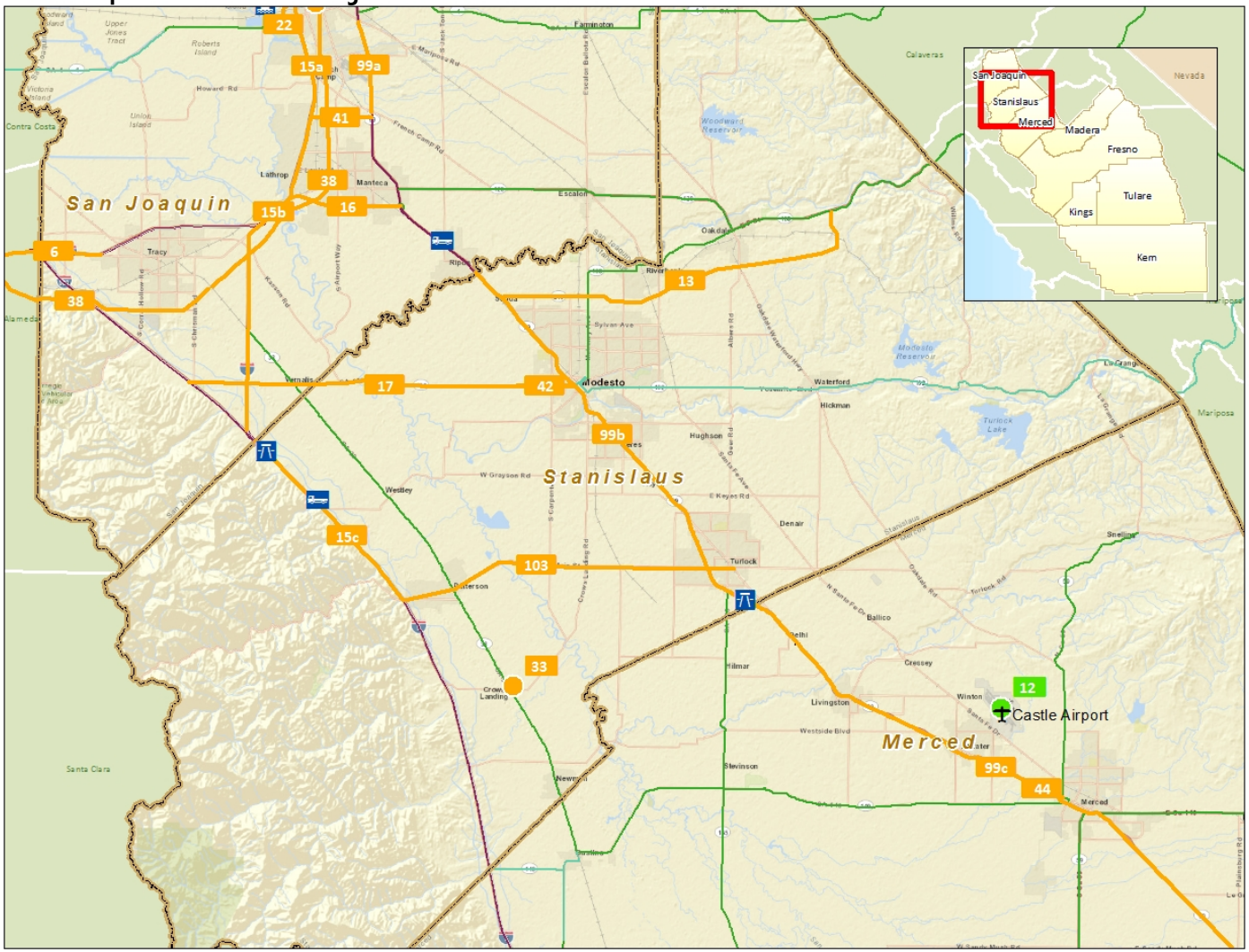
26 Operations Projects

73 Capacity Projects

SJV Counties

Other Counties

Proposed Project Locations

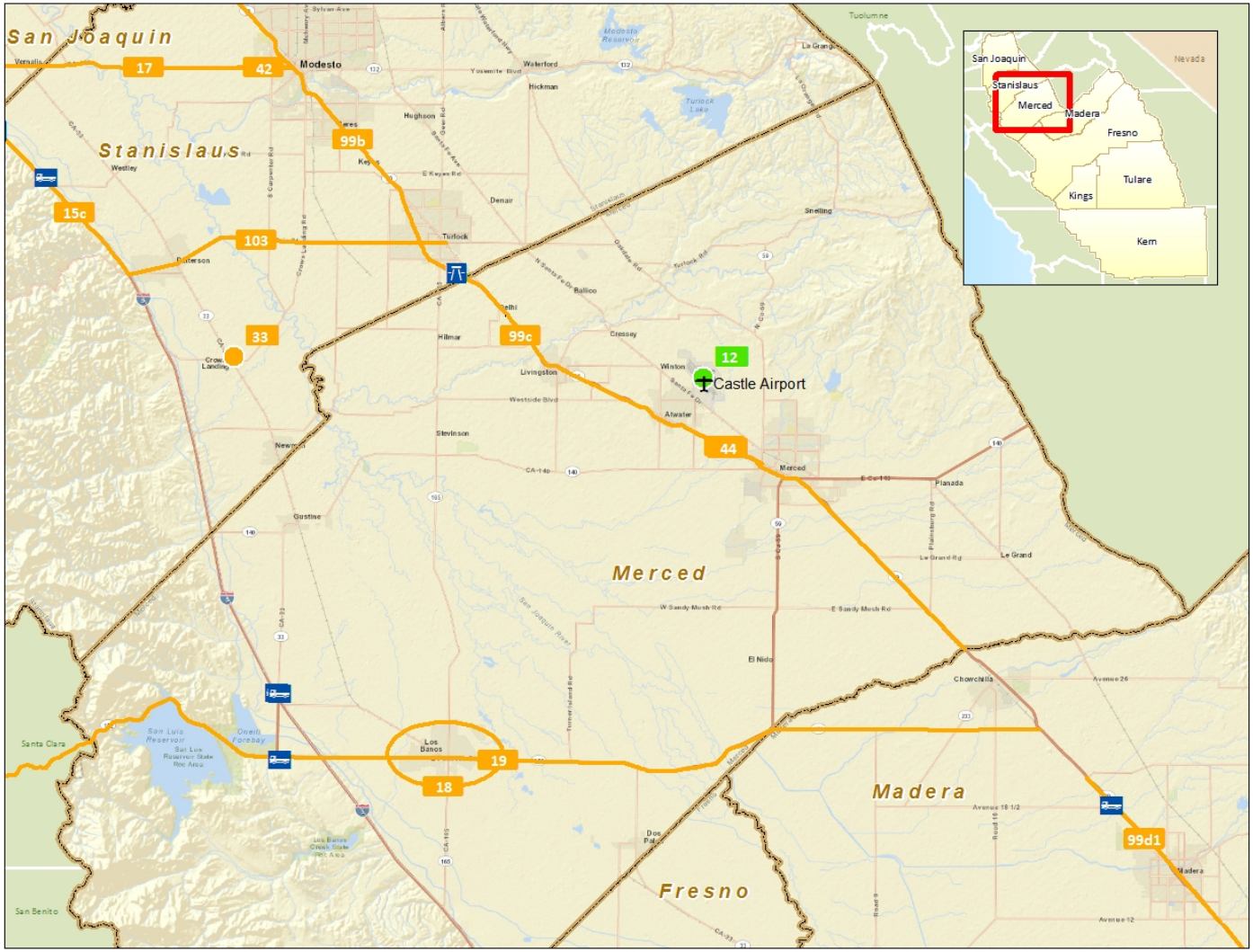


Stanislaus County

Capacity Projects

Project	Route	Project Description
13	North County Corridor	New Interregional Expressway from SR 99 to SR 120/ 108
15c	I-5	Widen I-5 1 Mile north of SR 12 to the San Joaquin County Line
17	SR 132	Widen SR 132 connecting SR 99 and I-580
33	Rail	Crows Landing Intermodal Rail Facility
42	New Route	SR 132 West Freeway / Expressway Project from SR 99 to Dakota Avenue
99b	SR 99	Widen SR 99 from 6 to 8 lanes in Stanislaus County
103	New Route	Develop Expressway Connector Between SR-99 and I-5 From Turlock to Patterson

Proposed Project Locations



0 4 8 Miles

Truck Stops (> 50 spaces)

Rest Areas

26 Operations Projects

73 Capacity Projects

SJV Counties

Other Counties

Merced County

Capacity Projects

Project	Route	Project Description
18	SR 152	SR 152 Bypass around the City of Los Banos
19	SR 152	Widen SR 152 between SR 99 and U.S. 101
99c	SR 99	Widen SR 99 from 4 to 6 lanes in Merced County
44	New Route	New Construction: Atwater-Merced Expressway

Operations Projects

Project	Route	Project Description
12	Castle Airport	Castle Airport Air Cargo Improvements

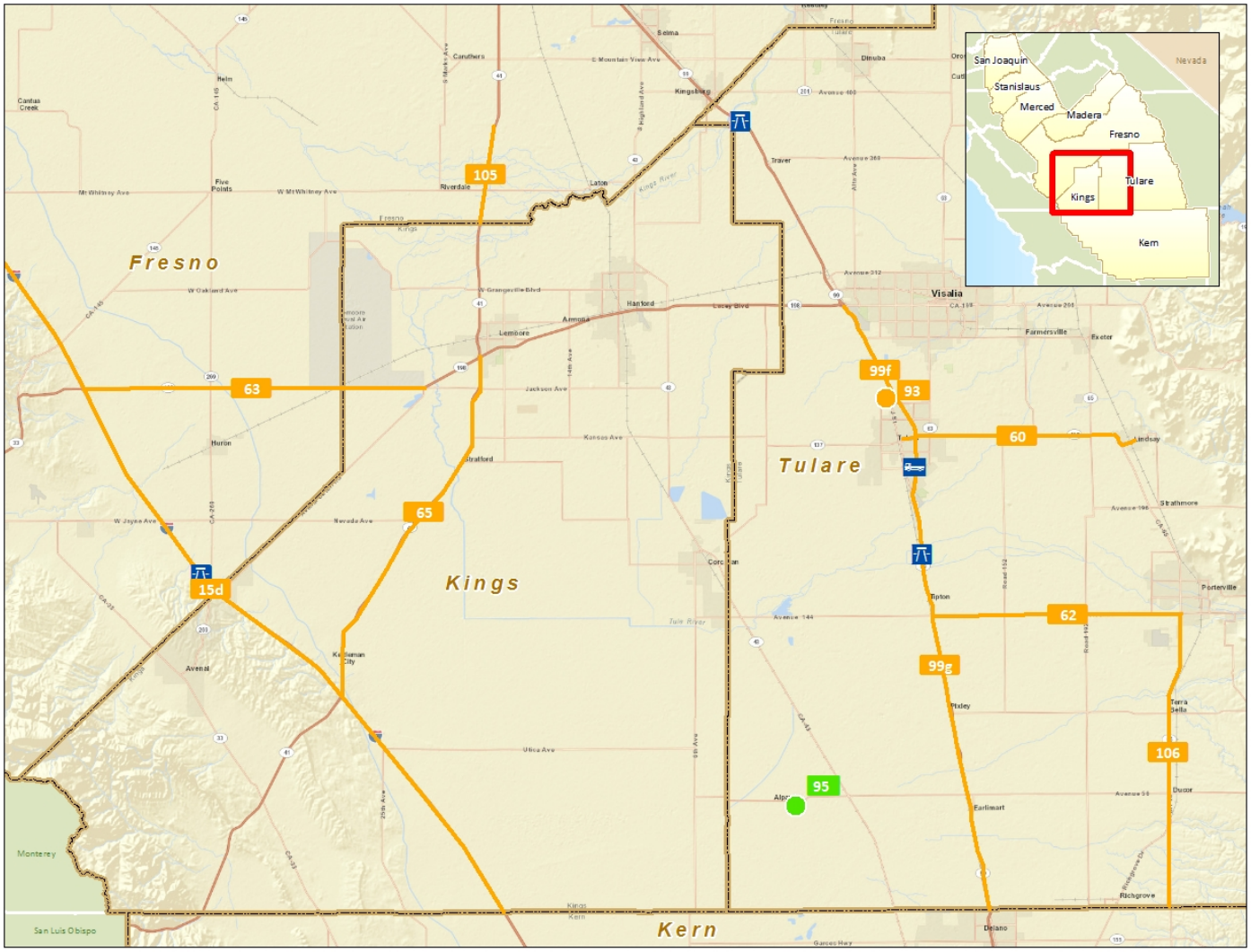
Proposed Project Locations

Fresno & Madera Counties

Capacity Projects

Project	Route	Project Description
15d	I-5	Widen I-5 between Kings County and Merced County lines
19	SR 152	Widen SR 152 between SR 99 and U.S. 101
20	SR 180 (East)	Widen SR 180 to 4 Lane expswy Quality Ave. to Frankwood Ave.
21	SR 180 (West)	Extend SR 180 from Mendota to I-5
24	SR 41	Widen SR 41 from 4 to 6 Lanes Between Madera County Line and Avenue 12
25	SR 41	Widen SR 41 from 6 to 8 Lanes Between Divisadero and Ashlan & widen SB off-ramp at Divisadero
32	SR 145	Widen SR 145 Between the UP and Shaw Avenue
63	SR 198	Widen SR 198 from 2 to 4 lanes from LNAS to I-5
99d1	SR 99	Ave 12 – Ave 17, Widen to 6 Lanes & Ave 17 Intersection Improvements
99d2	SR 99	Ave 7 to Ave 12, Widen to 6 Lanes
99e	SR 99	Widen SR 99 from 6 to 8 lanes from Central Avenue to Bullard Avenue
105	SR 41	Widen SR 41 to a 4 Lane Expressway Kings County Line to Elkhorn Ave.

Proposed Project Locations



Tulare & Kings Counties

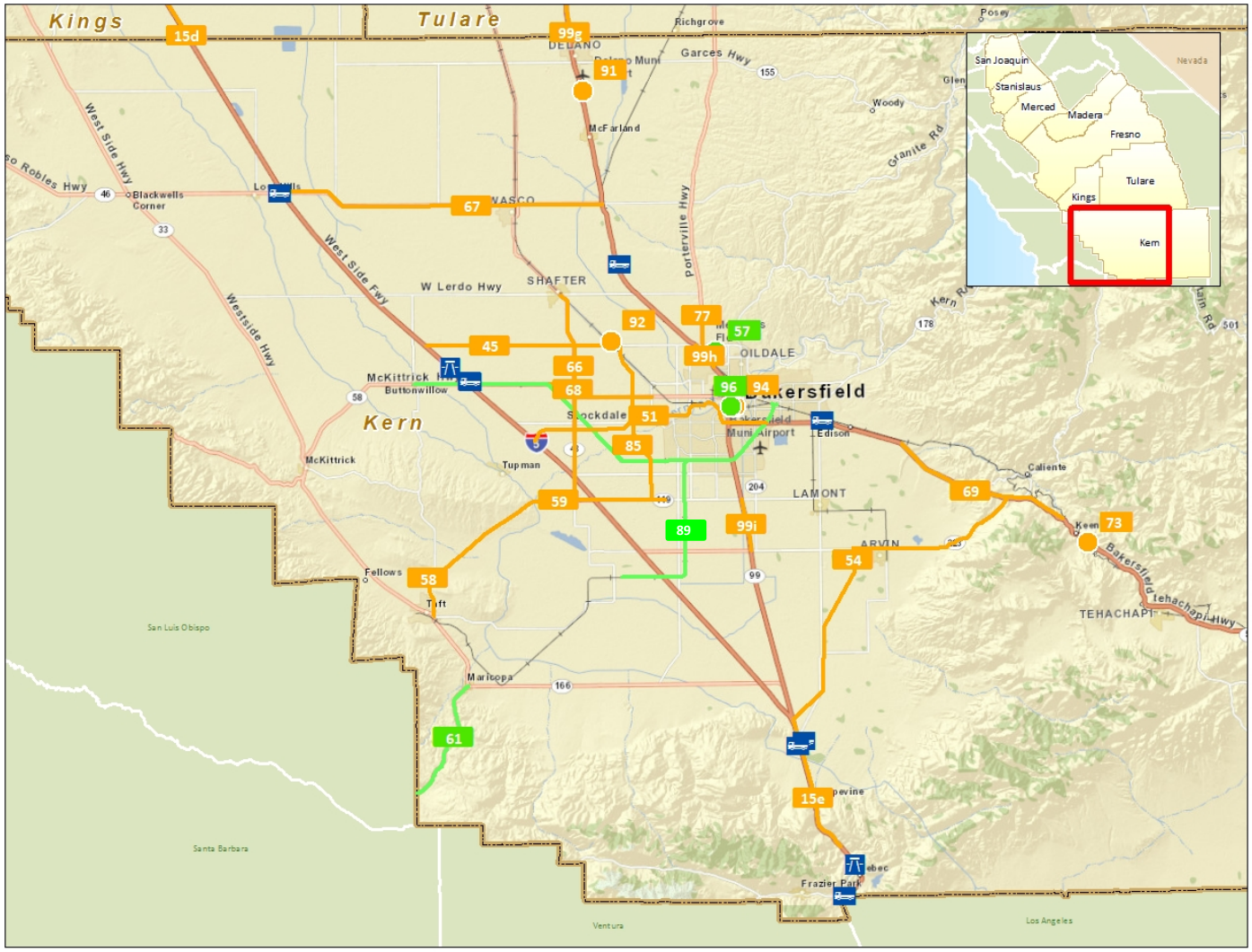
Capacity Projects

Project	Route	Project Description
15d	I-5	Widen I-5 between Kings County and Merced County lines
60	SR 137	Widen SR 137 between Lindsay and Tulare
62	SR 190	Widen SR 190 from 2 to 4 lanes between SR 65 and SR 99
63	SR 198	Widen SR 198 from 2 to 4 lanes from LNAS to I-5
65	SR 41	Widen to 4 lanes from SR 198 to I-5
99g	SR 99	Widen SR 99 from Kern County line to Avenue 200
99f	SR 99	Widen SR 99 from Avenue 200 to SR-198
93	Rail	Extend existing track, add new track in Tulare
105	SR 41	Widen SR 41 to a 4 Lane Expressway Kings County Line to Elkhorn Ave.
106	SR 65	Widen SR 65 in Tulare County (4 Phases) County Line to SR 190

Operations Projects

95	Rail	West Isle Line Track Upgrades

Proposed Project Locations



Western Kern County

Capacity Projects

Project	Route	Project Description
45	7th Standard	Widen 7th Standard Road from I-5 to Santa Fe Way
51	Centennial Corridor Bakersfield	Centennial Corridor SR-58 Upgrade I-5 to SR 99 and east
15e	I-5	Widen I-5 between Fort Tejon and SR 99
54	SR 223	Widen SR 223 from 2 to 4 lanes and associated improvements
58	SR 119	Widen SR 119 from 2 to 4 Lanes Between SR 33 to Cherry Ave, and to Elk Hills Rd
59	SR 119	Widen SR 119 From 2 to 4 Lanes From Elk Hills Road to I-5, and to Buena Vista
66	SR 43	Widen SR 43 from SR 119 to Shafter
67	SR 46	Widen SR 46 from 2 to 4 Lanes Between SR 99 and Lost Hills
68	SR 58	Widen SR 58 Between I-5 and Allen Road (East of SR 43)
69	SR 58	Improve Capacity on SR 58 Directly East of Bakersfield (near Sandpatch grade)
77	SR 65	Widen SR 65 to four lanes Between James Rd and Merle Haggard Drive
99i	SR 99	Widen SR 99 between SR 223 and SR 119
99h	SR 99	Widen SR 99 from Beardsley Canal to 7th Standard Road
85	West Beltway	Develop Bakersfield West Beltway
91	Rail Intermodal	Expansion of Railex Facility at Delano
92	Inland Port	Shafter Inland Port Phase II and III
94	Rail (SJVR)	Expand capacity in Bakersfield yard to accommodate new unit grain carload business on sunset hub.

Operations Projects

Project	Route	Project Description
57	Meadows Field Airport	Meadows Field Air Cargo Improvements
61	SR 166	SR 166 Improve speeds from Cuyama grade to SR 33
89	Rail (SJVR)	SJVR– Shortline Rail Improvements
96	Rail (SJVR)	SJVR – Upgrade (286K compliant) and Replace Rail

0 4 8 Miles

Truck Stops (> 50 spaces)

Rest Areas

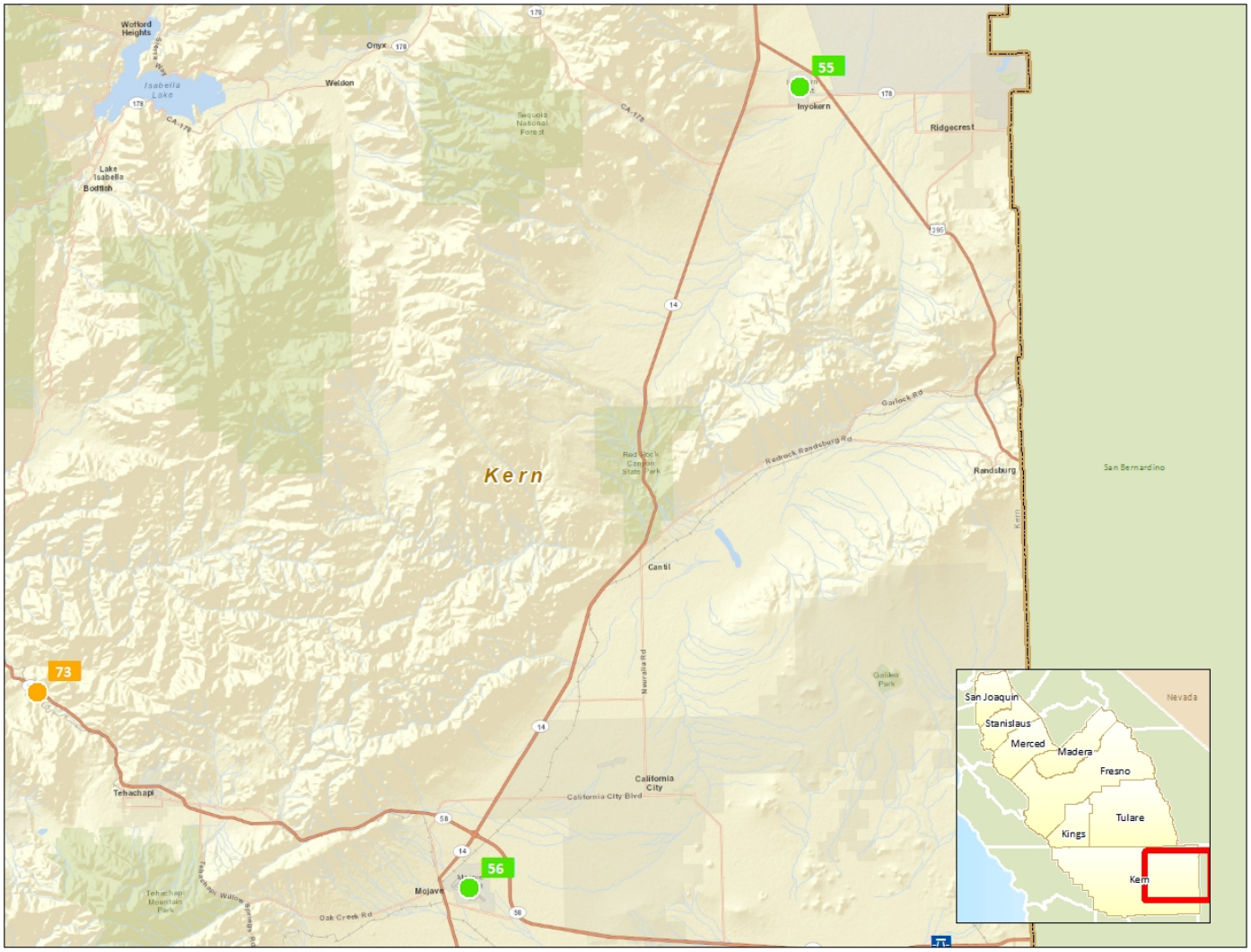
26 Operations Projects

73 Capacity Projects

SJV Counties

Other Counties

Proposed Project Locations



0 4 8 Miles

Truck Stops (> 50 spaces)

Rest Areas

26 Operations Projects

73 Capacity Projects

SJV Counties

Other Counties

Eastern Kern County

Capacity Projects

Project	Route	Project Description
73	SR-58	New SR 58 Truck Weigh Station (Near General Beale Road)

Operations Projects

Project	Route	Project Description
55	Air	Inyo-Kern Air Cargo Improvements
56	Mojave Spaceport	Mojave Airport Rail Access Improvements

Funding Recommendations for Goods Movement Projects

There are recognized shortfalls in the availability of many of the Federal and state sources for practical use in funding goods movement projects. For example, the Transportation Investment Generating Economic Recovery (TIGER) grants are extremely competitive – and in fact only about 5% of total applicants eventually receive an award. Likewise, the Federal Highway Administration's (FHWA) Section 130 grants for grade crossing improvements are capped at $220 million dollars annually – money that is distributed among all 50 states (and thousands of potential grade crossing improvement projects). New sources of revenue – including the California Cap-and-Trade program – may take years before they become a fully capitalized, ongoing source of funding for goods movement projects. Therefore, like many other regions across the nation, the San Joaquin Valley must be proactive in searching and advocating for new sources of funding. In addition, SJV stakeholders can continue to build the right alliances to make sure that SJV projects have broad support from numerous stakeholders, as well as clearly demonstrated regional benefits. Several other funding recommendations are included on the following pages.

Recommendation #1 – Prepare for MAP-21 Actions

The region can work to strengthen the National Freight Policy and National Freight Network provisions to identify ways that the Federal government, in partnership with the states and regions, will invest in and maintain the national freight network.

Provision	Action
Establishes National Freight Policy	Establishes a national freight policy, including establishing goals for national investment into freight infrastructure.
National Freight Strategic Plan	Calls for development of a National Freight Strategic Plan that would assess the condition and performance of the national freight highway network. This requires the USDOT to identify highway bottlenecks, issues, and major trade corridors.
State Freight Advisory Committee and State Freight Plans	Encourages states to establish freight advisory committees, and develop state freight plans.
National Freight Network	Calls for the establishment of a National Freight Network. This network would consist of a primary network established by the FHWA, but also portions of the interstate system and critical rural freight corridors.

These new provisions suggest several opportunities for the San Joaquin Valley. For instance, the inclusion of critical rural freight corridors in the National Freight Network may be an opportunity for the SJV to gain national recognition for several of its critical rural corridors. It is likely that corridors will be selected for their importance to national commodity flows, and the national economic significance of these flows. Work completed throughout this SJV Interregional Goods Movement Plan lays the groundwork for the region to demonstrate the regional and national importance of several of its goods movement corridors, and may be a head start to getting National Freight Network designation.

Funding Recommendations for Goods Movement Projects (continued)

Recommendation #2 – Advocate for a Series of Short Line Rail Programs at the Regional and State Level

The Stakeholder outreach efforts completed during this San Joaquin Valley Goods Movement Study reveal strong support for short line rail systems. Stakeholders recognize that short line rail could, potentially, remove thousands of trucks from the region's highway system. This could bring benefits such as decreased congestion, decreased wear and tear on regional roads, reduced truck emissions, and reduced truck safety concerns. In response to this desire, the following recommendations were developed regarding potential policies and funding programs to support short line rail. Most of these programs would be state- or Federal-level programs. Therefore, the role of SJV stakeholders is mostly to advocate for these programs, or to offer potential pilot projects for the demonstration of the efficacy of any of these programs.

Potential Program	Program Summary
Freight Rail Assistance Program	• Grant or loan source at the state level to support short line rail maintenance or capacity projects. • More than 30 states have such a program.
Industrial Rail Access Program (IRAP)	• Provide grants and loans for build-out to rail-served industries. • Facilitate development of transload and intermodal terminals in agricultural regions.
Create Performance Goals for Short Line Rail	• Create performance targets for short line rail.

- Numerous states across the nation have adopted freight rail assistance programs designed to address short line rail needs, to recognize the important role that rail has in job creation and economic development, and, in some cases, to formalize the state's participation in funding rail projects. More than 30 states have some kind of freight rail assistance program in place, including Kansas, Oregon, Wisconsin, Iowa, and Indiana. However, California is not one of these states. Though this type of program would be a state-level program, SJV stakeholders can advocate for the development of such a program.
- The development of an **Industrial Rail Access Program (IRAP)** could help to maintain the competitiveness of California's freight intensive industries. The program would focus on providing grants and loans to accomplish build-out to rail-served industries. It could also be used to facilitate the development of transload and intermodal terminals in agricultural regions. This program could be complemented with other actions at the state level, including a streamlined approval and permitting process for qualifying facilities, and the support of investments to provide sufficient main line capacity for handling industrial traffic generated by the new facilities.
- The development of **short line performance metrics** could help to better understand and quantify system needs throughout the SJV. Being able to quantify the costs of meeting these performance metrics would establish a baseline assessment of regional short line rail "needs." This would also help to position the region for successful grant applications for TIGER, or other competitive grant sources (for example if a California freight rail assistance program were to be established).

Funding Recommendations for Goods Movement Projects *(continued)*

Recommendation #3 – Other Potential Actions

Coordination with Other Plans

One of the needs highlighted by stakeholders in the public outreach process is the need for coordination between different transportation and goods movement planning efforts at the state and regional levels. Stakeholders expressed concern for a unified and consistent goods movement "vision" that is carried through all regional and state transportation planning efforts. Because of this concern, this plan coordinated closely with the California Statewide Rail Plan, the SR-99 Business Plan, and other ongoing studies. This is a concept of growing importance, in particular, when considering the opportunities presented by MAP-21.

Agency and Stakeholder Collaboration

Ongoing interregional collaboration can bring about reduced costs of service, improved service, and better economic competitiveness for the region. This type of coordination is already occurring- for example this San Joaquin Valley Goods Movement Plan represents the combined goods movement planning efforts of all eight counties within the San Joaquin Valley. Likewise, other efforts of the San Joaquin Valley Regional Planning Agencies Policy Council has created a strong venue for collaborative, multiagency planning. This type of multiagency coordination has been successful in procuring Federal funds in the past—in particular, through competitive, nationwide programs, such as the TIGER grants in 2010, 2011, and 2012.

Next Steps – Areas for Future Study

Additional study will be required to support long-term goods movement planning for the region. Though this SJV Goods Movement study lays the groundwork for ongoing freight planning, several specific areas are suggested for future study. These include:

- **The potential for short line or short haul rail.** There is a strong interest among multiple stakeholders in maximizing the effectiveness of the region's short-line rail. Tulare and Kern Counties have undertaken short-line rail studies, but stakeholders still have questions about the ultimate contribution that short-line and short-haul rail can make toward the region's freight needs. The Central California Railroad Authority could be a vehicle for coordinating or sponsoring the additional study required.

- **The use of natural gas or other alternative, cleaner fuels for goods movement purposes.** The drastic cost reductions for natural gas due to shale gas production (in other states, whether or not it occurs in California) are changing the outlook for natural gas as a vehicle fuel. While some suggested projects already anticipate a growing role for natural gas, notably the West Coast Green Highway Initiative, additional study may be needed to better define the role of this increasingly competitive alternative fuel (or other potential alternative fuels) in goods movement.

- **The potential of zero-emission or near-zero emission technologies for use in goods movement applications.** Work is ongoing in Southern California and other regions to study the potential of using electric or hybrid trucks and locomotives for goods movement activities. The SJV should continue to monitor the development of these technologies, and consider potential sites for zero-emission pilot projects, in particular to support "last mile" goods movement activities.

- **Truck routing and parking needs ongoing study.** Truck routing and truck parking are long-term priorities to ensure the safe and efficient movement of goods by truck through SJV communities. The truck routing study sponsored by SJCOG and SACOG may provide a starting point, but much work remains to be done on the local and regional planning levels. Large fleet owners have different routing and parking needs than owner operators, and local route truckers have different routing and parking needs than long-haul truckload carriers.

- **Further study to understand the region's future air cargo needs and the roles that its multiple airports can play in meeting those needs.** The reversion of military airbase to civilian use has created excess near-term airport capacity; the question is how that capacity should best be used to meet long-term requirements.

- **Continue to identify "last mile" connectors to better understand their role in regional goods movement.** "Last mile" connectivity is the link between the regional and national systems and local customers. "Last mile" connectivity is also often the nexus between freight transportation and local community impacts. Therefore, "last mile" connectors should be identified throughout the SJV. In addition, they could be the focus of future study to determine the issues that are impacting their ability to provide safe and efficient freight mobility.

The San Joaquin Valley Interregional Goods Movement Plan

Appendix A:

Additional Recommendations

SJV Goods Movement Priority Projects: Air Quality Recommendations

The serious air pollution problems in the SJV require application of emission control measures and implementation of these measures depends critically on coordination between transportation planning agencies and environmental agencies. Air quality in the San Joaquin Valley is regulated by several agencies; each exercising varying levels of control. The **Federal government** acts primarily through the U.S. Environmental Protection Agency (EPA), state government acts through the **California Air Resources Board (ARB)** and Bureau of Automotive Repair, and the local air pollution control districts, the **SJV Air Pollution Control District (APCD),** develops plans and implements control measures.

Many strategies are available to reduce emissions from the freight sector ranging from technology applications to infrastructure improvement projects, and from operations strategies to institutional and regulatory initiatives. Some of the strategies are shown below.

Technology Strategies	Anti-Idling Strategies	Energy Efficiency Strategies	Alternative Fuel Strategies
Retrofit older engines with diesel particulate filters or diesel oxidation catalysts	Truck Stop Electrification	Truck Speed Reduction	Ultra Low Sulfur Diesel (ULSD) fuel
Replace old engines with brand new engines	Auxiliary Power Units	Hybrid-Electric Vehicles	Compressed Natural Gas (CNG)
Retrofit older engines with selective catalytic reduction (SCR) systems	Anti-Idling Regulations	Improved Vehicle Aerodynamics	Liquefied Petroleum Gas (LPG)
Retrofit older engines with selective catalytic reduction (SCR) systems	Locomotive Idling Limit Devices	Improved Tire Efficiency	Emulsified Diesel Fuel
Convert engine to run on alternative fuels or electricity		Vehicle Weight Reduction	Biodiesel Fuel

SJV Goods Movement Priority Projects: Safety Recommendations

The movement of goods can have safety implications. For example, in 2010 there were 752 **truck-involved crashes** recorded in the SJV. Contributing factors can include poor driver performance, driver fatigue, and a lack of awareness of trucks by other roadway users. Other contributing factors are the unsafe condition of truck tires, poor weather conditions, or malfunctions of braking systems and steering systems. The mixing of rail and truck traffic at at-grade rail crossings can be a source of traffic- and safety-related concern. In 2011, the eight-county SJV had a total of 35 incidents at highway-rail grade crossings, including 31 train/vehicle incidents, and 4 incidents that involved pedestrians

Improving freight transport safety in the SJV requires the region's jurisdictions to collaborate with each other and with regional, state, and Federal agencies in the areas of engineering (infrastructure), education, enforcement, and operations.

- **Engineering Strategies.** Freight vehicle crashes can be reduced through implementation of improved roadway and rail crossing designs. Improving roadway infrastructure with respect to safety benefits freight and nonfreight users alike.

- **Education Strategies.** Providing safety education to commercial vehicle operators helps ensure drivers are aware of and follow safe practices. Because truck-involved crashes often occur with passenger vehicles, it is also important to provide education to the driving public on how to safety drive in the presence of large trucks.

- **Enforcement Strategies.** Effective commercial vehicle enforcement programs help reduce truck-involved crashes, protect highways and bridges from unnecessary damage from overweight vehicles, and ensure hazardous materials are transported safely.

- **Operations and Management Strategies.** Operations and management strategies can be designed to help truck drivers operate safely by providing wayfaring information and additional facilities for drivers to pull over and rest. Some of these strategies (such as the availability of truck parking facilities) have been identified throughout this project as key issues facing the safety and efficiency of the region's transportation system.

SJV Goods Movement Priority Projects: Land Use Recommendations

Goods movement and freight facilities can affect land use. Even with the best mitigations, freight operations tend to create noise, traffic, and emissions. Uncoordinated land use planning that allows residential development adjacent to busy industry or freight facilities will likely lead to encroachment, disproportionate adverse impacts, and conflicts. If providing greater goods movement capacity requires expansion within existing rights-of-way that are immediately adjacent to residential or commercial uses or if there expansion beyond existing rights-of-way is necessary, this will be done more effectively if current land use plans acknowledge the potential conflicts. Protecting right-of-way in strategic goods movement corridors is an important element in land use planning that is often overlooked.

The land use strategies presented in the plan can help to better integrate freight into the land use planning process. Some strategies are to be implemented by the private sector, to help minimize the negative impacts of their necessary freight movement activities. Other strategies are to be implemented by the public sector, to ensure that land use design and planning recognizes freights needs and helps to plan for it. Implementing these concepts through combined action of public and private sector stakeholders can help to maximize the benefits of goods movement, while minimizing the negative impacts to communities and the environment.

These strategies can be classified into the following three types:

- **Land Use and Transportation Coordination Tools.** These tools focus on the recognition that land use and freight planning activities should be more closely coordinated. Doing so can help ensure that freight land uses have the space that they need to operate safely and efficiently. Conversely, better integration can ensure that freight land uses minimize their negative impacts on communities within which they locate and move through.

- **Operational and Educational Tools.** These tools focus on methods to streamline goods movement activities to increase the efficiency and safety of freight movement, or freight cargo pick-up or drop-off activities. Educational components (to the public and to freight system stakeholders) are also included in this category.

- **Transportation System Tools.** These tools focus on ensuring that transportation system design and operation minimizes potential negative impacts on local communities and the environment. They include strategies to mitigate safety, congestion, emissions, and other types of public nuisance (i.e., noise or lighting) from transportation system operations.

The details of these potential strategies are presented in the technical memorandum for Task 8 of the SJV Interregional Goods Movement Study.

The San Joaquin Valley Interregional Goods Movement Plan

Appendix B:

Federal and State Funding Sources

Federal Funding Sources for Goods Movement Projects

Congress reauthorized the Federal surface transportation programs in July 2012. The legislation – MAP-21 – maintains current Federal transportation funding levels (adjusted for inflation) for the Federal fiscal years 2013 and 2014. Based on these authorization levels it is likely that California will continue to receive Federal transportation funds for the next several or more years at levels consistent with what has been received under the previous transportation bills. In this funding climate and with continuing Congressional concerns about growth in the Federal deficit, MAP-21 did little to create new funding opportunities for freight transportation programs in the short-term. The longer-term outlook for Federal transportation funding is less clear, but Congress laid the groundwork in MAP-21 for what might eventually become a national freight program.

Despite MAP-21, funding sources at the Federal level remain limited. There are special and discretionary grants are monies set aside from the Federal Highway Trust Fund (and general revenue) by Congress for specific purposes. These grants can be awarded to state and local governments on a competitive basis or at discretion of the Secretary of Transportation. Examples are Projects of National and Regional Significance program and TIGER grant programs, both of which funded projects that improved freight movement within and between modes.

Though these grant programs are very competitive (for example only 5% of TIGER applications are successful, work completed in this plan may help to favorably position the region to be competitive. The U.S. DOT has moved to greater reliance on benefit-cost methodologies for selecting projects and the benefits evaluations contained in the SJV Inter-Regional Goods Movement Study should provide much of the basic information necessary to compile competitive grant applications.

Funding Source	Description
TIGER	The Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant program provides funds for road, rail, transit, and port projects. There have been five funding cycles to date, from 2009-2013. Total amount distributed in each funding cycle is between $473 million and $1.5 billion.
TIFIA	TIFIA provides Federal credit assistance to nationally or regionally significant surface transportation projects, including highway, transit and rail projects. The program is a low-cost debt program (borrowing tool) that may be accessed by the private sector (and in some cases the public sector). This can help to decrease the overall financing costs of the program. MAP-21 increased the funding for TIFIA to $750 million for FY 2013.
FRA Grant Programs	Though none of these programs are currently (as of Spring 2013) accepting new applications, the FRA has in the past offered several grant programs to support freight rail safety and maintenance. These include the Railroad Safety Technology Grant Program, the Rail Line Relocations and Improvement Capital Grant Program, and the Disaster Assistance program.
Projects of National and Regional Significance Program	MAP-21 continued this program from SAFETEA-LU as a discretionary grant program. Eligible projects now include certain freight rail, port, and intermodal freight transfer facilities. Funded at $500 million in FY 2013.

State Funding Sources for Goods Movement Projects

There are several California-specific programs available to help fund transportation projects. These programs are summarized below.

Funding Source	Description
State Transportation Improvement Program	The State Transportation Improvement Program (STIP) is the five-year plan adopted by the Commission for allocations of certain state transportation funds. Some of the sources for this fund include GARVEE bond proceeds, state gasoline and diesel fuel taxes, and reimbursements from the Federal Trust Fund for Federal Aid projects.
Interregional Transportation Improvement Program (ITIP)	The ITIP includes projects funded from the interregional program share of STIP funding. This represents 25% of new STIP funding. Projects are nominated by Caltrans in consultation with regional and local transportation authorities. Because of the inherently interregional nature of many freight projects, the SJV COGs may wish to advocate for a set-aside of some fraction of the funding to be reserved for freight projects with interregional significance. A number of the highway projects that cross county boundaries and even some of the connector projects that link to significant freight activity centers could be eligible for these funds.
Cap-and-Trade Program Funds	State legislation, AB 32 (Nunez 2006) mandates a reduction of statewide GHG emissions to 1990 levels by 2020. In accordance with that law, California has implemented a market-based, cap-and-trade program. Funds from the program can be used to further the purposes of AB 32. However, at this point the funding for the program is extremely limited.
State Section 190 Grade Separation Program	The Section 190 Grade Separation Program is a state-funded safety program that provides for the elimination of existing at-grade railroad crossings.
Infrastructure Financing Districts	California cities and counties have had authority since 1990 to create infrastructure financing districts (IFDs) to fund local infrastructure improvements. IFDs can divert an incremental portion of property tax revenues for 30 years to fund improvements including highways and transit projects. IFDs have been used very sparingly probably because of the cumbersome process for formation and the fact that redevelopment agencies were also authorized to divert incremental property tax revenues.
eCommerce Tax revenues	California law requires that residents pay a tax on the purchase amount of goods and services when their order is placed over the internet. The ecommerce tax rate is equal to the sales tax rate. The State estimates that this law will result in an additional $260 million in revenue for FY 2013. Currently there is no guarantee that these tax proceeds will be dedicated to transportation purposes.
Warehouse Business-Tax Revenues	It may be appropriate to levy a business tax on warehousing, distribution and logistics firms that benefit from the faster and more reliable truck travel times provided by the EWFC/I-15 project. In California, a business tax can be levied on all businesses in a similar trade, subject to two-thirds voter approval by the city, county or special district electorate
Public Private Partnerships	PPPs appear to be a viable means of facilitating project-specific funding, thereby reducing the pressure on other funding mechanisms. The major value of PPPs is not in providing capital that would otherwise be inaccessible, but in facilitating more rapid capital investment at a comparable or even lower financing cost.