IV. TRANSPORTATION ELEMENT



OVERVIEW

The Transportation Element, one of the nine elements of the Orange County General Plan contains County policies on the development of transportation facilities necessary to accommodate the County's orderly growth. The Transportation Element identifies goals, objectives, policies, and implementation programs that affect the transportation system and provide guidance for future transportation planning efforts within the unincorporated areas.

The Transportation Element contains three components:

CA/KB

- Circulation Plan
- Bikeways Plan
- Scenic Highways Plan

All three components are closely related and play a vital role in the County's efforts to achieve a balanced transportation system through integration of multi-modal transportation facilities.

Each component identifies and briefly describes transportation goals, objectives, policies, and implementation program that provide direction for transportation planning within the unincorporated territory of the County.

PURPOSE OF THE ELEMENT

The Transportation Element sets forth a comprehensive strategy for planning, developing, and maintaining a surface transportation system to serve existing and planned land uses in the unincorporated areas of Orange County. The primary goal, consistent with the State mandate, was originally adopted by the Orange County Board of Supervisors on May 10, 1972. On June 9, 1982, this goal was reaffirmed as follows:

To develop an integrated transportation system consisting of a blend of transportation modes capable of meeting the need to move people and goods by private and public means with maximum efficiency, convenience, economy, safety, and comfort and a system that is consistent with other goals and values of the County and the region.

RELATIONSHIP TO OTHER ELEMENTS

The Transportation Element has the same horizon year and growth assumptions as other elements so as to ensure internal consistency.

The Transportation Element is one part of a compendium of nine General Plan elements

that address projections for the next 20 to 30 year time frame. The Transportation Element provides a basis for transportationrelated decisions, and complements the other General Plan elements. Specifically, it clarifies and addresses transportation issues raised in the other General Plan elements and offers guidance toward solutions.

The Transportation Element, as an expression of County transportation policy, achieves consistency with other General Plan elements through the use of common demographic assumptions. These demographic projections have been adopted by the Board of Supervisors in the Orange County Projections (OCP) 2000, a single data reference used for County policymaking and planning. All long-range planning and budgeting activities by the County of Orange and the Orange County Transportation Authority (OCTA) are based on these projections.

This Element is also responsive to the Growth Management Plan Element policies, Air Quality Management District (AQMD) objectives, and regional planning objectives of the Southern California Association of Governments (SCAG) and the OCTA.

COMPONENT ONE: CIRCULATION PLAN

Overview



The Circulation Plan Component establishes a system of surface roadways within the unincorporated areas of the County. This system is depicted on the Circulation Plan (Figure IV-1) and is a key factor in the definition of the County's transportation policy. The County's goal is to coordinate with the cities and OCTA as the regional transportation planning agency (RTPA) to develop a consistent intra-community arterial highway system that will effectively serve existing and future land uses within its jurisdiction.

Background

The Circulation Plan (previously inclusive in the Master Plan of Arterial Highways) was first adopted by the County in 1956. It was the cornerstone of the first County Circulation Plan initially adopted on August 6, 1974, by the Board of Supervisors (Resolution No. 74-1151), and was subsequently amended in December 1978 (Resolution No. 78-1824). The Circulation Plan is amended on a regular basis, generally in response to land use policy changes in the unincorporated areas of the County. These policy changes are reviewed for impacts on the arterial highway system in order to maintain a balance between the land use and transportation plans.

The Circulation Plan map depicts a network of major thoroughfares comprising freeways, transportation corridors, and five main arterial highway classifications: principal, major, primary, secondary, and commuter. In addition, one other arterial highway sub-category (Smartstreets) is identified in this Element.

The principal, major and primary arterial classifications and Smartstreets predominantly serve regional travel. Secondary and commuter arterial highways function as collectors funneling traffic from local streets to primary, major, and principal arterials. The overall network of thoroughfares is designed to accommodate existing and projected traffic.

The Circulation Plan classifications are a statement of policy intended to reserve adequate right-of-way for future highway improvements within the unincorporated areas of the County. Design guidelines and criteria are briefly described for each arterial classification.

Purpose

The Circulation Plan serves as the legally required Circulation Element for the unincorporated areas under California Government Code Section 65302(b), and is one of the three components of the Transportation Element of Orange County's General Plan.

The main purpose of the Circulation Plan is to describe an arterial highway system that effectively supports General Plan policies and serves existing and adopted future land uses in the unincorporated areas of Orange County. Extensive coordination with the land use planning and implementation processes carried on by the County of Orange and adjacent jurisdictions is essential for the Circulation Plan to provide its intended service to County motorists.

CLASSIFICATION

Arterial highways are shown on the Circulation Plan map in the following two

forms:

- Established alignments depicted by solid lines on the map, including existing highways where the centerline is the precise centerline, and future highways where the Board of Supervisors, a City Council, or the subdivision process has established a precise alignment; and
- Conceptually proposed alignments, defined by intermittent lines indicating future facilities whose precise alignment and category have not yet been determined.

Arterial highways have been divided into classifications to address travel demand needs in terms of capacity and number of through lanes to aid in setting consistent design standards for unincorporated territory. These and other classifications are contained in the County's Highway Design Manual. These standards are used to ensure that arterial highway facilities are designed with public safety and adequate carrying capacity in mind. In addition, special intersection approaches for principal, major, primary, and secondary arterials have been identified to help address congestion problems.

A concept of the "Maximum Feasible Intersection" (MFI) has been introduced to establish a guideline for intersection enhancement that is compatible with travel Insert Figure IV-1 (Circulation Plan Map)

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demand requirements and operation capabilities of the highway system. Traffic studies, for example, can also be used as a mechanism to identify intersections that may require enhancement above the standard plan specified for that facility. Therefore, notwithstanding typical intersection geometrics as identified in the County Highway Design Manual, additional rightof-way may be required to implement the MFI. The MFI for each classification is defined in the classification description.

Transportation Corridor

A transportation corridor is a multi-modal facility of six to ten lanes, depending on projected traffic volumes, with a median of sufficient width to accommodate future options such as fixed rail or high occupancy vehicles. The corridors provide for efficient movement of vehicular traffic where projected volumes exceed major arterial highway capacities. These routes have been designed to Caltrans freeway and expressway standards and have been incorporated into that system.

As of 1999, the San Joaquin Hills (SR-73) and Eastern (SR-133, the northern segments of SR-241, and SR-261) Transportation Corridors have been completed. In addition, the Foothill Transportation Corridor (SR-241) between SR-133 and Oso Parkway is complete. The southern portion of the Foothill Transportation Corridor south of Oso Parkway is scheduled for completion in 2008.

These corridors are approved in the Surface Transportation and Uniform Relocation Assistance Act passed by Congress in 1987 as Federal toll road pilot projects. Additionally, these new corridors are authorized by State legislation as the State's first toll roads and will remain as pilot "toll" facilities until the bonding is paid. These corridors are to be operated by demand management to ensure a high level of operation, and tolls will be the implementation mechanism to maintain free

flow.

Final alignment and environmental studies will define the ultimate route of the proposed southern portion of the Foothill Corridor. These studies will identify the necessary rights-of-way based on projected traffic volumes and the various transportation modes to be accommodated.

Principal Arterial

A principal arterial is an eight-lane divided roadway, with a typical right-of-way width of 144 feet and a roadway width of 126 feet, curb to curb, including a 14-foot median (Figure IV-2). A principal arterial is designed to accommodate approximately 40,000 to 60,000 vehicle trips per day at Level of Service 'C'.

Maximum Feasible Intersection (MFI)

The standard MFI for a principal arterial shall consist of four through lanes, two left-turn lanes and a free right-turn lane. An optional right-turn lane, in lieu of a free right, may be allowed if warranted by traffic demand. Alternative geometrics, such as a grade separation or other special treatment, may be considered if they are cost effective and operationally feasible. In review and approval of subdivisions, the objective shall be to reserve adequate right-of-way to permit future implementation of the MFI as warranted.

Major Arterial

A major arterial highway is a six-lane divided roadway, with a typical right-of-way width of 120 feet and a roadway width from curb to curb, including a 14 foot median, of 102 feet (Figure IV-3). A major is designed to accommodate approximately 30,000 to 45,000 vehicle trips per day at Level of Service 'C'. Major arterials carry a large volume of regional through traffic not handled by the freeway system.

MFI

The standard MFI for a major arterial shall consist of three through lanes, two left turn lanes and a free right turn lane. An optional right-turn lane, in lieu of a free right, may be allowed if warranted by traffic demand. Alternative geometrics such as a grade separation or other special treatment may be considered if they are cost effective and operationally feasible. In review and approval of subdivisions, the objective shall be to reserve adequate right-ofway to permit future implementation of the MFI as warranted.

Primary Arterial

A primary arterial highway is a four lane divided roadway, with a typical right-of-way width of 100 feet and a roadway width from curb to curb, including a 14 foot median, of

PRINCIPAL - 144'

(8 LANES DIVIDED)

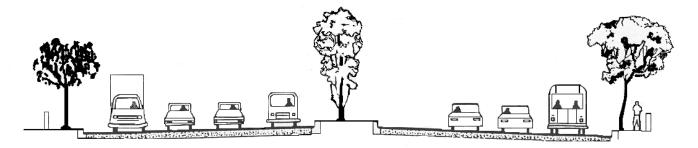
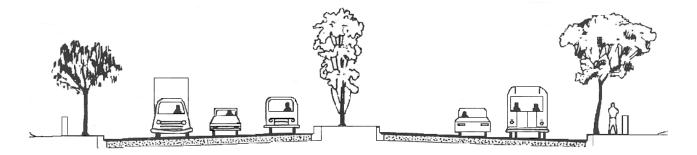


Figure IV-2

MAJOR - 120'

(6 LANES, DIVIDED)





84 feet (Figure IV-4). A primary is designed to accommodate approximately 20,000 to 30,000 vehicle trips per day at Level of Service 'C'. A primary arterial's function is similar to that of a major arterial. The principal difference is capacity.

MFI

The standard MFI for a primary arterial shall consist of two through lanes, two left turn lanes and a free right turn lane. An optional right turn lane, in lieu of a free right, may be allowed if warranted by traffic demand. Alternative geometrics such as a grade separation or other special treatment may be considered if they are cost effective and operationally feasible. In review and approval of subdivisions, the objective shall be to reserve adequate right-ofway to permit future implementation of the MFI as warranted.

Secondary Arterial

A secondary arterial highway is a four-lane undivided (no median) roadway, with a typical right-of-way width of 80 feet, and a roadway width from curb to curb of 64 feet (Figure IV-5). A secondary arterial is designed to accommodate approximately 10,000 to 20,000 vehicle trips per day at Level of Service 'C'. A secondary arterial serves as a collector, distributing traffic between local streets and principal, major and primary arterials. Although some secondary arterials serve as through routes, most provide more direct access to surrounding land uses than principal, major or primary arterials.

MFI

The standard MFI for a secondary arterial shall consist of two through lanes, one left turn lane and a free right turn lane. An optional right turn lane, in lieu of a free right, may be allowed if warranted by traffic demand. Alternative geometrics such as a grade separation or other special treatment may be considered if they are cost effective and operationally feasible. In review and approval of subdivisions, the objective shall be to reserve adequate right-of-way to permit future implementation of the MFI as warranted.

Collector Arterial

A collector arterial highway is a two-lane undivided, unrestricted access roadway, with a typical right-of-way width of 56 feet and a roadway width from curb to curb of 40 feet (Figure IV-6). A collector is provided to accommodate up to approximately 10,000 vehicle trips per day at Level of Service 'C'. By strict definition, a collector facility is not an arterial highway. It functions primarily as a commuter facility. It differs from a local collector street in its ability to handle through traffic movements between two arterials. It is shown on the Circulation Plan because it provides network continuity, or may serve through traffic demand where projected volumes do not warrant a secondary.

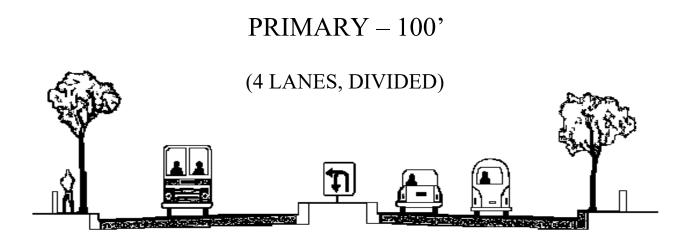
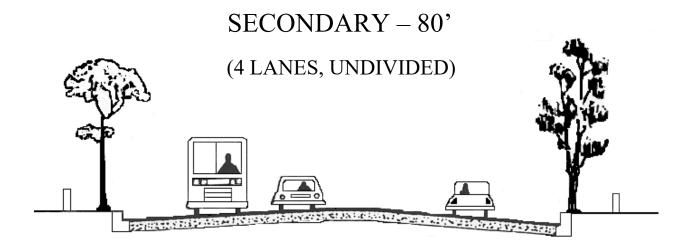


Figure IV-4





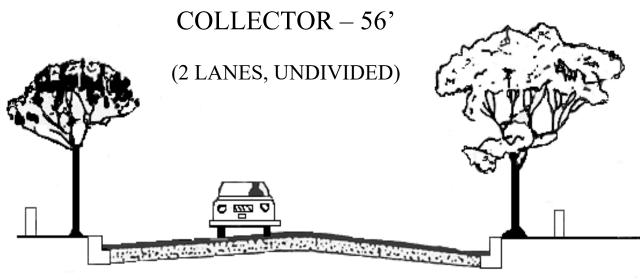


Figure IV-6

<u>Smartstreet</u>

In addition to the arterial classifications, the Circulation Plan recognizes Smartstreet arterials with an enhanced traffic-carrying capacity. The augmentation in capacity may be achieved by a variety of measures:

- Addition of through or turn lanes at intersections;
- Preferential traffic signal timing and synchronization;
- Removal of on-street parking;
- Intersection grade separations;
- Grade separated turning movements;
- Access limitation right turns only, or no access (streets and/or driveways);
- Access consolidation;
- Frontage roads;
- Pedestrian grade separations; and
- Other elements which may be found

useful.

The intent of these measures is to minimize conflicts with cross traffic. These measures improve traffic carrying capacity and facilitate improved traffic flow along an arterial. Hence, the terms "High Flow Arterial" or "Continuous Flow Boulevard" can also be used to describe a "Smartstreet." This designation is intended to represent a roadway of a major or a principal arterial classification.

Intersection Condition

Intersection performance is the most critical factor in determining traffic conditions on arterials. Intersection condition should be considered in the planning process to improve traffic flow conditions in the arterial highway system.

Reclassification

A reduction in classification of a roadway from one side of an intersection to the other is made by transitioning the higher classification to the lower classification over a specified section beyond the intersection. Specifications for the required transition length are contained in the CALTRANS Traffic Manual (current edition).

Other Considerations

The typical sections depicted in the Circulation Plan legend, and in Figures IV-2 through IV-6, are simplified diagrams based upon adopted Orange County Standard Plans. Notwithstanding these arterial highway specifications, additional right-ofway may be required for any classification when an arterial highway coincides with an adopted route for an additional public facility (e.g., transit facilities, bikeways, or riding and hiking trails) or a scenic highway. The "right-of-way reserve" designation on the Circulation Plan indicates that origindestination needs have been projected in the area, but ultimate carrying capacity requirements have not been determined. This status is applied to facilities where the classification is uncertain due to potentially significant land use changes or network continuity needs.

A route designated "right-of-way reserve" requires design and right-of-way sufficient to construct a major arterial highway. Any refinements to the underlying classification would occur in conjunction with the land use planning process. The "right-of-way reserve" designation allows right-of-way flexibility to meet potential changes in the Land Use Element.

GOALS, OBJECTIVES AND POLICIES: Circulation Plan

Goals, objectives and policies are intended to provide direction for transportation implementation in the County's unincorporated areas.

A goal is a general expression of values and is abstract in nature. Goals look to an ultimate future of approximately twenty years. An objective is an intermediate step toward attaining a goal and is relatively more specific. A policy is a specific statement that guides decision-making.

<u>Goal 1</u>

Provide a circulation plan that supports land use policies of the County.

- Objectives
 - 1.1 Establish a circulation plan that accommodates the General Plan Land Use Element of the County.
 - 1.2 Establish a circulation plan designed to serve as part of a balanced transportation system (auto, rail, transit, bus, truck, bicycle, pedestrian, etc.).

- 1.3 Develop a program to monitor arterial highway conditions at intersections within the unincorporated areas to ensure that an acceptable Level of Service (LOS) is maintained.
- 1.4 Prepare circulation monitoring reports to evaluate the cumulative impacts of major land use developments within unincorporated County areas.
- 1.5 Develop a circulation phasing plan to ensure that adequate roadway capacity is available on the circulation network to accommodate increments of new development.
- 1.6 Develop a "7 Year Capital Improvement Program" of circulation improvements pursuant to Measure M and the Congestion Management Program (CMP).
- Policies
 - 1.1 Implement the circulation plan in a manner that supports the implementation of adopted overall land use policies and which is consistent with financing capabilities.
 - 1.2 Apply conditions to land use development projects to ensure that the direct and cumulative impacts of these projects are mitigated consistent with

established level of service policies.

<u>Goal 2</u>

Provide a circulation (arterial highway) plan that is integrated with that of adjacent jurisdictions.

• Objectives

2.1 Plan, develop and implement a circulation system in the unincorporated areas, which is consistent with the Master Plan of Arterial Highways and circulation plans of adjacent jurisdictions.

Policies

2.1 Coordinate with the following transportation planning agencies: Caltrans (State), Orange County Transportation Authority (OCTA), the Transportation Corridor Agencies (County corridor planning and construction) and Orange County cities on various studies relating to freeway, tollway and transportation corridor planning, construction, and improvement in order to facilitate the planning and implementation of an integrated circulation system.

- 2.2 Coordinate Circulation Plan planning with OCTA for the purpose of promoting existing and future transit system programs.
- 2.3 Apply conditions to development projects to ensure compliance with OCTA's transit goals and policies.
- 2.4 Apply conditions to development projects to ensure implementation of the Circulation Plan as applicable.

Goal 3

Provide a circulation plan that facilitates the safe, convenient and efficient movement of people and goods throughout unincorporated areas of the County.

• Objectives

- 3.1 Establish minimum roadway specifications necessary to ensure safe and efficient movement of vehicles and other modes of transportation.
- 3.2 Provide for safe and efficient movement of traffic on smartstreets, 8-lane, 6-lane, 4lane and 2-lane arterials so as to provide access to the regional circulation network.

• Policies

3.1 Maintain acceptable levels of

service on arterial highways pursuant to the Growth Management Element of the General Plan.

- 3.2 Ensure that all intersections within the unincorporated portion of Orange County maintain a peak hour level of service "D", according to the County Growth Management Plan Transportation Implementation Manual.
- 3.3 Evaluate all proposed land use phasing plans for major development projects to ensure maintenance of acceptable Levels of Service on arterial highway links and intersections.

<u>Goal 4</u>

Ensure that the circulation plan conforms to applicable environmental quality standards.

- Objectives
 - 4.1 Ensure that development of the circulation plan is sensitive to the environmental character of communities and neighborhoods throughout the unincorporated areas of the County.
 - 4.2 Plan and develop, through design and alignment studies, roads in a manner which minimizes impacts associated with crossing of flood plains or drainage courses; known earthquake fault zones,



wildlife, unique geological, and resource conservation and open space areas and currently designated agricultural areas.

- 4.3 Maintain a circulation system that is compatible with the physical environment, to the extent practical, and allows for the preservation of the natural resources of the County.
- Policies
 - 4.1 Implement the Circulation Plan in a manner consistent with Federal, State and local environmental quality standards and regulations.

<u>Goal 5</u>

Manage peak hour traffic congestion to achieve an acceptable level of service (LOS) on existing and future circulation plan facilities in the unincorporated areas of the County.

• Objectives

- 5.1 Implement the circulation system in a manner which achieves the established Traffic Level of Service Policy pursuant to the applicable Growth Management Plan (GMP) Element. The 2020 Updated Transportation Implementation Manual contains traffic LOS policies applicable to County unincorporated areas.
- 5.2 Develop traffic forecasts for County unincorporated areas that are consistent with those of OCTA.
- 5.3 Reduce Vehicle Miles Traveled in an effort to reduce greenhouse gas (GHG), pursuant to SB 743.
 See "Guidelines for Evaluating Vehicle Miles Traveled Under CEQA" and "2020 Updated Transportation Implementation

Manual".

• Policies

- 5.1 Establish "traffic impact fees" for application to county development projects with measurable traffic impacts, as defined in the Growth Management Plan Element of the General Plan. These fees may serve as local matching funds for Orange County Measure 'M', state and federal highway funding programs.
- 5.2 Use uniform analytical methods, in conformance with the Growth Management Plan, Measure M, and the Congestion Management Program (CMP), to aid in transportation planning and impact evaluation and support the development and utilization of sub-area models to address detailed transportation issues.
- 5.3 Use adopted Orange County forecasts for all projections of future year population, housing, employment, and other socioeconomic data to assure consistency among other General Plan Elements.
- 5.4 Develop traffic forecasts for County unincorporated areas utilizing the approved Orange County forecast.

- Require as conditions of approval 5.5 that the necessary improvements to arterial highway facilities, to which a project contributes measurable traffic, be constructed and completed within a specified time period or ADT/peak hour milestone to attain a Level of Service "D" at the intersections under the sole control of the County. LOS 'C' shall be maintained on Santiago Canyon Road links until such time as uninterrupted segments of the roadway (i.e., no major intersections) are reduced to less than three miles. For a detailed discussion of LOS policies, refer to the 2020 Updated Transportation Implementation Manual.
- 5.6 Establish comprehensive traffic improvement programs to ensure that circulation improvements are built, as a condition of approval, to accommodate each phase of development. For a more detailed discussion regarding traffic improvement programs, refer to the Growth Management Plan Element of the General Plan.
- 5.7 Require, as a condition of approval, that a development mitigation program, development agreement or developer fee program be adopted to ensure that development is paying its

fair share of the costs associated with that development pursuant to Policy 5.1.

5.8 Participate in Growth Management Program (GMP) forums to develop and secure funding to implement circulation improvements necessary to achieve established LOS standards.

<u>Goal 6</u>

Implement transportation demand management (TDM) and transportation systems management (TSM) strategies which reduce peak hour vehicle travel demand and minimize single-occupant vehicles and trip length on the unincorporated County roadway system.

- Objectives
 - 6.1 Develop and promote a transportation system and strategies that are consistent with Rule 2202 of the South Coast Air Quality Management District (SCAQMD) and the County Transportation Demand Management (TDM) Ordinance (Ordinance No. 3820).
 - 6.2 Encourage development of Park and Ride facilities in County unincorporated areas to integrate multi-modal transportation facilities and promote ridesharing. These activities

should be done in coordination with OCTA and the development community.

- 6.3 Maximize the efficient movement of traffic through congested areas by using approved Orange County signal coordination methods.
- 6.4 Implement arterial highway intersections to their Maximum Feasible Intersection (MFI) capabilities when LOS deficiencies are noted.
- 6.5 Enhance the efficient movement of vehicles through the circulation system by providing bike lanes and restricting parking on arterials whenever feasible.
- 6.6 Enhance the continuous movement of vehicles along bus routes by providing bus turnouts.
- 6.7 Require developers of more than 100 dwelling units, or 25,000 square feet of non-residential uses to: a) demonstrate consistency between the local transportation facilities, services, and programs, and the regional transportation plan¹; and b) submit, as part of their development proposal (non-residential), a Transportation System Management/Transportation Demand

¹Current regional transportation plan is that that is developed by SCAG.

Management (TSM/TDM) plan which includes strategies, implementation programs and an annual monitoring mechanism to ensure a reduction of singleoccupant automobile travel associated with development.

- Policies
 - 6.1 Apply conditions to development projects to ensure compliance with applicable TDM/TSM regulations and the County's TDM Ordinance.
- 6.2 Encourage new developments to support means of enhanced pedestrian and bikeway use by providing linkages between land uses such as residential areas, parks, schools, businesses and commercial areas which typically generate a large number of peak hour trips.
 - 6.3 Work with adjacent jurisdictions to cooperatively implement needed measures that would provide high occupancy vehicle lanes, emergency lanes or additional travel lanes, necessary channelization, and/or bicycle lanes whenever warranted and feasible.
 - 6.4 Assist businesses in County unincorporated areas in the implementation of the policies of the County Transportation Demand Management (TDM) Ordinance.

- 6.5 Require employment centers

 (e.g. shopping malls, business
 parks, etc) with total employment
 of more than 100 to form
 Transportation Management
 Associations (TMA), or to be
 affiliated with an established
 TMA, to coordinate ridesharing
 for the purpose of reducing
 single-occupant vehicle trips to
 their site.
- 6.6 Encourage commercial developments to provide park and ride lots if practical and feasible.

IMPLEMENTATION PROGRAMS: Circulation Plan

Implementation programs provide a means of achieving General Plan Transportation Element goals, objectives and policies. The implementation programs have been adopted to assist in implementing the County Circulation Plan.

1. SUBDIVISION CONDITIONS OF APPROVAL

Subdivision map applicants are required to comply with certain conditions prior to approval of their maps. Generally, standard conditions of approval, from the OC Public Works manual of "Standard Conditions of Approval", are applied to projects to ensure that developments meet county standards and that project impacts are mitigated. The intent of these conditions is to standardize and facilitate the application of requirements to development projects. Additional non-standard conditions should be applied to developments when appropriate.

2. ASSESSMENT DISTRICT

Assessment Districts are a means of financing the design and construction, through bond sales, of infrastructure needed to support new development. Periodic assessments, paid by property owners within the infrastructure area of benefit, are used to repay the bonds. Assessment Districts are administered by the County.

3. MAJOR THOROUGHFARE AND BRIDGE FEE PROGRAMS

There are ten major thoroughfare and bridge fee programs which include the following:

a) <u>Foothill Circulation Phasing Plan</u> (FCPP)

The FCPP was adopted by the Board of Supervisors on October 14, 1987 and is administered by OC Public Works (OCPW). As of July 1, 1995 approximately 98 percent of the roadways planned for FCPP funding were completed and 2 percent were in the final design and right of way acquisition phase based on lane-miles of roadway.

b) <u>Coastal Area Road Improvements</u> and Traffic Signals (CARITS)

The CARITS is a financing plan for the construction and improvement of roadways and intersections in the south county coastal area. It includes construction of 13 roadway sections (31 lane-miles), improvements to 6 intersections and installation of traffic signals at 29 locations. CARITS was adopted by the Board of Supervisors on December 14, 1988 and is administered by OCPW.

c) <u>El Toro Road Fee Program</u>

The El Toro Road Fee Program was adopted in October 1983 and is administered by OCPW. This financing program is for upgrading El Toro Road between Trabuco Road and Live Oak Canyon Road to its 1982 Master Plan of Arterial Highways designation as a primary arterial.

d) <u>Moulton Parkway/Laguna Niguel</u> <u>Fee Program</u>

The Moulton Parkway/Laguna Niguel Fee Program was adopted by the Board of Supervisors on January 7, 1987 and is administered by OCPW. The program has constructed arterial highway improvements in the Laguna Hills, and Laguna Niguel and unincorporated areas.

e) <u>Plano Trabuco Area Road Fee</u> <u>Program</u>

The Plano Trabuco Area Road Fee Program was adopted in October 1983 by the Board of Supervisors and is administered by OCPW. The fee program was established to provide funding for the extension of Alicia Parkway and Santa Margarita Parkway across Trabuco Creek to Plano Trabuco Road, and an expansion of the Santa Margarita Parkway bridge over Trabuco Creek.

f) <u>Santiago Canyon Road Fee</u> <u>Program</u>

The Santiago Canyon Road Fee Program was adopted by the Board of Supervisors on August 10, 1990 and is administered by OCPW. The fee program was established to provide funds for widening Santiago Canyon Road to a primary arterial highway from Chapman Avenue to Live Oak Canyon Road.

g) <u>Avenida La Pata Supplementary</u> <u>Road Fee Program</u>

The Avenida La Pata Supplementary Road Fee Program was adopted by the Board of Supervisors on November 12, 1991 and is administered by OCPW. The purpose of the fee program is to construct Avenida La Pata from Ortega Highway to the City of San Clemente city limits.

h) <u>San Clemente Regional</u> <u>Circulation Financing and</u> <u>Phasing Program (RCFPP)</u> The RCFPP was adopted by the City of San Clemente and subsequently by the Board of Supervisors on November 12, 1991. Administration of the program is by the city (for

program is by the city (for incorporated areas covered by the RCFPP) in coordination with OCPW (for unincorporated RCFPP areas). The program is a condition of approval for the Rolling Hills and Talega Valley Planned Communities and provides a mechanism for a phased program, tied to traffic level of service (LOS) and development, to construct arterial highway and I-5 interchange improvements.

4. ORANGE COUNTY COMBINED TRANSPORTATION FUNDING PROGRAMS (OCCTFP)

OCCTFP consists of a number of funding programs for transportation projects. OCCTFP programs are administered by OCTA. The Combined Transportation Funding Programs Manual provides guidelines and procedures necessary for Orange County agencies to apply for local funding sources. Programs contained in the manual are:

a) Arterial Highways Rehabilitation

<u>Program</u>

The Arterial Highways Rehabilitation Program (AHRP) has been developed to deal with the pavement condition in Orange County. Specifically, the AHRP is designed to fund pavement rehabilitation projects on the Master Plan of Arterial Highways (MPAH) facilities throughout Orange County.

The Arterial Highways Rehabilitation Program is administered by OCTA and replaces the former Arterial Highways Financing Program.

All jurisdictions in Orange County whose Circulation Plan is consistent with the MPAH are eligible to participate in the program. Agencies should contact OCTA for details.

b) <u>Measure M Streets and Roads</u> <u>Programs</u>

The Measure 'M' Growth Management Program requires a locally collected and administered traffic mitigation fee to guarantee that new development pays its fair share toward dealing with traffic generated by the new development. This requirement is addressed in Policies 1.2 and 5.1 of this Component and Policy 4 of the Growth Management Element of County General Plan. These policies provide assurances that the impacts of a development are adequately mitigated by the developer pursuant to the Growth Management provisions of Measure M requirement for a "minimally acceptable base fee level for areas under the County jurisdiction".

5. COMPUTER MODELING

The countywide travel demand forecast model is known as the Orange County Transportation Analysis Model (OCTAM) and is used to forecast future travel demand on the County Master Plan of Arterial Highways (MPAH) network. The forecasts are used to plan and design roadways and transportation facilities needed to support land use development in the County.

6. ROAD IMPROVEMENT MONITORING

a) Monitoring Report

This is a detailed analysis of traffic conditions at intersections impacted by development in unincorporated areas of the County. The analysis is done for horizons of three and five years. The report also contains specific mitigations that are necessary to ensure LOS consistent with standards specified in the Growth Management Plan Element. In addition to other applicable

requirements of the General Plan, the County shall prepare, or cause to be prepared, an annual monitoring report regarding the average number of daily vehicle trips generated by the land uses at Orange County's Central Park shown on Map III-1. The County shall approve land uses within Orange County's Central Park consistent with the General Plan in a manner to insure that the average number of daily vehicle trips generated by the authorized land uses within Orange County's Central Park at build out shown on Map III-1 do not exceed ninety-six thousand (96,000) vehicle trips per day on average.

b) <u>Development Agreement</u> <u>Implementation Program</u>

> The County has entered into a number of Development Agreements with major county developers in the unincorporated areas of the County. Each contains specific infrastructure improvements, including roadways, to be completed by the developer by certain development milestones.

> The intent of these agreements is to provide a mechanism for phasing new development in conjunction with the construction of infrastructure needed to serve that development. A Development

Agreement Implementation Program has been established to define and clarify the benefits obtained through these agreements. This program is administered by OCPW.

- c) Facility Implementation Program The Facility Implementation Program (FIP) is based on the 11 "Measure M" GMAs and contains FIPs for only those GMAs with a large amount of unincorporated areas. The FIPs outline infrastructure improvements and phasing of those improvements necessary to support projected development in the unincorporated areas.
- 7. TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAMS
 - a) <u>County TDM Ordinance</u>

The County adopted a Transportation Demand Management Ordinance on April 30, 1991 to address the County's strategy to promote transportation demand management.

b) <u>Transportation Management</u> <u>Associations (TMAs)</u>

A TMA is a proactive, non-profit, public benefit organization, may be required through conditions of approval, for the purpose of helping employers, developers, building owners, government agencies and others to collectively establish policies, programs and services to address local transportation problems. TMAs provide a means for the County to achieve trip reduction goals such as those contained in the County's TDM Ordinance (Ordinance No. 3820) and in the SCAQMD's Rule 1501.

Implementation Schedule: Ongoing

Responsible Agency: OCPW

Source of Funds:

- Local Park Trust Fund
- Local Park Maintenance Agency Funds
- Grants
- General Fund
- Special Taxes (subject to two-thirds approval of local voters)

8. CONGESTION MANAGEMENT PROGRAM

Proposition 111 was approved by the State of California voters on June 5, 1990. AB 1791, an element of Prop 111 legislation, requires that each county with an urban area population of 50,000 or more develop and implement a Congestion Management Plan (CMP). In response to AB 1791 Orange County adopted its first CMP in June of 1991. The intent of the CMP is to foster coordination among land use, transportation planning and air quality management. The CMP is administered by OCTA.

9. INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT (ISTEA) OF 1991 & TRANSPORTATION EQUITY ACT (TEA-21)

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and TEA-21 in 1998 established Federal funding for transportation.

TEA-21 preserves the ISTEA philosophy but TEA provides the financial wherewithal lacking in ISTEA. TEA-21 provides 217 billion dollars in spending authorization over the next six years - a 40 percent increase over ISTEA. The Act includes a measure which requires that funds included in the Federal Highway Trust Fund be spent primarily on maintenance and construction of the nation's transportation infrastructure.

OCTA is primarily involved in the programming and selection of projects for TEA-21 Programs.

10. CIRCULATION PLAN AMENDMENT

The County Circulation Plan, as well as the circulation plans for the various cities, is required to be consistent with the Master Plan of Arterial Highways (MPAH), which is administered by

OCTA. Amendments to the County Circulation Plan may require amending the MPAH. The procedure for amending the MPAH is set forth in the OCTA publication entitled "Guidance for Administration of the Orange County Master Plan of Arterial Highways" dated November 1993.

COMPONENT TWO: BIKEWAYS PLAN

Overview

The current Bikeways Plan is excerpted from the initial Master Plan of Countywide Bikeways that was adopted in 1971. It defines a network of local bikeways that interfaces with and complements adjacent local and regional bike routes. The Bikeways Plan supports General Plan policies and covers the unincorporated areas of Orange County.

Bicycle routes provide an alternative transportation mode for all trips, including commuting, shopping, school, and recreation. The Bikeways Plan defines goals, policies, and objectives for planning, design and construction of an integrated system of on-road and paved off-road bicycle facilities in the unincorporated areas of the County. The emphasis is placed on bicycle route that complement other transportation modes (e.g., transit, car-pool, etc.) serving activity centers (e.g., employment, educational, civic, etc.).

The Bikeways Plan also addresses the recreational objectives of bicycling. This is done in concert with other Countywide recreational programs such as regional parks and riding and hiking trails.

The Bikeways Plan Component of the Transportation Element provides the policies and practices that help to define the role of bicycle travel within Orange County's unincorporated areas. Coordination of the Bikeways Plan's development and implementation with OCTA and the various cities of Orange County is an important part of the process.

CLASSIFICATION

The Bikeways Plan exhibit (Figure IV-7) indicates the general location and classification of all officially adopted bikeways in the County unincorporated areas, whether existing or proposed. The Caltrans Highway Design Manual can be referenced for clarification and specific detail on design speeds, grades, signing, striping and other design issues. This document has been modified for adoption by OCPW in the Orange County Highway Design Manual. "The thing about a bicycle is that it's difficult to feel unhappy on one and impossible to feel old."

Sunset Magazine, September 1999



The basis for the design of bikeways in the County's unincorporated areas shall be, in order of precedence, Chapter 1000 of the Orange County Highway Design Manual, followed by Chapter 1000 of the Caltrans Highway Design Manual. Additional information can be found in the County's adopted Standard Plans and the OCTA Commuter Bikeway Strategic Plan (CBSP). Laws pertaining to the use of bicycles and trail facilities can be found in the Vehicle Code of the State of California (CVC). The rights and rules applied to the operation of a bicycle on arterial highways, as shown on the County Circulation Plan (CP), are set forth in the CVC, Division 11, Section 21200 as follows:

> Every person riding a bicycle upon a highway has all of the rights and is subject to all of the provisions applicable to the driver of a vehicle by this division, ...

Following is a description of the characteristics of Class I, II and III

bikeways.

Class I Bikeway (Bicycle Trail)

A Class I bicycle trail is a paved off-road facility which is physically separated from a roadway and designated primarily for the use of bicycles. Crossflows by pedestrians and motorists are to be minimized. (See Figure IV-8.) However, where significant pedestrian traffic can be anticipated on a two-way Class I bikeway, a design standard for combined pedestrian/bicycle traffic is provided in Section 1003.1 (1) of the Orange County Highway Design Manual "Bikeway Planning and Design".

Bicycle trails typically serve corridors not served by streets and highways, or where sufficient right-of-way exists to construct a separate facility parallel to the roadway. They can provide both recreational and commuter opportunities. These facilities can often serve to bridge gaps in the system caused by man-made or natural barriers. They often utilize abandoned railroad rightsof-way, utility easements, flood control channels, parks and similar linear open space corridors.

Class II Bikeway (Bicycle Lane)

A Class II bicycle lane is a facility featuring a striped lane on the paved area of a road for preferential use by bicycles. It is located along the edge of the paved area outside the motor vehicle travel lanes and shall be restricted to parking. (See Figure IV-9.)

Where sufficient pavement width exists, it may be located between a parking lane and the outside motor vehicle travel lane. (See Figure IV-10.)

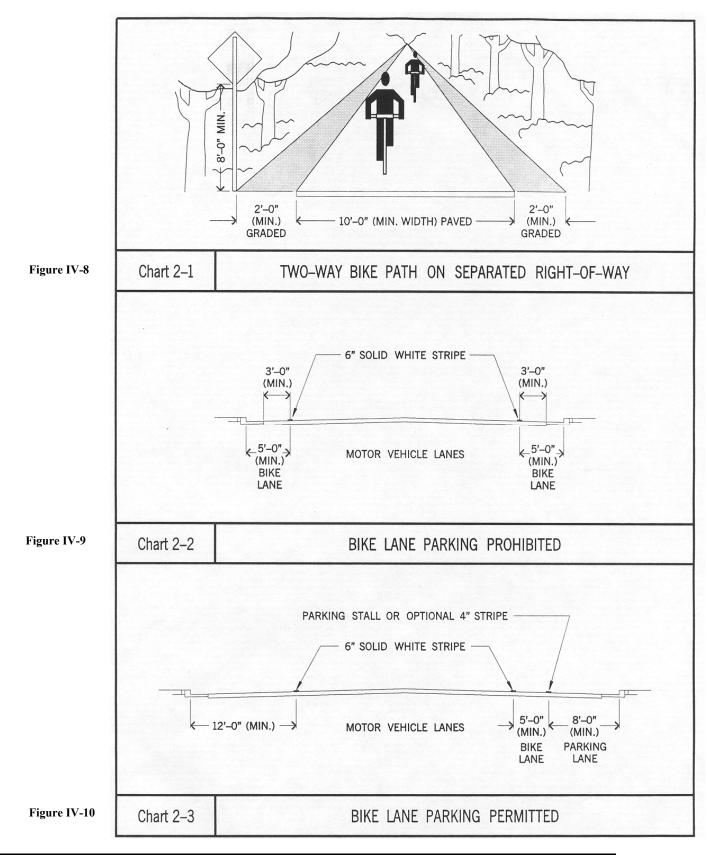
Section 1003.2 (1) of the Orange County hway Design Manual "Bikeway Planning and Design" provides for a typical width of 8 feet, measured from curb face, for a Class II bikeway on a curbed street, and specifies that additional width be provided where parking is anticipated. However, a minimum width of 5 feet is acceptable if more width is needed in the travel way of existing roadways to facilitate re-striping for additional turn lanes.

On arterial highways in the County's unincorporated areas where a Class II trail is designated on the Bikeways Plan, parking shall be prohibited where insufficient width exists to accommodate both parking and bicycle lanes, in addition to the required number of vehicular travel lanes.

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A bike lane serves to differentiate the rightof-way assigned to bicyclists and motorists, and provides for more predictable movements by each. A bike lane is typically identified by black and white "Bike Lane" signs (Sign type "R81", State of California Uniform Sign Chart), special lane striping, and may have "Bike Lane" stencils on the pavement. Bike lanes are one-way facilities intended to be ridden in the same direction as adjacent motor vehicle flow.





Class III (Bicycle Route)

A Class III bicycle route is a facility typically identified by green and white (Type "D11-1") "Bike Route" guide signing only. There usually are no special lane designations, and parking may be permitted. Bicycle traffic may share either the roadway with motor vehicles, or a sidewalk with pedestrians and, in either case, bicycle usage is considered secondary. Bike routes are established as a means to connect otherwise discontinuous segments of Class I or Class II bikeways.

Undetermined

A bikeway route designated on the Bikeways Plan map as "Undetermined" indicates that the ultimate trail category or classification, and/or its alignment has not yet been determined or officially adopted due to topographical or right of-way constraints, or other considerations.

GOALS, OBJECTIVES AND POLICIES: *Bikeway Plan*

This section provides guidance regarding the Bikeways Plan Component of the Transportation Element.

<u>Goal 1</u>

Develop and implement a bikeway plan that maximizes the opportunities for nonmotorized vehicle transportation, and meets the recreation and local transportation needs of the residents of Orange County's unincorporated areas.

- Objectives
 - 1.1 Develop a bikeways network for the unincorporated areas that provides non-motorized alternatives for commuter travel as well as recreational opportunities.
 - 1.2 Plan and develop the County's Bikeways Plan in coordination with the cities, OCTA, and CalTrans. This system will be designed to complement and interface with the overall transportation network existing and planned for Orange County, including the individual cities' bikeways and circulation plans.
 - 1.3 Develop a bikeway network that maximizes the safety and convenience of users of all levels of experience within that system.
 - 1.4 Promote coordination among the County, the Cities, OCTA, and other agencies in providing an integrated bikeways system.
 - 1.5 Review and update the Bikeways Plan as needed, in order to assure compatibility with the other elements of the County General Plan, and with the bikeways plans of OCTA, the Cities, and adjacent counties.

1.6 Actively seek all available means of financing bikeways including State and Federal grants.

• Policies

- 1.1 Role of the Bikeways Plan: Coordinate and facilitate the implementation of the unincorporated County's bikeway system, utilizing input from the bicycling community, the cities, and other agencies.
- 1.2 Seven-Year Plan: Establish and annually update a Seven-Year Plan to provide direction for bikeway implementation and to serve as a guide for grant applications. The plan will include both commuter and recreational bikeways.

1.3 Arterial Highways:

Provide for bicycle access to arterial highways as depicted on the Circulation Plan. Bicycle travel will also be accommodated on arterial highways during roadway construction, widening or other improvements, whenever feasible and practical.

1.4 Commuting:

Design bicycle routes to connect residential areas with major activity centers (employment, educational, civic, etc.) by requiring, through the subdivision process, the dedication of right-of-way and construction of designated bikeways as conditions of development within the unincorporated areas.

- 1.5 Recreation:
 Plan bicycle routes to facilitate access to recreational areas such as regional parks, beach areas, and major tourist commercial/recreational facilities.
- 1.6 System Connectivity: Plan a bikeway network to interface with other modes of transportation (train or transit stations and Park-N-Ride lots, etc.) to plan for, and provide space for carrying recreational and commuting bicyclists on public transportation systems where feasible.
- 1.7 Modal Interaction: Encourage other modes of transportation (buses, trains, etc.) to plan for, and provide space for carrying recreational and commuting bicyclists on public transportation systems where feasible.
- 1.8 Scenic Value: Locate bikeways along designated scenic highways wherever environmentally,

physically, or economically feasible, and encourage the development of scenic vista points and rest areas where feasible and appropriate.

1.9 Rights-of-Way:

Construct bikeways in existing and abandoned public rights-ofway along flood control channels, parks, roads, and utility and railroad rights-of-way where feasible, and where a need can be demonstrated.

1.10 Public Information:

Provide bicycle trail and safety information to the public by publishing bike trail maps and representing the County at trade shows, rideshare fairs, etc.

1.11 Design Standards:

Design and construct bikeways in accordance with County and Caltrans standards in order to maximize safety and minimize potential conflicts with pedestrians and motor vehicles.

1.12 Bicycle Safety:

Separate bicycle and automobile traffic wherever possible, taking into consideration safety, users of the facility, economic factors, and physical feasibility, and by designing only one-way bike lanes, thereby minimizing conflicts at intersections and reducing the hazards of bicyclists traveling against traffic.

1.13 User Convenience:

Encourage the provision of bicycle racks, showers, lockers, and other storage facilities, where practical and economically feasible, when reviewing discretionary permits for major activity centers.

1.14 Regional Continuity:

Encourage other jurisdictions to adopt a system of bikeways that complements the County system and the Commuter Bikeways Strategic Plan (CBSP) administered by OCTA.

1.15 Regional Consistency:

Periodically revise the Bikeways Plan component of the Transportation Element, when warranted, to reflect changing conditions, and evaluate proposed development projects for compatibility with the County regional bikeways system through the subdivision and discretionary permit review process.

1.16 Funding:

Solicit and utilize all sources of local, regional, State, and Federal funds to plan, acquire right-ofway for, and construct bikeways, including such sources as SB 821

and SB 244 (CalTrans Bike Lane Account) funds; County Road funds and Harbors, Beaches and Parks funds; and private grants.

 1.17 Development Commitment: Encourage developers to provide local bicycle trails, as well as require construction of applicable Bikeways Plan bikeways within their projects as conditions of development approval.

IMPLEMENTATION PROGRAMS: *Bikeway Plan*

1. SUBDIVISION PROCESS

Programs involve a review of subdivision maps for consistency with the Bikeways plan, and a requirement that new developments dedicate necessary right-of-way, and develop bikeway facilities according to Bikeways Plan classification and design specifications.

2. FUNDING

Bikeway funding programs (Bicycle and Pedestrian Facilities (BPF) Funding Program, SB 244, etc.) accord priority to those projects which improve bicycle access to employment centers, educational facilities, and commercial developments, as well as to recreational areas. The BPF, formerly referred to as SB 821, funding program is administered by OCTA.

COMPONENT THREE: Scenic Highways Plan

Overview

The Scenic Highways Component of the General Plan was first adopted by the Board of Supervisors on June 12, 1973 (Resolution No. 73-659). The component identifies the County's scenic highway routes. The primary purpose of the Scenic Highways Component is to define the policy guidelines pertaining to the implementation of the Scenic Highways Plan (Figure IV-11).

The Scenic Highways Plan attempts to incorporate safety, utility, economy, and aesthetics into the planning, design and construction of scenic highways.

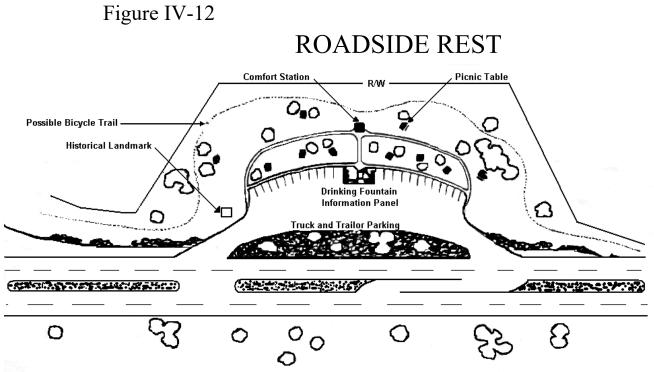
CLASSIFICATION

The County's designated scenic highways have been divided into two categories: Viewscape Corridors and Landscape Corridors (Appendix IV-4).

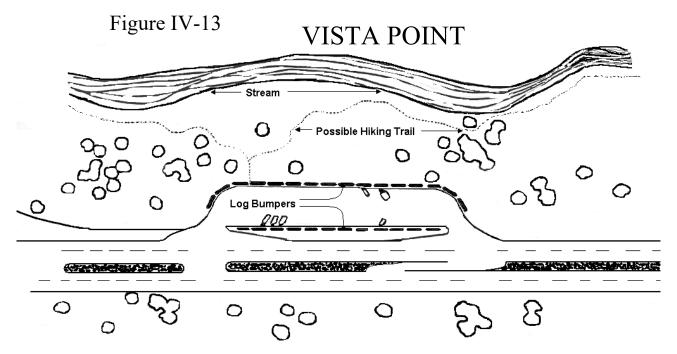
Viewscape Corridor (Type 1)

A viewscape corridor is a route which traverses a corridor within which unique or unusual scenic resources and aesthetic values are found. This designation is intended to minimize the impact of the highway and land development upon the significant scenic resources along the route. Safety roadside rests and vista points should be developed, when feasible and where appropriate, to enhance any exceptional scenic values (Figures IV-12 and IV-13).

Insert Fig. IV-11 (Scenic Highway Plan Map) Left blank for Fig. IV-11 (11x17)



Roadside Rest: Facilities of limited size (usully 1 to 3 acres) located along highways for the rest, comfort and enjoyment of the scenic highway traveler, may include sanitary facilities, picnic tables and landscaping.



Vista Point: A designed turnout with a scenic view and with sufficient width to provide for a paved parking area and a separated access lane from the traveled portion of the highway.



Development of the right-of-way should, to the extent possible, follow the adopted Viewscape Typical Section (Figure IV-14). If utilization of the typical section would destroy the scenic amenities of the corridor, a modification of the standard can be considered. The appropriate width and development of the right-of-way shall be discussed/considered in the scenic corridor implementation plans.

Landscape Corridor (Type 2)

A landscape corridor traverses developed or developing areas and has been designated for special treatment to provide a pleasant driving environment as well as community enhancement. Development within the corridor should serve to complement the scenic highway.

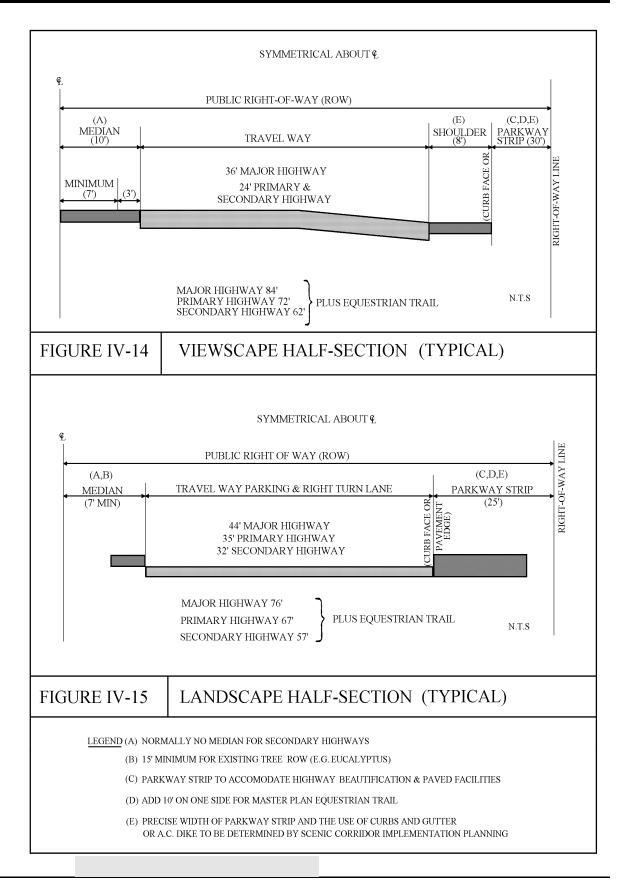
Development of a landscape corridor should, to the extent possible, follow the adopted Landscape Typical Section (Figure IV-15). Any variation to the typical section should be addressed in the scenic corridor implementation plans.

GOALS, OBJECTIVES AND POLICIES: Scenic Highway Plan

This section provides guidance for goals, objectives and policies regarding scenic highways.

<u>Goal 1</u>

Preserve and enhance unique or special aesthetic and visual resources through



sensitive highway design and the regulation of development within the scenic corridor.

• Objectives

- Protect and enhance the County's beauty, amenities and quality of life within the unincorporated areas.
- Add to the pleasure of its residents and visitors by enhancing scenic routes.
- 1.3 Coordinate the development of new scenic corridors with CalTrans, OCTA, the cities, and the development community, in order to preserve the aesthetic qualities of the environment.
- Preserve established Scenic Highways in order to protect the existing scenic qualities of these corridors.
- 1.5 Develop the roadway portion of the scenic corridors in a manner that recognizes the natural scenic resources of the corridor and is sensitive to them to the maximum extent feasible.
- 1.6 Require sufficient setback from the scenic corridor, where feasible, for the purpose of preserving the corridor's scenic qualities.

1.1 Project Consistency:

Require preparation and approval of highway plans demonstrating project consistency with the intent of the Scenic Highway Component, prior to tract map recordation. This can be accomplished through the subdivision, discretionary permit, Feature or Area Plan review process.

1.2 Offer of Dedication:

Where necessary to preserve unique or special visual features, impose conditions on development within a scenic highway corridor to require dedication of scenic easements consistent with the adopted corridor plan.

1.3 Addition to the Scenic Highway Plan:

Preserve scenic routes which have exceptional or unique visual features, but are not necessarily designated as arterial highways on the County Circulation Plan, by placing them on the Scenic Highways Plan. Development of scenic highways shall be in conformance with a Specific Plan prepared in accordance with the Scenic Highway Implementation Planning Guidelines (Appendix IV-5).

• Policies

1.4 Cooperative Planning:

Connect County-designated scenic highways with citydesignated scenic highways; adjacent-County-designated scenic highways, and/or those in the State Scenic Highway system so as to form a linked system.

1.5 View Design:

Where feasible, through the design process and alignment studies, develop the scenic highway in a manner which takes into account the cone of vision of the motorist. Consider both the short and long-range views available along the way while enhancing them with foreground framing.

1.6 Highway Design:

Design the roadway to have a visual quality and riding comfort resulting from its horizontal and vertical design. Introduce curves where feasible to take advantage of natural or man-made scenic features.

1.7 Inclusion of Trails:

Incorporate pedestrian, equestrian, and bicycle trails into the right-of-way of scenic highways as designated by the County's Bikeways Plan and the Master Plan of Regional Riding and Hiking Trails.

1.8 Road Slope Improvement: Where feasible, utilize contour grading and slope rounding to gradually transition graded road slopes into the natural

topography of the area.

configuration consistent with the

IMPLEMENTATION PROGRAMS: Scenic Highway Plan

1. SUBDIVISION PROCESS

During the review of subdivisions and discretionary permits, assure that the number of access points (e.g., driveways, local roads, etc.) on scenic highways are minimized.