The return of American railroads to private control on 1 March 1920 gave rail managements an opportunity to revise their passenger strategies. At the end of federal control rail passenger service lost money, and freight service lost even more, but new regulatory legislation promised railroad managements a fairer deal. Although highway construction continued at an even more rapid pace than before World War I, rail management had more latitude to alter and price passenger service. It hoped it would find a better way to serve the public with passenger trains and make adequate profits at the same time.

By the end of the 1920s, management was failing. Despite a decade of prosperity and favorable regulatory policy, railroad passenger service lost more money in 1929 than it did in 1920. Its share of the passenger market plummeted as well. Growing automobile ownership and improved highways during the 1920s explain much of the loss of market share during the decade, but despite some successes, railroad management failures in pricing, investments, and cost control played significant roles. An analysis of the passenger management practices of the Southern Pacific and Santa Fe in the context of national legislation, management thought, and traffic trends illuminates national problems with American passenger service during the 1920s.

The ICC’s order to separate freight and passenger expenses in 1916 revealed that passenger service lost money for the nation’s railroads as a whole. The passenger operating ratio of 74 meant that operating expenses consumed 74 percent of operating revenues, leaving an insufficient operating surplus to pay interest on debt and other fixed expenses and return an adequate profit (see table 2).

With an operating ratio of 86 in 1920, passenger service was showing even larger losses when Congress returned the nation’s railroads to private control. The losses, resulting from hefty labor settlements in 1918 and 1919,
would have been even greater if not for passenger efficiencies introduced during federal control. Because the freight operating ratio stood at the even higher level of 98, railroad managers could not cross subsidize passenger losses with freight profits, even if they wanted to do so. Only two options for restoring financial viability to passenger service faced them. They could reduce costs, or they could raise fares.¹

Although the ICC generally prevented managers from raising rates before World War I, under the new rules of the Transportation Act of 1920 the ICC would not stand in the way of managers who wanted to follow this course, at least up to a point. In the 1920 act Congress directed the ICC to take the financial health of the railroads into account as well as the needs of shippers. The legislation defined a financially healthy railroad as one earning a 5.75 percent return on investment.²

Through the act Congress also encouraged the railroads to improve operating efficiency by entering into pooling agreements. In such an agreement competing railroads could coordinate their facilities and services between large cities and share the pooled revenues among themselves. The Interstate Commerce Act of 1887 had outlawed this practice, but the United States Railroad Administration (USRA) in effect followed it during government control, and Congress wanted efficiencies introduced by the USRA to continue under private control. Consequently, the act of 1920 nullified the anti-pooling provisions of the act of 1887.³

The 1920 act also promoted improved railroad efficiency by discouraging cross subsidies. It encouraged private railroads to provide only those services and facilities for which users were willing to pay. In the Hoch-Smith Resolution of 1925 Congress rescinded part of its prohibition against cross subsidies by specifying that other freight shippers cross subsidize grain movements, but before World War II it never altered its directive that freight and passenger services were to be self-supporting. The worsening deficits of passenger service after 1920, financed by ever larger cross subsidies from freight service, resulted from causes other than regulatory policy.⁴

Different classes of passenger service were also supposed to be financially supported by their users. If railroads spent more money to move a passenger one mile in a sleeping car than in a coach, regulatory policy encouraged the railroad to charge more for the use of the sleeping car.

In deciding what strategy to follow, railroad managers had to consider how sensitive passenger demand was to fare increases. As they did before World War I, managers in 1920 thought that the demand for passenger service was inelastic. This meant that the public considered passenger fares to be such a small part of their daily expenses that they would not mind
paying higher fares. Managers were confident that they could raise fares without causing traffic to decline by much.

At the same time, managers considered competitive pressures between railroads. In competing for freight traffic, railroad companies used their passenger service to project their corporate identities and win business. Pooling agreements masked corporate identity. For this reason, managers intended to restore competitive luxury passenger trains complete with dining and observation cars. They also intended to resume the use of separate terminals and ticket offices. This meant that passenger costs would increase, further compelling fare increases.\(^5\)

For all of these reasons railroad managers leaned toward the option of passenger fare increases when they retook control of the nation’s railroads in 1920. Rather than improving on passenger efficiencies introduced by the USRA, or even maintaining such efficiencies, they intended to increase passenger costs even further and make the passengers pay for the increased costs. Although passengers never asked for such expensive items as ostentatious city terminals and duplicate luxury services, the ICC gave its blessing to fare increases with the hope that passengers would finance such unproductive debt and expenses.

After gaining ICC approval, the nation’s railroads in August 1920 increased the one-way fare from $0.030 per passenger mile to $0.036, while they reimposed the Pullman surcharge that the USRA had briefly applied during World War I. The surcharge amounted to about a half cent a passenger mile and went to the railroads. The Pullman Company continued to collect room fees. The railroads also increased freight rates by 40 percent, although under strong pressure from shippers the ICC rolled back half of this increase two years later.\(^6\)

Railroad management’s position on the Pullman surcharge indicated its growing opposition to the idea of cross subsidies. Management claimed that Pullman cars cost more to haul than coaches because the lower capacity of Pullman cars meant that railroads had to operate longer or more trains to carry the same number of passengers. As the railroads argued in the early 1920s, and as the urban historian Carl Condit demonstrates in his studies of railroad terminals in Cincinnati and New York, more or longer trains cost the railroads dearly. First, running more trains increased fuel, wage, and maintenance costs. Second, to handle the increasing numbers of all-Pullman limiteds, terminals needed lengthened and additional tracks, more complex interconnections between tracks, and more elaborate servicing facilities. Pullman cars also caused much greater than average switching expenses and necessitated costly and cumbersome reservation systems. A substantial part of the costs of the great, burdensome city terminals, as well
as many intermediate stations, arose from serving Pullman trains, although only a tiny fraction of the passengers using the terminals were Pullman passengers.7 Appealing to Brandeis's arguments of 1914, the railroads argued for more compensation from each Pullman passenger. E. L. Bevington, chairman of the Transcontinental Passenger Association, testified on behalf of the Western Carriers on 5 September 1923:

The carriers submit that this additional cost [of Pullman cars] should not be borne by them; neither should it be shifted to coach passengers nor reflected in the additional revenue which must be derived from freight traffic. In making an additional charge for transportation in sleeping and parlor cars, the carriers are merely applying the principle which has frequently been upheld by this commission and by the Supreme Court of the United States that each service furnished by the carrier should stand upon its own bottom and pay its own way.8

The ICC not only accepted this reasoning, it upheld it in 1924 after two years of hearings in which commercial traveler associations complained of the hardship of the surcharge. The ICC did this even though the railroads stubbornly refused to provide estimates of costs for moving Pullman and coach passengers.9 In granting these fare increases and in subsequent reviews of them in 1922 and 1923, the ICC agreed with the railroads' argument that every source of passenger revenue had to be protected. The railroads could not afford fare experimentation.10

At first the fare increase appeared to have no impact on ridership. The huge passenger flows of early 1920 continued unabated, and passenger revenues swelled. This happy situation continued until the recession of 1921, during which passenger revenues rapidly fell nationally as well as in California.

The drop in revenues that began in 1921 reflected more than a temporary downturn in the economy. It reflected the intensification of economic and competitive trends that had set in after 1910. As the economy continued to specialize and expand, competitive enterprises catering to its transportation demands continued to proliferate.

During the 1920s the production of consumer durables came to dominate American industry and alter American life. Auto manufacturing led the way, becoming by the middle 1920s the nation's largest industry.11 There were few individual habits the auto, its manufacturers, and its sellers did not alter in the process. Among the most radically changed were those of intercity travel.12

The auto not only expanded the volume of intercity travel, it cut into the passenger train market as well. In 1920 average Americans used autos
Troubles during Prosperity

50 miles per year for intercity travel, while they used intercity trains 450 miles per year. Just ten years later the average American drove 1,691 miles per year in intercity travel but rode only 219 miles per year on the train. By this time the American passenger train failed to earn its operating expenses, according to Interstate Commerce Commission statistics.\(^{13}\)

California exaggerated such trends because of its extraordinary population growth and rapid motorization. Having reached 2.4 million people in 1910, the state’s population climbed to 3.6 million by 1920. During the next ten years, another 2.1 million people moved to the state. They settled largely in the suburban communities of Los Angeles County and to a lesser extent in the suburban counties of the Bay Area.\(^{14}\) At the same time, auto ownership in the state rose from 150 cars per 1,000 population in 1920 to 340 cars per 1,000 by 1930 (see table 3). Auto-oriented newcomers increasingly ignored rail service in deciding where to live and work, and the state’s development interests considered it increasingly irrelevant.

Such economic and population growth, combined with rapid motorization, rapidly congested the state’s new highway system. These factors altered the emphasis in road construction in the early 1920s. Attention shifted to improving the concrete roads that already existed. For some time rural and urban interests debated methods for determining road improvement priorities. The original statewide standard of four-inch-thick, fifteen-foot-wide concrete pavement was clearly inadequate. The thin pavement quickly shattered under the weight of the primitive trucks of the time, while the narrow width could not accommodate any but the lightest traffic. The highway commission debated whether it should adopt a revised uniform standard for all of the state’s highways or vary its standards according to actual traffic conditions. The issue has never been resolved, but by the early 1920s traffic volume became an increasingly potent weapon in political fights over standards and the allocation of road funds.\(^{15}\) Generally the highway commission adopted higher standards for roads with greater traffic.

Traffic counts became the informational method used for determining road improvement priorities. In 1920 the highway commission conducted its first count, and it made a second in 1922. Traffic crossing the 103 counting stations increased by 43 percent in this two-year period. Thereafter the highway commission conducted counts annually. In 1926 state highway traffic was 300 percent greater than in 1920.\(^{16}\) The next year the highway commission began using such trends to project road needs for the future: “From the general increase noted yearly in the traffic, the Maintenance Department has prepared a chart setting forth the expected increase up to
the year 1940. As all California state highways are now being constructed to take care of future traffic, as well as that of the present, the traffic count in this way has become a valuable aid to the Construction Department.” 17

Through the 1920s the state and counties spent $512 million on road construction. Adjusted for inflation, the pace of road construction out-raced the state’s mushrooming population. Year by year motoring Californians encountered larger and more numerous construction and improvement projects. As in the teens, county expenditures generally exceeded those of the state, but not by much, and by the end of the decade the ever thinner lead in county expenditures evaporated. This change reflected increasing priority for the improvement of trunk roads (see table 4).

With the aid of federal funds and state gas taxes, the highway commission extended, straightened, widened, and thickened the more heavily traveled trunk roads throughout the 1920s. Multiple-lane roads appeared in the suburban Los Angeles and San Francisco areas and began extending outward along main routes into rural areas. At the same time, county highway commissions built thousands of miles of additional concrete highways. There was also a push to connect California with the outside world by paved highways. The first links across the Sierra to Reno and across the Imperial Valley to Yuma opened shortly after 1925; the link to Oregon opened soon after. 18

In the late 1920s, the highway commission unveiled a new type of mountain highway. Its curves had minimum radii of one thousand feet, and it was designed to be driven continuously at the legal speed limit of forty miles per hour. The commission planned this type of road for all of the major mountain passes and grades along those parts of the system linking the state’s large cities, many of which suffered terrible congestion by the middle 1920s. The first application of this radically new idea would replace the original Ridge Route between Los Angeles and Bakersfield. By 1930 the new route was under construction. 19

As the 1920s progressed the highway commission more zealously articulated its ideology of providing the state with free roads, and by the end of the decade it decided that private road initiatives clashed with its mission. Private toll-financed companies built and operated several roads and bridges in the state, including the spectacular Carquinez Straits Bridge between Vallejo and Crockett on the San Francisco–Sacramento route. Built by the American Toll Bridge Company, this was by far the most ambitious highway bridge in the state, but in the early 1920s several private toll bridge companies sought franchises to build a much grander project to link San Francisco and Oakland with what would be the world’s greatest bridge. After years of hearings that showed the feasibility of the bridge,
but which failed to authorize private companies to build it, the highway commission adopted a policy in 1928 calling for the elimination of all private toll facilities in California. It sought state legislation to establish a toll bridge authority to assume the task of building the San Francisco–Oakland Bay bridge and to eventually take over private toll roads and bridges in the state. The legislation passed in 1929, and although the California Supreme Court did not uphold its legality until 1931, the California Toll Bridge Authority was formed and began work in 1929. It opened the Bay Bridge to autos in 1936 and to interurban trains in 1939, and by 1941 it took over the remaining private road facilities in California.  

As if such ubiquitous road construction projects combined with state attacks on the involvement of private enterprise with transportation infrastructure were not enough to dispirit California’s railroad management, the reorganization of the intercity bus industry began competing with trains by the early 1920s. The regional monopolies that emerged at the end of World War I continued to expand through mergers. As the companies grew, they lengthened and strengthened trunk routes between major metropolitan areas and increasingly abandoned other services. By 1926 two statewide systems and one regional system dominated the intercity bus industry in California. Under the direction of Charles Wren, Pickwick Stages operated the largest intercity bus system in the United States. Routes covered much of California and extended north to Portland and east as well. Buck Travis directed Pickwick’s tough and nearly as large rival, the California Transit Company. A third company, Motor Transit, held suburban rights in the greater Los Angeles area, including the towns of San Bernardino, Riverside, and Santa Ana.

Under this arrangement the California Railroad Commission allowed little competition among bus carriers for local traffic. Where two or more carriers used the same highway, only one held rights for local traffic. However, bus lines competed with trains.

Wren and Travis expanded their bus operations rapidly after 1926. Both organized holding companies to take over operating properties in other parts of the country and forge national systems. In 1927, Travis formed the American Motor Transportation Company, which included his California Transit Company and other smaller operators that he purchased. In 1928, under the trade name of Pioneer Yellowway Stages, American Motor Transportation started service between San Francisco and New York, the first transcontinental bus service in the United States.

Steamships also made a comeback. In 1921 Los Angeles interests organized the Los Angeles Steamship Company and returned the Harvard and the Yale to the West Coast for five-day-a-week service between San
Diego, Los Angeles, and San Francisco. Compared to 1917, the refurbished ships featured almost twice as much space per passenger and a faster eighteen-hour schedule for the San Pedro to San Francisco part of the run. Through the 1920s these ships carried on average 1,400 to 2,100 passengers per week between the three coastal cities, although summer traffic greatly exceeded the average.\textsuperscript{23} The one-way fare of $18 (including berth and meals) between Los Angeles and San Francisco matched the Southern Pacific coach fare and considerably undercut the sleeping car fare. Fast passenger steamships also returned to service between San Francisco, Portland, and Seattle and continued to beat Southern Pacific passenger trains during the early 1920s.\textsuperscript{24}

Competitive pressures during the 1920s devastated Southern Pacific and Santa Fe passenger revenues, which fell 55 and 45 percent respectively between 1920 and 1929. Conventional wisdom holds that most of the ridership loss resulted from short haul coach riders deserting trains for automobiles, while long distance sleeping car travel remained robust. This view is supported by the fact that the average trip length of Santa Fe passengers increased from 139 miles in 1920 to 292 miles in 1929. Santa Fe historian Keith Bryant attributes the increase to the drying up of branch line and local coach traffic. On the surface, national statistics support this interpretation. Table 8 shows a remarkable 67 percent collapse in national coach traffic during the 1920s, which observers at the time attributed to the same cause as Bryant.\textsuperscript{25}

Other evidence suggests a more complex explanation for the decline in Southern Pacific and Santa Fe passenger revenues. Table 8 also shows that the average distance traveled by intercity coach passengers remained about the same in the United States through the 1920s, revealing that long distance coach passengers left the rails just as rapidly as did short distance coach passengers. At the beginning of the 1920s many coach passengers rode very long distances. For example, in 1921 the Santa Fe gained about a third of its Chicago–Los Angeles passenger revenue from coach passengers riding the full 2,000-mile distance between those cities.\textsuperscript{26} These figures suggest that in addition to coach passengers deserting rural local trains, such as those in the San Joaquin Valley, many transcontinental coach passengers left the rails as well. At the same time, the Pullman market softened remarkably during the 1920s. Many businesspeople who rode Pullman cars on runs as short as 90 miles in the early 1920s switched to speeded-up day trains or to automobiles by the end of the decade, reflected in table 8 by a 25 percent decline in the number of Pullman users and an increase in the average distance that each Pullman passenger traveled from 367 miles in 1920 to 486 miles in 1929. Many long distance tourists also stopped using Pullman cars in the mid-1920s, as discussed later in this chapter. So, while
the Santa Fe lost 55 percent of its 1920 intra-California revenue by 1929 and the Southern Pacific lost 41 percent, both railroads also lost substantial interstate passenger revenue. Despite the dramatic population growth in southern California, the two railroads’ revenues earned from interstate passengers in California dropped by 24 and 27 percent respectively during that period. Because interstate traffic fell while population increased, the percentage of California income spent on interstate train travel fell by more than half during the 1920s, as shown in figure 3.1.27

While certain long distance markets declined during the 1920s, some short distance markets remained relatively stable. The heaviest noncommuter rail passenger haulers in the United States—the Pennsylvania Railroad, the New York Central, and the New York, New Haven & Hartford—served numerous short haul markets in the East. These companies experienced passenger revenue losses of 5, 8, and 12 percent respectively between 1920 and 1929. In 1933 far more noncommuter passengers traveled between New York and Philadelphia, only 91 miles apart, than between any other pair of cities in the United States. In that year, when Southern Pacific and Santa Fe passenger revenues stood respectively at only 14 and 18 percent of their 1920 levels, the most heavily traveled noncommuter rail route in the West was that between San Francisco and Sacramento, only 92 miles apart.28

These considerations suggest that during the 1920s not so much the distance between cities as the nature of the service area and the traveler determined the competitiveness of passenger trains. Rail travel increasingly involved people traveling between big cities, whether far apart or close together, and it increasingly involved people traveling on business. Not short distance riders but price-sensitive travelers left the rails in droves during the 1920s, particularly in rural areas. Railroads such as the Southern Pacific and the Santa Fe, who gained substantial revenue from rurally oriented and price-sensitive passengers at the zenith of the passenger train era circa 1910, suffered greatly during the 1920s. Their remaining market increasingly centered on businesspeople traveling between the few large cities in their respective territories.

The Southern Pacific and Santa Fe managements reacted to the local traffic trends in California differently, primarily because the companies played different roles in the state’s economy. As the regulated transportation monopoly in much of California, the Southern Pacific assumed responsibilities that the Santa Fe did not. Its managers felt obligated to provide some unprofitable passenger services; Santa Fe managers felt such obligations to a much lesser extent and consequently acted more decisively and in a more businesslike manner.

As a regulated monopoly, Southern Pacific needed to provide complete
3.1 California passenger revenues as a percentage of California income, 1911–1930. Source: Table 20

passenger transportation service. This meant coverage to populated areas, service at the most demanded times, and sufficient space so as never to leave a passenger behind, even during peak demand times. Criticisms about wasteful passenger service and dictums not to cross subsidize tempered such considerations.

Examination of Southern Pacific’s passenger decisions suggests that it compromised between the conflicting goals by trimming rural local services as traffic dwindled and expanding its mainline train services. Southern Pacific strategy differed from the Santa Fe’s in that it did not cut back its local trains to what the Santa Fe called the irreducible minimum (a daily gas-electric car), but instead converted them to bus services offering several trips each day when traffic became embarrassingly light.

By comparing the pattern of train service that the Southern Pacific operated in central California at various times between 1915 and 1930, one can see the broad outline of the company’s passenger strategy. Figures 3.2, 3.3, and 3.4 taken together and compared to figure 1.1 in chapter 1 show the pattern of change in Southern Pacific passenger service during the 1920s. The company reduced rural local train service and expanded the number of through trains between San Francisco and Los Angeles. During the 1920s train mileage additions roughly matched train mileage reductions. The total
number of passenger train miles remained roughly constant until 1928 (see table 11).

In the early 1920s the company attempted to protect the demand for all of its passenger train services by politically denouncing intercity buses. Southern Pacific Bulletins between 1921 and 1923 contain numerous editorials by top company officers attacking unfair bus competition. They demanded that the state prohibit profit-making companies from using public roads, which they said the state should preserve only for private motorists. Letters to the editor from train and shop employees working in centers of local train operation echoed these points. In 1922 train and shop workers employed in Vallejo demonstrated against buses. Sixty-one train and shop employees based in that town operated and maintained a network of local passenger trains that fanned out to Santa Rosa, Calistoga, and Fairfield. Spokespeople for the employees stressed that their payroll of $131,000 helped support Vallejo's economy. They argued that buses were destroying this base, forcing the elimination of twenty employees.29

In later years Buck Travis, the California bus entrepreneur, bitterly referred to this period when he claimed that the Southern Pacific attempted to use its influence in Sacramento to legislate buses off state roads. Fighting back through the Motor Carriers Association, the bus interests eventually won and continued their mergers and restructuring of service into long intercity trunk routes.30

Even as it sought legislation against buses, the Southern Pacific Company discontinued local trains. Cases on the discontinuances suggest that management sought to eliminate some local trains when revenues no longer covered out-of-pocket costs. Railroads defined these as the direct costs of running passenger trains, which were a small fraction of average costs. In 1923 the average cost of operating a Southern Pacific passenger train was about $2.50 per train mile, according to Interstate Commerce Commission statistics. This figure is the ICC-defined fully allocated cost for passenger service for 1923 divided by the number of passenger train miles operated that year. It indicates all operating expenses that the Southern Pacific directly or indirectly attributed to passenger service, but the company believed that if it reduced passenger service by one mile, it would save only a small part of these expenses. The company kept a summary sheet of each passenger train on each division that showed the train weight behind the locomotive and revenues and costs that the company thought were directly attributable to the train operation. These included engine crew, train crew, and fuel expenses and totaled between $0.33 and $0.50 per train mile. For example, for a particular day in 1923 the Lark, Southern Pacific's crack overnight limited between Los Angeles and San Francisco, weighed 710 tons, cost $0.39 per mile to operate, and brought in $4.82 per mile in gross
3.2 Southern Pacific passenger train services in central California, ca. 1920. Source: SFC, exhibit 626
Southern Pacific passenger train services in central California, ca. 1925. Source: SFC, exhibit 626
3.4 Southern Pacific passenger train services in central California, ca. 1930. Source: SFC, exhibit 626
revenue. On the other hand, No. 24, the San Francisco to San Luis Obispo local, weighed 156 tons, cost $0.33 per mile to operate, and brought in $0.67 per mile in gross revenue. Company records showed virtually no difference between the cost of running a heavy train compared to a light one, and in both cases costs were less than one-fifth the ICC-defined average cost for running a typical Southern Pacific train.31

In the mid-1920s Southern Pacific ceased keeping such records of passenger train performance, but on an ad hoc basis it estimated out-of-pocket passenger costs when it considered abandoning a train with low gross earnings or running a new train. So did the Santa Fe. An examination of such figures shows that out-of-pocket costs, as defined by management, steadily rose through the 1920s, reaching about $1.00 a train mile for steam trains by the end of the decade. During this time the figure included more expense accounts that management came to believe were variable, such as passenger car and locomotive maintenance, train supplies, and engine house expenses, as well as a small amount for track maintenance.32

Trains that management abandoned typically grossed less than $0.50 per train mile, sometimes half that, suggesting average traffic of less than ten passengers and a handful of mail and express. I could find no record of controversy surrounding such abandonments. The railroad commission routinely approved and reported them, generally without comment.

Because of its desire to maintain the Southern Pacific image as a comprehensive transportation system, management refused to reduce branch line passenger service in many areas below several schedules per day. As traffic on rural trains continued to decline, management sought ways to operate them more cheaply. In 1927 it decided that the best strategy was to replace such trains with Southern Pacific buses, which management figured would cost much less to operate and look more modern. Coordinated with through trains, buses would meet the company’s objective of providing comprehensive transportation service. No potential railroad competitor could accuse it of shirking its duty and abandoning the field.

Lee D. Jones, Southern Pacific’s superintendent of transportation in the mid-1920s, scheduled the company’s passenger trains. In 1936 he testified that by the mid-1920s most rural local passengers had abandoned trains for automobiles. What local business remained for public carriers used buses, which offered more frequent service on the parallel highways. Only long distance passengers used the rural local trains to begin or end their trips, and according to Jones, Southern Pacific management thought such passengers were too few to justify the local trains. On the other hand, while Southern Pacific management believed the railroad commission would let
it abandon any local train it chose to discontinue, it feared that by doing so it would lose what it called presence in the state. It is difficult to determine what Jones meant by "presence," but he probably meant that influential groups in various communities in the state would think less of the railroad if it eliminated its remaining networks of local trains. There was also the consideration that the railroad commission or the Interstate Commerce Commission might become more inclined to allow competing railroads to expand their operations in California if the Southern Pacific ceased to provide comprehensive passenger service. In the mid-1920s the Southern Pacific vigorously fought initiatives by the Great Northern Railway to build into northern California and the Western Pacific to extend routes deep into the San Joaquin Valley. To maintain presence, according to Jones, Southern Pacific management decided not to eliminate all local train service but to replace remaining rural local trains with company-owned buses.33

Before entering the bus business, Southern Pacific president William Sproule pulled several of his officers together into an ad hoc committee to study bus operations throughout the United States. The committee reported to Executive Vice President Paul Shoup, who headed several of Southern Pacific's electric railway subsidiaries and who in 1929 replaced Sproule as company president.34

The committee's attention soon focused on a bus operation begun by the New York, New Haven & Hartford Railroad. During the first two decades of the century the New Haven built up a huge debt in order to finance its monopolization of surface transportation in southern New England. In the mid-1920s passengers began deserting many of the rural local services for which the company had paid so dearly a few years earlier. The company then attempted to cut costs by substituting buses for many of its local trains. To operate its buses it formed the New England Transportation Company, a wholly owned subsidiary, in 1925.35

Finding itself in circumstances not dissimilar to the New Haven's, Southern Pacific management in the spring of 1927 formed the Southern Pacific Motor Transport Company (SPMT), a bus subsidiary modeled after the New Haven effort. Appointed superintendent of the new bus operation, Jones immediately began drawing up bus schedules to replace entire systems of branch line trains centered in Santa Cruz and Vallejo as well as many trains in the Sacramento and San Joaquin valleys. The Southern Pacific organized another bus subsidiary, Oregon Motor Stages, to replace remaining steam trains and the entire electric rail operation centered in Portland. Far more rural than suburban in character, Southern Pacific's Portland electric operation had lost much of its traffic, unlike the company's East Bay electric operations or its Pacific Electric subsidiary in Los Angeles.36
To implement its plans in California, SPMT needed certificates of convenience and necessity, which it sought to purchase from established bus operators. Because of the low traffic density of the territories that SPMT intended to serve, most of the existing bus lines still were provided by owner-operators or small-scale companies. SPMT generally succeeded in buying the rights from the established operators, but in the Santa Cruz area an owner refused to sell. SPMT then applied to the railroad commission for a bus certificate allowing it to operate bus service that would compete with the established operator.37

Through the Motor Carriers Association Travis and Wren bitterly fought this seemingly unimportant application. Both entrepreneurs built their bus empires with confidence that the railroad commission never issued certificates where service already existed. Neither wanted a powerful railroad to break this precedent. If the Southern Pacific won the Santa Cruz case, it could quickly establish trunk bus lines along its own mainlines throughout California. This would put Southern Pacific buses in head-to-head competition with both Pickwick and California Transit. In 1928 the Southern Pacific had the financial resources to put either bus company out of business, if it so chose, and given the Southern Pacific's efforts to legislate buses off the roads in the early 1920s, neither Travis nor Wren trusted the company's motives.38

Despite Travis and Wren's arguments, the Southern Pacific won its case in October 1928. It quickly discontinued trains and implemented its bus operations in California and Oregon. Generally the new buses operated more frequently than the trains they replaced, but they lost money, and traffic continued to decline. Because of this and because of the fears aroused in Travis and Wren, the stage was set for the formation of Pacific Greyhound Lines, discussed in the next chapter.39

As the 1920s unfolded, Southern Pacific management realized that declining passenger train profitability stemmed not only from branch line trains but from mainline trains. Earnings per train mile were slipping on popular trains. In 1923, for example, the company began a daily luxury coach train on a fast twelve-hour daytime schedule between San Francisco and Los Angeles. Called the Daylight, the new train appealed to the public, and by 1925 it grossed an average of $4.71 per train mile. Whether caused by growing auto use or a price war between Pickwick and California Transit for through Los Angeles to San Francisco business, usage of the Daylight declined after 1925. By 1928 the train grossed only $3.87 per train mile.40

The company reacted to declining earnings of important trains in several ways. One was to discount fares. The high 3.6 cent fare that the ICC approved for national application in 1920 applied to one-way fares. If rail-
road management wanted to lower fares in specific markets, they could alter round trip and excursion fares without petitioning the ICC for approval. This they increasingly did in the latter half of the 1920s.

Where a railroad monopolized rail service, as the Southern Pacific did between Los Angeles and San Francisco, management could act more freely than where competition existed. In the latter case custom compelled it to convince the competing road of the wisdom of the fare change, and then the competing road would also implement it. California railroads observed such niceties since before 1906, when John J. Byrne, the Santa Fe's assistant passenger traffic manager in Los Angeles, outlined the basic arrangement before a gathering of railroad traffic officers. The traffic association served as the forum for deliberations between traffic officers of different railroads over fares, although in at least some cases individual traffic officers of two roads would work together outside of the association.

The passenger traffic manager generally was management's expert on fares. After 1925 Felix S. McGinnis held this position on the Southern Pacific's Pacific Lines. A Los Angeles native, McGinnis started with the Southern Pacific as an office boy in 1900 and rose through the upper managerial ranks during the reign of President William Sproule in the early 1920s. Following Sproule's example, McGinnis cultivated ties with the most prestigious social clubs in the area where he resided. In the early 1920s this was still Los Angeles, but after moving to San Francisco in 1925, McGinnis did likewise in that city. In 1929 the company promoted him to vice president of passenger traffic, a new post that extended his duties to overseeing passenger traffic of all properties owned by the Southern Pacific Company. Prominent in San Francisco and Los Angeles social circles, he represented the company and divined the tastes of both the traveling public and the social elite of the state.

In 1936 McGinnis testified that the public's willingness to pay railroad fares varied for different types of traffic and between different pairs of cities. In general McGinnis believed that a fare existed in each market above which traffic would not flow and below which further fare reductions would stimulate little additional traffic. Rail passenger traffic managers of the period often stated this theory. They called fares above this level "traffic-rejecting fares," and in general they sought to keep fares just below this level. If they succeeded, they obtained the most possible gross revenue for a particular service.

McGinnis believed that the official fare established in 1920 had been implemented as a wartime measure to suppress demand and was from the outset a traffic-rejecting fare. In the late 1920s he sought to selectively overturn it as revenues per train mile sagged on many previously popular trains. He did this by increasingly discounting round trips and weekend
3.5 Passenger fare yields in U.S. regions, 1922–1930. Group I includes the Pennsylvania Railroad, the New York Central, and the New Haven. Source: Table 24

excursion fares and often was gratified by at least a temporary recovery of gross earnings. The company also began discounting long distance coach and tourist sleeping car fares on numerous trains affected by long distance bus competition. Southern Pacific even lowered the basic one-way fare on the *Daylight* in 1929, which restored its earnings to $4.60 per train mile, albeit at the cost of carrying many more passengers, which meant higher operating costs and lower surpluses compared to 1925.

Fare discounts lowered the revenue that each passenger mile brought in for the Southern Pacific. The revenue per passenger mile declined most severely for travel within California, but it declined generally for the system, as it did for all western and southern railroads. Only in the Northeast did revenue yields hold up. This phenomenon, shown in figure 3.5, reflected the lessening value that the public placed on rail service. In the Northeast the public continued to ride high-priced trains, most likely because northeastern trains operated at almost double the speed of those in the West and consequently were of higher value to business travelers.

Lowered bus and train fares combined with faster train schedules spelled the end for passenger coastal steamship service along the West Coast. While the steamship companies succeeded in holding on to traffic by
meeting lowered rail coach fares at the end of the 1920s, the reduced revenues failed to cover costs. Deficits rapidly accelerated as steamships met further rail and bus fares reductions in the early 1930s. After one of the two Los Angeles Steamship Company ships ran aground in 1931, making daily service impossible, the steamship service ceased to compete significantly in the California market. A bitter West Coast maritime strike in 1934 sealed its fate.\textsuperscript{47}

While Southern Pacific management discounted fares on long distance trains, it also speeded the trains up in response to auto competition. Under USRA control, the \textit{Overland Limited} ran between San Francisco and Chicago in seventy-two hours. In late 1920 Southern Pacific cut the schedule to sixty-eight hours, but it made no further schedule improvements until 1926. Thereafter, the company cut additional time from the schedule almost every year. By May 1930 the \textit{Overland} completed the run in fifty-seven hours.\textsuperscript{48}

Almost certainly the automobile played a role in these speedups. Paved roads connected California to the East about 1926, and long distance auto touring was not only feasible but popular. Warren Bellasco shows that after 1925 autos accounted for much more travel to western national parks than did trains. Richard Overton reports that the Burlington complained about reduced earnings from its trains to the Rockies in 1927 because of auto competition. Taken in the context of Bellasco’s and Overton’s observations, the fact that significant speedups on the \textit{Overland Limited} did not occur between 1920 and 1926, and were then followed by a series of improvements, suggests that management made the improvements at least in part in response to automobile competition.\textsuperscript{49}

Competition between cities on the West Coast also influenced Southern Pacific’s decisions on speed and appointments of its transcontinental trains. The railroad and business historian Maury Klein points out that railroad managements strived to equalize service between Chicago and the large cities on the West Coast in order not to anger jealous business elites in the various cities. Prior to World War I the railroads agreed among themselves to provide equal but not excessively extravagant service on these routes, and the agreements generally held until the mid-1920s, when the Santa Fe broke ranks. Most likely driven by auto competition, the Santa Fe then began speeding up its trains and improving their amenities. Union Pacific responded on its own route to Los Angeles, obligating it to make similar improvements to the \textit{Overland} service that it jointly operated with Southern Pacific to San Francisco.\textsuperscript{50}

Under the threat of auto competition, Southern Pacific management speeded up most of its passenger trains modestly between 1925 and 1930, as shown in table 12. Investments in improved locomotive designs at the
end of the 1920s helped management to realize the speedups. Modern passenger locomotives of the 4-6-4 varieties introduced by the New York Central about 1927 showed that steam engines could efficiently cruise in the sixty to seventy mile per hour range, in contrast to about forty miles per hour for the 4-6-2 locomotives they replaced. Southern Pacific ordered larger but slower 4-8-2s to replace its 4-6-2s on important passenger trains; like the New York Central engines, they allowed for the operation of longer trains at faster speeds more economically than previously was possible.  

Two investments in track and signal improvements also allowed significantly higher Southern Pacific train speeds in the 1920s. In the San Francisco suburban district Southern Pacific spent approximately $4 million during the early 1920s to expedite its growing but unprofitable commuter traffic. This sum provided for a more complex track structure, additional interlockings, and a replacement block signal system between San Francisco and San Jose, allowing the company to operate more suburban and long distance passenger trains into San Francisco at higher speeds.  

In 1928 the company also began work to replace its train ferries across the Carquinez Straits with a large bridge costing $12 million. Completed in 1930, the bridge unplugged a major bottleneck for both freight and passenger trains. After it opened, passenger trains completed the run between San Francisco and Sacramento one-half hour faster.  

Southern Pacific could have increased speeds substantially more between San Francisco and Los Angeles had it invested in shortening the San Joaquin Line linking these major markets. While auto competition was drying up rural rail traffic in the state, heavy freight and passenger traffic flows continued between Los Angeles and San Francisco, which constituted one of the Southern Pacific’s largest passenger and freight markets in the 1920s. If the company was to continue thriving in these markets, it needed a better rail route linking the two metropolitan regions. Year by year improvements to the state highway system, particularly in mountain passes, accentuated the tremendous circuitry of both the Coast and the San Joaquin lines and lessened their competitiveness. The 1916 opening of the original Ridge Route cut the highway distance between San Francisco and Los Angeles to 425 miles, compared to the San Joaquin Line’s approximate 480 miles and the Coast Line’s approximate 470 miles. Curve straightenings and widenings during the 1920s improved driving conditions considerably.  

Southern Pacific management invested relatively little money to make its rail routes between San Francisco and Los Angeles more competitive with such highway improvements. Outside of the San Francisco suburban project and improvements in the Los Angeles terminal district, the company between 1916 and 1935 invested only $7.7 million chargeable to capital
in the Coast Line and $8.3 million in the San Joaquin Line. Most of the Coast Line work centered on a $6 million project begun in the late 1920s to re-signal and otherwise increase the capacity and speed of the Coast Line between San Jose and Watsonville Junction. Approximately $3.3 million of this amount paid for a line change and new passenger terminal in San Jose to take tracks off city streets. The remainder increased the capacity and reduced the curvature between San Jose and Watsonville Junction, where increasing perishable traffic and inbound and outbound passenger trains caused ever growing congestion.

The San Joaquin Line improvement may have hindered rather than helped the competitiveness of the state’s rail system. Its timing suggests that the company made it primarily to thwart a Santa Fe proposal for entering the Los Angeles to San Francisco market. In 1922 the Santa Fe not only surveyed a 128-mile line between Los Angeles and Bakersfield, which California Division of Highways engineers followed six years later with their new superhighway, but it went so far as to purchase land for right of way in the vicinity of Tejon Pass. This line would have created a Los Angeles to San Francisco route forty miles shorter than the Southern Pacific’s Coast Line and likely would have resulted in increased passenger and freight traffic between northern and southern California.

I have not discovered Santa Fe management’s thinking on this proposal, which I estimate would have cost between $50 and $60 million. Perhaps the management decided that it could better spend resources on improvements to the route between Los Angeles and Chicago. Perhaps the state highway program dissuaded it. Perhaps the proposal merely was a ploy to force Southern Pacific to improve its route over Tehachapi Pass, which the Santa Fe used to reach the San Joaquin Valley from eastern points. In any event, Southern Pacific in 1923 offered the Santa Fe a renewed lease for the use of its Tehachapi Pass tracks and announced that it would build a second track on the congested route at a cost of $10 million. The work cost less than this because the Southern Pacific later substituted improved signaling for some of the double track. As a result, for the sum of $8.8 million the Southern Pacific defended its most important market from the Santa Fe, while at no cost the Santa Fe gained improved access between the East and the San Joaquin Valley. However, the rail infrastructure between southern and northern California remained sadly underdeveloped.

Instead of investing more in its main California trunk lines, the Southern Pacific made significant politically motivated investments intended to prevent possible competition. In 1923 the company announced that as a result of winning its battle to keep the Central Pacific, it would invest $50 million in new track. Many of these projects, including the Natron Cut-Off
(a new, more direct line between California and Oregon), double tracking the mainline east from Sacramento over the Sierra, and double tracking the line over Tehachapi Pass between Bakersfield and Mojave, were part of the 1913 capital budget. Other projects included a new passenger depot at Sacramento and new terminal facilities and mainlines in central Los Angeles, designed to take mainline freight trains off city streets. Shortly afterward the company announced that it would build a mainline connecting the Central Pacific and points in Oregon. It also announced that it would build a new mainline through Phoenix. Finally, it announced that it would build a large $12 million bridge to replace the train ferry across the Carquinez Straits on the mainline between Oakland and Sacramento.⁵⁸

Some of these projects, such as the Natron Cut-Off, the double tracking of the Overland Route, and the Carquinez Straits bridge, improved heavily traveled routes. They undoubtedly increased the operating efficiency and competitiveness of the company. Others, such as the connecting line to Oregon and the line through Phoenix, promised but light traffic or operating economies. The Southern Pacific evidently agreed to build the former in exchange for political support for its continued control of the Central Pacific, and evidently agreed to the latter in exchange for support of its ICC petition to take over the El Paso & Southwestern. The EP&SW operated to Tucson from eastern connections in Texas and New Mexico. In the early 1920s the EP&SW threatened to extend its line to Los Angeles via Phoenix, a feasible proposition if backed by either of its eastern connections. The company went so far as to buy terminal property in Los Angeles—the site of the present-day Los Angeles Union Passenger Terminal. By purchasing the company in 1924, Southern Pacific ended this threat at the price of building about 150 miles of new mainline that added little to revenue or did little to reduce costs.⁵⁹

Southern Pacific’s investment in passenger cars also was of questionable economic merit. When management realized the magnitude and irreversibility of the loss of rural traffic about 1915, it limited further investment in steel cars to either accommodate rising traffic or to increase luxury. In the early 1920s only the Peninsula suburban service experienced rising traffic, and the company purchased about seventy high capacity steel coaches for this service, even though it lost money. Much of the elite of San Francisco (including many Southern Pacific executives) used this service. Most of the remaining car orders during the 1920s improved luxury trains. Probably the largest of such orders occurred in 1926 when the company outfitted the Overland Limited with eight sets of cars at a cost of $3 million. The Bulletin described the new trains as “aristocrats of western transportation.”⁶⁰ In addition to these train sets, the company during the
1920s ordered large numbers of new dining, observation, and chair cars for its other luxury trains. Although they heavily lost money, dining cars seemed particularly important to management for the marketability of its leading trains. During the 1920s the Bulletin, in nine major articles, commented more on them than on any other aspect of the Southern Pacific’s passenger service. The company’s ninety-seven dining cars constituted the largest such fleet in the United States during the early 1920s.

Southern Pacific directed other investments to improving productivity by the traditional method of operating longer freight trains composed of bigger cars, each of which was more heavily loaded. During the 1920s the company bought larger and more efficient locomotives that could pull longer trains. It bought larger freight cars to make up the trains, and it sought to load them more fully. It also laid heavier rail to hold the heavier trains. The Bulletin boasted throughout the 1920s of continuing freight productivity improvements resulting from such measures.

Unfortunately these measures taken together yielded a disappointing bottom line. Although Southern Pacific’s operating ratio improved from the unsatisfactory level of 76 in 1920 to the marginally acceptable level of 71 in 1923, the important statistic failed to further improve significantly for the rest of the decade. At the same time traffic grew by 28 percent (see table 5). These statistics told management that despite growing traffic and heavy investments, the company remained only marginally profitable. Southern Pacific historian Don Hofsommer reports that at the end of the 1920s the company’s board, noting record gross earnings but a disappointing 3.98 percent return on investment, questioned management about the wisdom of its investments.

Many other U.S. railroad managements faced equally disappointing results. The Harvard economist William Cunningham reports that railroad productivity improvement in the 1920s came from a continuation of the trend of operating longer, larger, and heavier trains, but such investments no longer earned a competitive return. Albert Fishlow reports that between 1909 and 1953 railroad productivity advanced at an average of 2.7 percent per year, but this rate was slower than the rate of productivity growth for the American economy.

By the end of the decade, Southern Pacific’s passenger service performed considerably more poorly than its freight service, although it showed signs of improvement. The operating ratio declined to 84 in 1929 from 88 in 1927. Gross revenues increased to $53 million in 1929, from $52 million in 1927. Intrastate passenger riding declined by only 10 percent, interstate riding held steady, and mail and express revenue increased. Apparently the conversion of little-used rural local trains to buses improved passenger service’s financial performance. The conversion lost little reve-
nue, while it saved substantial expenses. The closure of entire operating centers in locations such as Vallejo, Santa Cruz, and Portland saved much more than the reduction in train and car miles would suggest. These results outshined those for the nation's railroads, whose passenger ratio climbed slightly from about 97 in 1927 to about 98 in 1929. Perhaps for this reason, McGinnis saw 1929 as the year by which Southern Pacific's rail demand and services had adjusted to the automobile.

Much less information is available on the Santa Fe's passenger strategy during this period. What there is shows that the Santa Fe's status as a challenger to the Southern Pacific for intrastate traffic left its management unburdened by the self-imposed service obligations that saddled Southern Pacific management. As a consequence, Santa Fe management responded more freely to changing market signals, although its conception of passenger service as a marketing ploy for freight service moderated its responses.

In 1920 the Santa Fe restored some of the service that it deleted in 1918, increasing its intrastate train mileage from 1.7 million train miles per year in 1919 to 2.0 million per year in 1921. This number remained far below the 1916 peak of 3.3 million train miles, but management decided not to restore more service because of traffic losses to the automobile during the period of federal control. Instead, it concentrated on its Los Angeles to Chicago trains, increasing their mileage operated within California from 1.3 million miles in 1916 to 1.6 million miles in 1921.

Management considered restoring the Saint and Angel, the pre-war overnight trains between Los Angeles and San Francisco, but decided not to do so. The road's Los Angeles traffic managers had recommended restoration in order to reestablish the Santa Fe corporate identity in the lucrative freight market between Los Angeles and San Francisco. They argued there was little cost in this strategy. Before the war the trains usually covered their direct costs and likely would do so again, or so the Los Angeles management thought. After considering the rampant highway construction then occurring in California, Santa Fe's Chicago executives vetoed the idea.

Traffic results quickly convinced Santa Fe officials of their wisdom in not emphasizing local trains. In 1920 the Santa Fe carried 104 million intrastate passenger miles in California, up from 89 million in 1919. In 1921 the number plummeted to 69 million despite the modest added service.

Rather than restoring more intrastate trains, the Santa Fe took advantage of pooling provisions in the Transportation Act of 1920. In 1921 the Santa Fe asked the Southern Pacific for an agreement to carry Santa Fe passengers on Southern Pacific trains locally within California, to which the Southern Pacific consented.

Santa Fe management also relied on the automobile for taking care of the local travel needs of its transcontinental rail passengers. In 1921 the
company ran newspaper ads in the Chicago papers exhorting midwesterners to take their cars with them when they traveled west on the *California Limited*. The ads proclaimed that a just-passed bond issue would finance several thousand miles of additional roads. Once in California the midwestern traveler could drive the length of the state in all seasons on unsurpassed roads and avoid local trains altogether. These ads so upset the Southern Pacific’s passenger agent in Chicago, Frank E. Batters, that he clipped an ad from the 10 October 1921 Chicago *Tribune* and scrawled a note to his superior in California across the top: “Black [Santa Fe’s passenger traffic manager] don’t seem to care much for his or our local business in California. Santa Fe all the way both ways including freight.” 74 In the eyes of McGinnis in the mid-1930s, this ad symbolized the Santa Fe’s passenger policy after 1921 of concentrating on its Los Angeles to Chicago trains. Except for trains between Los Angeles and San Diego, the Santa Fe operated other trains in California only as token services intended to preserve its corporate identity.75

The company’s investment program reflected this orientation. The rural passenger market, which had been the objective of the Santa Fe’s service expansion strategy prior to 1916, was dead. To break into the state’s lucrative market between Los Angeles and San Francisco, the Santa Fe needed a direct track between Los Angeles and the San Joaquin Valley. After considering building such a line, it decided to instead place all of its limited resources into upgrading its mainline and services between Los Angeles and Chicago. Buck Travis commented on this in 1936:

Succeeding the close of the United States Railroad Administration, when the railroads were returned to private enterprise, the management of the Santa Fe Railway decided to build its main line across the country, this requiring all the energies the Santa Fe could bring to bear upon this project for several years; as a consequence, the Santa Fe could not give much attention then to the re-establishment of the Los Angeles-San Francisco service, all of the Santa Fe resources being applied to build up the main line.76

Along with building up the mainline, Santa Fe invested in new equipment and faster schedules for its limited trains between Los Angeles and Chicago. In 1921 trains operating between the two cities accumulated 1.6 million miles within California. By 1929 this figure increased to 2 million miles. Management added the extra fare *Chief* to the Chicago–Los Angeles route in 1926. To regain tourist traffic, it discounted coach and tourist sleeper fares and expanded Chicago–Los Angeles tourist service on its *Scout*, *Navajo*, and *Grand Canyon Limited* at the end of the decade.77
The Santa Fe’s local traffic generally reflected management’s priorities. After holding at about 70 million passenger miles per year through 1924, traffic within California steadily declined to 43 million passenger miles in 1930. Most of this remaining traffic rode on trains between Los Angeles and San Diego, and it continued at this level because Santa Fe management, like the Southern Pacific’s, began discounting fares heavily.78

While not as disheartening, trends in the Santa Fe’s long distance traffic could not have comforted management. Despite the phenomenal growth of Los Angeles, improvements to the Santa Fe service between Los Angeles and Chicago failed to increase usage on this route. Interstate traffic declined from 184 million passenger miles within California in 1920 to 135 million in 1921. Although interstate traffic partially rebounded to 154 million passenger miles in 1924, thereafter it slid every year to a low in 1928, and then slightly rebounded to 133 million passenger miles in 1929.79

U.S. railroad passenger service began the 1920s in a deficit position and ended the decade in worse financial shape. In 1920 revenues more than covered operating expenses, but not by enough to fully pay for fixed expenses. Nine years later revenues barely covered operating expenses, leaving nothing left over for fixed expenses. During the same period the passenger train’s share of intercity travel declined precipitously. What had been a general form of transportation in 1920 changed into primarily a specialized means of business travel by 1929. In the latter year the Southern Pacific’s passenger service fared somewhat better than the national average, but in general terms both it and the Santa Fe mirrored the national trend.

The primary problem with passenger service at the beginning of the 1920s was its high cost of operation. Rather than addressing this problem, most railroad managements raised fares to absurdly high levels. Since about 1910 railroad management had argued that if only it had the freedom to raise rates, its financial problems would be solved. Dismissing critics such as Brandeis, who argued that many railroad financial problems derived from inefficient practices, management was not about to change course in 1920 by concentrating on efficiency while ignoring the opportunity to raise rates. Despite abundant evidence beginning in 1921 that the nonbusiness public would not pay such high fares, managements left fares at the high levels for most of the decade. Both the Southern Pacific and the Santa Fe managements followed this path. Only at the end of the decade did they begin to concede that fares had been too high since 1920 for all types of train services (except commuter service), and then they cautiously began fare reduction experiments.

Managements then found that although lowered fares increased gross
revenues, they also increased costs by almost as much. Moving the added passengers brought in by the lowered fares cost money. Compared to buses or autos, moving passengers by rail, at least the way the U.S. railroads did it, was a costly business. Management did little to address this problem during the 1920s. What actions it did take involved the operation of trains that the public no longer used. One of the few U.S. railroads to take advantage of pooling provisions in the Transportation Act of 1920, the Santa Fe avoided the costs of reinstating many rural local trains in 1921 by making agreements with the Southern Pacific to transport local passengers. Of the trains that it did reinstate, it wasted no time in taking them off again once usage declined. On the other hand, the Southern Pacific felt compelled to operate a comprehensive passenger network long after traffic would no longer support it. Ultimately the railroad turned to buses as a cost-saving measure for rural local services.

Neither railroad addressed the high cost of moving passengers in their mainline limited trains. To the contrary, they continued investing heavily in the same massive, uneconomic steel equipment that remained virtually unchanged from the previous decade. This equipment proved to be an ever greater liability as automobile competition forced reluctant railroad management to increase passenger train speeds. Only toward the end of the decade did the Southern Pacific and Santa Fe managements make some technological advance when they began ordering locomotives that could move the heavy trains somewhat more efficiently at higher speeds.

Both managements also failed to address the increasing obsolescence of their main rail routes in California. Dramatic advancements made in California’s highway system each year cut into the earning power of the circuitous rail routes linking the lucrative freight and passenger market between northern and southern California. Perhaps because public sentiment in California during the 1920s scorned private investment in transportation infrastructure, both railroad managements invested elsewhere. Rather than making its services more competitive in California, Southern Pacific management invested in a scatter-gun array of productive and nonproductive projects intended to stifle competition from potential railroad threats on the approaches to California. It also resorted to politics in an unsuccessful effort to stifle bus competition. Santa Fe management channeled its investments into a more focused and productive program of improving its mainline between Los Angeles and Chicago. Consequently, rail routes serving perhaps the most heavily traveled corridors in the West failed to improve significantly during the 1920s, even though, as argued later, the rail market would have supported such improvements.
Fig. 1  Southern Pacific San Joaquin Valley local, ca. 1910. Few of these local trains were photographed, except when in distress. This train is on the line between Visalia and Exeter, jointly used by the Southern Pacific and the Visalia Electric. Courtesy of the Tulare County Museum.

Fig. 2  Southern Pacific San Joaquin Valley local, ca. 1910, in the vicinity of Visalia. The locomotive was running backward, suggesting that this train shuttled back and forth, perhaps several times daily, between valley points. Courtesy of the Tulare County Museum.
Fig. 3  Southern Pacific limited sleeping car train departing Oakland, ca. 1910. The relatively light locomotive, a 4-4-2 Atlantic, could make good time with the wooden cars. Courtesy of the California State Railroad Museum.

Fig. 4  The Sunset Limited rolls up the peninsula toward San Francisco after traveling more than 2,500 miles from New Orleans. This train, ca. 1925, is typical of limiteds from about 1915 well into the 1930s. The heavier steel cars required larger 4-6-2 locomotives, and when they were speeded up in the late 1920s, even larger 4-8-2 locomotives. Courtesy of the California State Railroad Museum.
Fig. 5  George Tatterson's Ripon–Manteca–Stockton stage in Stockton, 1910. This was one of the first interurban jitneys (later known as intercity buses) in the United States. SFC, exhibit 327. Courtesy of William A. Myers.

Fig. 6  Promoting good roads, Wheatland tract, north of Sacramento, 1914. Automobiles were adopted first in rural areas and greatly reduced the demand for local trains. Influenced by automobile technology, the Southern Pacific introduced gasoline-mechanical McKeen rail cars before 1914 to cut costs on several local trains, including the one shown here. Courtesy of the California Department of Transportation.
Fig. 7  California Transit Company intercity bus, Oakland, 1921. SFC, exhibit 327. Courtesy of William A. Myers.

Fig. 8  The new three-lane Ridge Route, 1933. For the first time motorists could drive across mountain barriers at the legal speed limit of 40 miles per hour without having to slow for curves. Courtesy of the California Department of Transportation.
Fig. 9  New road alignments, San Diego County, 1925. The highway commission started a road-straightening program in the early 1920s. As projects were completed, driving speeds approached train speeds on parallel railroads. From California Highways and Public Works, January 1925. Courtesy of the California Department of Transportation.
Figs. 10 & 11  The standard Greyhound bus of 1935 (top) and the Greyhound Superbus that began replacing it in 1936. SFC, exhibit 327. Courtesy of William A. Myers.
Fig. 12  The Southern Pacific *Daylight* climbing Cuesta Grade, ca. 1940. The streamlined *Daylight* offered luxurious accommodations and cut more than an hour from the schedule between Los Angeles and San Francisco. Tortuous mountain crossings and an indirect route prevented it from saving even more time. Southern Pacific Company photo by A. W. Rommel. Courtesy of William A. Myers.

Fig. 13  A Santa Fe *Golden Gate* streaks along U.S. 50 as it leaves the Bay Area, 1947. Unlike the conservative Southern Pacific, the Santa Fe fully embraced diesel power, which helped improve the financial performance of its passenger trains at the end of the 1930s. Courtesy of Fred Matthews, Jr.
Fig. 14 The Daylight races trucks on U.S. 101, 1937. The new train compared favorably to state highway alignments dating from the 1920s—at least in relatively flat country. Courtesy of the California Department of Transportation.

Fig. 15 Because of the construction of Shasta Dam, the Bureau of Reclamation built a thirty-two-mile modern mountain railroad for the Southern Pacific in the late 1930s. Similar projects on the main rail routes linking California’s population centers might have made a difference in the fate of the state’s rail industry. Courtesy of the California Department of Transportation.
Fig. 16  New highway construction, Cuesta Grade, 1937. Even as the Southern Pacific broke in its new streamliner, the California Highway Commission feverishly continued to improve roads over mountain passes. Courtesy of the California Department of Transportation.

Fig. 17  The new high-speed, four-lane Altamont Pass highway between Stockton and San Francisco, 1938. This coastal mountain crossing opened the same year that the Santa Fe inaugurated the *Golden Gate* on a much longer and slower route out of the Bay Area. Note the obsolete highway paralleling mainlines of the Southern Pacific and Western Pacific. Courtesy of the California Department of Transportation.