

THE DEVELOPMENT OF A STATE-WIDE FREEWAY SYSTEM

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When one comes from afar and so *ipso facto* is an expert (as your Governor pointed out yesterday), there is danger that his remarks will not fit the particular problems in which the audience is interested. Especially is this true when the speaker comes from California, a land of superlatives that is not noted for diffidence about its accomplishments or aspirations. The greater danger is that the listeners will be amused but will find nothing that seems of immediate practical application to the local situation. The typical reaction is often that the conditions of two states are so entirely different that neither can profit from the other's experience.

Yet, it has always seemed to me that one of the great virtues of our unique American system of cooperative federalism is the opportunity it provides for diversity and experimentation, and, certainly, we can take full advantage of this opportunity only by comparative analysis. As one specific example, there is no question but that our Western Interstate Committee on Highway Policy Problems, which is made up of legislators and administrators of 11 states, has proved invaluable to each of the states despite their diversity, simply because we have exchanged ideas and experiences, learning what has proved effective and casting out what has proved ineffective and thus avoiding costly duplication.

There are other reasons why I think that the California story may have relevance here. For one thing, the State is highly diverse—it is not all Hollywood. It has mountains and deserts as well as rich agricultural lands and teeming industrial developments. Sunny California has its areas of excessive snow and rain, freeze and thaw. Its burgeoning cities stand in marked contrast to many of the smaller towns that are nearly static, some even declining in population. Thus one can almost always find areas of California that are quite honestly comparable to other sections of the nation.

Finally, and perhaps most important, California's efforts to solve its highway transportation problem have been emulated elsewhere, simply because traffic conditions became critical earlier and we were forced to meet the challenge sooner. If we are a leader in highway matters it is because circumstances have forced us to be so. And it has been my observation that it is only a matter of times until rather similar circumstances arise that force comparable action in other areas of the nation.

Background of the Freeway System Study

My assignment today is to discuss the development of the proposed state-wide system of freeways that is now before the California Legislature. A little background, however, is needed.

The general principles under which the State Highway System in California was established were laid down in 1895—long before the automobile was a factor—by a Bureau of these men who traveled the length and breadth of the state by buck-board. The original system comprised about 3,300 miles. Subsequent additions have swelled the total to more than 14,000 miles; the biggest single addition coming at the depths of the depression in 1933 with the inclusion of over 6,000 new miles, including many urban county roads and city streets.

Initially, California, like other states, was concerned only with rural and inter-city roads; as time went on it was found necessary to extend these state highways

into and through cities if they were to serve their purposes, but this was accomplished through shared financial and administrative responsibility until 1947. In the highway legislation of 1947 a limited mileage of metropolitan streets was added to the State highway system, and the State assumed the full financial and administrative responsibility for construction and maintenance of all state highways in cities. Thus, the spectacular urban freeways of California are all built by the State.

California has had a freeway or limited-access law since 1939 but with the intervention of the war little had been accomplished prior to 1947. In 1947 the legislature considered and enacted after long debate a substantial increase in rates of financing for all highways, roads, and streets. One of the major issues was concern over the impact of freeways on land uses and the economy in general. It was argued that freeways would be concrete barriers "balkanizing the state". It was contended that urban by-passes would destroy the smaller cities. These qualms had all but disappeared by 1953 when accelerated highway financing was again considered, and the only major issue was the amount of tax increase required; there was general agreement that the additional financing should all be channeled into the freeway program.

The result of these earlier actions, and subsequent enactment of the federal highway program in 1956, has been to provide California with the largest highway financing program in the nation. Considering construction of state highways alone, the program of 1959-60 will total about \$466 million as compared with a 1946-47 construction budget of about \$60 million.

Despite the continuing efforts to enlarge upon and improve the California highway program, there has been growing dissatisfaction with the rate of progress, particularly in regard to freeway construction. There has also been question as to the adequacy of the existing State Highway system to perform the functions for which it was created, especially in metropolitan areas. Numerous efforts had been made in recent years to add specific routes to the State Highway system with the certain knowledge that they would be developed as limited-access highways—a fact that again indicates how far we have progressed toward accepting the freeway concept.

While many of the requests for additions had obvious merit, unfortunately no criteria had been developed by which the individual requests could be evaluated, and, more importantly, it was apparent that the piecemeal proposals did not add up to a balanced and uniform program for the entire State. Thus, a major objective of the freeway system study which was requested by legislative resolution in 1957 was to find a solution to the problem of adjusting the State Highway system to the requirements of modern-day traffic in California. The resolution itself states legislative findings that are further indicative of California's attitude toward its freeway program. It said:

(a) Adequate, safe, and economical highway transportation is vital to the future development of the State of California.

(b) It has been amply demonstrated that properly designed and located freeways and expressways are the most economical means of providing highway adequacy and safety.

(c) California is rapidly developing individual freeways and expressways and segments thereof, but in many cases on a piecemeal basis, which program has been greatly accelerated by the enactment of the Federal-Aid Highway Act of 1956 and will be expanded considerably more if Congress carries out its stated intentions regarding apportionments of federal funds for interstate highways.

(d) There is need for the people of California and its agriculture and industry to be informed of plans for the ultimate freeway and expressway system of the entire State as nearly as such can now be determined by basic engineering studies.

(e) There is need for the establishment of a plan for such a state-wide system of freeways and expressways determined without regard to present jurisdiction over the highways, roads, and streets that might be included, in order that

appropriate state, county, and city transportation plans and fiscal arrangements may be worked out and properly coordinated.

Conduct of the Study

After this recital of findings, the legislative resolution called upon the Division of Highways of our Department of Public Works to "undertake a study which will provide a basis for an over-all state-wide plan of freeways and expressways for the State of California, such study not to be limited to state highways and such study to locate the potential freeway and expressway routes of such a state-wide system and the necessary connections thereto as nearly as is practicable in advance of detailed engineering design of projects".

Actually, consideration had been given to the possibility of having the study done by outside consultants rather than our own highway agency, but after investigation the idea was rejected because of the magnitude of the task, the time limitations of the study, and the simple fact that our own agency was in the best position to utilize the vast quantities of data that had already been assembled in highway planning over the years.

However, the Department was advised to employ engineering consultants and other specialists at its discretion. It subsequently arranged with the Automotive Safety Foundation of Washington, D.C. and the Institute of Transportation and Traffic Engineering of the University of California for advise on overall aspects of the state-wide study. It also made arrangements with a number of counties and their incorporated cities for the joint employment of engineering consultants to draw up comprehensive highway, road, and street plans, including freeway requirements, for particular sections of the state.

The legislative resolution also provided for the creation of a committee of 7 county and 7 city officials to act in a technical advisory capacity to the Department in the conduct of the freeway system study. The committee had more than ordinary status because it was appointed directly by officers of the State Legislature. As it turned out, this provision may become one of the most important by-products of the entire study. For it is the first time that such whole-hearted cooperation in highway planning between state and local officials has been achieved in California, and possibly in any other state; and we are hopeful that this cooperative effort will continue into the future.

In the conduct of the study the Department made full use of its highway district machinery, which solicited advice and recommendations of all of the local areas of the State, and transmitted data along with district recommendations to the central office in Sacramento. At headquarters all of the planning information of local areas was utilized in appraising the recommendations in the light of general criteria that had previously been established, and finally the system was selected after having been reviewed by consultants and the advisory committee.

In discussing route qualifications the Department said:

The primary function of a state-wide freeway system is to provide relatively rapid through-traffic service for the longer distance trips, in the most direct and economical manner possible. Future traffic volumes should also be of such magnitude that the necessary high-standard facilities can be provided at reasonable cost per vehicle using them, with proportionately high benefits of time-saving and accident reduction.

The specific criteria used in selecting the system were, as follows:

- (a) Connect major centers of population.
- (b) Connect primary centers of industrial activity and of natural resources with centers of supply of labor and material and with major shipping points.
- (c) Provide access to important military installations and defense activities.
- (d) Provide access to major recreational regions: national parks and monuments, and state beaches and parks; lakes; hunting and fishing areas; and to state institutions.
- (e) Connect as many seats of county government as economically feasible.

- (f) Provide for continuity of travel into, through, and around urban areas from rural freeway approaches.
- (g) Provide for large traffic movements between population and industry and within urban areas.
- (h) Provide for needed capacity in the traffic corridors.
- (i) Connect with major highways of adjacent states.
- (j) Provide an integrated system, with a minimum of stubs or spurs, to permit general traffic circulation.

The Selected System

The freeway system selected as meeting these criteria consisted of about 12,250 miles, of which 10,772 miles were already in the state highway system and 1,519 miles were under local jurisdiction. Approximately 3,700 miles of existing state highways were not included in the proposed California Freeway System. Some mileage in the selected freeway system will be developed by stages and is not expected to reach full freeway status until after 1980.

A freeway system of the magnitude proposed came as something of a surprise—even to Californians—as may well be imagined when it is realized that National Interstate System mileage in California is only 2,100 miles, and the proposed system (which includes the Interstate mileage) is six times as great.

While many facts could be taken from the report itself demonstrating the need for a freeway system of the magnitude outlined, perhaps the outstanding point is the need for expansion of highway capacity to provide for the anticipated growth of California. It is estimated that California's population will grow from 14 million in 1957 to 31 million in 1980; that motor vehicle registrations will increase from 7 million to 17 million; and that volumes of highway traffic will triple by 1980.

The Department estimates that the selected freeway system will carry about 59 percent of all traffic in the state even though it consists of only 11 percent of all road mileage. Even in the Los Angeles metropolitan area where, of course, there will be large volumes of local-access movements, the proposed freeways of the selected system are expected to carry more traffic than all other miles of highways, roads, and streets combined.

The Department attributes the following service features to the proposed system:

The system will serve directly, or closely, all population centers estimated to reach 5,000 or more people by 1980.

It serves directly, or will absorb a large proportion of all major rural traffic streams estimated to exist in 1980, and will relieve for local use the most congested city streets by removing the longer-distance through traffic.

It will protect the investment in highways and preserve the capacity for carrying traffic through application of planned access control, according to developing needs.

The system should reduce highway fatalities by 60 to 75 percent for the traffic using it, when developed to full freeway standards.

The system should save appreciable amounts of time, reduce commercial operating costs and expand market areas.

It should aid the Division of Highways in detailed planning and design of specific sections of the system, and enable the state, counties and cities to coordinate and develop their future planning and programming of transportation facilities.

It should aid in the more effective use of funds that will be available for highway purposes at all jurisdictional levels.

Financing the System

Total costs of the freeway system at 1958 prices are estimated at \$10.5 billion, of which \$1.8 billion is for the 1,519 miles of roads and streets not now in the

state highway system. Estimates of benefits to highway users indicate that they will exceed costs by more than two to one. The estimate of revenues indicates that the entire freeway system plus the remaining mileage of the state highway system (which are not visualized as freeways but are clearly of state importance) can be financed by 1980 with funds that are now in sight at existing rates of highway-user taxation and anticipated levels of federal aid. However, there is a close fiscal balance and it will be up to the Legislature to decide whether or not to give top priority in financing to the freeway system. Cities and counties, of course, would like to have additional state funds to meet local road and street needs, but any additional grants without corresponding additional revenues will simply slow up completion of the freeway system.

Implementing the Program

Since the Department's report was submitted to the Joint Legislative Interim Committee on Highways in September 1958, extensive public hearings have been held throughout the state. The public reaction has been one of general approval. If anything, there has been some criticism that the proposed system is not extensive enough; that it does not provide for *ultimate* needs. One thing that was made abundantly clear in the hearings is the need for periodic review of the program at rather frequent intervals. It was emphasized again and again that a plan must be a living thing in a dynamic economy like ours.

But at least we think we have made a bold start. As the Joint Interim Committee said in its report to the legislature giving general approval to the program as outlined:

"Benefits of the freeway system will extend long into the future, for the highways will be protected against premature obsolescence by the control of access. The rights-of-way will be virtually permanent. With the basic transportation network laid out, local governments, and business, industry, and agriculture, will be able to plan expansion with confidence."

Currently bills are before the legislature to bring the proposed freeway system into being. It seems likely that such legislation will be adopted with relatively little modification. But even if it were not adopted at this time, the freeway system study will bear fruit, for a diagram has been drawn that cannot be erased. As Senator Collier, Chairman of the Joint Committee, has observed: "You cannot unring a bell, and we have rung a big one".