I. INTRODUCTION

A. Purpose

The purpose of the Circulation Element is to ensure the efficient movement of people and goods, promote compatibility between transportation modes and land use, and reduce the adverse air quality impacts of transportation.

B. Consistency with Other Elements

The Circulation Element is consistent with the other elements of the General Plan because all elements use the same population, housing, and employment projections; policies of the Circulation Element support, and are supported by, policies of the other elements; and the policies of all elements are cross-referenced where necessary.

Because circulation facilities are a major determinant of land use, the Circulation Element combines current traffic counts and roadway capacities with population projections from the Land Use Element to determine future traffic demand.

C. Scope and Organization

The Circulation Element contains the following two major sections:

> "Existing Transportation Conditions," which describes the current countywide transportation system, including present traffic counts on roadways of regional significance; and
>
> "Projected Transportation Conditions in 2000," which describes projected levels of roadway usage and required improvement.

Supporting data for this element are found in Tables 13 through 16, Appendix 5, and in the Kings County Regional Transportation Plan (RTP) prepared by the Kings County Regional Planning Agency (KCRPA) and incorporated herein by reference.

II. EXISTING TRANSPORTATION CONDITIONS

The countywide transportation system includes a federal interstate highway, several state highways, rural and urban highways, and numerous county routes; a local and regional transit system and privately-operated taxi services; rail freight and passenger service; a series of small airports serving general aviation aircraft; and several designated bicycle routes.

A. Roadways

1. Standard Roadway Classifications

The classification of roadways by purpose forms an important link between transportation planning and land use planning. This Circulation Element and the RTP use the same roadway classifications, including Interstate and Other Highways/Freeways, Expressways, Arterials, Collectors, and Minor Streets and Roads (for further information see the RTP; for definitions see the Glossary).

2. Kings County Roadways of Regional Significance

There are approximately 1,352 miles of surfaced roads of all classifications in Kings County maintained variously by the state, the County, and the incorporated cities (see Appendix 5, Table 13). About 157 miles of this total are state and interstate highways, and approximately 972 miles are County roadways. The remainder are city streets.

There are two classifications of regionally significant roadways: "Countywide Regional System" and "Regionally Significant Routes in Urban Areas" (see Glossary for further definition).

3. Volume Versus Capacity on Significant Routes

As shown in the RTP, the Kings County Regional Planning Agency (KCRPA) has evaluated all regionally significant routes in the county using the U.S. Department of Transportation's 1987 Highway Capacity Software program (see Appendix 1 of the

RTP for specific results by roadway segment). All regionally significant roadways in the unincorporated area of Kings County are operating within their design capacity and are suitable for current traffic.

The Regional Transportation Plan generally projects travel demand to the year 2000, although in some cases its forecasts are for longer periods (projection dates are extended as the RTP is updated every two years). Routes of regional significance are not expected to exceed either their capacity or Level of Service (LOS) "D" during the planning period (see the Glossary for a definition of LOS, or Level of Service).

It is assumed that current traffic patterns will continue to the year 2000. Any changes in current patterns will be reflected in analyses of proposed traffic-generating projects. Major new developments will be required to provide traffic distribution models so that the traffic they generate can be quantified and added to the estimated increase due to population growth (see the "Caltrans Guide for Traffic Impact Studies," incorporated herein by reference).

B. Local Transit Systems

The Kings Area Rural Transit (KART) bus system and the Corcoran dial-a-ride bus system provide general fixed route or demand response public transit services for the cities and unincorporated areas.

Both the Kings County Area Public Transit Agency (KCAPTA) and the Kings County Public Works Department maintain up-to-date maps of KART routes. The City of Corcoran maintains a current map of its dial-a-ride bus system. The maps of current KART and Corcoran bus routes are included herein by reference.

The RTP identifies and discusses various special transportation services in Kings County.

C. Inter-County Bus System

Orange Belt Stage Lines provides commercial busline service between Hanford and the Goshen Junction on Highway 99 northwest of Visalia, where passengers can connect with Greyhound interstate bus service.

Orange Belt also provides the only public busline service from Kings County to the coastal areas, carrying passengers from Hanford to Paso Robles on U.S. Highway 101 for other connections. Between 250 and 500 persons ride Orange Belt Lines from Hanford to all destinations each month.

D. Amtrak Passenger Service

Kings County is linked with other areas of the state by the Amtrak "San Joaquin" train. Its growth in ridership in recent years is due to many factors, including increased marketing efforts by Caltrans (which operates the route); changes in scheduling to allow one-day round trips between the Valley, the Bay Area, and Sacramento; the addition of a direct bus connection between Bakersfield and the Los Angeles Amtrak depot; increased top speed; and the operation of eight trains per day--four northbound, four southbound--through the Valley.

There are two Amtrak train depots in Kings County, one in Hanford and one in Corcoran. The Hanford depot is developed as an intermodal facility serving the Orange Belt busline, the KART bus system, taxis, bicycles, and pedestrians. A travelers' information center is in operation, and a coffee shop is expected to be developed. Amtrak buses connect the Hanford depot with destinations in Tulare County.

The Corcoran stop was added to the rail line in 1990, in part to accommodate visitors to the Corcoran State Prison. The Corcoran Santa Fe depot consists of a passenger loading ramp, a sheltered bus stop, telephone, parking area, and security lighting.

E. Goods Movement

Kings County has a high level of truck travel, much of it related to the local agricultural economy. Because heavy trucks do more damage to roads than cars, County roads are subject to rapid deterioration. About 55% of County Local Transportation Funds go to road maintenance.

The four incorporated cities have each designated truck routes along important roadways within their city limits. The State has designated I-5 and State Route 198 in Kings County as oversize truck routes suitable for 3-axle "super-trucks." The County has designated a portion of Highway 41 northward from

I-5 to the Kettleman City oversize truck service area as an oversize truck route.

Goals, objectives, policies, and implementation strategies for goods movement are presented in detail in the RTP, and are incorporated herein by reference.

F. Rail Freight System

Two railroad companies operate lines within Kings County which are identified in the Regional Transportation Plan (RTP):

The Santa Fe Railway's Fresno-based crews operate between 10 and 25 trains per day along the 28 miles of Santa Fe track which run through Kings County. Customers include many of Kings County's major agricultural operations.

The San Joaquin Valley Railroad began operating in 1992 on several former Southern Pacific branch rail lines. Two Hanford-based crews operate trains running east and west through Kings County between Huron and Visalia. Customers include major local agricultural operators and solid waste management facilities.

The Southern Pacific Railroad no longer serves Kings County. The company now provides only "mainline" service through the San Joaquin Valley on lines running north and south between Bakersfield and Roseville.

G. Bikeways

Bicycling is a pollution-free form of transportation which provides an excellent opportunity for exercise. Although most bicycle riding is for short trips, enthusiasts often make longer cross-country trips.

Bikeways are generally developed at three levels, depending on budget constraints and need:

1. A Class I Bikeway path is for the exclusive use of bicycles. It is separated from the road by space or a physical barrier. It may be on part of a road right-of-way or on a separate right-of-way.

2. A Class II Bikeway lane is primarily for the use of bicycles on a road right-of-way. Travel within the lane by autos or pedestrians is excluded, although vehicle parking is permissible.

3. A Class III Bikeway route shares its right-of-way with either moving autos or pedestrians.

Roads which are designated as bicycle paths are shown in the Regional Transportation Plan (RTP), and are included in this element by reference. These routes, shown as Class III bike routes, are designed to connect populated areas to County parks. Their routes are over roads that are lightly traveled or have sufficient paved shoulder width to accommodate bicycle traffic.

GOAL 28: Support a broad range of transportation modes and options.

Objective 28.1: Consider the public transit needs of Kings County residents in all transportation-related decisions.

Policy 28a: Support regularly scheduled intercity bus and rail services.

Policy 28b: Support the preservation of existing railroad right of way for use as part of a possible future light rail system connecting area cities.

Policy 28c: Support the Kings Area Rural Transit (KART) bus system for urban residents who have unmet transit needs.

Policy 28d: Through membership in the KART system, seek to coordinate local transit services with intercity and multimodal transportation facilities.

Policy 28e: Use Local Transportation Fund (LTF) revenues to support public transit services when a reasonable transit need has not been met.

Policy 28f: Through membership on the Regional Transportation Planning Agency (RTPA), monitor and respond to legislation which could impact bus or rail services in Kings County.

Policy 28g: Through membership in the Kings County RTPA, work with other regional transportation planning agencies and Caltrans to create and support aggressive marketing programs for intercity bus and Amtrak train service.

Objective 28.2: Maintain and enforce airport land use policies.

Policy 28h: Act upon proposed developments within airport areas of influence only after they have been reviewed by the Kings County Planning Commission.

Objective 28.3: Provide a bicycle route system which meets the transportation and recreation needs of Kings County residents.

Policy 28i: Through the RTP, designate a bicycle route plan which consists of a system of bicycle routes connecting major residential, commercial, employment, educational, and recreational areas.

Policy 28j: Encourage the design of state and federal roadway projects which are consistent with bicycle routes shown in the RTP.

Policy 28k: Allow flexibility for design of bicycle routes designated in the RTP.

Policy 28l: Coordinate the locations and types of bicycle routes shown in the RTP with CalTrans and city routes.

Policy 28m: Designate the Kings County Department of Public Works as the agency responsible for establishing and maintaining bicycle routes along roadways in unincorporated areas.

Policy 28n: Consider the needs of bicyclists and pedestrians when constructing or improving the County road and street system.

Policy 28o: Consider methods to accommodate bicycle and pedestrian traffic in new development.

Policy 28p: Seek state and federal funding for bikeway construction.

Policy 28q: Encourage private organizations to assist in the maintenance and patrol of bicycle routes.

H. Public Utilities and Facilities

Most of the infrastructure servicing city fringe areas and rural communities is located within the County road right-of-way, usually under the roadway pavement. The infrastructure includes water and sewer lines, storm drainage systems, and utilities such as electricity, gas, telephone, and cable television.

City streets typically are lower in elevation than abutting properties and, with their curbs and gutters, are an integral part of a storm drain system that leads to ponding basins. In contrast, County roads are elevated and designed to drain stormwater onto adjacent properties. This system is generally adequate for the agricultural and rural areas served. In the more densely populated rural communities, however, curb and gutter drainage systems leading to ponding basins are usually necessary.

Gas pipelines and electric transmission lines bring power to virtually every resident of Kings County. The utility companies continually monitor growth trends in order to prepare for supplying and balancing future additional demand for gas and electrical power and telephone and cable television service.

I. Transportation Systems Management

Transportation Systems Management (TSM) is a series of measures designed to reduce the number or length of vehicle trips, and to change the time of day of some trips to reduce peak commute periods. TSM encourages wider use of transit, vanpools, carpools, bicycles, and other alternatives to the single-occupant vehicle. Mandatory TSM measures may reduce peak-period traffic by 5 to 10 per cent. TSM studies are routinely conducted as a part of local traffic and parking management programs, and by the Kings County Area Public Transit Authority (KCAPTA) to assess Kings Area Rural Transit (KART) bus system performance.

Despite the success that local agencies have had with these efforts, Kings County does not have a formal, coordinated, regional TSM planning program. However, the RTP includes a chapter addressing TSM, and KCRPA coordinates TSM activities for the Kings County region. The formal TSM function should be coordinated by KCRPA, and the implementation of the Circulation Element should be consistent with the RTP.

J. Transportation Issues

"Tule fog" imposes severe transportation safety problems in fall and winter. According to studies conducted between 1960 and 1982 by the Lemoore Naval Air Station, there are an average of 94 foggy days per year where visibility is one-half mile or less.

Heavy peak-period roadway congestion is lighter in the unincorporated rural areas of Kings County than in more urban locations (see Appendix 5, Table 14, for information on travel time to work). For example, a 1990 traffic count in a sparsely settled rural area along Houston Avenue, just west of the Tulare County line, recorded 2,839 vehicles per day. In contrast, a count taken during the same period in the Hanford urban area, along 11th Avenue north of 6th Street, counted 15,781 vehicles per day.

Because the vast majority of all travel in Kings County occurs by private vehicle, local road maintenance programs emphasize reconstruction of deteriorated major arterials. This is not expected to change in the foreseeable future.

Some residents commute to jobs outside Kings County. The number of these commuters is likely to increase because of lower housing costs in Kings County than in Fresno and Tulare County job markets.

III. PROJECTED TRANSPORTATION CONDITIONS IN THE YEAR 2000

A. Volume Versus Capacity on Significant Routes

Two factors influence an increase in traffic volume: population growth, which results in increased numbers of vehicles; and land use, which determines where the increase will occur. Either factor may cause a roadway segment to reach or exceed a desirable level of service.

No regionally significant routes in Kings County are expected to exceed their capacities by the year 2000 (see Appendix 5, Table 15, for inter-county traffic projections). Interstate 5 between State Route 41 and the Fresno County line is expected to have the highest increase, due to the statewide importance of I-5 for through-county travel and the significance of Route 41 for agricultural commodity transport, commuter traffic, and recreational trips. It is projected that this segment of I-5 will reach 80% of capacity by the year 2000.

State routes in Kings County are expected to carry high rates of increased non-local traffic during the 10-year planning period. These routes are not expected to reach their capacities until approximately 2010.

Likewise, other county roadways are expected to reach their capacities in about 2010. Therefore, maintaining but not widening the roads should be adequate for the present. The State expects to widen the state highways shown in the Regional Transportation Plan (RTP) in the unspecified future when their capacities have been exceeded and as funding is available.

Project-specific traffic studies will be required for development projects in order to evaluate their expected effect on circulation. While it is not projected that any new regional roadways will be needed in the foreseeable future, developers will be required to mitigate any impact on the existing circulation system. This can be accomplished by either lowering traffic volume through the installation of transit-related facilities such as bus stops, or increasing roadway capacity by dedicating future right-of-way, creating a parking lane, or improving signalization or channelization, for example.

A new road is planned to serve a solid waste disposal site in the Kettleman Hills.

For more information on local long-term roadway planning see the RTP.

B. Transportation-Related Air Quality Issues

The San Joaquin Valley air basin is naturally susceptible to manmade poor air quality, and severe air pollution exists in some areas. Growth in transportation systems needs to be offset by either vehicle improvements or implementation of Transportation Control Measures (TCM's) in order to improve air quality.

The California Clean Air Act mandates no future net increase in vehicle emissions. To implement the Clean Air Act, it will be necessary for local government to require extensive use of TCM's such as alternate fuels, reduction in vehicle miles traveled, and increase in persons per vehicle through pooling.

The public may perceive new TCM's such as vanpooling to be inconvenient, and intensive public education measures may be necessary to assure their acceptance.

For further information about TCM's refer to the Resource Conservation Element, "Air Resources" section; or the RTP.

GOAL 29: Provide a countywide street and road system which is consistent with land use needs.

Objective 29.1: Design circulation systems that provide access to employment, commerce and markets, and recreational and residential areas of the county; promote safety; and minimize traffic congestion and air pollution.

Policy 29a: Ensure that road improvements are coordinated with land use and circulation policies of the County and city general plans and the Regional Transportation Plan.

Policy 29b: Designate 13th Avenue from Lacey Boulevard to State Highway 198 as an Arterial. Realign 13th Avenue to improve circulation and land use patterns at the 13th/198 interchange.

Policy 29c: Synchronize traffic control devices to control the flow of traffic, minimize delays, and reduce adverse air quality effects.

Policy 29d: Assure that new parcels of land have frontage on, or access to, a public road.

Policy 29e: Roads which are intended to serve more than fifty dwelling units, or to serve commercial or industrial uses which generate more than 350 trips per day, are considered collectors and are to be designed and constructed as such.

Policy 29f: Streets in industrial and commercial zones are to be designed to accommodate the needs of truck and non-truck traffic with as little conflict as possible.

Policy 29g: Preserve future road right-of-way through the adoption and implementation of precise plan lines where necessary.

Policy 29h: The goals, objectives, policies, and siting criteria of the Kings County Hazardous Waste Management Plan as they pertain to hazardous waste transportation are incorporated herein by reference.

Objective 29.2: Approve development only when there are adequate circulation facilities to serve it, or the installation of new facilities to handle increased demand is made a condition of approval.

Policy 29i: Review proposed circulation systems to ensure there will be no unmitigated adverse effects.

Policy 29j: Require all developers to pay the cost of mitigating the impacts of their developments on existing roads and highways; and to pay the cost of new roads necessary to serve their developments, and to provide the mechanism for assuring the continued maintenance of such roads.

Policy 29k: In addition to the requirements of Policy 29j above, require major developments to provide traffic distribution models in which the traffic they expect to generate is quantified and added to the projected increase due to population growth. The Caltrans publication Guide for Traffic Impact Studies is incorporated herein by reference; the standards shown therein shall be the minimum acceptable traffic distribution model, although other models may be used.

Policy 29l: The minimum level of service (LOS) for intersections in Kings County shall be "D." For State highways other operational LOS standards will be considered. For more specific information about level of service see the Glossary or the RTP. As the RTP is updated, any significant findings that may affect this Circulation Element will be revisited within this document and updated as appropriate, including mitigation.

Policy 29m: Where precise plan lines or ultimate right of way lines exist, require their dedication as a condition of development approval.

IV. IMPLEMENTATION

Circulation Program 1:

When a proposed major development will significantly impact the State highway network, require a Traffic Impact Study acceptable to Caltrans and following the methodology outlined in the Caltrans document "A Guide for Traffic Impact Studies," incorporated into this General Plan by reference.

Circulation Program 2:

Explore the feasibility of abandoning roads, or reducing the level of their maintenance, in areas of little or no resident population, allowing their reversion to private roads or cultivated land.

Circulation Program 3:

Designate 13th Avenue from Lacey Boulevard to State Highway 198 as an Arterial. Realign 13th Avenue to improve circulation and land use patterns at the 13th/198 interchange.

Circulation Program 4:

After adoption of the General Plan, the County will conduct a specific study with the Armona Community Services District to address the area bounded by 13th Avenue, Hanford-Armona Road, Oak Avenue, and the SPRR tracks. This area has been designated for industrial and commercial uses, is a community entrance to Armona, and has a potential for development for highway commercial uses associated with the SR 198 and Hanford-Armona Road interchange. The area needs a detailed study of traffic circulation to determine how best to serve potential commercial and industrial uses at this location.