

APPENDIX

Of Missing the Train and Not Missing It: Public Transportation in Los Angeles History

Transportation planning in Los Angeles has been consistently marked by two features: systematic adaptation to the automobile and continuing inability to execute significant public transit improvements. The neglect of public transportation was not for lack of vision. From 1906 on, a series of proposals for mass rapid transit have been put forward, most of them based on an electrified rail system. Attempts to act on these plans, however, were plagued by numerous obstacles, many of which highway and freeway development could circumvent. The following is a brief look at two particularly critical periods, both marked by rail rapid transit proposals that had a good chance of being realized, and at the reasons for the failure to implement them.

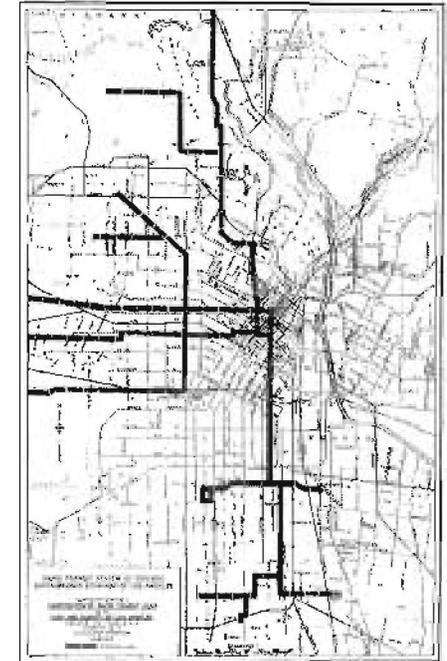
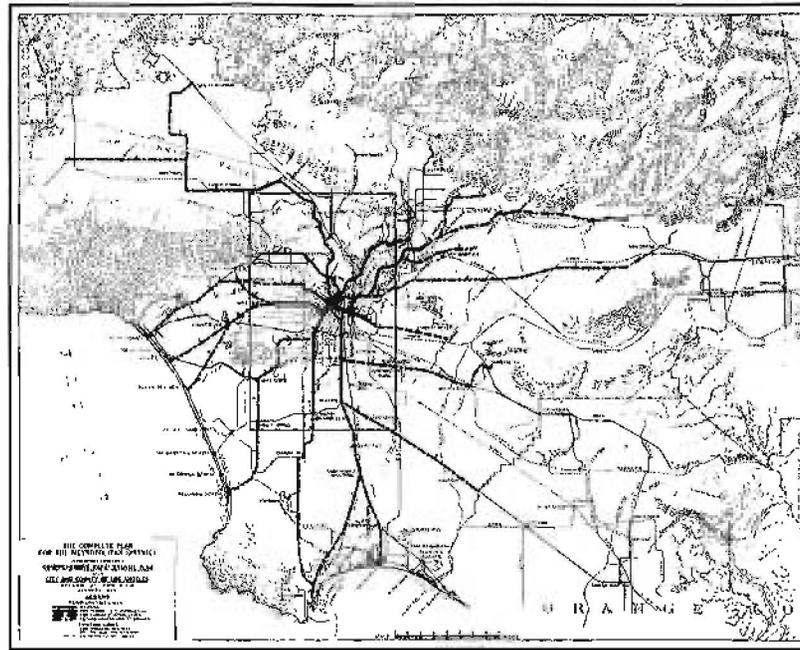
The 1920s

Although Los Angeles' first real city plan—the *Major Traffic Street Plan*, presented in 1924—was restricted explicitly to improvements in streets, it acknowledged the importance of coordinating the traffic system with street railways, rapid transit, and railroads (not to mention flood protection and drainage systems, schools, playgrounds, and parks). Since the streetcar was assumed to be necessary and desirable, “its freedom of movement must be provided for.”¹ But the plan gave few details as to how the electric railway would fit into a comprehensive plan for improving regional transportation. This information was provided the following year, in a work prepared for the city and regional planning commissions by Kelker, De Leuw, and Company of Chicago. Their *Report and Recommendations on a Comprehensive Rapid Transit Plan for the City and County of Los Angeles* addressed itself to the same basic problems as had the *Street*

Plan: traffic congestion and the role of transportation in the development of the metropolis. In the concern expressed in the letter of transmittal, the 1925 plan harmonizes with its automotive-oriented predecessor in stressing that “a clear cut recognition of the fundamental relationship of transportation to the growth of a city is essential to the determination of a sound developmental policy.” This study, however, turned toward improvement of the electric railway system as the key to the city's future. It opens with the following argument:

Los Angeles has become a large metropolitan center and it is of vital importance, at this time, that transportation facilities be planned upon a scale commensurate with the present and prospective development of the City and County. The phenomenal growth in population and industrial activity, together with the tremendous increase in street traffic, makes the construction of rapid transit lines not only necessary, but imperative if an adequate, quick, and convenient means of public transportation is to be provided and traffic conditions are to be improved.²

The report, in effect, recognized the transformation of Los Angeles from a rural to a metropolitan region. As Nelson and Clark have more recently observed, “there was something not quite urban about a city that had no subways or elevated trains, but instead depended on the street car or interurban for mass transit.”³ The Kelker, De Leuw plan was an attempt to rectify the contradiction by constructing those very subways and elevateds which would have allowed interurban lines to efficiently accommodate intraurban patterns of movement.



Rapid Transit Plan, 1925

These three plates appear in the Kelker, De Leuw and Co. report submitted to the City and Regional Planning commissions. The complete plan was the most ambitious public transit proposal ever suggested in southern California. The existing rapid transit visible on the Los Angeles map was the 0.8-mile Hollywood subway and a few grade separations, all in the downtown area. Comparison with eastern cities reveals some of the problems facing such a system in Los Angeles. New York, which began constructing elevateds in the 1880s, had in 1925 an overall population density of 31 persons per acre; Chicago, which began its elevateds in the 1890s, had 22 persons per acre. Los Angeles had an overall population density of 4.2 persons per acre, with 10.2 per acre in urbanized areas. In 1925 the average Angeleno rode transit half as often as the average Chicagoan and less than a third as often as a New Yorker.

What the report offered was a remarkably extensive rapid transit plan. If the proposals had been completely carried out, the system would serve virtually every developed corner of the county. Comparison of the plan with the systems in four other United States cities showed that it would have provided the most extensive rapid transit system then, or now, in existence.

The heart of the plan was a two-stage construction of subways and elevateds. Four basic radial passenger lines were scheduled for completion within ten years. Eventually this core system would be elaborated by extensions connecting with communities on the county's perimeter. The total system would have included about 26 miles of subways and 85 miles of elevated lines, as well as extensive private surface rights-of-way.⁴ The proposal embodied three supportive elements: improvement of Pacific Electric freight facilities, an increase in crosstown streetcar service, and development of crosstown bus service. The latter two improvements showed a recognition of the fact that people were focusing less on the downtown area than on outlying districts, a movement that had already become significant owing to the motor car. But the map outlining the system clearly illustrates an emphasis on the central district, and so only a few bypass routes were detailed.

The Kelker, De Leuw proposals were predicated on increased public interest in rapid transit. The authors explicitly recognized that even expanded patronage would not form a self-sustaining basis for construction and operation. The improvements were to be funded primarily through city and county bonds and assessments, except for freight improvements, which were to be the responsibility of the Pacific Electric Railway alone. The plan would have required administrative as well as financial assistance from public authority so as to implement a suggested coordination of transit operations. It is not unlikely that the authors would have preferred complete municipalization of all public transportation, yet the nature of the necessary agreements or consolidation was left undecided in recognition of the complex political maneuvering required.

The report also briefly summarized the street traffic problem per se, at the same time commending the *Major Traffic Street Plan*. The rapid-transit plan was obviously conceived as a complement to the street plan, and it did, in fact, provide the missing element suggested by the earlier report. But even massive street improvements could do only so much, or so Kelker and De Leuw argued. Increasingly, people would have to resort to public

transportation to cope with the inevitable saturation of the central business district.⁵

Like every proposal for publicly sponsored rail rapid transit in Los Angeles history, the Kelker, De Leuw report never got beyond the planning stage. Though the transit proposals may very well have been a step toward a better Los Angeles, they were not so for the reasons advanced. Kelker and De Leuw were working with a set of assumptions that were no longer quite accurate for describing the sort of city Los Angeles was becoming. Public rapid transit, though perhaps desirable, would no longer be a necessity for a major metropolitan center. And more unprecedented, neither would a vital downtown district.

Inherent in the report was a contradiction with the earlier street plan and with the trend of events in general which would prevent its actualization: any fixed-rail rapid transit system, especially the radially aligned plan presented, would work to preserve, if not to intensify, patterns of concentration. Kelker and De Leuw were not unaware of Los Angeles' uniqueness. They cited the low-density population and the large number of single-family homes as among the region's more alluring charms. Nevertheless, their argument that efficient and reasonably priced rapid transit would only aid in continuing the orderly spread of population⁶ was apparently unconvincing. It was on this issue—the preferred vision for future development of the metropolis—that debate centered.

The most important challenge to the proposal came from the City Club of Los Angeles, an influential organization of professionals which concerned itself with civic issues.⁷ A seven-member committee was formed to consider the Kelker, De Leuw report. Several particulars of the plan, such as "circumstantial lines" and even limited subway or elevated lines, were endorsed. Yet all but one committee member agreed that implementation of a comprehensive fixed-rail rapid transit system would prove contrary to the area's best interests.

The committee members' argument was simple. The most important issue in transportation planning, they said, was relief of congestion. Subways and elevated railways would work toward the contrary; they would concentrate, and therefore congest, population. With the automobile and the telephone, such solutions were no longer necessary; nor, according to the majority report, were they desirable. Los Angeles was pioneering a new urban form, for "the great city of the future will be a harmoniously developed community of local centers and garden cities, a district in which the need for transportation over long distances

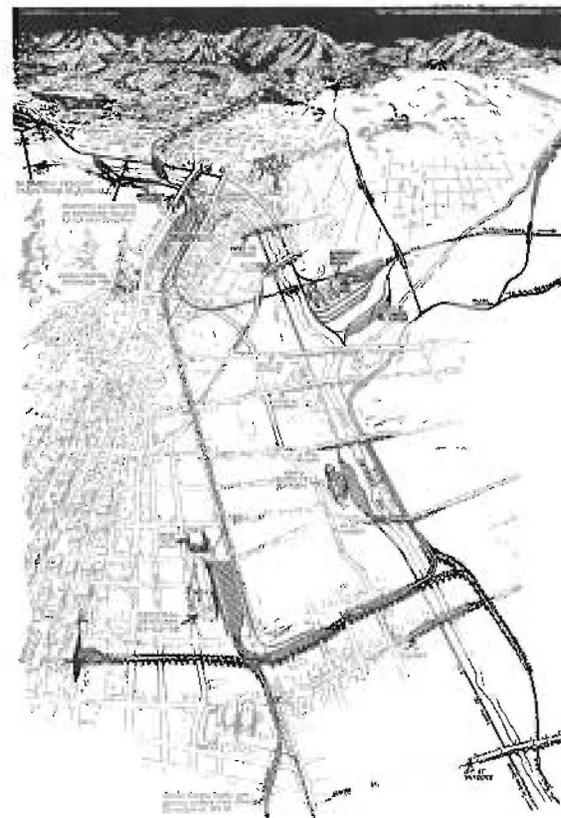
at a rapid rate will be reduced to the minimum."⁸ Swayed by arguments such as these, both city and county governments shelved the Kelker, De Leuw proposal.

The City Club report, issued late in January 1926, cast a dark shadow over prospects for implementation of the rapid transit plan. A second major blow came three months later.

Early in the same month the Pacific Electric had joined the Southern Pacific, Santa Fe, and Union Pacific railroads in putting forward a plan that suggested a partial sharing of facilities. A major proposal in the plan was to build four miles of elevated trolley lines in the downtown area which would eliminate 18,000 individual street crossings each day. Two new passenger terminals were also suggested: one at Fourth and Central streets, to be shared by Southern Pacific, Union Pacific, and Pacific Electric, and the second to be a separate Santa Fe terminal farther east. This package was opposed by the *Los Angeles Times*, which preferred a single union station located near the traditional Plaza. The *Times*-sponsored plan would have eliminated the Pacific Electric from participation, including the elevated railways. Debate over the two proposals focused on the elevated lines, and a referendum was set to decide the issue.⁹

Proponents of the plan sponsored by the rail companies included the Los Angeles and other regional chambers of commerce, the traffic commission, numerous civic groups, and all the major local papers except the *Times*. They argued that a union terminal was unnecessary (as Los Angeles was not a mid-way stop on rail trips, a single transfer site was useless) and that it was essential to aid the Pacific Electric, which carried three times as many passengers as all the railroads combined. "The fatal weakness of the Plaza Terminal Plan," said the *Los Angeles Examiner*, "is that it leaves the Pacific Electric entirely out of the picture."¹⁰

But Harry Chandler and the *Times* mounted a formidable opposition. Launching a journalistic barrage against the proposal for elevated lines, the newspaper urged voters to "Keep the L out of Los Angeles." It argued the merits of a palatial union station, held up the specter of railroad monopolies trampling on "the people's" will, and mounted sharp attacks against elevated railways. The paper ran up to five "articles" a day ("editorials" would be a more precise description), blasting elevated lines and frequently running photographs of disasters on such lines in the East. The *Times* used the occasion to attack not only the modest



Defeated Elevated Railway Proposal

This sketch shows the railroad companies' plan for two new rail stations, which was defeated by the voters in 1926. Four miles of elevated railway were to be built in the mostly industrial eastern section of downtown, carrying passengers heading for points north, east, and south. Although the plan was supported by downtown business interests and most of the daily newspapers, it was bitterly opposed by the Los Angeles Times. A single union station excluding Pacific Electric was selected instead for the Plaza area. (Source: Union Pacific System, et al., The Solution of Los Angeles Station Problem, 1925.)

railroad plan but the entire concept of the elevated railway, specifically including the Kelker, De Leuw proposal. Often ignoring the fact that at issue were only four miles of overhead construction on private rights-of-way, the newspaper tied the station issue to the eventual construction of 61 miles of elevateds in the central area, many along public streets. The choice, as the *Times* saw it, was to have "a union depot or elevateds," to have a beautiful new terminal the city could be proud of, or "hideous, cluttering, dusty, dangerous, street darkening trestles in our downtown area."¹¹ (Interestingly, the paper occasionally championed the subway as a wonderful alternative, though it never offered specific proposals. And though it condemned elevateds as "expensive," it never mentioned that even the most elaborate ones would cost a fourth as much as the simplest subways.)¹² Despite the inconsistency of its campaign, however, the *Times* did in all likelihood reflect the prevailing popular sentiment. In any event, the straw vote saw the Plaza site narrowly approved and the "El" soundly defeated.

The inability of local rapid transit proponents to get their proposals off the planning boards and out of political chambers reflects more than a simple rejection of "eastern" devices. A 1906 subway proposal was killed by a business recession. Expenses chopped the Hollywood subway, opened in 1925, down to a tunnel less than a mile long from its envisioned four-mile course.¹³ Finances were, as always, the insurmountable obstacle. The privately held Pacific Electric corporation could finance only the most modest capital improvements. (The four miles of elevated tracks included in the PE-backed terminal plan would have been affordable, at \$2 million, only because construction costs would have been shared by the more capital-rich railroads.) A comprehensive system of any sort would have required public backing. Kelker and De Leuw were asking for \$120 million for the first stage of their plan alone.¹⁴ Yet it was a difficult time to secure such backing, as rapid transit had to compete with all other municipal improvements, such as schools, water supply, flood control, and an expanding array of public services, including highway improvements. The Kelker, De Leuw proposal was submitted after the *Major Traffic Street Plan* had already been approved and partly funded.¹⁵ Since the proposal followed almost immediately upon the ideological and financial commitment to automotive transportation, it is questionable whether area voters would have approved the bonds necessary for the sys-

tem's construction, had they been given the choice. One can only imagine the strength of the *Times* opposition to a bond issue for elevated lines. And it certainly did not help that the most articulate municipal policymakers were members of the professional middle classes, and in Los Angeles that meant they were automobile commuters. If elevateds would help to ease traffic congestion, the proposal was certainly worthy of consideration, but the prime concern was to make life easier for the automobile.

The situation was further complicated by the inclusion in the public debate of indirectly related issues, such as the argument over the merits of a union station. Three years earlier, in 1923, a subway station proposal was defeated in large part because of a furor over trees. Hoping to fit the Hollywood subway into a more comprehensive system, transit supporters had won substantial political backing for a connecting station under centrally located Pershing Square. Opponents objected that the high ceiling required for the construction would destroy most of the trees in the square. A city council ordinance requiring a ceiling below the ten-foot-deep root system of the trees terminated the project.¹⁶ (A city, of course, can change its collective mind. In 1951 Pershing Square was excavated and 200,000 cubic yards of soil were removed to make way for a three-level, 2,000-car underground garage. New trees were planted in the square. The garage was completed the same year as the downtown freeway interchange, and its supporters associated the two projects as a combined attack on traffic congestion.)¹⁷

The improbability of private financing of rapid transit proposals becomes obvious when one discovers that the railways could hardly earn their own operating expenses. The compact and heavily traveled downtown streetcar system operated by the Los Angeles Railway stayed in the black through most of the pre-depression years, but as a paying investment the Pacific Electric was a disaster. From its incorporation in 1911 until 1941 (the beginning of an anomalous good period, owing to World War II) it turned a profit only three times, in 1912, 1913, and 1923.¹⁸ It could survive only as part of the huge Southern Pacific conglomerate. It is obvious with hindsight that the only way a vital system of rail public transit could survive would have been with municipal support.

Such an observation was made as early as 1911, though it was suggested more as a forecast than as an immediate proposal.¹⁹ Fourteen years later the city attempted to purchase the Los An-

geles Railway from its owner, Henry Huntington, but the negotiations were halted when Huntington died.²⁰

For the Pacific Electric interurban lines, full municipalization was never seriously considered. The closest approximation to that ideal was recommendations of municipal support for rapid transit improvements. A major block to further public participation was the management of Pacific Electric. Mark Foster describes the official attitude toward municipal ownership as one of contempt. In 1928, in its official journal, the company proclaimed that "when the facts are known, then there will be no fear that the radical and half-baked notion [of public ownership] will triumph."²¹ This statement, together with analogous statements by private citizens, planners, and utility commission members, underscores a naïve apprehension of the future course of the area's history. No one really recognized the severe threat the automobile was presenting to all electric railways. The already difficult financial situation was perceived, even in the 1930s, as a temporary setback.²² As electric railways were an assumed necessity for any city, their survival was simply assumed. One can only speculate that, had public and corporate officials known better, they would have responded differently.

At the time, each separate defeat for a transit proposal was perceived more as a delay than as a rejection of the whole idea of rapid transit. The cumulative effect of such defeats, however, was disastrous. Even many of the planners originally behind the Kelker, De Leuw proposal became wary. For example, by 1927 Gordon Whitnall, the Regional Planning Commission head who originally backed the proposal, had begun to change his mind, becoming increasingly convinced that the automobile provided the more reasonable alternative. The area was undergoing rapid transformation, and planners feared the inflexibility of fixed-rail transportation facilities. In 1928 the commission cited a New York study which found that subways were proving unable to keep pace with demand and that new construction was creating new centers of congestion. With every passing year of debate the Kelker, De Leuw proposal was becoming more and more untenable.²³

In Los Angeles, a tendency to decentralization had long been at work, and one might seriously question whether any fixed-rail system could have successfully competed with the area's growing obsession with the car. Rail rapid transit would have required the compromise of a walking city while automotive transit ide-

ally served the preferred pattern. Both Los Angeles planners and voters were ultimately unwilling to make such a compromise.

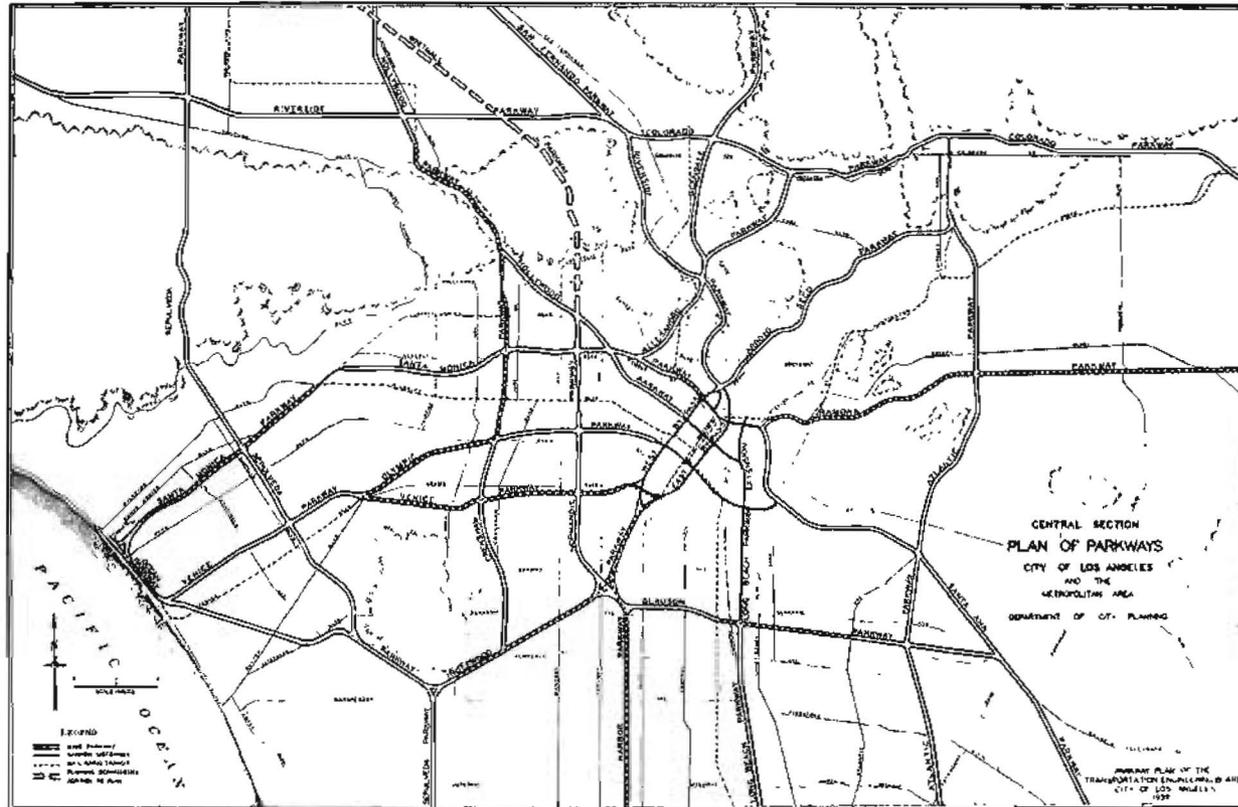
By failing to replace streetcars with a rapid transit system, Los Angeles effectively cast its lot. The Kelker, De Leuw proposal, offered at a time when passenger revenues (if not profits) of electric rail companies were growing, was a crossroads in the course of the city's self-definition. The rejection of rapid transit improvements stemmed largely from a rejection of the image of the industrial city in favor of the image of a pastoral garden city. With its failure to construct a transportation system appropriate to "a Great American City," Los Angeles firmly committed itself to a redefinition of the nature of an urban metropolis.

The Freeway Era

Later critics of the freeway system would indict it as the archnemesis of public transit, and, to be sure, the freeway is a haven for individual mobility. But freeways were intended to serve an entire community, and throughout the years of their development they were envisioned as a vital supplement to public transportation.

Since *A Transit Program for the Los Angeles Metropolitan Area* appeared in 1939, the freeway has been considered in relationship to public transit. This first report, true to its title, examined the total transportation situation in the metropolis. At the time there were both a million automobiles and a million daily revenue passengers on public transportation in the area,²⁴ and a large portion of the study was devoted to the issue of mass transit. Based on expected figures for future growth, there is a repeated acceptance of rail rapid transit as the "ultimate solution" for the area's transportation problems. The report offers several possible improvements, including electric railways operating on certain freeways, and perhaps the first suggestion of a Wilshire Boulevard subway and its eventual connection with the San Fernando Valley.

Any attempts to revitalize that mode of transit within the immediate future, however, were dismissed as impractical during the "intermediate stage," owing to prohibitive costs. Transit needs for this period of rapid growth combined with continuing low densities would be best served by running express buses on the rapid transit facilities provided through freeway construction. The operation of this system should remain private, the report argued, though there should be increased public coordination.



Freeway Transit, 1939

The most influential report in the early planning of the freeway system, prepared by the Transportation Engineering Board of the City of Los Angeles, recommended wide center strips in key portions of the freeway system to be used later for a heavy rail system. Drafters of the plan argued that "the broken lines in the centers of certain double lined parkway routes represent a most intensive and effective use of the investment by providing simultaneously in the same right-of-way for automobile traffic of relatively light passenger capacity and for rail rapid transit trains of radically greater passenger capacity."

Most emphatically, the city was urged not to get into the business of bailing out failing transit operations. In addition, any extra costs accruing from alterations designed to fit highways for bus use would be met from transportation company revenues.²⁵ Accordingly, the 1939 report lay the groundwork for future action in both freeway and public transit developments.

The freeway system in Los Angeles fulfilled all the basic requirements for providing mass rapid transit: smooth surface, reasonable grades, freedom from interference by other traffic, easy accessibility to business centers, and the capacity to handle large passenger vehicles.²⁶ Adjusting freeway design to further accommodate buses was repeatedly endorsed throughout the forties and the fifties,²⁷ but the issue of financing consistently hindered action. Because of restrictions on the use of the Highway Trust Fund (along with Highway Commission and legislative obstinacy), the state refused to contribute directly to the construction of such facilities. Local government was ultimately responsible for bus turnouts and other bus-related improvements, an expense passed on to the bus companies—and thereby to bus patrons—through increased franchise taxes. Only the city of Los Angeles was able to afford such expenditures. Six bus turnouts were constructed between 1949 and 1955, three each on the Hollywood and Harbor freeways, and a few improvements were made on surface level.²⁸ Needless to say, plans for building even more elaborate facilities for express buses on freeways were never implemented.²⁹ Thus the opportunity to adjust freeway design to immediate public transportation use was usually passed up.

Express buses have long used the freeways, but their service during peak hours was always a problem. Caught in heavy automobile traffic, they produced all the inconveniences of public transit without affording any of its benefits. Not until the 1970s was any major innovation introduced to fit the freeway system to public transportation. In 1974 an 11-mile express busway was opened along the San Bernardino freeway from downtown to El Monte, complete with on-line stations. This single experiment suggests the importance of dramatically visible changes in affecting the popular notion of a freeway's function.³⁰

Another persistent proposal was to use the center divider of the freeway to carry fixed-rail systems. This option was argued frequently during the late forties and early fifties. Its most vocal proponent was the Rapid Transit Action Group, an organization that included top officials of the State Division of Highways, the Public Utilities Commission, the County Regional Planning Com-



Freeway Trolleys

Pacific Electric trolley cars used the center divider of the original 1.8-mile Cahuenga Pass segment of the Hollywood freeway. The Division of Highways joined the city of Los Angeles in financing the improvements in order to make use of the rail company's right-of-way. An additional 1.1 miles of track were placed in the freeway's right-of-way with the 1949 extension to Lankersheim. Operation was halted in 1952 when the entire Van Nuys – Cahuenga Pass line was discontinued. The abandoned 48-foot median strip was purchased by the Division of Highways to be used for additional freeway lanes to reduce mounting congestion. These photos were taken from the Pilgrimage Bridge. (Top photo courtesy of Henry E. Huntington Library; bottom photo courtesy of CALTRANS.)

mission, and all concerned city departments (such as City Engineer Lloyd Aldrich, Board of Public Utilities head Charles Bean, and Mayor Fletcher Bowron), as well as the executives of both local rail companies and prominent private citizens.

The essential argument in the group's report, *Rail Rapid Transit* (1948),³¹ was that the time had come for construction of a rapid rail system, and its combination with the freeway system offered an unprecedented economic opportunity. The report recommended rail operation for all or part of seven freeways, as well as several routes on private rights-of-way. Financing was to be secured through bonds offered by a metropolitan rapid transit district. No highway money would—or could—be used.

Other voices spoke for similar programs. The Assembly Fact Finding Committee on Highways, Streets, and Bridges, after passage of the Collier-Burns Highway Act, began to deliberate on such proposals. Particular attention was paid to running rails down the Hollywood freeway extension toward downtown.³² Plans were also offered for overhead suspended systems, such as monorails, down the center divider. At any given time some plan or other, suggesting the use of freeways for fixed-guideway rights-of-way, was being considered.

One of the most thorough investigations of the whole rapid transit question during this period was conducted by the Assembly Interim Committee on Public Utilities and Corporations. Its *Preliminary Report on Rapid Transit for the Los Angeles Area* (1950) resulted from a series of hearings, as well as a public survey, aimed at determining the best public transportation policy for the area. The committee considered all four of the basic measures then being debated: a monorail system running on freeways, on private rights-of-way, on surface streets, and through downtown subways; an electric train system with the same basic qualities; an extensive electric subway serving downtown only, with surface rail or bus connections; and express buses on freeways.³³ The last proposal was the one endorsed by the committee.

The committee's conclusions offer an important reminder as to why no action was taken on a fixed-rail measure at a time when extensive freeway construction would have made it as economical as it could ever be. The same problems surfaced then as had faced the Kelker, De Leuw proposal twenty-five years earlier and would face those dealing with similar proposals twenty-five years later.

Although some form of public transportation was widely regarded as a necessity, there was sharp disagreement as to which

form was best, and this division hampered particularly the rail proponents. The study accompanying the 1950 report showed that while 40 percent of the population preferred some form of fixed-rail transit, this support was divided among the three alternatives. Freeways with buses, receiving a 47 percent favorable response, were far and away the most popular choice. When respondents were asked whether they would favor buses on freeways, if they could be convinced that this alternative would cost less to construct and operate, be more flexible, give more extensive and quicker overall service, be available sooner, and require no additional taxes, the support jumped to almost 80 percent.³⁴ Except for the issue of travel time, all the above propositions were conceded to be fairly accurate.

The issue of financing has always been a major barrier to rapid rail systems. The genius of the Collier-Burns Highway Act was to allocate highway user taxes for freeway construction, making freeways, in a real sense, self-supporting. Rail operations, on the other hand, had been unprofitable for years, in other major cities as well as in Los Angeles. Though many argued that an improved system would pay for itself, many others disagreed, feeling that buses alone could be operated at a profit. And in either case, construction would probably have required some additional tax burden. Only 18 percent of those polled, however, would support a bond issue secured simply by property taxes, which was the most likely measure to be employed and one that would require approval by two-thirds of the voters.³⁵ Obviously the times were not ripe for the notion of publicly subsidized transit. (It is important to remember that as late as 1976 Los Angeles County residents rejected a locally financed transit system, one quite similar to those under discussion in the late 1940s. It has taken 80 percent federal funding to keep the notion of fixed-rail transit alive in Los Angeles, and even the process of obtaining necessary matching funds from the state will require tricky legislative maneuvering.)

The ultimate impasse in the question of mass transit was that most people simply did not want to use it. It was conceived as the choice of necessity. The pilot study accompanying the interim committee's 1950 report showed that 74 percent of those using public transit did so because they had to, not because they wanted to. Only 23 percent of those polled used it even for the regular daily trips to work. Those using automobiles cited a number of reasons to avoid public transit and, with the exception of speed, those reasons could not be eliminated. Uncomfortably crowded vehicles, the bother of using transfers, the difficulty of

carrying tools or packages, and other inconveniences would plague even the most modern system. And apropos of speed, new freeway construction would continue to make the private automobile a superior choice. The report concluded that

At least insofar as public transportation is concerned the big majority of people use it as little as possible. The indications are that the trend is away from the use of public transportation instead of toward it. The hope that the percentage of the people will increase who will use a new and improved system of public transportation appears to be rather dim. This significant situation is one that must be given serious consideration in planning a new public transportation program.³⁶

By the 1950s public transit had become less a viable transportation alternative and more a form of transportation welfare. Transit was a bad investment; in 1958 both of Los Angeles' private operators gladly sold their holdings to the Metropolitan Transit Authority. Public transportation, however, was a social necessity, serving those unfortunates who could not afford to own automobiles: the poor, the old, the young, and frequently the housewife.³⁷ Nevertheless, the overwhelming majority preferred the private car; it was eccentric to choose transit freely. Supporters of public transportation lacked the strong political base, the political clout, available to freeway proponents, for a majority of southern Californians used the private automobile.

All these factors contributed to the overwhelming support for private transportation and the pitifully small support for mass transportation. But even if the most extensive plans for public transit had been developed, there is disagreement among experts as to whether they would have been successful. Critics of such systems were probably correct in claiming that the urban form of Los Angeles was not particularly conducive to successful fixed-rail transit. Transportation economist George Hilton notes the lack of geographical barriers to sprawl, an economy based on nonclustering industries such as petroleum, aerospace, motion pictures, and agriculture, as opposed, for example, to Manhattan's finance, garment, and entertainment districts, and the cultural ingredients encouraging homeownership and private transportation—all have worked against a fixed-rail system and will continue to do so.³⁸ At issue in contemporary debates is whether these patterns have changed, or whether such transit systems could accelerate changes in what was once the preferred pattern, and, perhaps most important, whether such changes would be desirable.

opment of the Freeway System for the Los Angeles Metropolitan Area," *California Highways and Public Works* 31 (March-April 1955), 6.

¹⁴⁵Fogelson, *Fragmented Metropolis*, p. 157.

¹⁴⁶Harland Bartholomew, "The Urban Auto Problem," *Proceedings of the Twelfth National Conference of City Planners*, 51 (19-20 April 1920), 99.

¹⁴⁷See W. L. Fahey, "Santa Ana Freeway Has Induced Industrial and Recreational Development," *California Highways and Public Works* 34 (Sept.-Oct. 1955), 1-13; P. O. Harding, "Revealing Direct Benefits from Freeway Development," *California Highways and Public Works* 34 (July-Aug. 1955), 6-10.

¹⁴⁸Stuart L. Hill, "Freeway Impact: Santa Ana Project Saves Users \$7,000,000 in Five Years," *California Highways and Public Works* 42 (July-Aug. 1963), 23.

¹⁴⁹Paul Shuldiner, "The Rationale behind the Los Angeles Freeway System," paper prepared for CHP 226, University of California, Berkeley, 1957, p. 13.

¹⁵⁰C. G. Beer, "Traffic Studies: Need for Network of Freeways in Los Angeles Clearly Evident," *California Highways and Public Works* 32 (Sept.-Oct. 1953), 31; see also Harding, "Big Job," p. 14.

¹⁵¹*Major Traffic Street Plan*, pp. 18-19.

IV. Epilogue: The End of an Era?

¹James Taylor, "Traffic Jam," on *IT* (CBS, Columbia Records, 1977).

²See California Department of Transportation, *Effect of the Current Fuel Shortage in California: Travel and Related Factors*, Report 3 (Sacramento, Sept. 1979).

³Bureau of the Census, *United States Historical Abstract (1979)*, pp. 490-491.

⁴Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970, Series Q* (Washington, 1976), pp. 156-162.

⁵See Mark Leepson, "Auto Research and Regulation," *Editorial Research Report* 8 (23 Feb. 1979), 146-164.

⁶Charles A. Lave, "The Mass Transit Panacea and Other Fallacies about Energy," *Atlantic Monthly* 244 (Oct. 1979), 40. The increase in average mileage by 0.2 mpg and the doubling of transit patronage would each result in approximately a 1.3 percent energy savings.

⁷Charles A. Lave, "Transportation and Energy: Some Current Myths," *Policy Analysis* 4 (Summer 1978), 299-301.

⁸Melvin M. Weber, *The BART Experience—What Have We Learned?*, Institute of Urban and Regional Development, University of California, Berkeley, 1967, pp. 1-5.

⁹Lave, "Transportation and Energy," p. 297.

¹⁰Weber, *BART*, pp. 7-12; Charles A. Lave, "Rail Rapid Transit and Energy: The Adverse Effects," *Transportation Research Record* 648 (1977), 15.

¹¹Lave, "Transportation and Energy," p. 305.

¹²Lave, "Transportation and Energy," pp. 301-305; Lave, "Rail Rapid Transit," pp. 14-30.

¹³Lave, "Transportation and Energy," pp. 306-307.

¹⁴Weber, *BART*, pp. 23-29.

¹⁵*Ibid.*, pp. 19-23.

¹⁶Lave, "Transportation and Energy," p. 303.

¹⁷Andrew Marshall Hamer, *The Selling of Rail Rapid Transit* (Lexington, Mass.: Lexington Books, 1976), pp. 9-12.

¹⁸Kaiser Engineers and Daniel, Mann, Johnson, and Mendenhall, *Subarea and Total System Analysis (Task 8.5.1)* (Los Angeles, 1974), pp. III, 10-14, as quoted in Peter Marcuse, "Mass Transit for the Few: Lessons from Los Angeles," School of Architecture and Urban Planning, University of California, Los Angeles, 1975, pp. 12-14.

¹⁹California Department of Transportation, District VII, *Freeway Transit Element of the Regional Transit Development Plan for Los Angeles County* (Los Angeles, 1978).

²⁰Martin Wachs, "The Case for Bus Rapid Transit in Los Angeles," unpublished position paper, School of Architecture and Urban Planning, University of California, Los Angeles, 1975, *passim*.

²¹Caltrans estimates that the high-level guideway alternative would save 8 percent of the energy that would be used if no new guideways were built. See "Technical Analysis," in *Freeway Transit Element*, pp. 133-135.

²²California Department of Transportation, District VII, *Progress Report for the Upgrade and Control for the Los Angeles Area Freeway Network* (Los Angeles, 1978), pp. 38-39.

²³See Weber, *BART*, pp. 12-19.

V. Appendix

¹Los Angeles Traffic Commission, *A Major Traffic Street Plan for Los Angeles*, prepared by Frederick Law Olmsted, Jr., Harland Bartholomew, and Charles Henry Cheney (Los Angeles, 1924), pp. 9, 18, 14.

²Kelker, De Leuw, and Co., *Report and Recommendations on a Comprehensive Rapid Transit Plan for the City and County of Los Angeles* (Chicago, 1925), p. 1.

³Howard J. Nelson and William A. V. Clark, *The Los Angeles Metropolitan Experience: Uniqueness, Generality, and the Goal of the Good Life* (Cambridge, Mass.: Ballinger, 1976), p. 60.

⁴Mark Foster, "The Decentralization of Los Angeles during the 1920's" (Ph.D. diss., University of Southern California, Los Angeles, 1971), p. 119.

⁵Kelker, De Leuw, *Comprehensive Rapid Transit Plan*, p. 36.

⁶*Ibid.*, p. 6.

⁷City Club of Los Angeles, *Report on Rapid Transit*, supplement to *City Club Bulletin*, 30 (Jan. 1926).

⁸Ibid., p. 4.

⁹Union Pacific System, Atchison, Topeka, and Santa Fe Railway, and Southern Pacific Company, *The Solution of the Los Angeles Station Problem* (Los Angeles, 1925); *Los Angeles Examiner*, April 1926, passim; *Los Angeles Times*, April 1926, passim.

¹⁰*Los Angeles Examiner*, 27 April 1926.

¹¹*Los Angeles Times*, 1 Feb. 1926.

¹²Kelker, De Leuw, *Comprehensive Rapid Transit Plan*, p. 7.

¹³Foster, "Decentralization," pp. 114-117.

¹⁴Kelker, De Leuw, *Comprehensive Rapid Transit Plan*, p. 118. This figure does not include the \$13 million investment expected of the Pacific Electric Railway Corporation for expansion of freight-connected facilities.

¹⁵Mark Foster, "The Model-T, the Hard Sell, and Los Angeles' Urban Growth: The Decentralization of Los Angeles during the 1920's," *Pacific Historical Review* 44 (Nov. 1975), 472.

¹⁶Foster, "Decentralization," pp. 114-116.

¹⁷"Underground Garage Nears Completion," *Western City* 25 (April 1952).

¹⁸Spencer Crump, *Ride the Big Red Cars: How Trolleys Helped Build Southern California* (Corona del Mar, Calif.: Trans-Anglo Books, 1970), App. E, p. 251.

¹⁹Bion J. Arnold, "The Transportation Problem of Los Angeles," *California Outlook*, 4 Nov. 1911.

²⁰Foster, "Decentralization," pp. 95-96.

²¹Ibid., p. 99.

²²Mark Foster, "City Planners and the Evolution of Urban Transportation in the United States, 1900-1940," paper read at Social Science History Association Meeting, Ann Arbor, 23 Oct. 1972.

²³Foster, "Decentralization," pp. 126-129.

²⁴Los Angeles Transportation Engineering Board, *A Transit Program for the Los Angeles Metropolitan Area* (Los Angeles, 1939), p. 85.

²⁵Ibid., pp. 7, 14, 38, 86.

²⁶Los Angeles Board of Public Utilities, *Mass Transportation Facilities in Various Large Cities* (Los Angeles, 1952), p. 5.

²⁷For example, see Los Angeles City Planning Commission, *Mass Transit Facilities and the Master Plan of Parkways* (Los Angeles, 1942); California Legislature Joint Fact Finding Committee on Highways, Streets, and Bridges, *Final Report* (Sacramento, 1947), pp. 132-133; California Assembly Interim Committee on Transportation and Commerce, *Transcript of Proceedings, Hearings by the Subcommittee on Rapid Transit Problems* (Sacramento, 1954).

²⁸California Assembly Interim Committee on Public Utilities and Corporations, *Final Report* (Sacramento, 1962), p. 51.

²⁹De Leuw, Cather, and Co., et al., *Recommended Program for Improvement of Transportation and Traffic Facilities in the Metropolitan Area* (Los Angeles, 1945); Los Angeles Metropolitan Traffic Association, *Express Buses on Freeways* (Los Angeles, 1953).

³⁰John F. Maloney, "Eleven Mile Busway Will Serve Los Angeles Region," *Public Works* 105 (Aug. 1974); Southern California Association of Governments, *San Bernardino Freeway Express Busway: Evaluation of Mixed-Mode Operations* (Los Angeles, 1978).

³¹Rapid Transit Action Group, *Rail Rapid Transit* (Los Angeles, 1948).

³²California Assembly Fact Finding Committee on Highways, Streets, and Bridges, *Final Report* (Sacramento, 1949), pp. 67-203.

³³California Assembly Interim Committee on Public Utilities and Corporations, *Preliminary Report on Rapid Transit for the Los Angeles Area* (Sacramento, 1950), pp. 10-14.

³⁴Ibid., pp. 36-37.

³⁵Ibid., pp. 15-17.

³⁶Ibid., pp. 14-15, 31-35.

³⁷Ibid., p. 34. Housewives, who made up most of the category of "non-employed persons," used public transit at a much higher rate than employed persons. Although 25 percent of the latter used public facilities on a daily basis (4-7 times weekly) as compared with 14 percent for the unemployed, fully 60 percent of the employed used transit less than once a month or never, whereas only 32 percent of the unemployed fell into that category.

³⁸George W. Hilton, "Rail Transit and the Pattern of Modern Cities: The California Case," *Traffic Quarterly* 12 (July 1967).