CHAPTER 5

GOODS MOVEMENT

I. OVERVIEW

This chapter examines ways to ensure that freight and commodities are efficiently transported through Kings County and the region. The two transportation modes of railroads and freight trucks are considered. Special attention is given to the needs of the agricultural industry in moving its products.

II. ASSUMPTIONS AND INVENTORIES

A. Forecasted growth for California is expected to increase the volume of goods moved over the next 20 years by 46%, using trucks, air, rail, pipelines, and seaports. Air cargo is expected to be the fastest growing segment of freight transportation nationwide. Rail intermodal traffic is the second fastest growing segment, and truck transport will also continue to grow, but at a slower rate than air cargo or rail intermodal.

B. Kings County's agricultural economy will continue to generate a strong demand for adequate truck and rail facilities to move farm products to processing plants, markets, and ports.

FIGURE 5-1

KINGS COUNTY FARM PRODUCT VALUE
2016

PRODUCT	VALUE IN $ Millions
Livestock Products	$640.3
Fruit and Nuts	$525.1
Field Crops	$367.6
Livestock/ Poultry	$274.2
Vegetable Crops	$175.8
Apiary Products	$10.5
Seed Crops	$8.7
TOTAL	**$2,002.2**

Source: 2016 Kings County Agricultural Crop Report

C. Kings County will generate relatively little demand for air cargo transportation.

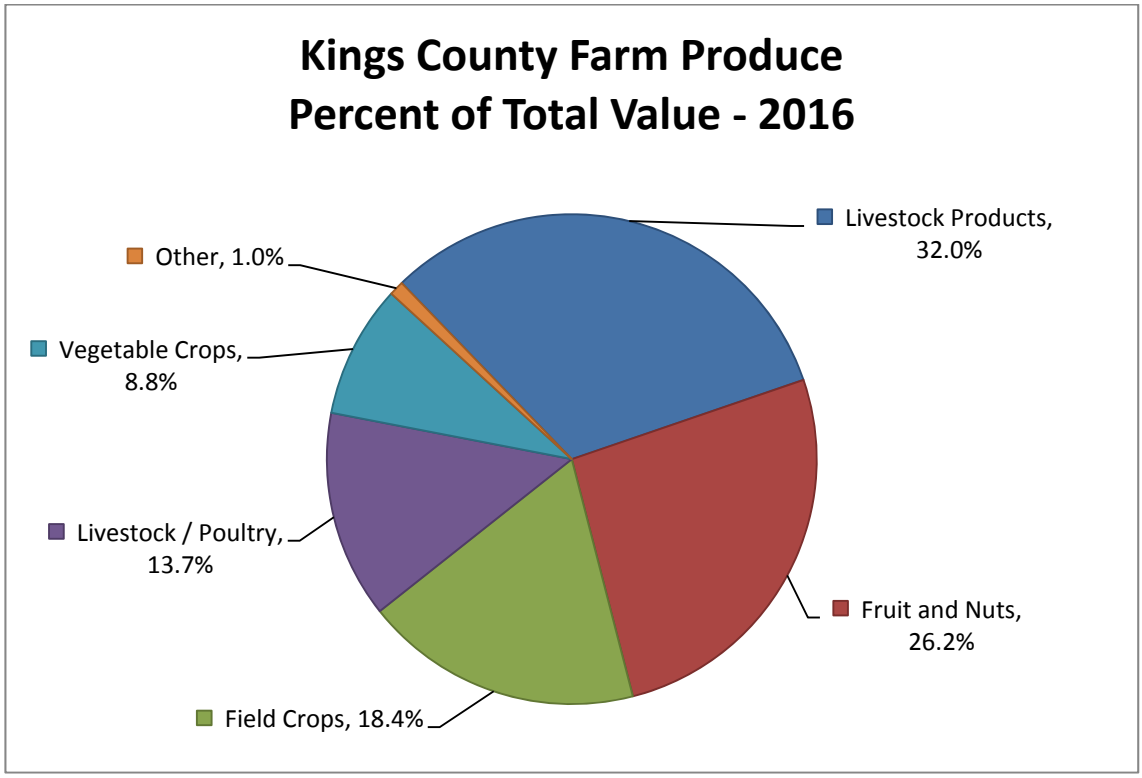
D. The rail network in Kings County, shown in Figure 5-4, consists of approximately 67 miles of mainline and branchline railroad over which two railroad companies operate. The Burlington Northern Santa Fe (BNSF) mainline runs north-south through the county, and the San Joaquin Valley Railroad runs east-west on the leased Union Pacific Railroad (UP) Coalinga Branchline.

E. Railroad companies will continue to seek abandonment of service on unprofitable rail lines. Once abandoned, railroad companies could salvage track, ties, and other equipment and dispose of the right-of-way. Freight previously shipped by rail would be shipped by trucks, increasing truck vehicle miles traveled (VMT) and emissions.

F. Kings County will have a much higher percentage of trucks on its highways than will most other counties. The majority of these vehicles will be moving agricultural products (see Figures 5-2 and 5-3).

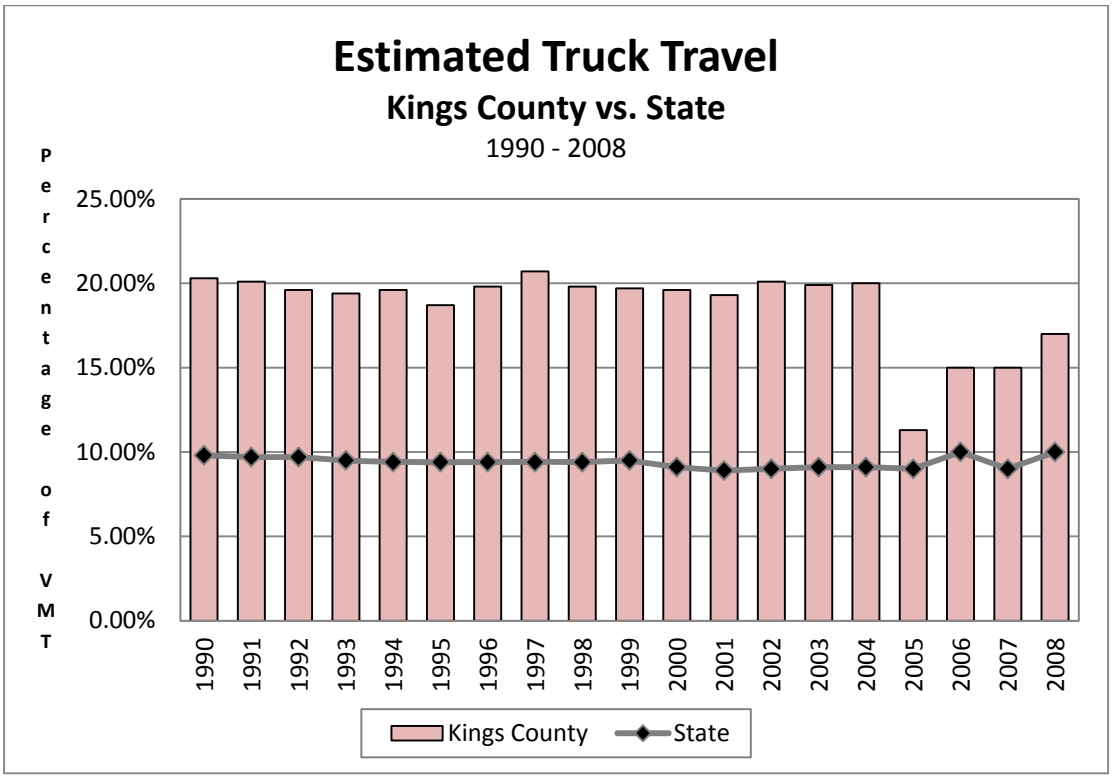
G. Each city has identified local truck routes as part of their road network, and the State has identified oversize truck routes and terminals within Kings County. Figures 5-5 through 5-9 provide maps of local truck routes. Truck routes are specifically designated to carry heavyweight commercial and industrial vehicles through and around the city with a minimum disruption to auto traffic and annoyance to residential areas. Truck routes are generally established on arterial and collector streets that provide direct access from regional routes to industrial areas within each community.

FIGURE 5-2



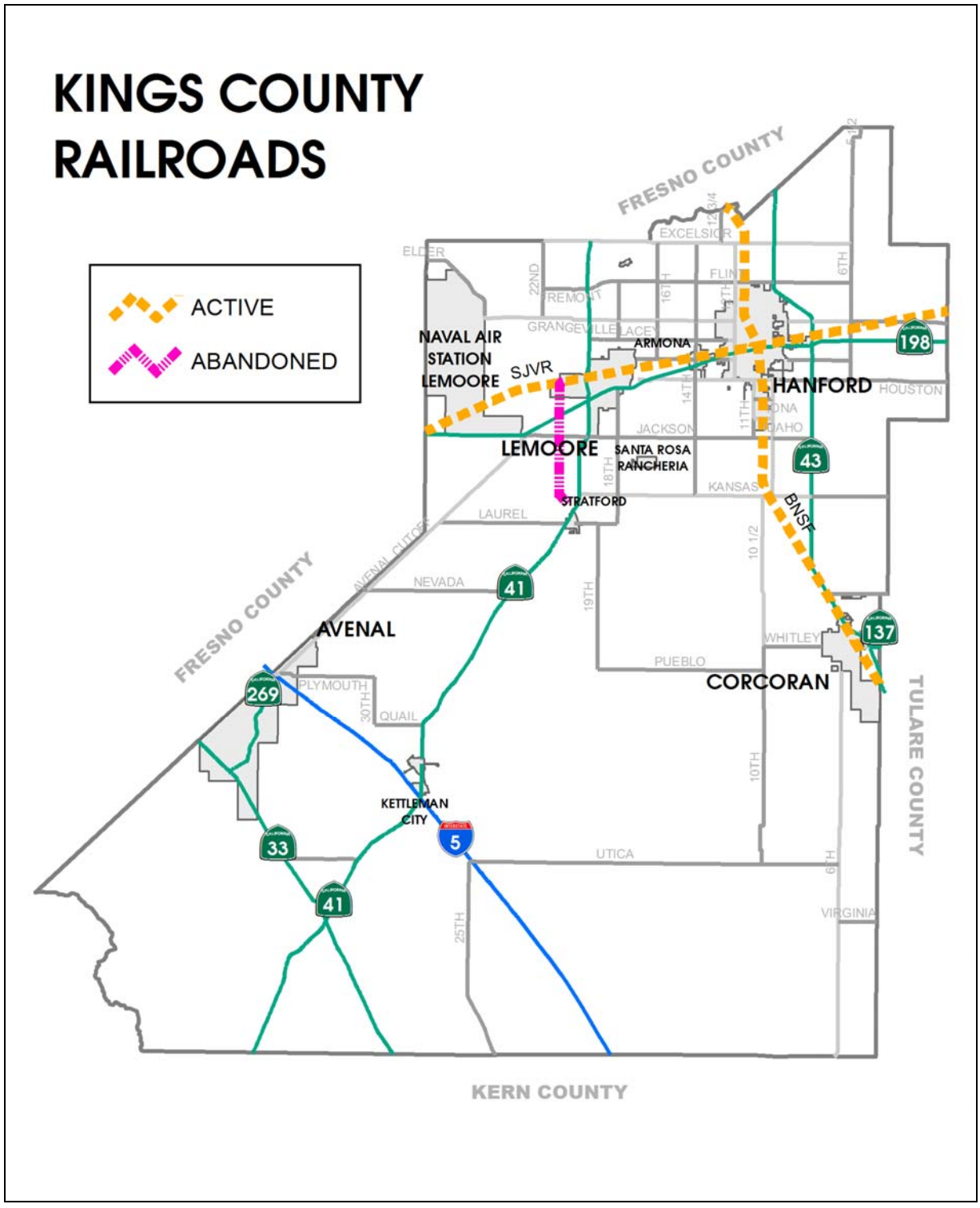
Source: 2016 Kings County Agricultural Crop Report

FIGURE 5-3



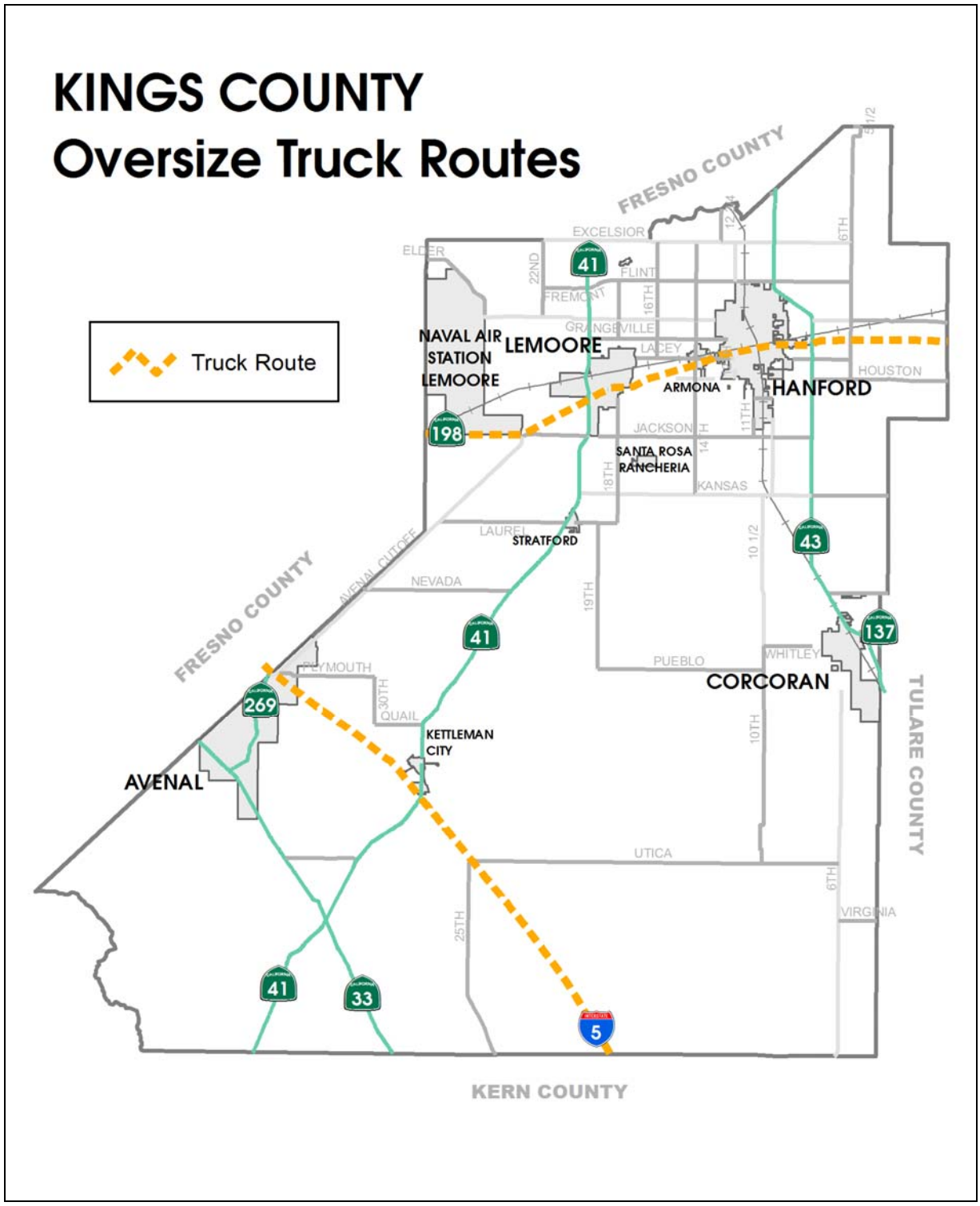
Source: Caltrans, Traffic Data Branch Website
http://www.dot.ca.gov/hq/tsip/hpms/datalibrary.php

FIGURE 5-4



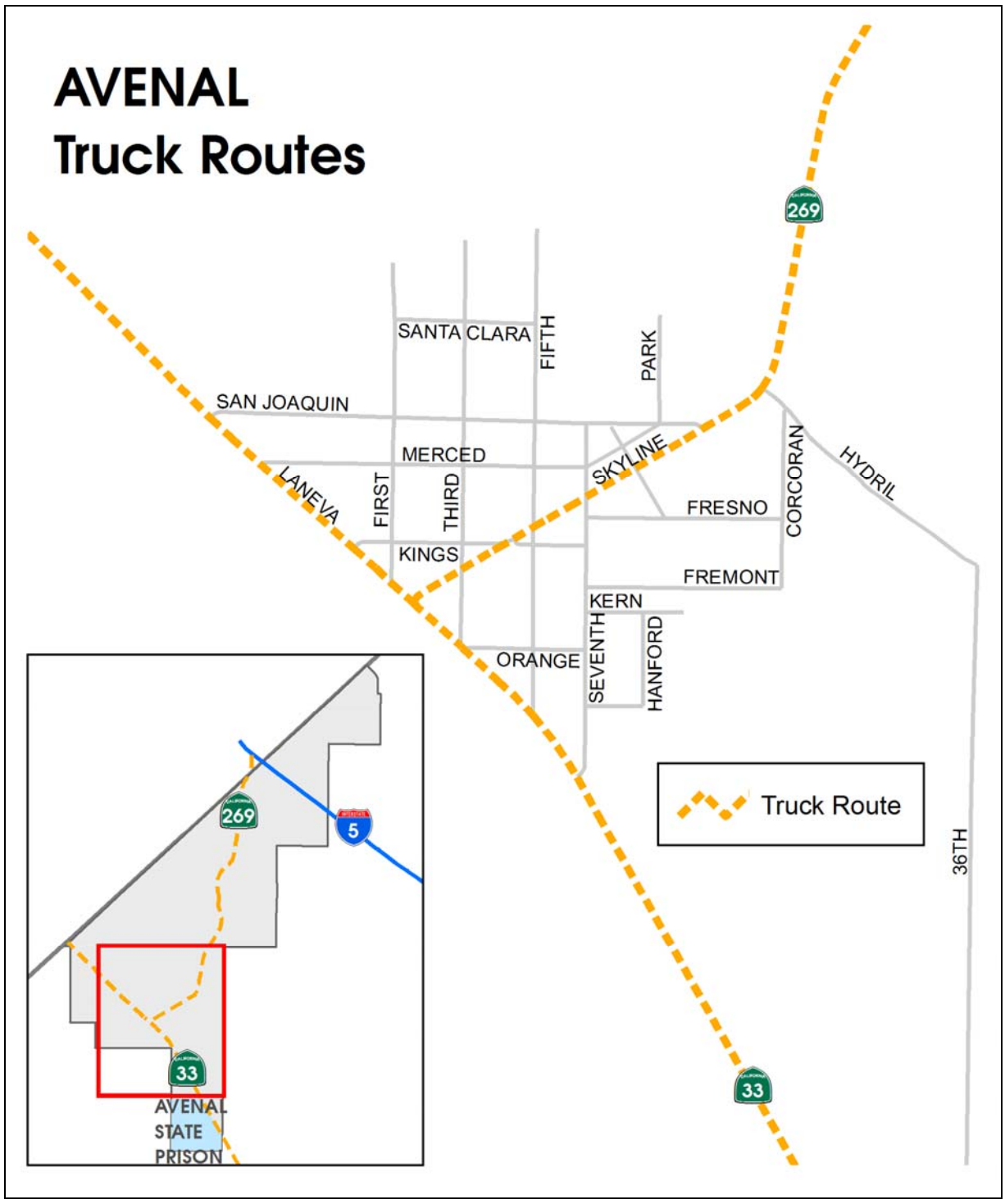
Source: KCAG

FIGURE 5-5



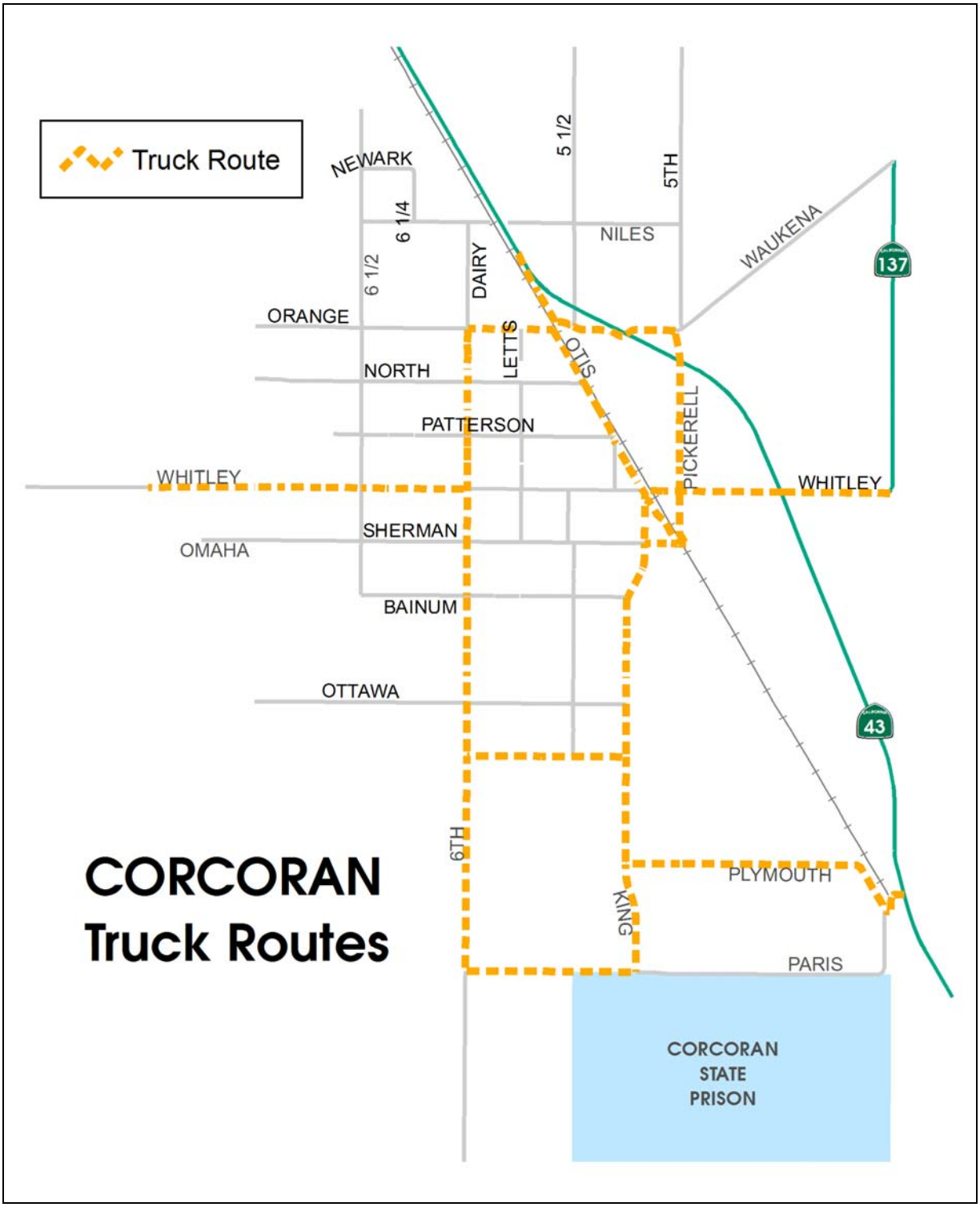
Source: KCAG

FIGURE 5-6



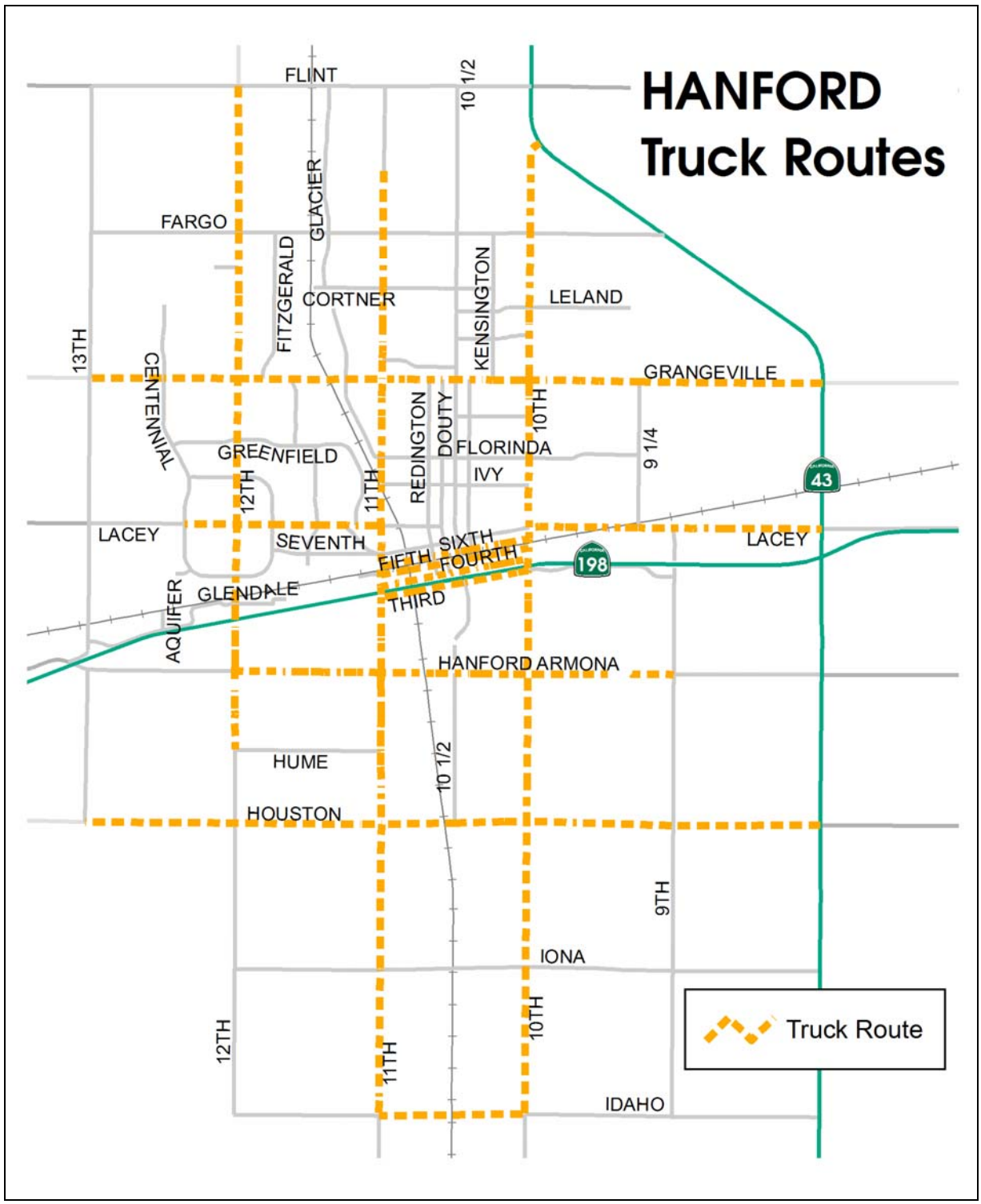
Source: City of Avenal

FIGURE 5-7



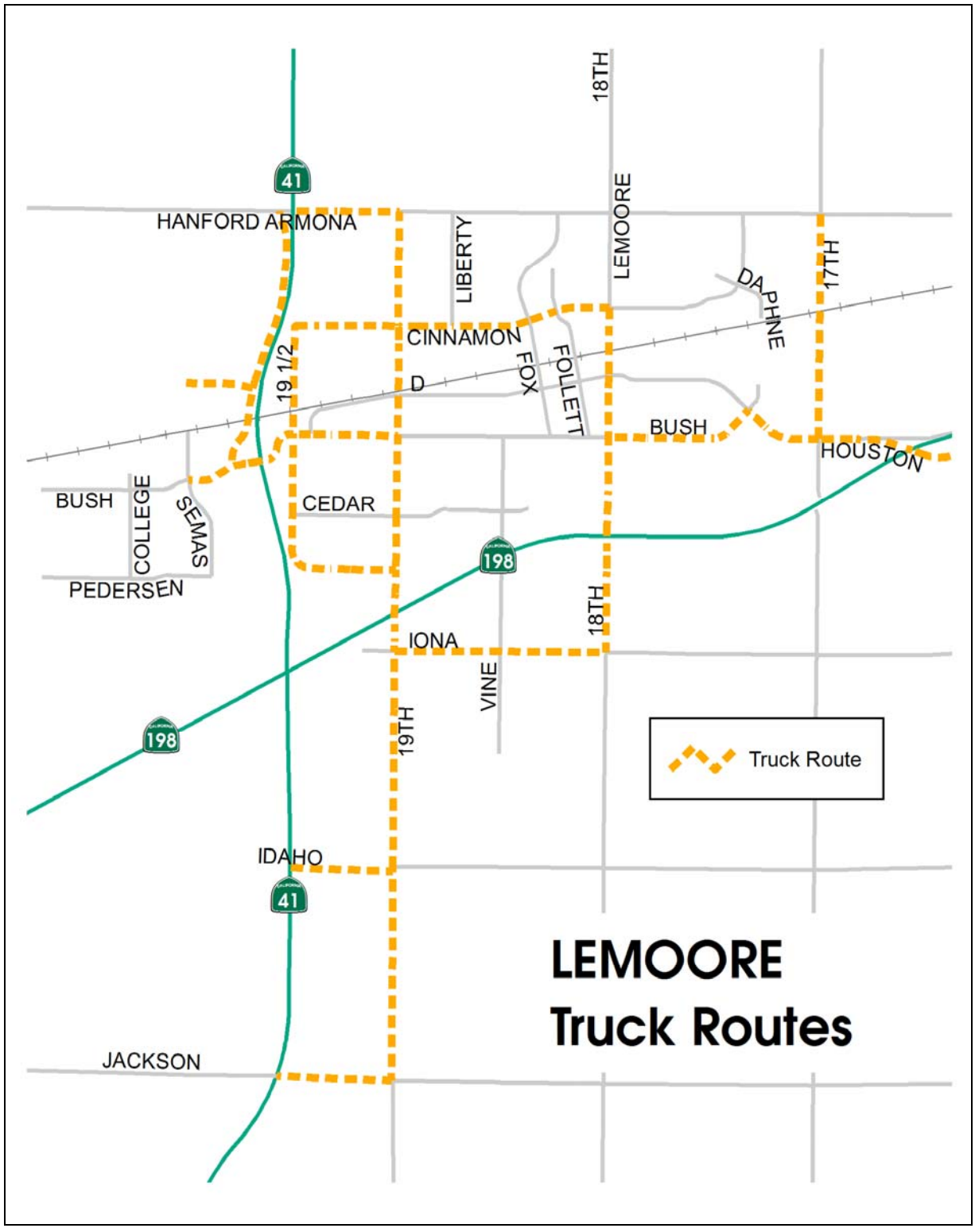
Source: City of Corcoran, County of Kings

FIGURE 5-8



Source: City of Hanford

FIGURE 5-9



Source: City of Lemoore

III. SUMMARY OF GOODS MOVEMENT ISSUES

A. DETERIORATION OF HIGHWAYS

Heavy trucks damage roads much faster than do automobiles. Because Kings County experiences such a high level of truck travel, its streets and highways are subject to rapid deterioration and failure. City, county, and state road crews are well aware of this fact; most of their work involves repairing fatigued pavements. Roughly 60 cents out of every local transportation dollar in Kings County goes to road maintenance. Special attention must be given to the regional routes to keep them in a serviceable condition and to avoid major reconstruction costs.

Existing overweight truck fines are not devoted to enforcement of truck weight regulations or the maintenance and rehabilitation of roads needed due to overweight truck damage. Legislation to increase truck weight penalties in order to provide added revenue for funding enforcement and road repair needs should be pursued. The amount of any penalty should relate to the damage done to the road and the cost of the repair.

B. OVERSIZE TRUCKS

The Surface Transportation Assistance Act of 1982 authorized the use of longer, wider trucks on designated highways. In Kings County, I-5, SR 41, SR 137 and SR 198 are designated oversize truck routes. The act also allowed trucking companies to establish terminals off the designated routes. While the law did not change the present 80,000 lb. limit, overloading of the vehicles is expected. The trucks' wider turning radii can lead to congestion problems in urban areas. Local officials have expressed concern over the impact that the trucks will have on state and local roads in Kings County. Policies have been adopted to regulate local access points, routes, terminals, and infrastructure improvements.

C. TRAFFIC CONGESTION

By their very size, trucks lead to reduced capacity on rural highways and to congestion on local streets. The need for rural route improvements has already been addressed in Chapter 4: “The Regional Highway System”. Each local agency has designated important collectors and arterials as "truck routes." Local street systems, however, are highly stressed by trucks because of their thinner pavements and base. Congestion results when large trucks try to maneuver on narrow urban streets with cramped intersections and on-street parking.

Cooperative efforts are needed between the trucking industry, the driving public, and local officials to assess the impacts that trucks have on local street and to create regulatory guidelines for trucks in urban areas. Most of the cities will be phasing out truck routes through residential neighborhoods as the area population increases.

D. HAZARDOUS SPILLS

The Class I waste facility located in Kings County's Kettleman Hills draws trucks carrying hazardous materials from all western states. The presence of these vehicles specifically increases the probability of spills. The Kings County Area Plan for Hazardous Materials and Emergency Response document details the protocols for handling hazardous spills.

E. PORT ACCESS

Because many of Kings County's agricultural products are destined for world markets, efficient freight access at California's export points must be ensured. Private and state officials need to find ways to reduce rail and truck congestion at the ports.

F. RAIL CROSSINGS

Rail grade crossings produce several undesirable consequences: lengthy delays of local traffic at certain times; safety problems where automatic grade protection devices have not been installed; and unnecessary roughness which slows traffic and causes congestion. Ways to correct these problems should be identified, discussed, and solved by the local jurisdiction and the railroad company.

Improving rail crossings has only been addressed for passenger rail grade crossings. The California Transportation Commission adopted guidelines for the development of a statewide inventory and methodologies for prioritizing grade crossing improvements that would enhance public safety. Criteria used to prioritize improvements include such factors as train speed and frequencies, traffic volumes, and accident history. These guidelines would only affect the BNSF rail lines and are currently being implemented.

G. TRANSPORTATION OF HAZARDOUS WASTE

Hazardous waste can be transported by rail, small or large trucks, and possibly by air and pipelines. At present, and for the foreseeable future, the largest volume of hazardous waste is transported by large trucks. Many of the counties within California import hazardous waste to Kings County for treatment, storage, and disposal at the Waste Management - Kettleman Hills facility. At full operation in 2007, approximately 733,000 tons of hazardous waste was transported to the Kettleman Hills facility. While current transported levels are much lower, it is anticipated that if expansion permits are approved, then shipments of hazardous waste would increase to historical levels.

Potential adverse affects associated with the transportation of hazardous waste can be partially mitigated by restricting roads available for hazardous waste trucking. The Kings County Area Plan for Hazardous Materials and Emergency Response includes a hazardous waste transportation plan that established policies that define preferred major and minor routes which connect to regional, state, and interstate highways and railroad systems.

The transportation of hazardous waste within Kings County is guided by a three-tiered road classification system. Within the first tier are minor roads. The second tier includes selected roads of either arterial or collector class and the third tier are the state and interstate routes. Any routing plan for the transportation of hazardous waste should encourage upward movement through the tiers with a minimum amount of time spent on road segments in the lower tier.

Caltrans recommends that specific hazardous waste sites should be located a minimum of one-half mile away from any state highway and that any access to a facility by county, city, or private road should be improved to provide a left-turn lane and any other improvement to reduce the possibility of an accident. Access to the Kettleman Hills facility is provided with an interchange at Interstate 5/State Route 41 and with turn lanes into the facility from State Route 41. Truck climbing and passing lanes are proposed for future improvements on State Route 41.

H. RAILROAD ABANDONMENTS

Railroad companies have ceased operating freight on several railroad corridors throughout the San Joaquin Valley due to low freight volumes and unprofitable lines.

KCAG prepared a "Rail Right-of-Way Inventory Report" in 1990 for Kings County as part of the statewide Commuter and Intercity Rail Right-of-Way Inventory. The inventory report consisted of a description of each rail line within the county and a listing of which lines may have the potential for future passenger rail or recreational use. However, abandoned rail lines through agricultural production property should not be utilized for general public recreational use, as farm security requirements and proximity to agricultural operation make this option infeasible. The following table lists the rail lines within Kings County and their status.

FIGURE 5-10

RAIL RIGHT-OF-WAY INVENTORY

Railroad	Status	Potential Transportation Use
UP - Coalinga Branchline	Active - Portions abandoned or previously proposed for abandonment	Yes
UP - Stratford Spurline	Abandoned (1996)	Yes
BNSF - Mainline	Active	Yes
BNSF - Visalia Branchline	Abandoned (1994)	Yes
BNSF - Laton Branchline	Abandoned	No

Source: KCAG

In 1996, the San Joaquin Valley Railroad petitioned the Surface Transportation Board (STB) for an abandonment exemption of an 18.1 mile segment of the Coalinga Branchline between Huron and Rossi. Protests were filed by the California Public Utilities Commission (CPUC) and several shippers, citing rail shipping needs and rail freight potential. Subsequently, the STB denied the abandonment exemption on March 5, 1999. The area shippers continued to negotiate with SJVR to consider increasing freight traffic. The continuation and extension of freight rail on this segment will reduce truck travel and emissions.

IV. ACTION ELEMENT

A. To ensure that regional system operational and maintenance costs are held to a minimum and that safety requirements are met, seek to implement the following:

1. Enforce federal and state truck weight and size regulations.

2. Enforce California Vehicle Code maximum load size and weight regulations.

B. The county and each city should adopt consistent Oversize Truck Ordinances compatible with the state ordinance(s) to identify acceptable oversize truck routes, terminals, and servicing areas and to set fees for infrastructure improvements.

C. To facilitate more efficient movement of goods through California's ports, encourage Caltrans and private entities to carry out the following:

1. Reduce congestion on port access roads.

2. Reduce conflicts between port rail traffic and non-port transportation.

3. Encourage the development and improvement of intermodal freight transfer facilities at ports.

D. Implement the goals and objectives identified in the San Joaquin Valley Interregional Goods Movement Plan to maintain and improve the goods movement transportation system.

E. Any conditional use permit for a hazardous waste facility should include a description of routes to be used and route restrictions to be adopted. Facilities should be located so as to minimize distances to major transportation routes and designed to accommodate heavy trucks.

F. Review and comment on proposed notices of abandonment exemptions filed before the Surface Transportation Board by railroad companies for railroad abandonments to determine if the corridor could be used for other transportation purposes.

G. Support the continuation of freight rail on existing rail lines to preserve rail corridors and to reduce truck travel by encouraging the shipment of goods by rail.

H. Continue to implement various planning strategies to preserve the existing rail corridors for future transportation uses.

I. Participate in statewide and regional Freight Advisory Committees to address inter- and intra-regional goods movement issues.

J. Coordinate with various public and private stakeholders, agencies, and organizations to develop information to better understand the movement of goods within and through the Valley, to assess the efficiency of the transportation network in handling goods movement, and to recommend improvements.

K. Support the programming of capacity, operational, safety, and network improvements on the Interregional Road System (IRRS), as recommended in Caltrans' 2015 Interregional Transportation Strategic Plan, and program improvements on the local transportation system that facilitate interregional movement of people and goods in the Transportation Improvement Programs.

L. RECENT PROJECTS

1. San Joaquin Valley Goods Movement Study

The San Joaquin Valley is in a strategic geographic location for the flow of statewide, nationwide, and international commodities. The eight RTPAs within the central San Joaquin Valley, in conjunction with Caltrans and the SJVAPCD, have undertaken a study to improve the understanding of truck transportation of commodities within and through the Valley. The first phase of the study, completed in 2000, focused on documenting the freight transportation system and identifying existing issues and problems of regional goods movement planning within the Valley. Farm products account for almost 30% of the tonnage of all commodities shipped from the Valley. About 46% of the farm product tonnage is sent directly out

of the Valley. Almost 87% of the total tonnage is moved out of the Valley by truck, while rail accounts for 11%. Between 1993 and 1997, there was an increase in the tonnage of goods moved by trucks and a decrease by rail. Shipments of higher value products have shifted from rail to trucks.

Freight transportation problems identified by generators within Kings County included a safety issue at the SR 41 and SR 198 interchange, lack of adequate off-street parking and restricted on-street parking, poor connections from loading areas to state highways, and long delays at grade rail crossings.

The second phase of the Study concluded in 2004, described the development of a model tool to forecast truck movement within and through the San Joaquin Valley. The truck model is intended to forecast truck trips and vehicle miles traveled, analyze air quality and emissions from heavy-duty trucks, impacts of congestion on major truck routes, and safety and road maintenance issues associated with truck activity. The third phase of the Study initiated in 2006, provided improvements to the San Joaquin Valley truck model and integration with local models. This model will provide an analytical basis for evaluating the benefits of transportation investments that impact the movement of goods in the San Joaquin Valley.

In response to the State's Goods Movement Action Plan (GMAP), the San Joaquin Valley RTPAs prepared a Regional Goods Movement Action Plan as a way to leverage the Valley's abilities and opportunities to improve the goods movement system in the Valley. This Plan identified the regions goods movement system, analyzed the flow of commodities within the system, identified the impacts on air quality, and developed a list of regional projects that strive to relieve the overburdened goods movement infrastructure.

2. San Joaquin Valley Interregional Goods Movement Plan

As a continuation of evaluating goods movement in the San Joaquin Valley, in 2011-2013, an additional study was conducted. The San Joaquin Valley Interregional Goods Movement Plan was developed to take the next steps in the progression and implementation of the region's freight transportation vision. This effort, above and beyond the prior Valleywide good movements planning efforts, was focused on developing actionable project recommendation and implementation plans. This study confirmed that goods movement-dependent industries remain the foundation for many local area economies within the San Joaquin Valley, providing over 44% (564,000) of the region's jobs in 2010. Projected growth by 2040 estimates over 813,000 new jobs throughout the region. The growing industries and population of the San Joaquin Valley will therefore increase demand for freight services. Freight volumes are projected to grow from 500 million tons in 2007 to almost 800 million tons by 2040. Goods movements will continue to rely heavily on trucks, and it is anticipated that by 2040, roughly 93% of all commodity movement will be transported by truck. The Interregional Goods Movement Plan identified 50 priority projects categorized by regional north-south highway capacity, east-west connectors, local "last mile" connectors, modal capacity for expected flows (rail and air cargo capacity increase or upgrades to support new freight flows), economic development opportunities, inland ports, and strategic programs. The project lists will be provided during statewide and national goods movement planning efforts.

3. San Joaquin Valley I-5 / SR 99 Goods Movement Corridor Study

   Completed in 2017, the San Joaquin Valley I-5 / SR 99 Goods Movement Corridor Study builds on prior studies and focuses primarily on the two main corridors that carry the highest truck volumes in the Valley. The study analyzes truck traffic patterns and freight facilities to better understand deficiencies that affect goods movement in the region. The analysis found that trucks are the primary mode of transportation for the agricultural, food, and beverage industries carrying over 97 percent of these commodities. Freight clusters were identified within each county with a cluster in Kings County being located in the Hanford/Lemoore area with distribution centers and businesses having a range of specialties in agriculture and manufacturing industries.

   Strategic programs and corridor improvements were explored to assess goods movement benefits, such as shifting truck traffic from SR 99 to I-5 to improve efficiency on SR 99 which passes through urban centers. This study resulted in identifying corridor and connector projects that would improve economic efficiency, alleviate mobility and safety related goods movement issues, and support the growth of agricultural and industrial land uses. Road-to-rail shifts and technological advancements (e.g., truck platooning) were highlighted as future opportunities that should be monitored.

4. San Joaquin Valley Goods Movement Sustainable Implementation Plan

   The San Joaquin Valley Goods Movement Sustainable Implementation Plan was developed in tandem with the San Joaquin Valley I-5 / SR 99 Goods Movement Corridor Study and completed in 2017. The Plan reviewed truck routes and parking needs, including the identification of first and last mile connectors within freight clusters. Priority rural corridors were also identified using the FAST Act criteria for Critical Rural Freight Corridors (CRFC). A list of priority rural corridors was developed and included routes were: SR 41 with high truck Annual Average Daily Traffic (AADT) and SR 198 with access to agriculture. With a growing demand for freight-related analyses, a review of the truck model was also conducted to explore available options for updating the existing Valley truck model.

5. Cross Valley Rail Upgrade

   As discussed in “Chapter 6 - Public Transportation”, the second phase of the Cross Valley Rail Feasibility Study recommended that the UP Coalinga branchline be preserved for future use. In an effort to preserve the rail corridor that was threatened with abandonment, funding for the rehabilitation of the UP Coalinga branchline across the San Joaquin Valley between Huron and Visalia has been obtained from various sources. Rehabilitation of the tracks will improve freight service operated by the San Joaquin Valley Railroad and reduce the amount of truck traffic on regional county roads and highways. Funding for the $15 million project was provided in the state Traffic Congestion Relief Program, federal Economic Development Initiative grant, Congestion Mitigation and Air Quality funds from Fresno, Kings and Tulare Counties, the cities of Huron, Lemoore and Visalia, private agencies, and the SJVRR. Rehabilitation work began in late 2001 and was completed in 2004.