

CONCRETE UTOPIA: THE DEVELOPMENT OF ROADS AND FREEWAYS IN
LOS ANGELES, 1910-1950

by

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ABSTRACT

This study examines the production of the public places of automotive transportation in Los Angeles. It consists primarily of a series of detailed case studies of the roads and freeways that helped to establish the patterns of infrastructure and settlement in the city and region of Los Angeles, including Wilshire Boulevard, Olympic Boulevard, Mulholland Highway, the Los Angeles River bridges, Whittier Boulevard, the Pacific Coast Highway, and the Ramona, Arroyo Seco and Hollywood parkways. Interrogating the physical reality of the automotive infrastructure provides the critical perspective for this work. By relentlessly focusing on the sites and structures of transportation, this study fills in the material history of those places that lurk behind the grandiose narratives of politics and culture in 20th-century Los Angeles, and ultimately revises our understanding of politics and culture as they intersect with urban place production.

INTRODUCTION

Los Angeles made the cover of *Newsweek* in May, 1956.¹ For once, the story did not paint Los Angeles in the reflected glory of its most visible industry -- the movies -- and the cover image did not feature any of the reliable icons. No Hollywood sign. No Graumann's Theater. No spotlights crossing in the sky over a palm-fringed horizon. Instead, the cover and the story inside focused on the shape of the city. The image that represented Los Angeles was the Four-Level interchange, where two freeways met, just outside of downtown. How did that piece of freeway come to stand for Los Angeles?

The most direct reason was that the California Division of Highways selected the Four-Level as the centerpiece of an extensive campaign to promote freeways in the late 1940s and early 1950s. The agency's publicity department flooded the print media with images of its swooping symmetrical ramps. State highway engineers trotted out a scale model of the Four-Level when they attended the public meetings and local-government hearings that occurred with increasing frequency during those formative years of the Los Angeles freeway network. The stark mathematical purity of the interchange appealed to the engineers' idea of beauty in order and structure, and the photographs and the model presented the Four-Level as the only feature of an abstracted landscape. Its selection as the logo of the freeway program was also based on the circumstances of its creation. The Four-Level was the first major piece of the Los Angeles freeways designed solely by the state engineers, without any participation by the city engineering department that had

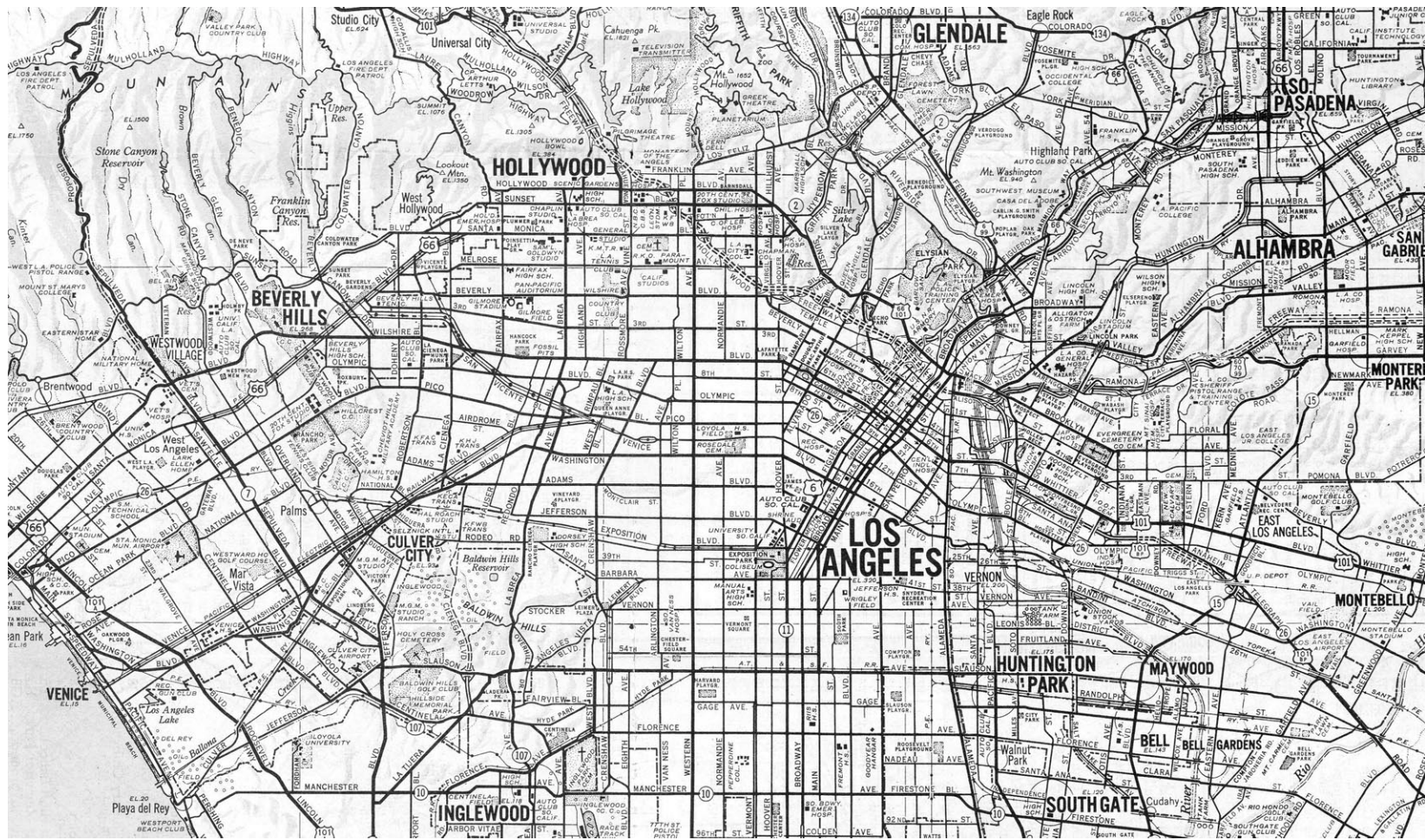


Figure 1: Los Angeles Metropolitan Area, 1950. The first three freeways (Ramona, Arroyo Seco and Hollywood) have begun to take shape. Much of the Hollywood Freeway is shown as a dotted line because it was under construction. The portion of the Arroyo Seco near the Four-level Interchange, intersecting the Hollywood Freeway, is also dotted, as is the eastern portion of the Ramona Freeway. Source: *Map of Metropolitan Los Angeles* (Los Angeles: Automobile Club of Southern California, 1950). Used with permission; all rights reserved.

originally adopted freeways as the primary approach to transportation in Los Angeles. That design process took place in 1943 and 1944, when public and media attention was riveted on the war effort, and when construction was impossible anyway because the nation's steel output was dedicated to military production and all available labor was turned to the same purpose. After the war, the state highway engineers allocated newly available highway funding to complete the Four-Level in record time, basking in a brief glow of approval for ambitious infrastructure development aimed at resolving the physical problems bestowed on Los Angeles during the rapid growth of the war years. Finished in 1949, the Four-Level ran far ahead of the rest of the freeway program. It stood in splendid isolation for four years, until the freeways it was intended to join could be completed. The opposition that delayed those connections had no part in the representations of the Four-level. The image of the modern city did not include the protests, the editorials, the city council and state legislative hearings, and the lawsuits that threatened to still freeway construction before the program could unfold. The Four-Level became the symbol of Los Angeles because of what it omitted as much as for what it depicted.

The state engineers and their press agents had other interchanges from which to choose. Besides lacking the photogenic qualities of the Four-Level, they were also marked by ferocious conflict. At the southern gateway of the San Fernando Valley, where the Hollywood Freeway crossed under Barham Drive, a series of concrete ramps connected the limited-access freeway with the "surface" streets of Universal City. In the early 1950s, however, that location was caught up in more than five dozen lawsuits over

the landtaking and construction practices associated with freeway construction. Questions had already arisen about the functional adequacy of the Barham ramps, which were later closed because of the extreme peril they represented. If you look for them today you will find them abandoned behind chain-link fence. East of the Los Angeles River, the Aliso Interchange, later known as the "San Bernardino Split," held the distinction of being the first structure to connect freeways together in Los Angeles. Aliso Interchange was the most significant freeway structure in the city because it established the first freeway crossing over the Los Angeles River and thus the pattern of the subsequent freeway network in the vicinity of downtown, including the location of the Four-level Interchange. But Aliso also had controversial implications and the freeway planners did not invite close scrutiny of it. The product of a hasty deal between the city engineering office and the state highway department, it was a political compromise that caused the ill-considered redrawing of planned routes through the east side of the city and established the precedent of slicing through neighborhoods on newly acquired rights-of-way, rather than enlarging existing corridors to make freeways. When the state engineers attempted to transfer that method of routing from the multiethnic, workingclass east side to the more prosperous neighborhoods between downtown and Hollywood, they provoked a decade's worth of lawsuits, legislative investigations, and the delays in completing the freeways that connected to the Four-Level. Aliso Interchange was also a rambling structure with no apparent logic to its maze of roadways that wrapped over and under each other. To see it today, it is best to bring a helicopter, because there is no earth-bound vantage point that offers a view of the whole thing.

For another famous location, the state highway department could have offered *Newsweek* a photograph of the Hollywood Freeway as it entered the Los Angeles Basin at the south end of Cahuenga Pass, crossing Franklin Avenue on a massive viaduct just a block north of the Walk of Fame on Hollywood Boulevard. But that too was a site where the echoes of recent litigation still resonated, and where an intrusive footprint had irrevocably transformed a fashionable street into a shadowy grey zone, a place of dark corners and bleak concrete retaining walls. In this setting of contested infrastructure development, the Four-Level was the product of a unique convergence of political, cultural and spatial circumstances. It served as a means to promote consensus in favor of freeway construction.

The built environment of transportation in Los Angeles has largely been interpreted as the product of consensus even for the period before the freeway era. Wilshire Boulevard stands as the universally welcomed alternative to the congested downtown of the early 20th century, the site of a happily mobile citizenry exercising free choice in both shopping and transportation. Mulholland Highway and the Pacific Coast Highway, also products of the 1920s, signify the technological sublime of 20th-century urbanism, the incorporation of nature into the everyday life of city-dwellers. But all were rooted in conflict. The appearance of Wilshire Boulevard was the product of a bitter political struggle between visionaries of the automotive metropolis and investors seeking to maximize the profit potential of their Wilshire frontage. Mulholland Highway was worthless as a transportation artery, but a favorable convergence of bureaucratic ambition and real estate investment allowed the city engineers a temporary respite from the

ubiquitous protests that stopped most of their road schemes. Pacific Coast Highway was stalled for more than a decade, and when the state highway engineers were finally able to complete it, they invoked the views it afforded of ocean and coast as a retroactive justification for the effort. The *Major Traffic Street Plan* of 1924 is widely hailed by scholars as the climax of Los Angeles' turn toward the automobile, but the largest project in it, the improvement of Tenth Street (Olympic Boulevard) into a high-speed cross-town thoroughfare, was defeated in court in 1926 and again by citizen protest in 1932.

With consensus so elusive, the familiar narrative of Los Angeles transportation history must be wrong. That narrative has been repeated so often in scholarship and popular culture that many assume it has been proven long ago. It goes like this: A distinctive "car culture" arose in southern California in the early 20th century. Adoration of the automobile fueled its widespread adoption, which, coupled with the rapid growth of Los Angeles, produced horrible traffic congestion starting in the years leading up to World War I. Undertaking a rational response to this obvious problem, municipal engineers strived to build larger and larger highways to combat the congestion. Eventually, in the late 1930s, they enlisted the participation of the state highway department, which controlled the expenditure of state gasoline-tax revenues, and this alliance embarked on the construction of the first freeways. The pace of construction gathered speed when the state increased the gas tax after World War II, and then federal funding under the 1956 Interstate Act unleashed a frenzy of freeway building. Around 1970, new environmental regulations and newly empowered urban communities brought a halt to the freeway era, which was followed by a revival of mass-transit construction.

My critique of this narrative began with direct observation of the structures and landscapes of transportation in Los Angeles. Those abandoned ramps at Barham Boulevard did not seem consistent with a smoothly functioning effort to provide facilities for mass automobility. At First Street and Glendale Boulevard, an isolated viaduct, 900 feet long, separates the grades of those major streets but does not connect to anything. What was missing? Olympic Boulevard takes a sharp turn to the south at Lucerne Avenue, and there is no mountain or river or any other obvious obstacle. What made that kink? Understanding those places took me to the records of the public agencies responsible for building them -- construction contracts, proposals to the city council, contracts with the state Division of Highways, legislative hearings, letters from irate citizens, and the reports of city agencies, board and commissions. After absorbing the ebb and flow of public business concerned with transportation, the inescapable conclusion was that it was very difficult to build a road in Los Angeles. For the city engineers, overcoming opposition was their most formidable challenge and their main preoccupation as they tried to address the infrastructure issues caused by rapid adoption of the automobile. Every completed project was a close call, and the constraints under which the city engineers operated were reflected in the structures that they built.

The first purpose of this work is to reconstruct the specific actions and arguments that produced many significant pieces of the street and highway networks of Los Angeles: How did the city get the roads and freeways it has? The period of study is 1910 to 1950, from the origins of roadbuilding politics as part of Progressive spatial reform to the completion of the nodal structures in the freeway network, the ones that

determined where subsequent construction would occur. The second contribution of this new narrative of Los Angeles and the automobile is the observation that the automotive infrastructure was conceived in conflict. Detailed examination of the roads and freeways of Los Angeles *as they were built* demonstrates that major construction projects usually resulted from site-specific technical opportunities, financial arrangements, and political alliances. They did not follow previously established priorities, they generally did not accord with comprehensive plans for transportation in the city, and they portray a sequence and a context of development that is omitted in the cultural representations of the city's automotive infrastructure. To a considerable degree, the city's roads and freeways were improvised -- not spontaneous, but certainly not the orderly fulfillment of rational plans. This opportunistic process of road and highway development proceeded by negotiation and compromise, and often entailed the hasty redrawing of plans right up to the moment of construction, and often into the actual building of thoroughfares. The exploitation of narrow and ephemeral niches of approval, and the in-process alteration of specifications, meant that major highway projects rarely performed as expected. The inadequacy of existing roads and freeways became a justification for further construction aimed at correcting their deficiencies.

The third main goal of this work is to assess the political settings in which those negotiations took place and those opportunities were grasped. Numerous municipal departments as well as agencies of state, county and federal government and various private interests contended to define the character and extent of transportation infrastructure. Site-specific analysis reveals that each major road and highway project

resulted from a temporary accommodation among diverse public and private interests. The common element in all of these arrangements was the city engineering bureau, which leveraged sponsors for ambitious construction projects on a case-by-case basis. The city engineers constructed a roadbuilding regime based on their role as brokers among other city agencies and the city council, railroads and street railways, homeowners and real estate investors, and the nation's capital markets. The city engineers made routing decisions and designed roads and bridges according to their own aesthetic and professional values, and discerning their basis for producing the city's infrastructure is a necessary part of understanding the tangible effects of this roadbuilding regime.

The final strand of this narrative is the effort to recontextualize the metaphors of metropolitan automobility, which do not describe nor even suggest the historical reality of widespread resistance to the construction of streets and highways in Los Angeles. Battles over the approval of highways produced lasting images of the city as being particularly suited for the automobile, which continued to influence opinions about Los Angeles long after the original issues were settled. Rooting the origin and elaboration of those images within the political and spatial contexts of their creation helps to demonstrate that the reputation of Los Angeles as the city built for the automobile originated as a promotional mechanism to abet road and freeway construction. The image of Los Angeles as the quintessential automotive metropolis is more false than true, if seemingly irreversible in popular culture.

This is a story of politics, culture and urban space that builds upon and argues with many branches of historical scholarship. Interrogating the physical reality of the

automotive infrastructure provides the critical perspective for this work. The site-specific approach cuts across the conventional boundaries of academic enterprise, and I consider specific works and bodies of literature in relation to the places that are most suited to those discussions. Thus the story of Wilshire Boulevard in the 1920s offers an opportunity to consider the decline of Progressive spatial reform and the implications of that decline within the historiography of Progressivism. For another example, Whittier Boulevard in the 1920s and 1930s makes an appropriate case study to reconsider how the history of planning has interpreted the multi-jurisdictional relations of infrastructure policy. The story of Aliso Viaduct and Interchange and its relationship to the Four-level Interchange is used to critique the assertions of consensus in favor of the automobile. The rest of this introduction is devoted to a survey of the many strands of literature traversed in the main narrative.

Roadbuilding Regimes

The onset of mass automobility around 1910 meant that Progressive reformers prescribed some of the earliest responses to the spatial implications of cars in cities. Dedicated arteries have long been recognized as a distinctive element in the city plans of the early 20th century, and the origin of parkways has correctly been placed within the City Beautiful movement.² A second facet of Progressivism that influenced opinion and policy regarding automobiles is connected to the origins of the planning profession in the early 20th century, which owed much to reform impulses aimed at relieving “the evils of congestion,” usually conceived as crowded tenements and the consequences of

inadequate sewage disposal in densely packed neighborhoods. Planners enlisted the automobile as a device to aid dispersion from the congested core, which necessarily involved those planners in consideration of how to move those cars in, out, through and around the city.³ Third, Progressivism was fundamentally a gendered experience. Male reformers used the business enterprise as the model of efficiency and instrumentality that could be applied to the state, while female reformers based their vision of a just society on the concerns of the family household. Though incorrectly consigned previously to parks and playgrounds under the condescending rubric of “municipal housekeeping,” the contributions of “organized womanhood” extended to transportation and streets.⁴ The fourth and last strain of Progressivism that shaped the Los Angeles response to automobility was the anti-railroad political program that brought the Progressives to power in city (1909) and state (1910) elections.⁵ Because both rail companies and city governments sought to coordinate the construction of streets with the construction of the railways that ran on them, the regulatory framework governing rail operations had the additional effect of constraining roadbuilding.

Before moving on to the comprehensive reconsideration of these various incarnations of Progressivism, it is worth dwelling for a moment on the anti-railroad argument because it has been a powerful interpretation in the effort to understand the automobile in Los Angeles. Anti-railroad progressivism is one of the main pillars of Scott Bottles’ assertion of consensus in favor of the automobile, but I differ substantially with that view.⁶ It is logical to assume that if people bought and used cars in great numbers, they would also approve the construction of roads and freeways to

accommodate those cars. Logic departs from fact in this case because it overlooks the controversies that always attended roadbuilding in Los Angeles. To infer a consensus for roadbuilding from widespread car ownership may only replicate the arguments of roadbuilding engineers who used traffic statistics to justify their plans, providing scant perspective outside the viewpoints of the participants.⁷ Bottles' further inference, that citizens viewed the automobile as a "democratic alternative" to the robber-barons of rail, distorts the history of urban transportation by squeezing it into the liberal-consensualist interpretation of Progressivism exemplified by Richard Hofstadter and Robert Wiebe.⁸ This tale of modal conflict makes good drama only by omitting the fact that the public officials who worked to accommodate the automobile were the same people who, at the same time, also worked to assure the viability of the street railways. It also omits the evidence of active participation by railroad and street-railway companies to enable construction of the city's first arterial thoroughfares and the critical first links in the Los Angeles freeway system. Furthermore, the early freeway plans assumed that transit ridership would continue at then-current levels. The smooth operation of freeways depended on a well-functioning transit system, and the plans associated with the origins of freeway construction in the late 1930s had ample accommodation for that.⁹ Anti-railroad Progressivism was primarily a style of campaign rhetoric, and to associate it with consensus in favor of the automobile is an after-the-fact construction that elides more evidence than it incorporates. (While on the topic of road-versus-rail in Los Angeles, it should be pointed out that the *noir* fantasy of a conspiracy that killed the street railways

has been thoroughly refuted in serious scholarship and that Bottles made a significant contribution to that refutation.¹⁰⁾

Taking a more inclusive view of Progressivism and the automobile, the various strains of spatial reform served different if overlapping constituencies, and they each sought to institutionalize their views in the structure of local government.¹¹ By spatial reform I refer to the effort to ameliorate social conditions through physical alteration of the urban environment. Though it was not the main purpose of most Progressives, many reform programs incorporated policies or specific programs to change the physical character of the city. The Board of Public Utilities, established in 1909, the City Planning Committee (1910), and the City Planning Commission that succeeded the City Planning Committee in 1920 all pursued spatial reform initiatives that included street plans. Adding to the institutional complexity, the Board of Public Utilities spawned the Traffic Commission in 1922; the city council never ceded its plenary authority to any of the new institutions of local government; and the city engineering bureau enjoyed *de facto* control of street development through its role as the agency charged with certification of special-assessment districts that were the main source of funding for street improvements. Considerable confusion ensued as to which agency had authority over comprehensive plans and specific projects, and there were also rivalries for control among the different groups, all of which contributed to inability of city government to build streets. Progressive spatial reform initiatives thus tended to cancel each other out, or at least to foment institutional dissonance that crippled efforts to provide streets and highways.

All reformers agreed, to greater or lesser extent, on the efficacy of government intervention and the application of professional expertise to solve social problems, but the obstacles to orderly provision of infrastructure were deeper than the ability of local agencies to overcome.¹² The “original sin” of public space in Los Angeles was the city council decision, in 1853, to cede all land in the municipality to private ownership, without reserving easements or rights-of-way for any purpose. Every infrastructure project thereafter was a real estate transaction too, as local government had to acquire the land on which to build. Moreover, following the wishes of the San Francisco delegation, which desired above all to keep taxes low, the state legislature in the 19th century enacted arduous procedures to regulate the ability of local jurisdictions to build sewers, sidewalks and streets. Thus the scholarship on San Francisco politics contributes to an understanding of roads in Los Angeles.¹³ An excessively privatized landscape and a deeply ingrained tradition of a tax avoidance on the part of Californians configured the difficult setting for infrastructure initiatives in Los Angeles.

Moving out of the Progressive period, historians have applied the concept of highway federalism to interpret the construction of ever-larger roads in the cities of the United States.¹⁴ In this view, freeways resulted from a planning vision and an agenda of professional aggrandizement that flowed from federal agencies into state agencies. Though deftly analyzing the role of federal officials, these works cannot do justice to the municipally employed engineers whose work was shaped by a different set of concerns. In Los Angeles at least, city engineers played a determining role in the location, design, structure of authority, and funding strategies for the formative stage of freeway

development. Mark Rose described the Interstate Highway Act of 1956 as “federal funding for localistic and largely impermeable commercial and professional subcultures.”¹⁵ But those subcultures are not impermeable to site-specific analysis. Locally based studies can enlarge the idea of highway federalism by including the other end of the federalist relationship, the places outside the Beltway, in keeping with the original meaning of federalism as the sharing of power among the national government, the states, and local jurisdictions. Only half the story of highway federalism has been told. The other half must proceed from the ground up.

Planning scholars concerned with transportation tend to emphasize the economics of highway federalism.¹⁶ Based on the generally productive tactic of following the money, this interpretation portrays freeways primarily as an example of “burden-shifting,” from local to state to federal outlays. There is a basic truth to that sequence, but looking only at the source of the money obscures the extensive struggles over who would control how the money was spent. Again, in Los Angeles at least, municipal employees and the city council held firmly to that authority for as long as they could and, as it turned out, that was long enough to set the basic pattern for the freeways in the city. Moreover, viewed in the fine grain, the sequence takes on a more complex texture, especially in the 1930s, when municipal engineers had far more direct access to funding for urban transportation from New Deal programs than did state or even federal engineers. Los Angeles city engineers capitalized on this access to build the key projects that established the freeway system.

Until recently, the historiography of the New Deal has exhibited substantial continuity on the subject of public works, from the consensualist school of the post-World War II period through the influential interpretations of William Leuchtenberg in the 1960s, the New Left critiques that followed Leuchtenberg, and many monographs and survey texts that treat the period. All have pointed out the conservatism of the Roosevelt approach to unemployment during the Depression, the circumscribed goals of the federal public works agencies, and the rapid abandonment of the public works strategy of unemployment relief when economic conditions shifted and then war engulfed the nation. While all acknowledge the enormous tangible accomplishments of the New Deal public works agencies, they also move quickly past the potential implications of a vast nationwide construction project in order to return to a more conventional focus on electoral politics and the meaning of liberalism.¹⁷

In contrast, Jordan Schwarz viewed the New Deal public works agencies as the embodiment of a philosophy of political economy that “sought to create long-term markets by building an infrastructure in undeveloped regions.”¹⁸ Los Angeles was hardly an undeveloped region in the 1930s, but it was a young city for its size, and there is little doubt that the infrastructure bequeathed by the New Deal laid the foundation for its further spectacular growth during and after World War II. Similarly, Jason Scott Smith sees the public works programs of the 1930s as “not simply employment measures that failed due to insufficient state capacities,” but as “an extraordinarily successful method of state-sponsored economic development” over a longer term than is defined by the lifespan of the New Deal.¹⁹ The experience of Los Angeles during the New Deal

provides ample data to support these views and complements Schwarz and Smith by allowing us to witness these development strategies in action and to assess their effects.

This approach to the New Deal fits the Los Angeles experience because growth and its promotion have been the civic religion of city for much of its history. But that still leaves an interpretive void for the period before the New Deal, when growth was no less promoted, yet the barriers to the growth-friendly activity of roadbuilding consistently prevailed. Harry Chandler and Henry O'Melveny, two of the leading apostles of growth, were on the losing side in the battle over enlarging Wilshire Boulevard. Without overlooking the fact that they were also two of the most powerful men in Los Angeles, their defeat can only be accounted for by the highly localized circumstances that shaped the Wilshire struggle. The same was true for the defeat or abandonment that ended the majority of road proposals: the opponents of road and highway construction rarely based their arguments on theoretical propositions, but rather on place-specific considerations such as the character of the street that would result, or the cost, or because they thought that others would benefit more. Thus the minority of proposals that were brought to completion benefited from the highly localized convergence of political, economic and topographic circumstances.

It was the city engineers who discerned those opportunities of overlapping interests and cemented them into contracts. They tended to articulate the justification for improved roads in terms of congestion, but they actually confronted the more fundamental matters of the near-total privatization of real estate in the city and the piecemeal authority over road construction among various city agencies and interests.²⁰

The acquisition of the right-of-way for a major highway from private landowners could only be justified by a claim of broad public benefit, but there was no single or unified means to define that public benefit. Highway politics in Los Angeles thus consisted of negotiating this boundary between public responsibility and private property. This "contradiction between private accumulation and collective action," as Peter Hall put it, was the central issue in the planning profession during its formative period.²¹ Yet those scholars of planning, such as Christine Boyer, who view city planning as a means of disciplining citizens and the public sector to the pre-eminence of capital, overlook the fact that many of the arguments that crippled road planning were between different capital interests. Boyer views capital as monolithic, but in the arena of road policy it was pluralistic, or, in capital's own terms, competitive.²² For that matter, the public sector was pluralistic and competitive too, with different agencies serving different constituencies and agendas.

Urban regime theory offers a means to transcend the false dualisms between elite dominance and pluralist interest group politics and between structural determinants and local (or social) construction. While defining the "regime" as an alliance between capital and the public sector, this approach does not view either side of that alliance, nor indeed the alliance itself, as monolithic or static. Instead it asks how different types of governing coalitions emerge and then solidify, dissolve, or transform.²³ On a project-by-project basis, the Los Angeles city engineers carved out a niche as the brokers among diverse public and private interests concerned with roadbuilding. Every completed project translated into political capital for its builders and altered both the physical setting

and the political setting to make similar projects more likely to succeed in the future. The roads and freeways do not simply reflect the values and the authority of their builders, but provide glimpses into the formation of those values and the establishment of that authority. Completed projects were the means by which the city engineers extended their power and promulgated their ideas. The process of building streets and highways in Los Angeles produced the structure of public authority under which more highways would be built -- the roadbuilding regime.

The Cultures of Concrete

This study engages with two separate meanings of culture. One use of the term is based on the anthropological field of material culture studies, or the interpretation of objects according to the values and ideology of those who produced the objects. The objects are roads and freeways; the producers are the Los Angeles city engineers, and to a lesser extent for the period of this study, the California state highway engineers. These engineers have eluded scrutiny until now, except in the blithe assumption that they uniformly served the interests of the Los Angeles growth machine. The other use of the term applies to the numerous cultural representations of automotive infrastructure in Los Angeles, such as the 1956 cover of *Newsweek*. For the most part, these depictions and assertions have not been assessed in terms of the actual places they purport to portray or the political context for the production of those places.

Material culture analysis is a necessary tool because the city engineers did not reflect on their ideology or their views toward their work. Though they left a massive

documentary record, virtually all of it is written in the studied blandness of bureaucratic communication, and many of the most significant decisions are mentioned only in passing. Literary analysis cannot unlock the meaning embedded in these documents. But the engineers also left behind a concrete record in the structures they built, an exceedingly eloquent body of information when interrogated within appropriate contexts.

The historiography of engineering has taken up the subject of urban roadbuilding but offers scant guidance as to the values of the Los Angeles city engineers. Thomas P. Hughes places the systems consciousness of engineers at the center of the story, asserting that the tendency among engineers to produce and manage integrated technological systems explains their design choices. Politics, particularly the politics of protest, enter the picture as an externality forced upon the engineers after a period in which the exercise of technical decision-making reigned not only supreme but unchallenged.

Environmentalism and concern for the impact of freeways upon urban non-elites define “postmodern” highway engineering, in contrast to a prior condition that is imputed more than defined.²⁴ These representations might accord with the way that engineers saw themselves, but they fail to encompass the historical reality of Los Angeles, where opposition to broad-scaled road schemes always existed and usually prevailed. City engineers in Los Angeles believed that overcoming such opposition was their most important task. Politics – contestation over the allocation of power and resources -- was not something imposed after the fact, but their central and motivating concern.

Elevating systems-consciousness to a paradigm for behavior also requires us to discount entirely the abundant evidence of incremental rather than systemic thinking (and

action) among those charged with accommodating urban traffic. To be sure, they made comprehensive plans, and frequently touted them, but they also built projects that did not appear in those comprehensive plans, advocated the utility of individual projects on their own merits, and comfortably, even avidly, moved ahead without approval for the comprehensive plans.²⁵ The plans were an idealized rhetorical device deployed most significantly in political and public relations. Their most critical influence came not as a grand shaping force, but as a means to negate other proposals that the engineers did not favor. If systems-based thinking was consequential, it was as a means to preserve resources for the engineers' preferred projects rather than for its generative role in reshaping the urban environment.

Histories of engineering that are not concerned specifically with urban practice do offer useful armatures for interpreting the material culture of roadbuilding in Los Angeles. Engineers had an aesthetic sense based on dynamism, which landscape historian J. B. Jackson described as engineers' deep appreciation of their own skill in conveying energy and material from one place to another.²⁶ This reverence for flow was satisfied in spatial terms by a line across the map, or across the land itself. It contrasted with the planner's ideal of balance, which was graphically represented by the grid, a pattern of many intersecting lines. The aesthetics of engineering also included a visual quality described by historian David Nye as the "technological sublime." Large-scale civil engineering involved the fundamental transformation of nature, not necessarily its subjugation, but setting nature off with the "dramatic contrast" of human achievement, and the urbanizing environment of Los Angeles offered numerous opportunities to

domesticate the landscape.²⁷ The technological sublime could also derive from the intrinsic qualities of the structure itself, as seen in the city engineer's praise for the bridges over the Los Angeles River, based on their visual impact: "The character of these structures will be such as to excite comment from visitors who enter and leave Los Angeles by the railways."²⁸ The river bridges, based on the Classical form of the arch, fit neatly into the traditional conception of aesthetic intent, but the engineering eye also found beauty in the most utilitarian, unadorned structures, especially those made of concrete. Historian Amy Slaton has demonstrated how the purveyors of concrete structures wove a functionalist aesthetic around the "realism of economical construction methods." Pouring concrete was a cultural project, and the engineers could derive satisfaction from the results apart from, and even at odds with, the sorts of claims that dominated public pronouncements about highway construction, such as the efficient reduction of traffic congestion.²⁹ All of these aesthetic values – the dynamism of linear-flow systems, the technological transformation of nature, and the particular kind of beauty perceived in concrete structures – resided in a road or a bridge as a stand-alone artifact, whether or not it fit into comprehensive plans for congestion relief. They dovetailed perfectly with the engineers' incrementalist approach to the politics of right-of-way approval, and the goal of building one road at a time became the central mission of the city's highway builders.

The city engineers also acted out of a concern for recognition and apprehension over their status in society. Amid the clamor of boosterism and the awe-inspiring growth of the city, they engineers sought appropriate acknowledgment for their indispensable

role. They basked in the reflected glory of William Mulholland, the aqueduct builder, and sought to emphasize their connection with him. They also built memorials to themselves into the decorative treatments of bridges, tunnels, and, incongruously, into the arched openings of sewer outlets. The engineers' fondness for concrete also expressed a concern over the social position of engineering at a time when standardization and professionalization based on college training began to supplant the practical engineering of those who came up from the ranks, like Mulholland. As Slaton has shown, the promulgation of technical standards and testing procedures was not simply a scientific program, but a social program that put the control of concrete construction in the hands of a small number of highly trained individuals. Quality control in concrete construction fell short of scientific objectivity because testing procedures were based on assumptions about the identity of the practitioners. Their successful application was confined to those who already possessed familiarity with the work, or to those who were admitted into the coterie of experts. Those lines were drawn significantly according to gender. It is possible that the city engineers' institutional rivalry with the City Planning Commission expressed gender anxiety provoked by the prominence of women reformers in the formation of the commission. Even absent such direct confrontation, a concern for their own occupational status shaped the engineers' sense of their role and their mission. As Slaton put it, "Technologies . . . do not incidentally encourage a particular social order as they pursue a material end, but rather bring into being a technical order as they pursue a social end."³⁰ Seeking to reinforce their own status by staking out a determining role in the production of streets and highways, the city engineers of Los Angeles enacted a

technical order that could proceed whether it resolved traffic congestion or not. This factor in engineering practice also helps to explain the extraordinarily successful relationship between the Los Angeles city engineers and the New Deal public works agencies, which by focusing on large-scale civil engineering projects forged an association with the construction trades in which membership qualifications enforced gender exclusivity.³¹

The dominant representations of automobility and the automotive infrastructure in Los Angeles trace a narrative that seems all but totally disconnected from the politics and engineering that are my central concern. Indeed, one reason I undertook this study was my discontent with the narratives of automobility that did not accord with my direct observation of the built environment of the city. But a relationship between the material reality of roads and freeways and the representations of that reality became clear after I established the timelines of actual construction. The thickest effusions of imagery about the automotive infrastructure appeared precisely during the most difficult battles to produce that infrastructure. Social and political friction was the stimulus for assertions intended to influence the outcomes of specific struggles.

A primary example of this phenomenon is the *Major Traffic Street Plan* of 1924, along with the publicity campaign that was mounted to win its approval as a ballot initiative. The myth of the Los Angeles car culture originated as a by-product of this avidly promoted attempt at establishing the political authority and dedicated funding mechanisms to overcome the formidable barriers to street construction in the city. The sponsors of the *Major Traffic Street Plan* issued alarmist but not fanciful messages about

the congestion choking the city, with statistical documentation of the total area of pavement, of time lost in traffic, and of the money that lost time represented. These claims fed into the growing stream of booster literature substantially based on the claim that Los Angeles was a unique kind of city. The notion of a distinctive relationship between Angelenos and their automobiles was a mutated form of boosterism, a hybrid of the sober reckoning produced in support of the street plan and the feverish promotion of Los Angeles exceptionalism.

The elevation of the Four-level Interchange as a synecdoche for the city and its approach to transportation illustrates a similar relationship between representations and reality. The elegance of the structure made it unique rather than typical in a setting where virtually all major highway projects reflected compromises and half-measures, and the only other interchange was the awkward and operationally compromised junction built as part of the Aliso Viaduct project. The Four-level also signified the ascendance of the state highway establishment and the diminution of the roadbuilding regime erected by the city engineers who designed the Aliso structure. The swooping, symmetrical ramps of the Four-level interchange braid together the triumph of can-do rationalism with the aesthetics of architectural modernism, and appropriately occupy center stage in the narratives of Los Angeles as the quintessential automotive metropolis and the harbinger of 20th-century urban experience.³² But they only accomplish that by omitting most of the story of the origins of freeways in Los Angeles. The reality was far messier.

Perhaps the most significant omission from the popular culture of automobility during the period of this study is the development of major thoroughfares in east Los

Angeles. The first encounter between the city and state roadbuilding engineers took place during the creation of Whittier Boulevard in the 1920s. The state Division of Highways improved Whittier Boulevard to a multilane highway outside of the city limits, which produced enormous traffic problems inside the city until the boulevard could be widened to the same dimensions. The city engineers achieved that difficult objective only by minimizing the cost of acquiring the right-of-way by taking land from parks and schoolyards. The east side was in the process of rapid development as the multiethnic, workingclass neighborhood occupied by the families of workers employed in the industrial corridor along the Los Angeles River. It was not subject to the restrictive covenants that prevented Mexicans, Jews, and other “undesirables” from living in many other areas of Los Angeles. The placement of a high-traffic artery through the east side and the reduction of play areas helped to define that neighborhood as a place where the residency of “undesirables” would be tolerated. Subsequently, the east side bore the effects of the arbitrary realignment of the planned route for the Santa Ana Freeway as part of the negotiations between city and state engineers, the first instance of a freeway cutting through the middle of blocks. Aliso Interchange and the through highways that sliced through the east side were left out of the images produced to promote freeways, but they would later enter the representations of the city in the works of Chicano artists and activists. To them, the built environment of transportation stood for invasion, dislocation, and the dismemberment of community.³³

Overview of the Narrative

Chapter One lays out the limitations to roadbuilding embodied in the legal and institutional structures of state and local government through the early 1920s. It provides a detailed account of the varieties of Progressive spatial reform in Los Angeles, including the founding of the Public Utilities Commission and the City Planning Commission, the role of organized clubwomen, the constant involvement of the City Council, and the origins of the city's highway grid in the work of the Office of the City Engineer.

Chapter Two uses a case study of Wilshire Boulevard to explore the conflicts among the various interests and agencies seeking to influence roadbuilding and highway policy in the city. It provides historical context for the manufactured reputation of Wilshire, and for the stalemates and confusion that the city engineers sought to address by securing a larger role in road construction. In this episode, professional planners as well as middleclass and elite clubwomen lost their formal role in the institutional structure of municipal place production as it pertained to highways.

Chapter Three interprets the *Major Traffic Street Plan* of 1924 as a struggle between public and private authority rather than as the triumph of automotive ideology that characterizes its previous portrayals. It shows how the Plan was a landmark in the city's reputation but not in its infrastructure, and how that gap between perception and reality is crucial in any effort to comprehend the subsequent development of transportation in Los Angeles.

Chapter Four shows the city engineers at work in the 1920s and early 1930s as they attempt to piece together a highway network based on case-by-case political and

financial arrangements. Case studies include Olympic Boulevard, Mulholland Highway and the bridges over the Los Angeles River. Incrementalist, opportunistic, and at times overtly irrational, the efforts of the city engineers were nonetheless shaped by the broad objectives of establishing an east-west route through the city and providing highway crossings over the Los Angeles River.

Chapter Five brings the state highway department into the picture. In the Pacific Coast Highway, the state engineers addressed on a larger scale many of the same legal and financial obstacles that frustrated their counterparts in city government. In pushing the work to completion over two decades, the state highway department developed its own institutional culture of massive landscape transformation and expanded the legal definition of driving in the United States. Another case study, Whittier Boulevard, opens the story of the often troubled relationship between city and state roadbuilders, follows the evolution of the efforts to extend major highways across the Los Angeles River, and explains the transportation patterns on which the first freeways were inscribed.

Chapter Six focuses on the city engineers during the New Deal, when agency chief Lloyd Aldrich orchestrated the city's access to direct funding under various federal programs to assert a central role in infrastructure development. Under Aldrich the department completed long-deferred initiatives such as Olympic Boulevard and expanded the department's technical expertise and planning authority in constructing the first limited-access highway in Los Angeles, Ramona Boulevard through the east side. In leveraging New Deal funding to put in place the first segments of the freeway network, Aldrich pulled the state highway department into participating in the program. State and

city collaborated on the Aliso Viaduct and Interchange, which was the first structure to join together freeways in Los Angeles and the first freeway crossing of the Los Angeles River. It was thus the nodal point of the network, the component that determined where subsequent construction would have to occur. Aliso required the rerouting of the Santa Ana Parkway through the middle of city blocks on the east side, establishing the precedent of invasive route determination and exacerbating the friction between local interests and state engineers.

In choosing the title “Concrete Utopia” for this study, I mean to imply much more than the ubiquity of that most modern material in the landscape of metropolitan Los Angeles. I hope also to convey the irony that the roads and freeways of Los Angeles rarely fulfilled the widely proclaimed hopes for a wholesome and elegant city, that all the concrete did not help to construct an urban utopia but rather diminished that vision. The roads and freeways of Los Angeles were, at times, proposed in utopian terms, but they resulted from specific processes that answered utopian visions with all the blunt realities that the term concrete connotes. Cupidity, incrementalism and professional aggrandizement shaped the work of the city engineers and other decisionmakers as they confronted obstacles to roadbuilding that were among the most difficult in any American city. In different circumstances and through different processes, public works did, and do, have the potential to express the highest ideals of democracy. Public works can embody social justice, they can ease the lives of every member of a diverse society, and they can inspire people with their beauty and their power. It did not work out that way

for the roads and freeways of Los Angeles, yet I do not intend to characterize all public works as the feckless exercise of unchecked authority in service to capital. Nor do I abandon the conviction that informed and responsive public action can construct a public sphere that strengthens community, invites communication across the barriers that would otherwise divide us, and encourages our hopes for the future.

NOTES TO INTRODUCTION

- ¹ *Newsweek*, May 14, 1956, 103-105, plus cover.
- ² Clay McShane, *Down the Asphalt Path: The Automobile and the American City* (New York: Columbia University Press, 1994); Paul S. Boyer, *Urban Masses and Moral Order in America, 1820-1920* (Cambridge: Harvard University Press, 1978); John W. Reps, *The Making of Urban America: A History of City Planning in the United States* (Princeton: Princeton University Press, 1965); William H. Wilson, *The City Beautiful Movement* (Baltimore: Johns Hopkins University Press, 1989).
- ³ Mark Foster, *From Streetcar to Superhighway: American Planners and Urban Transportation* (Philadelphia: Temple University Press, 1981); Asha Elizabeth Weinstein, "The Congestion Evil: Perceptions of Traffic Congestion in Boston in the 1890s and 1920s," Ph.D. dissertation, University of California Berkeley, 2002.
- ⁴ Gayle Gullett, *Becoming Citizens: The Emergence and Development of the California Women's Movement, 1880-1911* (Urbana: University of Illinois Press, 2000); Sarah Deutsch, *Women and the City: Gender, Space and Power in Boston, 1870-1940* (New York: Oxford University Press, 2000) and Peter C. Baldwin, *Domesticating the Street: The Reform of Public Space in Hartford, 1850-1930* (Columbus: Ohio State University Press, 1999); Maureen A. Flanagan, *Seeing with Their Hearts: Chicago Women and the Vision of the Good City, 1871-1933* (Princeton: Princeton University Press, 2002); Chafe, "Women's History and Political History," in Nancy Hewitt and Suzanne Lebsock, eds., *Visible Women: New Essays on American Activism* (Urbana: University of Illinois Press, 1993).
- ⁵ William F. Deverell, *Railroad Crossing: Californians and the Railroad, 1850-1910*. (Berkeley: University of California Press, 1994).
- ⁶ This claim is most fully developed in Bottles, *Los Angeles and the Automobile*, esp. 15, 22-51, 56-57, 88; also see Foster, *Streetcar to Superhighway*; and David Brodsky, *LA Freeway: An Appreciative Essay*. (Berkeley: University of California Press, 1981).
- ⁷ Paul Barrett and Mark H. Rose, "Street Smarts: The Politics of Transportation Statistics in the American City, 1900-1990," *Journal of Urban History* 25 (March 1999); Rose, *Interstate*, 9; Seely, *American Highway System*, 180-85.
- ⁸ Bottles, *Los Angeles and the Automobile*, 56-57; Richard Hofstadter, *The Age of Reform: From Bryan to FDR* (New York: Vintage, 1955); Robert H. Wiebe, *The Search for Order: 1877-1920* (New York: Hill and Wang, 1967). For the antithesis to Hofstadter, Wiebe, and those who followed them, see Peter J. Ling, *America and the Automobile: Technology, Reform and Social Change* (Manchester, UK: Manchester University Press, 1990), which uncouples automobility from Progressive reform.
- ⁹ Los Angeles Transportation Engineering Board, *A Transit Program for the Los Angeles Metropolitan Area* (Los Angeles: by the board, 1939); Milton Breivogel and Stuart Bate, *Mass Transit Facilities and Master Plan of Parkways* (Los Angeles: City Planning Commission, 1942); Regional Planning Commission, County of Los Angeles, *Freeways for the Region* (Los Angeles: by the commission, 1943).
- ¹⁰ Bottles, *Los Angeles and the Automobile*, 2-6, 236-48; Robert C. Post, "Images of the Pacific Electric: Why Memories Matter," *Railroad History* 179 (Autumn 1998): 31-68; Sy Adler, "The Transformation of the Pacific Electric Railway: Bradford Snell, Roger Rabbit and the Politics of Transportation in Los Angeles," *Urban Affairs Quarterly* 27 (September 1991): 51-87; Jonathan Richmond, "Transport of

Delight: The Mythical Conception of Rail Transit in Los Angeles," Ph.D. diss., Urban Planning, M.I.T., 1991.

¹¹ William F. Deverell and Tom Sitton, eds., *California Progressivism Revisited* (Berkeley: University of California Press, 1994), though not devoted specifically to spatial issues, establishes the considerable diversity in the ideas and participants of Progressive reform.

¹² Richard McCormick, "The Discovery That Business Corrupts Politics: A Reappraisal of the Origins of Progressivism," in McCormick, *The Party Period and Public Policy* (New York: Oxford University Press, 1986), and Daniel T. Rodgers, "In Search of Progressivism," *Reviews in American History* 10 (December 1982): 113-32, both see these beliefs as central to all strains of Progressive thought.

¹³ Terrence MacDonald, *The Parameters of Urban Fiscal Policy: Socioeconomic Change and Political Culture in San Francisco, 1860-1906* (Berkeley: University of California Press, 1986); Philip J. Ethington, *The Public City: The Political Construction of Urban Life in San Francisco, 1850-1900* (New York: Cambridge University Press, 1994).

¹⁴ Bruce Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987); Owen D. Gutfreund, *Twentieth Century Sprawl: Highways and the Reshaping of the American Landscape* (NY: Oxford University Press, 2004).

¹⁵ Mark H. Rose, *Interstate: Express Highway Politics, 1941-1956* (Lawrence: The Regents Press of Kansas, 1979).

¹⁶ Brian D. Taylor, "When Finance Leads Planning: The Influence of Public Finance on Transportation Policy and Planning in California," Ph.D. diss., Urban Planning, UCLA, 1992; Jeffrey Brown, "Statewide Transportation Planning: Lessons from California," *Transportation Quarterly* 56 (Spring 2002): 51-62; Martin Wachs, "The Evolution of Transportation Policy in Los Angeles: Images of Past Policies and Future Prospects," in Allen J. Scott and Edward W. Soja, eds., *The City: Los Angeles and Urban Theory at the End of the Twentieth Century* (Berkeley: University of California Press, 1996), 106-59.

¹⁷ The consensualist school is exemplified by Hofstadter, *The Age of Reform*; Arthur Schlesinger, Jr., *The Coming of the New Deal*, vol. 2 of *The Age of Roosevelt* (Boston: Houghton Mifflin, 1958); and James McGregor Burns, *Roosevelt: The Lion and the Fox* (New York: Harcourt Brace, 1956). Among many studies of the period by William E. Leuchtenberg, the fundamental approach is exemplified in *Franklin D. Roosevelt and the New Deal, 1932-1940* (New York: Harper & Row, 1963). Influential New Left interpretations include Howard Zinn, "The Limits of the New Deal," in Zinn, *The Politics of History* (2nd. edition; Urbana: University of Illinois Press, 1990), 118-36; Barton J. Bernstein, "The New Deal: The Conservative Achievements of Liberal Reform," in Bernstein, ed., *Towards a New Past: Dissenting Essays in American History* (New York: Vintage, 1967), 258-281; and Ronald Radosh, "The Myth of the New Deal," in Radosh and Murray N. Rothman, eds., *A New History of Leviathan: Essays on the Rise of the American Corporate State* (New York: E. P. Dutton, 1972), 146-87. For an overview of this literature, see James T. Patterson, "Americans and the Writing of Twentieth-Century United States History," in Anthony Molho and Gordon S. Wood, eds., *Imagined Histories: American Historians Interpret the Past* (Princeton: Princeton University Press, 1998), 185-205.

¹⁸ Jordan A Schwarz, *The New Dealers: Power Politics in the Age of Roosevelt* (New York: Knopf, 1993), xi.

¹⁹ Jason Scott Smith, *Building New Deal Liberalism: The Political Economy of Public Works, 1933-1956* (New York: Cambridge University Press, 2006), 13-14.

- ²⁰ I do not mean to imply that congestion was merely an argument deployed in the effort to build more roads. It was a genuine problem, and it had particular salience in the Los Angeles area because of the pattern of dispersed, multi-centered development put in place in the interwar period; see Greg Hise, *Magnetic Los Angeles: Planning the Twentieth-Century Metropolis* (Baltimore: The Johns Hopkins University Press, 1997).
- ²¹ Peter Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century* (Oxford, UK: Blackwell, 1988), 337.
- ²² M. Christine Boyer, *Dreaming the Rational City: The Myth of American City Planning* (Cambridge: Massachusetts Institute of Technology Press, 1983); also see Foster, *From Streetcar to Superhighway*.
- ²³ Stephen L. Elkin, *City and Regime in the American Republic* (Chicago: University of Chicago Press, 1987); Susan S. Fainstein, *The City Builders: Property, Politics and Planning in London and New York* (Cambridge, MA: Blackwell, 1994); Mickey Lauria, ed., *Reconstructing Urban Regime Theory: Regulating Urban Politics in the Global Economy* (Thousand Oaks, CA: Sage Publications, 1997).
- ²⁴ Thomas P. Hughes, *Rescuing Prometheus: Four Monumental Projects That Changed the Modern World* (New York: Vintage, 1998), esp. 197-254, 305.
- ²⁵ Matthew W. Roth, "Mulholland Highway and the Engineering Culture of Los Angeles in the 1920s," *Technology and Culture* 40 (July 1999): 545-75.
- ²⁶ Jackson, "A Puritan Looks at Scenery," in J. B. Jackson, *Discovering the Vernacular Landscape* (New Haven: Yale University Press, 1984), 57-64.
- ²⁷ David Nye, *American Technological Sublime* (Cambridge, MA: MIT Press, 1994), 76, 126.
- ²⁸ City Engineer, *Annual Report*, 1922-23, 30.
- ²⁹ Amy E. Slaton, *Reinforced Concrete and the Modernization of American Building, 1900-1930* (Baltimore: Johns Hopkins University Press, 2001), 187.
- ³⁰ Amy E. Slaton, "As Near as Practicable: Precision, Ambiguity, and Industrial Quality Control," *Technology and Culture* 42 (January 2001): 51-80.
- ³¹ Michael Kazin, *Barons of Labor: The San Francisco Building Trades and Union Power in the Progressive Era* (Urbana: University of Illinois Press, 1989) documents the exclusion of women from the construction trades.
- ³² For an overview and interpretation of this role of Los Angeles in the discourse of urban modernism, see Thomas S. Hines, *Richard Neutra and the Search for Modern Architecture: a Biography and History* (New York: Oxford University Press, 1992).
- ³³ Raul Homero Villa, *Barrio Logos: Space and Place in Urban Chicano Literature and Culture* (Austin: University of Texas Press, 2000), 111-55.

CHAPTER ONE
STRAINS OF PROGRESSIVISM: ROADS AND POLITICS THROUGH THE EARLY
1920S

Los Angeles had traffic problems and traffic politics before it had to contend with automobiles. In 1889, when the only automobiles in the world were a few prototypes in Germany, the superintendent of streets in Los Angeles pronounced that the city's public rights-of-way were in a "perfect chaotic state." The proliferation of horse-drawn street railways had followed no pattern beyond the competition among rail entrepreneurs for the busiest routes and the efforts by land speculators to provide transportation to their subdivisions. Parallel and overlapping street railways caused congestion in the business district and around the railroad depots, while in newly developed residential areas the hastily drawn streets bore no logical relationship to the adjacent through highways or to the streets in neighboring subdivisions. Moreover, reported the superintendent, developers and property owners built new streets without any review by city officials, and even when applications were submitted, there was no reliable process for the city to evaluate the plans or to monitor whether the construction followed the proposals.¹ The chaos was aggravated over the next two decades by the spread of cable and electric street railways and the continuing lack of any meaningful oversight of transportation. In 1911, the first traffic study of Los Angeles (a genre of planning document that would eventually fill several library shelves) was focused primarily on the congestion problems afflicting the operation of trolleys, not automobiles.²

That would soon change, and the automobile would become part of the city's traffic problems. In 1913, the moving assembly line at Ford Motor Co. launched the era of automotive mass consumption. Los Angeles would become the first metropolis to experience a majority of its growth after low-cost, mass-produced automobiles became available. The rapid increase in population and the equally rapid adoption of automobiles by Angelenos compounded the city's existing predicament. In the summers of 1914 and 1915, traffic regularly ground to a halt on downtown streets, where streetcars and automobiles competed for space, as well as in several outlying areas of relatively sparse development, such as Western Avenue, where automobiles alone accounted for the crowding on the streets. By 1915, the car was no longer the exclusive province of the wealthy who drove them on pleasure outings, but had become a daily accessory of middle-class commuting and shopping. Automobile ownership soared as registrations approached 120,000 vehicles in Los Angeles County by 1920.³ It is important to bear in mind, however, that inadequate and poorly coordinated public rights-of-way and fragmentary, ineffective administration of transportation by city government existed before the advent of routine automobile use in Los Angeles. The car came onto streets that were already congested and ill-governed.

The car also entered into existing ideological discourses and political programs associated with Progressive reform efforts that addressed the character and use of public places. In Los Angeles, the crucial matter of street construction did not become a prominent public issue in its own right until 1924, when a series of highway-related ballot measures came before the city's voters, accompanied by extensive and occasionally

sensationalistic publicity efforts on both sides of the propositions. Up to that time, policies regarding streets were subsumed within other aspects of urban spatial reform. Street construction emerged as a hotly contested issue in part because of empirical circumstances: the unabated growth of Los Angeles and its traffic problems in the early 1920s. But its emergence as a primary concern among residents and public officials and its establishment as a primary function of municipal government also corresponded with the collapse of Progressive spatial reform in Los Angeles. Looking closely into street construction in Los Angeles offers the opportunity to comprehend Progressivism from the inside out, to discern in action some of the contradictions embedded in Progressive ideology, and to provide further dimension to the persistent issue of why Progressivism lost its momentum.

The drama of Progressivism turns on the insuperable fact that the Progressive promise of expanded democracy and humanitarian government went substantially unfulfilled during the period defined by this reform impulse, from the early 1890s to around 1920.⁴ To historians in the 1950s, this lack of efficacy was connected with the identity of the reformers themselves. According to George Mowry, they were uniformly drawn from the "solid middle class" of white, male professionals. Richard Hofstadter dismissed them as "pathetically respectable" do-gooders whose isolation from the most exploited members of society fatally compromised their high-minded activism. In these views, Progressives were all of one stripe, and then Robert Wiebe's influential interpretation characterized their ideology in a similarly monolithic fashion, as a "search for order."⁵ In the 1960s, historians from the academic left began to treat Progressivism

in similarly sweeping fashion, rebuking the reform impulse because its potential for meaningful political change withered in the face of corporate power and the embrace of consumerism. Even suffragists underwent retroactive critique because some of the elite and middleclass women who led the charge for voting rights also engaged in, or tolerated, racist and anti-immigrant programs.⁶

In the early 1980s, influential review essays by Richard McCormick and Daniel Rodgers inaugurated a different approach to the history of the Progressive period.⁷ Rather than lumping all Progressives together as either ineffectual elitists or apologists for corporate tyranny, they instead tried to untangle the ideas and events previously bundled together as Progressivism, and then derive broad commonalities among the myriad goals and tactics of reformers. Central to this rehabilitation of Progressivism was the ability to perceive reformers in their own terms, to recognize their egalitarian motives while also acknowledging that they operated within circumstances they could not control. James Kloppenberg, in his comparative study of American Progressive thought and European social democracy, accorded full credit to the sincerity of Progressive intellectuals, and sharply criticized the attempts to dismiss them as “the slick condescension accompanying hindsight” and a “failure of historical imagination.”⁸

The parsing out of Progressive ideology also involved the revised understanding of who the Progressives were. John Buenker signaled this direction in historiography by showing the linkages between Progressivism and urban, ethnic political machines, a topic that was later explored in further depth by James Connolly.⁹ By the 1990s, historical scholarship had introduced an entirely new cast into the study of Progressivism: Tejanos

and Chicanos, African Americans, and, most significantly, women.¹⁰ Women Progressives had not been invisible in the literature previously, but historians gained a deeper understanding of the distinctiveness and the importance of women's participation. When Theda Skocpol demonstrated how voluntary women's associations had led the efforts to win legislation to protect working women, pensions for single mothers, and subsidized health care for children, these achievements were presented not merely as a collection of incremental successes for an ultimately failed movement, but the manifestation of a new vision of society, the "maternalist welfare state."¹¹

Progressivism came to be understood as a fundamentally gendered experience. "In emphasis and values," according to William Chafe, women and men reformers were "dramatically different."¹² For men, as Paula Baker put it, "The business corporation provided the model for the new liberalism," while women "took the family and small community as an ideal."¹³ Long described by the somewhat patronizing rubric of "municipal housekeeping," feminist municipal reform in the early 20th century has more recently been recognized not as an adjunct to the ostensibly mainstream Progressivism practiced by men, but as a fully realized (if not fully implemented) ideology in its own right, "rooted in social justice, social welfare, and responsiveness to the everyday needs of all the city's residents," to quote from Maureen Flanagan's study of Progressive-era Chicago.¹⁴ To Philip Ethington, the efforts of women Progressives were not only distinctive for the concrete programs they put in place, but also "portended the utter dissolution of the patriarchal public-private boundaries that had restricted the citizenship of women and sustained liberal political thought, law, and practice since John Locke."¹⁵

The revised understanding of Progressivism as diverse in its motives, its participants, and its results provides a useful foundation for considering the varieties of reform that grappled with street construction in Los Angeles. At least four distinct sets of ideas influenced public discourse about urban spatial reform in the city during the Progressive period: combating urban congestion; advancing the City Beautiful Movement and establishing the profession of city planning; feminism and the assertion of women's citizenship; and the anti-railroad doctrine that propelled California Progressives to their most significant electoral victories. Despite their differences, most Progressive reformers shared a readiness for government to intervene in social problems and a faith in rational solutions devised by experts, two of the broad commonalities in Progressive thought identified by McCormick and Rodgers. Progressives were "scientific centralizers at heart," in the words of Robert Johnston.¹⁶

In Progressive-era Los Angeles, different approaches to urban spatial reform took on equally diverse institutional forms. City government established new agencies, amended the statutory basis of existing ones, and undertook new initiatives with purview over aspects of transportation in the city. These innovations tended to cancel each other out, undermine one another, or suffer from a critical lack of resources or authority to carry out their programs that concerned transportation. Contributing further to the institutional complexity were the efforts of private organizations, which formed various alliances with public agencies, supported or opposed various public initiatives, and undertook their own programs independent of public authority, and at times in conflict with it. Institutional confusion bred delays and the jockeying for political advantage, and

the bruising highway politics of the 1920s sorted out the reform efforts put in place during the prior two decades. Before considering in detail how these reform efforts played out in the street politics of Los Angeles, it is useful to survey briefly the origins and constituencies of the local agencies that embodied the different aspects of Progressive spatial reform.

The Evil of Congestion

The fight against congestion had its roots in the efforts to ameliorate crowded and unsanitary conditions in workingclass neighborhoods, beginning in London in the 1860s. One approach pioneered by English philanthropist-reformers was to enact structural requirements for tenement buildings, such as minimum standards for light, ventilation and plumbing, a strand of reform that American Progressives pursued with some success, as in the New York City Tenement Law of 1901.¹⁷ The Garden City Movement also originated in England, with the writings of Ebenezer Howard, who advocated the dispersion of dense urban settlement into a pattern of detached centers, each surrounded by belts of agriculture.¹⁸ Historian Mark Foster traced how planners in the United States fastened onto the automobile as the means to link these dispersed garden cities. According to Foster, planners viewed the car as a beneficial ally in their attempts to deconcentrate urban settlement, based primarily on an analysis of planners' speeches and publications in professional journals. More recently, an examination of efforts to combat "the congestion evil" in a single city, by planning scholar Asha Weinstein, provided a

more nuanced picture that showed a range of opinions on the part of planners, as well as a mixed record of success in the adoption of their plans.¹⁹

In southern California, boosters recast anti-congestion rhetoric as a way to contrast the region with the crowded cities of the Great Lakes and the Atlantic seaboard. As Los Angeles real estate impresario Harry Culver told his sales force: "Whenever you can take a family out of an apartment house, out of the dust, dirt and smoke of a crowded city . . . and place that family in a fresh, pure, health-giving district in a home of its own, I want to say to you that you are not only starting that family out on the road to success, but you are rendering a service to the community and a service to humanity."²⁰

Arguments against congestion lost their connection with Progressive reform and became another way to promote Los Angeles at the expense of earlier-developed cities. To Culver and his ilk, street and highway construction primarily represented a means to increase the marketability of lots and houses, as well as the region as a whole, essentially the same motivation that produced the chaos decried by the city's streets superintendent in 1889. Subdividers and developers provided the support for private organizations that promoted road construction, including the Community Development Association and the Automobile Club of Southern California.

Their main ally in the public sector was the agency responsible for designing and building roads, the Engineering Bureau of the city's Department of Public Works. The city engineers did not view themselves as captive to the real estate industry, nor were they, but they valued support from the real estate sector when it helped secure approval for infrastructure projects that the engineers proposed. The engineers were "scientific

centralizers" with a vengeance, predisposed to the conception of urban infrastructure as integrated systems, and they produced as many comprehensive street plans as their more celebrated counterparts from the nascent field of city planning.²¹ The Los Angeles engineers, however, diverged from the Progressive planning approach in two significant ways. They created broad-scaled plans by the assemblage of individual, localized projects that reflected topography, existing traffic patterns, and a sense of the political feasibility of specific roads, rather than imposing an idealized view of the city on the complex urban fabric. Nor were the engineers thwarted when the comprehensive schemes failed to win approval or adequate resources. They would build one road at a time, whether or not the project fit into a master plan, and even when an individual project's completion would undermine the intent of a master plan. Their strength in the arena of street construction was based not on the ability to project a unified vision of the city, but on their mastery of the technical and bureaucratic processes of gaining approval for specific construction projects, a capability that was thoroughly appreciated by the real estate industry.

The City Beautiful, the City Planned

The City Beautiful Movement also had its origins in the perception of misery and vice among the urban poor. Rather than improving the lot of tenement dwellers by direct action to improve their residences and neighborhoods, the architects and planners who articulated the City Beautiful Movement believed, according to Paul Boyer, that city dwellers "must somehow be brought to perceive themselves as members of cohesive

communities knit together by shared moral and social values."²² By creating a beautiful urban landscape, they would inspire civic virtue among its residents, and reformers previously concerned with corruption in government, exploitation of labor, and other social causes "quickly embraced the concept of the city beautiful as an American goal," as John Reys put it.²³ Beautification would not only inspire moral rectitude among the poor, but also make the city more inviting to the middle and upper classes, and stake a claim for cultural equivalence between the United States and Europe (a claim that, in retrospect, seems mortally undermined by the seemingly rote adherence to the Beaux Arts and Neoclassical architectural styles then current in Europe). The 1893 Columbian Exposition in Chicago and the 1901 Plan for the Capitol Mall in Washington, D.C. were the first attempts to reflect all these ideas in tangible designs for actual places, and much of what followed under the banner of the City Beautiful was based on the creation of similarly concentrated cores of institutional, cultural and ceremonial use. "The civic center's beauty would reflect the souls of the city's inhabitants, inducing order, calm and propriety," as William Wilson described the reform objective embedded in such plans.²⁴

In the iconic City Beautiful proposals, such as Daniel Burnham's 1909's plan for Chicago, development of the civic center was closely connected with the rationalization of traffic "circulation" to access the institutional core of the city and to abet the movement of vehicles throughout the residential and commercial districts.²⁵ Circulation plans typically took the form of dedicated arteries inserted into the urban fabric, often in the form of diagonal boulevards that sliced through previously built-up areas. This ideology of circulation also featured the establishment of preemptive street patterns to

guide subsequent development and the rationalization of existing facilities, including the consolidation of rail networks and the widening of streets.²⁶

In Los Angeles, civic-minded architects and planners devoted enormous energy and expense to proposals for the coordinated design of the government and institutional buildings clustered in the north end of downtown.²⁷ They also participated in the related efforts to establish planning principles to shape development throughout the city, starting with the formation of the Municipal Arts Commission in 1903, followed by the City Planning Committee in 1910, and its successor, the City Planning Commission, in 1920. All of these agencies commissioned plans that included new street layouts, and the planning commission attempted to coordinate the opening of new streets and the widening of existing ones on a citywide basis.

Organized Womanhood

Middleclass and elite clubwomen lent their efforts to the City Beautiful Movement as part of their broader participation in municipal reform and urban spatial reform. In Los Angeles, the largest and most active women's organizations were the Friday Morning Club and the Ebell Club. These clubs were the incubators for a "reformist political culture" in which women agitated for a host of reforms, notably suffrage, but also including such social hygiene issues as milk inspection and the regulation of tenement construction in Los Angeles. Through a combination of volunteer participation and political pressure, the city's clubwomen also established kindergartens in the city's schools and English classes for immigrant women.²⁸ "Organized

womanhood," as the clubwomen called themselves, asserted a distinctive kind of citizenship that sought to reconcile moral womanhood with the active, public, political sphere previously reserved to men. For women carving out a public role for themselves -- moving across the boundary from the private to the public sphere, as Ethington put it -- the appearance and uses of public space were of paramount significance. Public places were not only the setting for political action, but their improvement and beautification also tied women's identity as public actors to civic progress in the most tangible way. By creating civic beauty the clubwomen would also transform social and political life, and transform themselves as well into "civic persons, citizens who had the power of social progress in their hands," according to Gayle Gullett.²⁹

Spatial reform on the part of organized womanhood initially involved the promotion of playgrounds for poor and workingclass youth. Like social hygiene programs such as kindergartens and school lunches, making fresh air and wholesome exercise available was another way to "mitigat[e] the harsher aspects of urban life for children."³⁰ In eastern and midwestern cities, putting that goal into practice brought women reformers into confrontation with the city master plans that tended to follow the vision of the commercial elite by emphasizing large, expensive, centralized facilities, rather than providing convenient access to recreation for all residents.³¹ Such gendered conflicts did not erupt into public disputation in Los Angeles, in large part because the clubwomen won recognition as a constituency to be heeded in planning issues; they could hardly rail against established authority once they had become a part of it. In 1904 they persuaded the city council to establish the Playground Commission, and the initial board

of five members included two woman appointees, one from the Friday Morning Club and one from the Ebell Club. Even the *Los Angeles Times*, no friend of reformers, acknowledged the effectiveness of the commission, though in giving credit to the commission the anonymous reporter could not resist an offhand slur against other reformers viewed as more talk than action. According to the *Times*, the commission's first annual report "Reads more like a Hull House suggestion of things to be done than an official record of work actually accomplished."³² Further evidence of the inclusion of women in planning issues can be found in the city charter-reform language that in 1903 established the Municipal Arts Commission to review public construction proposals. Appointments to the commission would be made "regardless of sex," the only such provision governing any of the sixteen commissions in city government.³³

The appointment of clubwomen to agency boards offered a partial solution to the awkward fact of women's exclusion from the political process. They could not vote or hold elective office, but they could accept appointments to public commissions, and that became the means by which Progressive politicians rewarded their women supporters, as well as the means by which women reformers could serve a formal role in the institutions of government.³⁴ Clubwomen held leadership roles in city planning bodies until the mid-1920s, when they abruptly disappeared from any formal role in infrastructure policy and urban spatial reform. Their withdrawal resulted partly from choice, as the clubwomen reoriented their civic reform agenda away from public action; partly from the streamlining of city government, in which diverse interests were subsumed within the stated goal of more efficient government; and partly from the ascendance of engineers in

road policy at a time when the definition of the engineering profession was being drawn explicitly to exclude women. While it is impossible to point out specific policy objectives in infrastructure and transportation that reflected feminist reform ideas, as Maureen Flanagan has done for Chicago, this disjunction in the mid-1920s serves to emphasize the extent to which road and freeway construction in the city became an exclusively male domain. The influence of women reformers in street and highway policy is most firmly grasped as a matter of unfulfilled potential, in the proposals that went forward after the mid-1920s that might have turned out differently if they had been subject to review by clubwomen, such as taking land from schoolyards and playgrounds for the creation of Whittier Boulevard.

Curbing the Railroad

In his study of railroad opposition in California, William Deverell exposed the Progressives' anti-railroad ideology as a mostly empty rhetorical device that was honed to perfection by the coalition of reformers united in the gubernatorial candidacy of Hiram Johnson in 1910. The Southern Pacific Railroad made an ideal enemy because it already had a perfidious reputation, most recently thanks to the sensational corruption trials prosecuted by Johnson himself in 1907. The anti-railroad campaign also made good politics because it promised something that already existed: the Southern Pacific had been substantially defanged by the regulatory authority granted the state in the constitution of 1879 and the subsequent establishment of the Railroad Commission. Though Johnson relentlessly hammered the railroad during the campaign, once he

became governor he “did not unleash the dogs of anti-trust, anti-railroad legislation,” wrote Deverell, “He did not have any to turn loose.”³⁵

Anti-railroad politics worked at the municipal level too, but with different enemies and different goals on the part of the reformers. Los Angeles Progressives such as Meyer Lissner and John Randolph Haynes hoped ultimately to establish municipal ownership of utilities; bending the operation and expansion of the locally based street railway companies to municipal control was part of that agenda. The reformers gained crucial support from the genuine grievances that the riding public brought against the street railways, such as crowded and dirty streetcars, a limited selection of routes, and too few streetcars plying those routes. A ballot proposition to create the city’s Public Utility Commission won overwhelming approval in 1909.³⁶

The concurrence of rising automobile use, urban spatial reform, and anti-railroad Progressivism has produced the interpretation that automobiles were the favored means of urban transportation among Progressives. Scott Bottles portrayed automobiles as a “progressive piece of urban technology” and “a democratic alternative to the inadequacy of public transportation,” wielded by Progressives against the street railway companies that dominated mechanized urban transportation in the early 20th century.³⁷ While not denying the valid criticisms of trolley service in Los Angeles, the more encompassing view of Progressive spatial reform presented here suggests that the automobile was not viewed as a panacea for urban problems and was not invested with democratic political implications, even by those who fought the hardest to limit the power of the rail companies. The inability of city government to put in place an adequate infrastructure to

accommodate rising automobile use is one sign that the automobile did not benefit from any privileged status in the public policy of transportation. Another is that the people who ran the Public Utilities Commission did not attempt to eliminate the trolleys but worked consistently to improve their performance. The city engineers also counted the railroad and trolley companies as valuable allies in some of their most ambitious highway schemes, from the creation of Venice Boulevard to the construction of the Los Angeles River bridges. Public policy and public opinion did not take a crucial turn away from the street railway and toward the automobile in Progressive-era Los Angeles. The opposition of road versus rail is an after-the-fact construction that simplifies a complex reality into a plot for historical melodrama.³⁸

Anti-railroad politics did have a profound impact on street and highway construction in Los Angeles, but primarily to hinder rather than to encourage it. The Vrooman Act, an 1885 state statute, gave property owners the right to approve or reject municipal infrastructure improvements, primarily as a device to keep taxes low. It was not only a formidable obstacle to the expansion of sewer and street systems, but constrained rail construction too, because rail improvements usually involved street work that could be blocked by the adjacent property owners. The rail companies had to navigate a series of neighborhood-level referenda in order to undertake any expansion plans in urban areas, which was why they lobbied to overturn the statute. They won its repeal in 1909, just before Hiram Johnson's election as governor. In one of its only meaningful acts of railroad regulation, the Johnson administration reinstated the substance of the Vrooman Act in the Improvement Act of 1911.³⁹ Despite the fact that

the act was targeted against rail companies, not City Beautiful planners, the property-owner autonomy of the 1911 act made it very difficult for municipal agencies to obtain approval for comprehensive street plans, no matter how rational they might have been. In one of the most stark contradictions within Progressivism, anti-railroad politics trumped City Beautiful planning initiatives, and one of the few concrete actions by the California Progressives to regulate the rail companies also stymied the efforts to build streets and highways for the automobile.

Considering the full range of Progressive reform initiatives that shaped the municipal response to rising automobile use, the picture that emerges is unavoidably one of inconsistency in law and confusion in institutional authority. Between 1903 and 1920, ordinances and charter amendments created no fewer than four new arms of city government with some purview over street and highway policy – the Municipal Arts Commission, the Public Utilities Commission, the City Planning Committee, and the City Planning Commission. Far from the consensus in favor of the automobile asserted by Mark Foster and Scott Bottles and other scholars, the ideological and institutional dissonance reflected a fundamental ambivalence over increasing the area devoted to public rights-of-way in order to create dedicated arteries for cars and trucks.

The one place where such ambivalence did not exist was the Engineering Bureau of the city's Public Works Department. Not that the city engineers particularly favored one means of transportation over another, but they were less preoccupied with broad policy issues than with the practical politics of building one road at a time. The

engineers had pursued this incrementalist agenda since automobiles had first appeared on the city streets, and continued it through, and beyond, the period of Progressive reform attempts. This continuity on the part of those who were directly concerned with the construction of streets and highways helps resolve the conundrum that historians confront in trying to explain how the highway programs beloved by high-minded Progressives devolved into brutal intrusions in the landscape. The ascendance of automobiles in infrastructure policy was not a matter of Progressivism gone sour, but the work of city engineers who pieced together the approval for individual projects on a case-by-case basis, without anyone ever deciding in a public or a broadly participatory process that cars would be the favored means of transportation. The tactics of the engineers were shaped most significantly by the stubborn opposition that generally prevailed against extensive highway proposals. As the city engineers contended with a broad scope of competing viewpoints and strategies of resistance, they developed and later articulated the political, financial and technical strategies that would enable further construction of major thoroughfares. The detailed examination of street construction in Los Angeles thus begins with a look at those obstacles confronted by the city engineers and the Progressive reformers of the early 20th century: the anti-urban and anti-development legacy of 19th-century infrastructure policy, and the culture of extreme economic individualism that configured the politics of space in Los Angeles.

The Nineteenth-Century Background and the Origins of Urban Spatial Reform

In 1850, after the annexation of California from Mexico, the state legislature granted a city charter that would configure local government in Los Angeles from that time forward, despite the brief survival of some practices from the period of Mexican rule and the continued participation in local government by some individuals from the prior period. The main feature of the charter was that the Common Council (later City Council) exercised fundamental authority over all municipal functions, a feature that would remain unchanged in the Home Rule Charter granted in 1889. Roads and bridges did not much occupy the council or the skeletal administrative offices of the city, but the nascent government nonetheless rendered several key decisions that would reverberate for generations with regard to how people moved around Los Angeles.⁴⁰

Most significantly, in 1854 the council ceded all rights to the lands of the city to the residents, without reserving municipal property or easements for any purpose. That meant that every decision to open a new road or widen an existing one would also constitute a real estate decision, as the land or the right to use it would have to be acquired from private property owners. The council also retained to itself the authority to determine the alignment, width and grade (elevation) of all streets, even after establishing the Board of Public Works (1872), and the offices of the city engineer (1872) and the superintendent of streets (1873). In setting these specifications, the council delineated the basic characteristics of numerous streets that would survive down to the present day.⁴¹

The great majority of street construction came at the behest of landowners, who would then pay for the work through special assessments on their property. The Board of Public Works was a standing committee of five council members, not a true

administrative body. It reviewed street petitions and made recommendations to the full council but did not see every proposal. Individuals and groups of citizens organized as improvement districts sent proposals, and protests against others' proposals, directly to the council, which could act without any participation by the Board of Public Works. The city engineer was an elected officer who was charged with the survey of all public improvements and keeping the records to document the specifications for construction. The superintendent of streets, appointed by the council, served as a quality-control inspector to assure that construction followed the plans approved by the council. The engineer and street superintendent worked together to determine the boundaries of special-assessment districts set up to pay for street improvements, to secure warrants from property owners for the special tax increments to pay for the work, and to release those warrants to pay the contractors when the work was completed. Though a great deal of money – tens of thousands of dollars a year in the 1880s -- passed through city accounts in this process, none of it ever appeared on the city's books because city officials in effect acted as agents for the property owners. The city's street network reflected this lack of coordinated planning and the priority accorded to taxpayers' wishes rather than a comprehensive view of transportation. The "chaotic state" of the city's streets reported by the street superintendent in 1889 had resulted from the speculative excesses of the mid-1880s real estate bubble, when competing proposals had been approved for the same streets and city government lacked any comprehensive mechanism to track the progress of various construction projects.⁴²

The city's imperfect administration of street construction was not merely a local matter, but also reflected state policies that constrained the ability of municipal government to initiate and fund infrastructure. In urban construction issues, the state legislature generally followed the wishes of the San Francisco delegation, for whom the dominant consideration was to keep taxes low. As historian Terrence McDonald observed, the result was a "poisonous anti-state atmosphere," in which the legislature made it extremely difficult for local governments to build public improvements. The main statute that embodied these principles was the Vrooman Act of 1885, which required a series of petitions, public notices, hearings, ordinances, judicial findings, and contract proceedings to regulate any street-construction project that included the acquisition of land for opening a new right-of-way or widening an existing one. In order for a project to reach fruition, the frontage owners had to proceed resolutely through a process that could take as many as 15 steps to complete if there were objection from any property owners, and consumed a minimum of two years even without any protest.⁴³

The city government's role in transportation also included various types of agreements with railroads and street railways, especially the latter. The primary municipal function was to award franchises allowing rail operations on city streets, a responsibility that was also shaped by state statutes and regulations and the need to coordinate with the state Railroad Commission. The city's first horse-drawn street railway opened in 1874. For the next twenty-five years, the proliferation of horse lines, cable railways and, starting in the 1890s, electric trolleys, shaped the direction and extent of the city's physical development as much as any other factor. By erecting the first

durable bridges over the Los Angeles River, rail entrepreneurs opened the east-side neighborhoods of Brooklyn Heights and Boyle Heights for real estate development and fixed the locations of the river crossings. Railway promotion also tended to stimulate the improvement of major streets, because railcars performed better on level grades, and the rail companies sought to avoid having to tear up tracks to accommodate road construction that came after rail installation. Thus a mid-1880s scheme to develop Belmont Heights (northwest of downtown) by means of a cable railway also entailed substantial street construction. The franchise had been awarded for a line along Second Street, but Second Street was "strictly imaginary," a barely discernible path through the chaparral, and the company had to create more than a mile of improved highway according to the city's specifications in order to fulfill the franchise terms. Because the Vrooman Act required that street railways pay one-third the cost of improving any street on which their lines ran, property owners who desired grading or paving often welcomed the chance to economize on the construction by cooperating with the railways. The opening, widening, and surfacing of Sunset Boulevard in 1894 benefited from just this kind of coordination.⁴⁴

The integration of street and railway construction that accounted for some of the city's largest infrastructure projects did not always manifest cooperation between the parties, but had an element of coercion to it. Property owners could band together to initiate street improvements beyond those sought by rail companies. When the rail operators attempted to avoid what they viewed as excessive payments for street construction, the city council was consistently able to prevail because of the state statutes governing street assessments. Property owners could also prevent the construction of

new track routes or the upgrade of existing ones by protesting against the accompanying street improvements. That was the background for the railroad-led repeal of the Vrooman Act in 1909 and its reinstatement in 1911 by the Hiram Johnson administration. The Improvement Act of 1911 constrained the rail companies even more strictly than did the previous statute by designating the city engineer to serve as agent for any rail operator in street improvement proceedings, a statutory privilege that Los Angeles city engineers learned to wield adroitly in later decades. For the anti-railroad Progressives united under Governor Johnson, the principles behind the Vrooman Act and its successors represented an effective way to restrain the actions of the rail companies that played the role of villain in the political drama the Progressives sought to enact.⁴⁵

The ability of property owners to thwart rail expansion fit perfectly into this larger picture of infrastructure development. Despite the completion of such major projects as Second Street, Sunset Boulevard, and the first generation of river bridges, the structure of authority for street construction still privileged opposition over approval. That suited a citizenry disposed toward lower rather than higher taxes and toward the careful expenditure of public funds. Citizens could protest on any basis from the width of the road, to the extent of damages awarded, to the composition of the pavement.

Abandonment of road proposals was more likely than completion. The council, the Board of Public Works, the street superintendent, and the city engineer all operated in a reactive mode, without the explicit authority and apparently without any inclination to consider the broader implications of a network of infrastructure that took its shape according to the profit opportunities of real estate investors and railway entrepreneurs, as

modified by pockets of resistance. While a resident could obtain quick action from the street superintendent to force a railway company to fill a pothole between its tracks, there was no mechanism to force reconsideration of subdivision plans that produced offset intersections and thus looming traffic problems along major thoroughfares, even when citizens alerted officials to the matter. Along Central Avenue, for instance, local residents in 1899 asked the city council to withhold approval of a new subdivision that would cause the misalignment of corners at 41st, 42nd and 43rd streets, to no avail.⁴⁶

Not that Los Angeles was unique in this regard: the emergence of the city planning profession and the City Beautiful movement in the early years of the 20th century were national trends that responded to heightened concern over unregulated growth and the resulting form of cities, the spatial proximity of diverse people and land uses, and the aesthetics of public places. At the same time, the availability of low-cost, mass-produced automobiles would alter how people traveled in Los Angeles and raise new technical, administrative and financial issues that city government would need to address.

The Los Angeles City Engineers

The Engineering Bureau of the Department of Public Works grew faster than the city it helped to build. Partly from an amalgamation of construction, inspection and maintenance functions that were previously dispersed among a host of administrative bodies and council committees, and partly to cope with the explosive demand for its services, the department staff increased sixfold between 1900 and 1920, from 200 to

1,200. Besides streets, the city engineer had responsibility for sewers, sidewalks, street lighting, city buildings, and the approval of subdivision maps. The bulk of the department's staff were the laborers who maintained streets, sewers and storm drains, but the department could nonetheless claim to employ the largest number of professional engineers of any municipal government on the west coast, and the Streets Division alone consisted of 30 engineers and draftsmen in 1922.⁴⁷

The largest source of new engineering staff was the city water department, which had charge of the construction of the Owens Valley Aqueduct when that project began in 1907. In 1909 the city council moved jurisdiction over aqueduct construction to the Board of Public Works and the city engineer, though the chief of the aqueduct project, William Mulholland, continued to act with near-total autonomy in the prosecution of the work. The water department assumed operating control of the aqueduct upon its completion in 1913, but most of the professional staff from the construction project remained with the engineering agency. They were an influential group in the agency due to their numbers, the importance of the aqueduct in the fortunes of the city, and their association with Mulholland, who was perhaps the most illustrious man in Los Angeles at the time. Homer Hamlin, who served as city engineer from 1906 to 1917, also held an appointment as consulting engineer to the aqueduct project during its construction. Two of his successors as city engineer during the 1920s had risen to prominence by designing and constructing parts of the aqueduct, and aqueduct veterans also supervised many of the functions within the engineering agency.⁴⁸

The aqueduct project also embodied the two approaches to municipal engineering that co-existed in the agency. Aqueduct veterans carried the traditions of wilderness engineering into the work culture of the engineering department, such as their relish for massive landscape transformation, a preference for action over negotiation, and an impatience with the coalition-building and compromise that proved necessary in the urban setting. At the same time, Mulholland ran the aqueduct project as a self-consciously modern, bureaucratic enterprise directed toward administrative efficiency. He set up a structure for managing the vast undertaking that served as its own government, with internal departments for accounting, supply, engineering, legal affairs and construction.⁴⁹ Rarely did the two approaches devolve into a stereotypical conflict between paper-pushing, dissembling bureaucrats versus muddy-booted, action-oriented engineers. They often complemented each other, notably in the person of Mulholland himself. William Mulholland clearly relished the transformative impact of his work, and he displayed legendary impatience with administrative concerns beyond his immediate purview. But if he savored his reputation as a man of action, he was also a skilled bureaucrat who deftly managed the boards to whom he reported and delegated responsibility through a hierarchical organizational structure.⁵⁰

A series of charter amendments between 1905 and 1911 structured the roadbuilding regime that remained in place until the early 1930s. Largely the work of good-government reformers led by Meyer Lissner and John Randolph Haynes, the amendments were intended to remove politics from public works by changing the key positions from elected to appointed posts. The Board of Public Works Commissioners

would no longer be a committee of city councilmen, but an appointed body that was expected to work fulltime at the job. The city engineer also became an appointed position, to be designated by the public works commissioners. The reformers attempted to preclude cronyism and assure appropriate expertise by the requirement that the appointee be a university-trained civil engineer with at least five years' experience.⁵¹

The city engineer presided over a professional staff with diverse experience in design and construction. Railroad engineering was the most common background. Most of the supervisory staff of the department through the 1920s had worked in the survey of railroad routes, the building of railroad trackbeds, bridges and tunnels, or the construction of cable and electric street railways. Hydrological survey and water supply engineering for the United States Reclamation Service or city governments also appeared on the resumes of the engineering staff, as well as harbor improvements and wharf construction, mining, and the design and fabrication of structural steel. The top officials all had extensive administrative credentials, and as the 1920s progressed the influence of the aqueduct veterans waned as the Board of Public Works and the city council began to value prior managerial experience more highly than loyalty to the aqueduct builders. Hamlin's immediate successor, Andrew Hansen (served 1917-1920), was one of the aqueduct engineers who had gained his supervisory experience as a division chief during its construction. After Hansen the board and council turned to a veteran of the Army Corps of Engineers, John Griffin (served 1920-1924). An old hand from the aqueduct project, Harvey Van Norman, came over from the water department to head the agency for a brief interregnum before the appointment of another Army engineer, John Shaw

(served 1925-1930). Shaw's successor, John Jessup (served 1930-1933), was an experienced administrator who had been city engineer of Berkeley for 12 years and president of a small college before heading the Los Angeles engineering agency.⁵²

Henry Z. Osborne, Jr. and the Streets of Los Angeles

In the early 20th century, Henry Z. Osborne, Jr., was by far the most important member of the city's engineering establishment concerned with streets and the policies that governed their construction. He specialized in street work from the time he joined the department in 1900 until he left in 1919, and he was the first head of the Streets Division when it was established as an operating unit in 1913. After receiving his degree in civil engineering from Stanford, Osborne studied law at the University of Southern California before going to work for the city. Distinctive among his peers as the only one with legal training, he also brought unusual political connections to the job. His father was a Republican party stalwart who edited the *Los Angeles Evening Express* from 1884 to 1897 before devoting himself fulltime to politics (Republican state central committee) and the largesse available to the politically connected (collector of customs at the port and United States marshal for Los Angeles). Osborne, Sr., was a founder of the Los Angeles Chamber of Commerce and he served on its board between 1910 and 1920, when his son was pioneering an alliance between the chamber and the city engineer. The elder Osborne was elected U. S. representative from California's tenth congressional district in 1914, but far more important to his son was his appointment to the city's Board of Public Works in that same year.⁵³

Osborne's access through his father to the Chamber of Commerce and the board overseeing the engineering department gave him a platform for policy recommendations, but did not alter the fundamental structure of authority in which he operated. The city council stood preeminent in all matters of city policy and solidified its role between 1911 and 1915 with new regulations to tighten council control over the growing bureaucracy. In 1913 the council started meeting daily instead of weekly, which was in part a response to the increasing pace of public business, but which also reflected the council's intention to manage closely the affairs of the city instead of delegating them to civil service employees like the engineering staff. The council chipped away at the civil-service protection recently established for the city engineer by reserving to itself the authority to set the engineer's salary, and stipulating that the council could issue orders directly to the city engineer without having to go through the Board of Public Works.⁵⁴ The city engineering department thus operated in an environment of built-in tension between expertise and politics, and between whatever clout the engineers could muster versus the plenary authority of the city council.

That tension tended to intensify another contradiction that frustrated the engineers – their attempts to keep up with the relentlessly increasing pace of everyday duties concerned with building and maintaining streets versus their desire to anticipate growth and to shape infrastructure accordingly. Adapting road technology to the new demands of the automobile by itself challenged the resources of the city and its engineering establishment. Before the advent of internal combustion engines and rubber-tired vehicles, the optimum road surface was the packed gravel known as macadam.

Consisting of layers of freshly crushed stone, macadam would solidify under the slow, steady pressure of the steel-rimmed wheels used on horse-drawn vehicles that traveled at no more than seven or eight miles per hour. The sharp edges of the rock would break off and be pulverized into dust, which would pack the interstices between the stones to create a durable, water-resistant surface. Rubber tires traversing these roads at speeds of 20 and 30 miles per hour produced suction that pulled the binding dust out of macadam road surfaces. The gravel would loosen, traffic would create ruts, and the penetration of water into the subsurface would aggravate the deterioration.⁵⁵

Oiling the gravel served adequately to preserve the surface in less-traveled rural areas, but city traffic required hard pavements, as Osborne observed in 1913:

Rutted or ragged oiled or macadam roads furnish an increasingly serious problem of maintenance and convey to the eye of our thousands of prospective inhabitants as well as to resident property owners an impression of inefficient construction and poor practice which is by no means to the advantage of the municipality.

The following year Osborne and Hamlin adopted new specifications for street work, proscribing the use of oiled gravel and requiring all pavement to consist of asphalt surface on a concrete base. The department managed to pave between 50 and 80 miles of road per year, an achievement which was nonetheless accompanied by an ever-increasing backlog of pavement orders. By 1919, a little over 500 miles of the city's 2,700 miles of public streets met the new paving standards. By driving up the cost of improvements, hard pavements also increased the already difficult process of gaining approval for street construction.⁵⁶

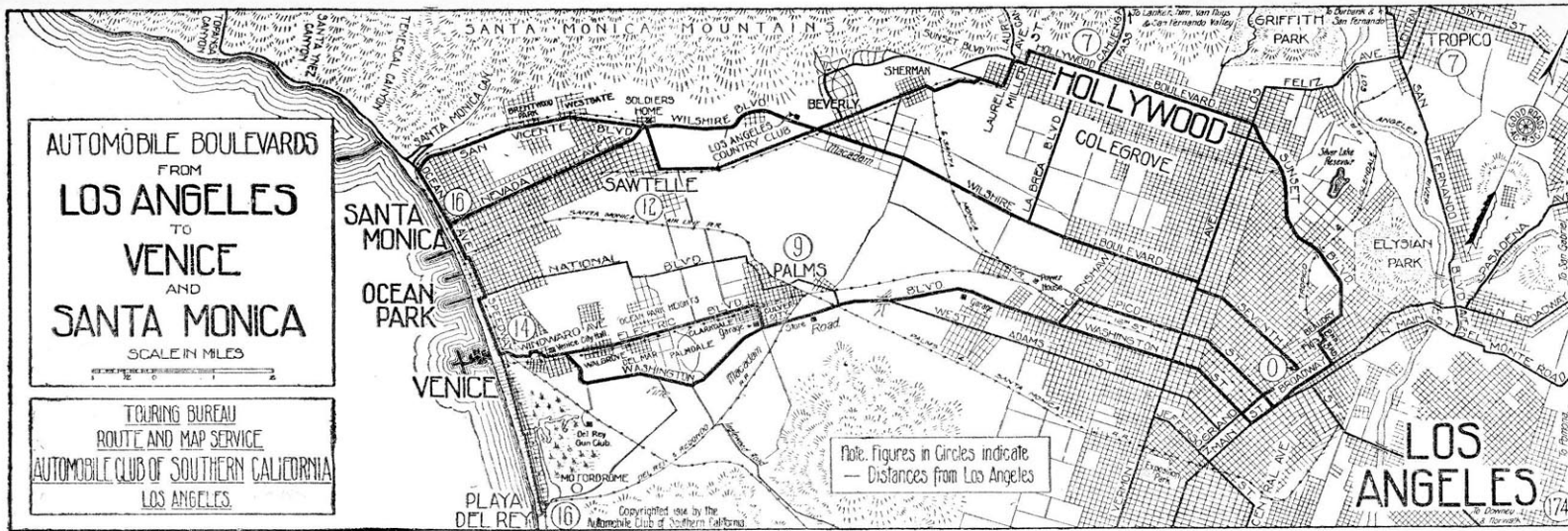


Figure 2: Major Roads in Los Angeles, 1914. Henry Osborne, Jr., recommended in 1915 a grid of boulevards that would supersede the spotty development of streets. Source: *Automobile Boulevards from Los Angeles to Venice and Santa Monica* (Los Angeles: Automobile Club of Southern California, 1914). Used with permission; all rights reserved.

California's "intricate street laws," as Osborne described them in 1913, afforded three ways to pay for street improvements: direct appropriation from the city's general operating fund, municipal bonds, or special assessments on the property owners who would benefit from the work. The city's general fund came mostly from property taxes, which the charter capped at a maximum rate of \$1.25 per \$100 of assessed value. Six cents of that was set aside for public improvements, including not just streets but all general-fund infrastructure expenditures, such as sewers, storm drains, bridges, and the salaries of those charged with their design and construction oversight. It was an inadequate amount to fund any but the most rudimentary street program. The charter also placed a ceiling on the city's capacity to defray the cost of public works through the sale of bonds. The overall debt limit was 15 percent of the assessed value of all real property in Los Angeles, but four-fifths of that, or 12 percent of assessed value, was set aside for revenue-producing projects, such as harbor improvements or hydroelectric generating plants. Los Angeles could only issue debt up to three percent of the total assessed value in the city for general government operations, which included street construction.⁵⁷

Political scientist Stephen Erie has observed that "the local state served as a key instrument of economic development" in early 20th-century Los Angeles because city voters overwhelmingly approved bond-issue referenda to pay for infrastructure.⁵⁸ Erie's case studies, however, all came from those revenue-producing functions that benefited from the 12 percent debt limit rather than the three percent for general government that included streets. Voters and public officials indeed borrowed eagerly against future operating revenues in the form of wharfage fees and electric bills, but displayed extreme

reluctance to borrow against future property-tax revenues. Road projects therefore differed significantly from the kinds of infrastructure in Erie's analysis. Roads were the orphans among public improvements and the exception to Erie's argument that the local state proved an effective instrument of development. Road construction would have to find its financial support from the special assessment process as defined under the Vrooman Act and its successors, which, as Osborne reported in 1913, "Although having its disadvantages, is in fact the only feasible and on the whole the best way to prosecute the work."⁵⁹

Early in his career Osborne had published a critique of the Vrooman Act that predicted with some accuracy how it would play out in a setting of urban growth, with localized interests defeating comprehensive plans, and delays in approval inviting unhealthy speculation.⁶⁰ The Improvement Act of 1911 did include a provision to overcome property-owner protest by a four-fifths vote of the city council, but only for right-of-way acquisition and not for construction costs. Its benefit was more symbolic than tangible to those like Osborne, who wanted to hire labor and buy equipment and materials to build roads. The 1911 act also allowed the city to pay for a project by selling longterm bonds secured by future property taxes levied against all the real estate in the city rather than only taxing within tightly drawn special-assessment districts. This attempt to increase the chances of approval at the polls by minimizing the bite on individual taxpayers did not succeed in Los Angeles, and every attempt to win approval of the voters by using that provision failed.⁶¹

As the widths of proposed streets grew larger in response to increasing automobile use, another type of cost became common – damage claims for properties along the right-of-way. Widening often meant cutting back hills, which made gently sloping front yards into precipitous rock faces or unstable embankments of soil. Landowners won suits against the city for harm to the appearance of their property, for loss of access to their property, and to recover the costs of regrading slopes or building retaining walls. When the city lost such suits it had to pay the damages from the general fund. The state legislature addressed this issue with the Improvement Act of 1913, which allowed the city to include such damages in the special assessment for the project. In effect, the property owners paid themselves for the damages, though in deferred increments over the term of the bonds. While the 1913 act protected the city treasury from unanticipated damage expenses for street construction, it did little to make property owners more willing to support ambitious through-highway proposals.⁶² This concern over slopes and yards also demonstrates that authority and budgets for road construction were not merely abstract considerations based on theories of the proper role of government or the rights of citizens, but connected directly with such everyday matters as where a homeowner could plant some flowers. Roadbuilding necessarily involved major landscape transformation, and the residents of the city decided on a virtually block-by-block basis how much of that transformation they were willing to abide.

The improvement acts of 1911 and 1913 updated the Vrooman Act and defined the difficult regulatory setting for road construction that remained in place through the mid-1920s, and with small changes until the late 1930s. Deciding which roads to pave or

where new roads should be opened or existing ones widened was thus a political process that primarily involved property owners and the city council. For opening and widening projects the city engineer's office had to certify the boundaries of the assessment districts and provide specifications on roadway width, grading and pavement surface, but the property owners usually contracted directly with construction companies to perform the work. Once the city engineering office approved the results, the contractor could collect payment from the property owners. It was a highly decentralized process in which private citizens controlled the location and timing of street proposals and the city engineering department provided the staff work to make the proposals technically adequate. When Hamlin and the Board of Public Works appointed Osborne to head the newly created Streets Division, for the first time Los Angeles had a single official with purview over the roads and highways of the entire city. A disappointing picture awaited him.

Boulevarding the City

In the spring of 1913, Osborne's first summary of pending road projects in Los Angeles found that "There are at present about 100 different proceedings for opening and widening of streets, most of which are in the courts." The three largest projects were all north-south arteries: widening and paving Silver Lake Parkway, between Griffith Park and the Wilshire District; opening Arroyo Seco Parkway, along the streambed running from the northeastern part of Los Angeles toward Pasadena; and widening Vermont Boulevard, from Griffith Park to just south of Wilshire. The first two had originated with

the Parks Commission's plans to create a network of scenic parkways, and the Vermont widening was promoted by the Chamber of Commerce and the Auto Club as a means to create a north-south highway between the city and the harbor that did not terminate in downtown. Osborne appreciated the arterial potential of all the projects and encouraged them in the only way he could, by making them priorities for staff assignments. In that first summary of pending projects, Osborne had to inform the board and council that Silver Lake Parkway was held up in court, that Arroyo Seco Parkway was "in abeyance" because of disagreements about how far the assessment district should extend, and that the only reason there were no protests against the Vermont proposal was that the assessment district had not been drawn up yet. The only major success in that first report was the opening and widening of Santa Barbara Avenue (later Martin Luther King, Jr. Boulevard), an east-west street south of the city's densely settled area. That only happened because Los Angeles Railway Co., the intraurban street railway, had donated the land for the highway, reserving a center strip for its tracks. Osborne also initiated another through-highway project by canvassing property owners to extend Broadway south from Tenth Street to provide another means to access the central business district.⁶³

Defeated projects continued to outnumber completed ones over the next four years. The city eventually won its appeal to the state Supreme Court to set aside an injunction against extending Broadway, and was able to open Central Avenue south of Slauson because the industrial property owners in the area welcomed improved access for motor trucks to their properties. Osborne obtained agreement from the Pacific Electric Railway, the interurban carrier, to run an east-west highway on either side of its Venice

line and create another new arterial called Venice Boulevard, but objection from abutting property owners stilled the idea in 1917. The Vermont widening was abandoned due to protest, Silver Lake Parkway was abandoned when the opponents won their lawsuit against the city, Arroyo Seco Parkway was in seemingly permanent limbo, and Osborne's new plans to widen First and Temple streets west of downtown were defeated in court. The protests against various projects included financial reasons, such as the extent of the assessment district, the amount of damages awarded, and the rate of the assessment; objections about the design and its impact on the surrounding area; preference for one contractor over another; and simple resistance to change. As Osborne summarized: "It frequently takes an exasperatingly long time to overcome the obstacles in the way of street improvements and as frequently the obstacles are beyond the city's control."⁶⁴ The public's lack of appetite for major road construction offered a stunning contrast to the promotional rhetoric on the part of the Chamber of Commerce and other visionaries of growth, which asserted that Los Angeles was on the move, was forward-looking, was building for a future of unbridled prosperity. In the coming years, the promoters of growth would combat that broad opposition with an evolved set of specialized metaphors that would recast the image of the city as an automotive metropolis.

Osborne started in 1914 to design a comprehensive network of arterial highways and to work out legal and political tactics to overcome the resistance built into the governance of street improvements. He envisioned a vast grid of thoroughfares covering the Los Angeles basin, building on the few projects already in place, such as Santa Barbara and Central avenues, and the cooperation of some (if not yet a majority) of the

property owners interested in the improvement of such routes as Vermont Avenue. The Venice Boulevard proposal was part of this plan, as were an upgrade of Hoover Street paralleling Vermont, Vernon Avenue paralleling Santa Barbara, and a plan to bypass the downtown district with through highways at its edges. Temple, First and Second streets would run northwest toward Hollywood. Mission Road, on the east bank of the Los Angeles River, would provide the main outlet to the east and northeast for the industrial and warehousing facilities along the railroads on either side of the river. High Line Boulevard would run east-west at the harbor, to allow trucks to access that critical node without adding to the traffic of the built-up parts of the city to the north. And when they needed to get to or from downtown, they could use the new “truck boulevard” that Osborne would create out of Alameda Street. Slauson and Florence avenues would carry east-west industrial traffic to and from the growing industrial district in southeast Los Angeles, in the vicinity of the newly opened Goodyear tire plant. These east-west highways went all the way to the coast so that city residents could travel easily to the beaches, and the alignments of proposed arteries were adjusted to provide ready access to major inland recreational areas such as Exposition Park and Griffith Park. Osborne's automotive transportation vision thus encompassed commerce, industry, recreation and housing. It was based on the integration of highways and street railways, because rail service determined the distribution of settlement density and traffic volume, and because the rail companies already controlled linear rights-of-way in these crucial corridors and had demonstrated their willingness to cooperate with highway development. Osborne also saw the central business district as one center among many. It did not need to serve

as a transportation hub, and it would neither rise nor fall precipitously according only to travel patterns.⁶⁵

Among Osborne's objections to the Vrooman Act and its successors, he particularly lamented the lack of any method to construct a road that passed through more than one jurisdiction, which particularly affected his later plans for Mission Road. He also believed that the long interval for project approval would allow opportunities for unproductive real estate speculation. A year into his duties overseeing street construction, Osborne quixotically recommended charter amendments to the city council in order to ease the process of highway approval, probably understanding that the council was powerless to change a process established in state law. Nor could Osborne easily come to terms with the paradox between his belief that engineering expertise offered the best basis for planning infrastructure, and the political reality that made the engineers subordinate to all the other participants in the process. Neither the city charter, the extant orders of the city council, nor the direction provided by of the Board of Public Works empowered him to make comprehensive recommendations such as the grid plan. Osborne therefore worked the political channels outside of city government by soliciting the Chamber of Commerce to petition the city council to undertake a plan for "boulevarding the entire city." Far from secretive or conspiratorial, he reported these contacts to his superiors and to the city council by way of buttressing the support for his program.⁶⁶

It would be difficult to overstate the importance of the Chamber of Commerce in the promotion of industrial development and urban growth in Los Angeles, especially in

securing public-sector support toward the provision of infrastructure. The Chamber's entry into Osborne's grid strategy in 1916 came during the height of its influence, in the middle of the period framed by the Chamber-led efforts to capture federal resources for the harbor in the 1890s and Boulder Dam in the 1930s, and immediately after the opening of the Owens Valley Aqueduct, which the Chamber had also avidly promoted. The Chamber played a pivotal role, but not a solitary one, as other organizations also supported transportation development, notably the Automobile Club of Southern California and the Community Development Association.⁶⁷

The Auto Club had been founded in 1900 as a group of well-to-do hobbyists and incrementally moved toward a policy agenda that combined advocacy for regional growth with a watchdog role over public expenditures on highways. Its directors had lobbied for the charter amendment that changed the Board of Public Works from an elected to an appointed body in the belief that the appointed board would be less influenced by politics. In 1906, when it began to place the first directional signs for motorists on the roads of southern California, the Auto Club adopted a *de facto* role in highway planning, as it had to determine which routes constituted the principal thoroughfares between Los Angeles and other communities throughout the region. Though it campaigned for Los Angeles County's first highway-bond referendum in 1908, the Auto Club opposed a similar state measure in 1909 in the belief that the amount (\$18 million) was not adequate for the stated purpose of creating a statewide highway network. (That turned out to be correct, and two more statewide highway measures appeared on the ballot, in 1915 for \$25 million, and 1919, \$40 million). Ernest East entered the

employ of the Auto Club in 1921 as its first staff engineer, establishing a fulltime highway-policy oversight role for the organization (much later, East would produce his own comprehensive plans for motorways). During the attempts to garner support for boulevarding the city, the Auto Club represented potential political support rather a source of technical advice, and in 1916 Osborne presented his plans to its board of directors as part of his effort to bring more outside influence to bear on the city council's deliberations.⁶⁸

A third private group that took an interest in highways, the Community Development Association, was smaller and more exclusive than the Chamber or the Auto Club. It was far less interested in policy prescription than in individual projects, such as a proposal to rebuild Wilshire Boulevard that came to the ballot in 1924. These three organizations differed in their administration: the Chamber had an extensive committee structure that developed public-policy positions, and the Auto Club board was responsible to a dues-paying membership that expected services such as maps and insurance more than policy advocacy, while the CDA members acted with a much freer hand than the other two. Membership overlapped among all of them, and such figures as Harry Chandler of the *Los Angeles Times* and real estate developers Henry Keller and William May Garland served on the boards of all three, at times simultaneously. The three groups did not represent different interests but rather different facets of the city's growth-oriented business sector that pursued a civic agenda inseparable from the pursuit of profit. Despite their numerous successes and expanding influence, highway construction remained a conspicuous disappointment. The combined efforts of the

Chamber and the Auto Club had been unable to salvage the aforementioned widening of Vermont Boulevard from defeat at the hands of the abutting property owners, and Osborne's grid proposal never even moved onto the docket of the city council.⁶⁹

Osborne's grid strategy had barely begun to unfold before the nation's entry into World War I interrupted all such schemes for domestic development. Military service and the abrupt end of immigration from Europe diminished the availability of laborers to take on construction work. Critical materials such as steel were commandeered for weapons production and other war-related applications. The nation's credit markets tightened and municipal bonds secured by special assessments found a greatly reduced pool of buyers. Street construction slowed down considerably, even the routine repaving of existing rights-of-way, and grand schemes had to be postponed. The economic dislocations following the war further delayed infrastructure development, but as the 1920s opened Los Angeles entered the period of its greatest rate of growth. The city engineering office saw early signs of it as petitions for new roads and sewers more than doubled between 1920 and 1921, and then increased again by more than 25 percent in 1922. Osborne had departed the engineering department in 1919 to become chief engineer of the city's Public Utilities Commission, where he would continue to work toward a master-planned approach to transportation in Los Angeles, including the formation of the Traffic Commission. His successor as chief of street engineering, John R. Prince, pursued a project-oriented rather than a comprehensive approach to highway development. That was in part because of the many urgent duties that confronted him during the city's headlong expansion, but also because the formulation of transportation

policy nominally belonged to the two new agencies that grew out of Progressive reform efforts of the previous two decades, the Planning Commission and the Public Utilities Commission.⁷⁰

The Strains of Progressivism

The Public Utilities Commission (PUC) was the governmental innovation that most fully embodied the anti-railroad ideology of the Progressive coalition that propelled Hiram Johnson's 1910 gubernatorial campaign. In Los Angeles, the primary advocates for the creation of the PUC were the same group that organized support for Johnson's coalition, the good-government reformers headed by Meyer Lissner. In 1907, they began to press for an oversight agency that would set utility rates and investigate the operations of utility companies. City voters approved a ballot proposition to establish the PUC in 1909, when Progressive candidates and platforms swept the city elections. Lissner served as president of the new public utilities board. Its charge extended to all utilities that operated in the city: telephone, telegraph, gas, electricity, street railways, and, after a few years, the jitneys and buses that began to ply the streets.⁷¹

The PUC was no panacea for what the reformers saw as the disorderly process of railway development and the exploitative conduct of the railway firms. For one thing, the state Railroad Commission already had jurisdiction over the operations and finances of the street railways. After a flurry of court tests and legislative hearings, the priority of the state agency was unequivocally established in 1914. For another, by the time the PUC was established, the interurban Pacific Electric (PE) and the intracity Los Angeles

Railway (LARY) had already been built out close to their fullest extent, and the debt for all that track construction and rolling stock severely constrained their finances. There was no question as to the board's authority over the franchises granted by the city, but the threat of revocation and the introduction of open bidding for franchises lacked genuine sanction in comparison to the *fait accompli* of the existing rail infrastructure controlled by the PE and the LARY. In 1919, the PUC advertised for bids when the PE's franchise to operate on Sunset Boulevard came up for renewal. It turned out to be an empty exercise, because any bidder other than the PE would have to purchase the existing physical plant that the PE already had in place. The PE submitted the only bid, in the nominal amount of \$100, which the PUC correctly perceived as an affront to its authority. Because the PUC lacked any meaningful regulatory bite, the city council balked at keeping an investigative engineer on the PUC payroll, while Lissner and his cohorts fought to maintain the independence of their hard-won oversight function. This contest over the institutional character of the PUC was finally settled in 1919 by the appointment of the most politically savvy and best-connected engineer in the city, Henry Osborne, Jr., who was well-known among the politicians on both sides of the issue because of his family ties and his prior lobbying on behalf of boulevarding the city.⁷²

Osborne viewed regulation of automobile traffic as part of his charge at the PUC, at least insofar as automobiles caused difficulties for streetcars trying to use the same public rights-of-way. Sharing streets with automobiles had been one of the main operational problems for streetcars after 1910, but there was no clear mandate for any agency to address the issue. The City Planning Committee and the Streets Division of the

city engineering office represented attempts at least to study the infrastructure implications of automobile use, but nobody believed that either was adequate to the task, least of all the city council. The council appointed its own members to conduct investigations and even to administer projects that arose from committee reports, such as the Special Committee on Street Congestion (1912), which had mandated the relocation of a PE line that ran through the crowded industrial corridor along the Los Angeles River. Soon after joining the PUC in 1919, Osborne moved to rectify both the administrative vacuum of street regulation and the practical problem of chronically jammed thoroughfares by recommending a parking ban on downtown streets. The city council enacted the ban but immediately watered it down after impassioned protests.⁷³

This failed attempt to enact a strict parking ban in downtown Los Angeles played a central role in Scott Bottles' portrayal of Progressive-era city-planning efforts as the response to a broad consensus among citizens favoring one form of transportation over another – the automobile over the street railway. In order to make that case it has been necessary to describe the automobile as a “democratic piece of industrial technology” that offered a means to challenge the autocratic reign of the rail barons.⁷⁴ There are many problems with this interpretation, starting with William Deverell's observation that the Progressives' pledge to rein in the rail companies was mostly an empty promise calculated to win votes and not a genuine program for reform.⁷⁵ Moreover, the author of the parking ban, Henry Z. Osborne, Jr., did not frame it as a choice between modes of transportation, but hoped to improve the circulation of both trolleys and automobiles by removing parked cars from the roadways.⁷⁶ Osborne had a more encompassing view of

urban transportation than road versus rail: he had argued for a comprehensive road system before proposing the parking ban, and he would be a principal architect of the *Major Traffic Street Plan* of 1924. He did not have a sudden conversion against the automobile in arguing for the parking ban in 1920 and then reconvert back again a short time later, but saw both trolleys and automobiles as necessary components of transportation in Los Angeles.

Most tellingly, the opponents of the ban did not express their objections in terms of technological choice in transportation or curbing the power of the rail companies, but in terms of access to shopping. Merchants decried the ban because it would discourage shoppers who came downtown by automobile, and the shoppers who objected were advancing their desires as consumers rather than their ideas as reformers.⁷⁷ To comprehend the automobile, in Bottles' terms, as a "democratic alternative to mass transit" is to submit to the exhortations of advertising copywriters of the 1920s, who sought to conflate consumption and democracy as a means of selling goods.⁷⁸ This approach to marketing encouraged the notion that freedom of choice should "be perceived as an act more significantly exercised in the marketplace than in the political arena," as Roland Marchand has put it.⁷⁹ But as we have seen, when given the choice to spend their tax dollars for road networks to accommodate the automobile, citizens consistently declined. People bought automobiles for many reasons, and we need not interpret that purchase as a proxy vote for the tax-funded provision of highways or an act of anti-railroad political import.

Urban spatial reform in Progressive-era Los Angeles proceeded from a set of considerations rooted in the specific physical and political circumstances that the reformers confronted rather than abstractions about democracy and its imputed association with the automobile. As has been shown with respect to the Vrooman Act and the statutes that succeeded it, anti-railroad politics did not necessarily translate into pro-automobile infrastructure policy. The other main forum for Progressives with an interest in the physical character of the city, the Planning Commission, was not motivated by the animus toward rail corporations that resonated so powerfully in state politics and the local agenda of the PUC, but rather by a broader collection of urban-reform initiatives. The conflicts over transportation infrastructure that embroiled the Planning Commission would not concern the relative merits of road versus rail, but institutional competition between the planning and engineering agencies over who would determine the location, the design, and the sequence of construction for major highways.

The earliest antecedent of the Planning Commission was the Municipal Art Commission, which the city council created by ordinance in 1903. The commission consisted of the mayor, the city engineer, the building inspector, and five unpaid citizen appointees. The Municipal Art Commission was the only one among the sixteen civic commissions in Los Angeles for which the enabling language specified that appointments would be made “regardless of sex,” an unmistakable signal that the city council found it impossible to ignore those women activists who had asserted a role for themselves in the creation of urban space and the conditions governing its occupancy.⁸⁰

The members of the Municipal Art Commission were instrumental in arranging for a consultation by Charles Mulford Robinson, the nationally prominent City Beautiful planner. In 1907 he produced a cut-and-paste program that grafted onto Los Angeles ideas drawn from Chicago architect and planner Daniel Burnham and the historicism of Beaux-Arts Neoclassicism. Besides the obligatory clusters of civic and cultural institutions, Robinson called for radial boulevards that emulated Baron Haussmann's thoroughfares in Paris. These boulevards followed the traditional definition of broad roadways with a center strip for plantings, all intended to convey a sense of elegance and monumentality; he singled out Wilshire Boulevard as a candidate for this treatment. The inspirational quality of Robinson's proposals was not diminished for their having been recycled, and if political circumstances had permitted their implementation they indeed would have produced a very different Los Angeles than the one that resulted. The Municipal Art Commission was sufficiently inspired to include an abstract of Robinson's work in its 1909 report that was printed for public distribution, along with Homer Hamlin's paean to the Neoclassically ornamented concrete bridge under construction to carry North Broadway over the Los Angeles River, a call for more permanent highways, and a correct prediction about the growth that would result from completion of the Owens Valley Aqueduct. The commission was clearly aware of the obstacles to public construction, and perhaps its most significant legacy was the call for a means to coordinate the many private and public bodies concerned with the physical character of the city.⁸¹

The city council obliged with the formation of the City Planning Committee in 1910. This group brought together the many city boards and departments with responsibility for public buildings and municipal facilities, as well as private groups with an interest in the development of the city. The boards of public works, utilities, the harbor, parks, and playgrounds were all represented, as well as the city council, the library, and the art and housing commissions. The Federation of Improvement Associations represented special assessment districts. Two organizations of Progressive reformers each had a seat – the Civic Association and the Municipal League. The two leading women’s clubs, the Friday Morning Club and the Ebell Club, were also invited to place a representative on the committee. The strong connection between the Planning Committee and Progressive reform was exemplified by the selection of Rev. Dana Bartlett as the chair. The minister of Bethlehem Institutional Church, Bartlett had co-founded the first settlement house in Los Angeles and enlisted in such diverse causes as the establishment of an employment bureau and municipal baths. Undaunted by its complete lack of staff, quarters or budget, the committee mapped out an imposing agenda in its early meetings, as reported to the city council in January 1911:

Much thought is being given to parks, parkways, boulevards, street platting, transportation, union station, subways and tunnels, civic center and beautifying of public buildings and grounds, bridges and approaches, harbor with warehouses and docks, municipal railway, river bed treatment, fountain and lighting systems, industrial districts and model villages.

It was an impressive, even prescient, catalog of the planning and infrastructure issues that the city would face in the coming years, and they asked for what they deemed an adequate period to consider them fully: “Your committee asks to be continued for a

sufficient length of time to be able to create a practical plan for the city at the least possible expense. It may take one or two years.”⁸²

The committee would have little to report in the next few years. In 1911 the clubwomen poured their energy and resources into mobilization for the California suffrage amendment. During the war, their reform impulses turned toward Americanization programs that sought to impose their version of citizenship on immigrant families and to argue for more stringent immigration restrictions.⁸³ After the war, as the city government regrouped to contend with the onset of spectacular growth, the city council reconsidered the voluntary basis of the planning function and the planning committee was succeeded by the City Planning Commission in 1920. Its board of commissioners was drawn from the same agencies and constituencies as before, including eight clubwomen among the 51 commissioners. A professional planner, G. Gordon Whitnall, was appointed chief of staff for the new agency, and the board was divided into committees reflecting the principal issues as defined by Whitnall: zoning, subdivisions, streets, railroads, buildings, parks, and law. In its first month of operation, July 1920, the commission considered ways to produce a comprehensive plan for major highways.⁸⁴

As the residue of Progressive reform initiatives concerned with public space in Los Angeles, the Planning Commission represented an institutional mechanism for comprehensive consideration of streets and highways for the city. The organized women of the Ebell Club and the Friday Morning Club still had their places at that table, but their role would be reduced and then eliminated during the highway battles that shortly

erupted, which would overwhelm the commission's attempts to plan transportation infrastructure through the exercise of logic and principle. The commission viewed the city engineers as subordinate to the big-picture planning agency, as specialists in paving rather than policy, but it was the engineers who would wrest the largest role in shaping the automotive infrastructure. Knowledge of how to build roads was surely an asset to the engineers, as was their close familiarity with the approval processes that governed highway construction. The professional staff of the engineering agency also outnumbered that of the planning commission by more than a hundred to one, and the engineering leadership would set their own priorities for the work of the agency.

The highway politics of the 1920s would play out around multiple lines of conflict, including land use and the city's zoning authority, public versus private determination of infrastructure policy, tax avoidance and place competition on the part of property owners, interagency squabbles among the various components of city government, and reconsideration by the clubwomen as to the most appropriate means to pursue their social mission. These struggles enacted some of the latent conflicts that existed among the people, ideas, and political strategies that have been bundled together under the label of Progressivism. They took place within the setting of explosive growth that multiplied the city's land area and population in the 1920s, and which imparted a sense of emergency to the proceedings. The participants frequently displayed considerable confusion as to the meanings of the onrushing events in which they were taking part, or seeking to take part. Their stridency suggests that they all believed the stakes were high, that in arguments over the function and appearance of its public

highways they were contending for the future of Los Angeles, and they were right about that.

NOTES TO CHAPTER ONE

- ¹ Report of the Street Superintendent to City Council, 9 December 1889, Box B-1062, City Archives.
- ² The report was conducted by Bion J. Arnold, a Chicago-based consultant who performed similar studies for Chicago, Pittsburgh, New York, San Francisco, Providence and other cities. Arnold summarized the study in his article, "The Transportation Problem in Los Angeles," *California Outlook* 11 (November 4, 1911): 9-13. On Arnold's career see Mark Foster, *From Streetcar to Superhighway: American Planners and Urban Transportation* (Philadelphia: Temple University Press, 1981), 37-41.
- ³ On traffic jams, Los Angeles Board of Public Utilities, *9th Annual Report*, 1917-18, 54; on registrations, Ashleigh Brilliant, *The Great Car Craze* (Santa Barbara: Woodbridge Press, 1989), 202; on the growing use of cars for commuting rather than pleasure outings, see Clay McShane, *Down the Asphalt Path: The Automobile and the American City* (New York: Columbia University Press, 1994), 190-92, and Scott Bottles, *Los Angeles and the Automobile: The Making of the Modern City* (Berkeley: University of California Press, 1987), 55-56.
- ⁴ For a recent historiographical essay see Robert D. Johnston, "Re-Democratizing the Progressive Era: The Politics of Progressive Era Political Historiography," *Journal of the Gilded Age and Progressive Era* 1 (January 2002): 1-15.
- ⁵ George E. Mowry, *The California Progressives* (Berkeley: University of California Press, 1951), 92-104, and Mowry, *The Era of Theodore Roosevelt and the Birth of Modern America, 1900-1912* (New York: Harper & Row, 1958), 86-88 (quoted words); Richard Hofstadter, *The Age of Reform: from Bryan to F.D.R.* (New York: Knopf, 1955), quoted words on 131; Robert H. Wiebe, *The Search for Order, 1877-1920* (New York: Hill and Wang, 1967).
- ⁶ Gabriel Kolko, *The Triumph of Conservatism: A Reinterpretation of American History, 1900-1916* (New York: Free Press of Glencoe, 1963); James Weinstein, *The Corporate Ideal in the Liberal State, 1900-1918* (Boston: Beacon Press, 1968); Aileen S. Krador, *The Ideas of the Woman Suffrage Movement, 1890-1920* (New York: Columbia University Press, 1965).
- ⁷ Richard McCormick, "The Discovery That Business Corrupts Politics: A Reappraisal of the Origins of Progressivism," was originally published in 1981 and reprinted in a collection of McCormick's essays, *The Party Period and Public Policy* (New York: Oxford University Press, 1986); Daniel T. Rodgers, "In Search of Progressivism," *Reviews in American History* 10 (December 1982): 113-32. Both find that the concept of Progressivism is worth retaining to characterize the era of reform between 1890 and 1920, while seeking greater precision in the motivations of reformers, the range of participants, and the effects of their actions.
- ⁸ James T. Kloppenberg, *Uncertain Victory: Social Democracy and Progressivism in European and American Thought, 1870-1920* (New York: Oxford University Press, 1986), quoted words on 415.
- ⁹ John D. Buenker, *Urban Liberalism and Progressive Reform* (New York: Scribner, 1973); James J. Connolly, *The Triumph of Ethnic Progressivism: Urban Political Culture in Boston, 1900-1925* (Cambridge: Harvard University Press, 1998).

¹⁰ Overviews of this new Progressive historiography can be found in Johnston, "Re-Democratizing the Progressive Era;" Noralee Frankel and Nancy S. Dye, eds., *Gender, Class, Race and Reform in the Progressive Era* (Lexington, KY: University Press of Kentucky, 1991); and Eileen L. McDonagh, "Race, Class and Gender in the Progressive Era," in Sidney M. Milkis and Jerome M. Mileur, eds., *Progressivism and the New Democracy* (Amherst, MA: University of Massachusetts Press, 1999). Recent syntheses, primarily intended for the textbook market, that take into account the gender, ethnic, racial and class dimensions of Progressivism include Steven J. Diner, *A Very Different Age: Americans of the Progressive Era* (New York: Hill and Wang, 1998) and John Whiteclay Chambers, II, *The Tyranny of Change: America in the Progressive Era, 1890-1920* (2nd edition, New Brunswick, NJ: Rutgers University Press, 2000). On Tejano Progressives, see Benjamin Heber Johnson, *Revolution in Texas: How a Forgotten Rebellion and its Bloody Suppression Turned Mexicans into Americans* (New Haven: Yale University Press, 2003). On Chicano Progressives, see George J. Sanchez, "The 'New Nationalism' Mexican Style: Race and Progressivism in Chicano Political Development during the 1920s," in William Deverell and Tom Sitton, *California Progressivism Revisited* (Berkeley: University of California Press, 1994), 229-44. On African Americans, see Douglas Flamming, "African Americans and the Politics of race in Progressive-Era Los Angeles," in Deverell and Sitton, *California Progressivism Revisited*, 203-28.

¹¹ Theda Skocpol, *Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States* (Cambridge: Harvard University Press, 1992), 524.

¹² William Chafe, "Women's History and Political History," in Nancy Hewitt and Suzanne Lebsack, eds., *Visible Women: New Essays on American Activism* (Urbana: University of Illinois Press, 1993), 105.

¹³ Paula Baker, "The Domestication of Politics: Women and American Political Society, 1780-1920," *American Historical Review* 89 (June 1984): 641.

¹⁴ Maureen A. Flanagan, *Seeing with Their Hearts: Chicago Women and the Vision of the Good City, 1871-1933* (Princeton: Princeton University Press, 2002), 5.

¹⁵ Philip J. Ethington, "Recasting Urban Political History: Gender, the Public, the Household, and Political Participation in Boston and San Francisco during the Progressive Era," *Social Science History* 16 (Summer 1992): 301-33.

¹⁶ McCormick, "Progressivism: A Contemporary Reassessment," and Rodgers, "In Search of Progressivism;" Johnston, "Re-Democratizing the Progressive Era," 3.

¹⁷ Lawrence Veiller, "The Tenement-House Exhibition of 1899," *Charities Review* 10 (1900-1901): 19-25.

¹⁸ Ebenezer Howard, *Garden Cities of To-Morrow* (London, 1902; reprint, London: Faber and Faber, [1946]).

¹⁹ Foster, *From Streetcar to Superhighway*; Asha Elizabeth Weinstein, "The Congestion Evil: Perceptions of Traffic Congestion in Boston in the 1890s and 1920s," Ph.D. dissertation, University of California Berkeley, 2002.

²⁰ Quoted in Kevin Starr, *Material Dreams: Southern California through the 1920s* (New York: Oxford University Press, 1990), 74.

²¹ Engineers in the Progressive period viewed their work as thoroughly compatible with city planning principles. See Jeffrey K. Stine, *Nelson P. Lewis and the City Efficient: The Municipal Engineer in City*

Planning During the Progressive Era, Essays in Public Works History, No. 11 (Chicago: Public Works Historical Society, 1981).

²² Paul S. Boyer, *Urban Masses and Moral Order in America, 1820-1920* (Cambridge: Harvard University Press, 1978), vii.

²³ John W. Reys, *The Making of Urban America: A History of City Planning in the United States* (Princeton: Princeton University Press, 1965), 195.

²⁴ William H. Wilson, *The City Beautiful Movement* (Baltimore: Johns Hopkins University Press, 1989), 92.

²⁵ Daniel H. Burnham and Edward H. Bennett, *Plan of Chicago* (1909; reprint, New York: Da Capo Press, 1970).

²⁶ Clay McShane, *Down the Asphalt Path: The Automobile and the American City* (New York: Columbia University Press, 1994), 206-13.

²⁷ Some of these plans were performed under contract to the Civic Center Commission, while others were submitted by architects who objected to aspects of the official plans; see "Los Angeles City-County Civic Center," s.v., in Leonard Pitt and Dale Pitt, *Los Angeles A to Z: An Encyclopedia of the City and County* (Berkeley: University of California Press, 1997).

²⁸ Judith Raftery, "Los Angeles Clubwomen and Progressive Reform," in Deverell and Sitton, *California Progressivism Revisited*, 144-74, quoted words on 144; Clark Davis, "An Era and Generation of Civic Engagement: The Friday Morning Club in Los Angeles, 1891-1931," *Southern California Quarterly* 84 (Summer 2002): 135-68; Gayle Gullett, *Becoming Citizens: The Emergence and Development of the California Women's Movement, 1880-1911* (Urbana: University of Illinois Press, 2000).

²⁹ Gayle Gullett, "Constructing the Woman Citizen and Struggling for the Vote in California, 1896-1911," *Pacific Historical Review* 69 (November 2000): 573-93, quoted words on 584. For recent works on other cities that also emphasize the importance of spatial reform and the City Beautiful movement within the efforts of organized womanhood in the early 20th century but are not specific to California, see Sarah Deutsch, *Women and the City: Gender, Space and Power in Boston, 1870-1940* (New York: Oxford University Press, 2000) and Peter C. Baldwin, *Domesticating the Street: The Reform of Public Space in Hartford, 1850-1930* (Columbus: Ohio State University Press, 1999).

³⁰ Raftery, "Los Angeles Clubwomen," 148.

³¹ Flanagan, *Seeing with Their Hearts*, 103-109; Baldwin, *Domesticating the Street*, pp TK.

³² Gullett, "Constructing the Woman Citizen," 580, *Los Angeles Times*, December 20, 1907.

³³ Municipal Art Commission, *Report for the year 1904*; Burton L. Hunter, *The Evolution of Municipal Organization and Municipal Practice in the City of Los Angeles* (Los Angeles: Parker, Stone & Baird, 1933), 123-24.

³⁴ Raftery, "Los Angeles Clubwomen," 146, 148, identifies such participation on appointed commissions as one of the signs of the clubwomen's influence.

³⁵ William F. Deverell, *Railroad Crossing: Californians and the Railroad, 1850-1910* (Berkeley: University of California Press, 1994), 149-77, quoted words 170-71.

³⁶ Tom Sitton, *John Randolph Haynes: California Progressive* (Stanford University Press, 1992), 106-08; Deverell, *Railroad Crossing*, 170; and Robert M. Fogelson, *The Fragmented Metropolis: Los Angeles, 1850-1930* (1967; reprint, Berkeley: University of California Press, 1993), 164-71. The best firsthand account of the early history of the Public Utilities Commission is Section 1, "Organization, Etc." of the Board of Public Utilities and Transportation, "Seventeenth and Eighteenth Annual Reports," 1926-28, typescript, n.p., City Archives, Box B-1054; the board had just been reorganized under the new city charter of 1925 (including the name change to add "Transportation") and this first chapter of the first report after the reorganization was a poignant attempt to maintain a strong connection to the reformist origins of the agency.

³⁷ Bottles, *Los Angeles and the Automobile*, 57, 88.

³⁸ Peter J. Ling, *America and the Automobile: Technology, Reform, and Social Change* (Manchester, UK: Manchester University Press, 1990), also uncouples Progressivism from technological choice in transportation, counter to Bottles and Foster.

³⁹ *Statutes of California and Amendments to the Codes*, 39th Session (San Francisco: Bancroft-Whitney Co., 1911), 618, 626-35.

⁴⁰ Hunter, *Municipal Organization*, 16, 20-21.

⁴¹ Hunter, *Municipal Organization*, 38-39; Harris Newmark, *Sixty Years in Southern California, 1853-1913*, 3rd edition (Boston: Houghton Mifflin Co., 1930), 23-25, 34, 83-85, 275-76, 286, 417; Los Angeles City Council Minutes, volume 9, pages 416-19, 1875, City Archives; hereinafter cited as Council Minutes, volume:page (year).

⁴² Hunter, *Municipal Organization*, 38-39; Report of the Street Superintendent to City Council, 9 December 1889, Box B-1062, City Archives.

⁴³ Robin Einhorn, *Property Rules: Political Economy in Chicago, 1833-1872* (Chicago: University of Chicago Press, 1991), esp. 14-19, has shown how the assessment district process became institutionalized in American urban governance as a means to pay for improvements without any redistributive economic impact. Terrence MacDonald, *The Parameters of Urban Fiscal Policy: Socioeconomic Change and Political Culture in San Francisco, 1860-1906* (Berkeley: University of California Press, 1986), quotation on 281; on the significance of low-tax policies with respect to infrastructure in San Francisco, also see Philip J. Ethington, *The Public City: The Political Construction of Urban Life in San Francisco, 1850-1900* (New York: Cambridge University Press, 1994), 364-8. Description and analysis of the statutes in *Annual Report of the City Engineer*, 1913-14, 16-20; Frederick Law Olmsted [Jr.], Harland Batholomew, and Charles Henry Cheney, *A Major Traffic Street Plan for Los Angeles* (Los Angeles: Traffic Commission of the City and County of Los Angeles, 1924), 56-66.

⁴⁴ Council Minutes, 9:415 (1875); Robert C. Post, *Street Railways and the Growth of Los Angeles* (San Marino, CA: Golden West Books, 1989), 17-21, 31-84, quotation on 51; Commissioner's Report to the City Council on Sunset Boulevard, October 6, 1894, Box B-108, City Archives; on the interdependence of street railways and street construction, see Clay McShane, *Down the Asphalt Path: The Automobile and the American City* (New York: Columbia University Press, 1994), 60-67.

⁴⁵ The ability of property owners to influence substantially the capital expenditures of rail operators arose repeatedly in analyses of the financial and regulatory aspects of trolley operations in connection with proposed fare increases. See California Railroad Commission, Engineering Department, *Application 4238: Operating and Financial Condition of the Los Angeles Railway Corporation* (Los Angeles: by the commission, 1919), 22-25; Robert C. Post, "The Fair Fare Fight," *Southern California Quarterly* 52 (September 1970): 279. On the repeal, reinstatement and amendment of the Vrooman Act, see *Statutes of California and Amendments to the Codes*, 39th Session (San Francisco: Bancroft-Whitney Co., 1911), 618, 626-35.

⁴⁶ Letters to City Council from Special Committee re widening Hoover Street, August 15, 1898, Box C-1; from Street Superintendent re abandoned projects, April 17, 1899, from Street Superintendent re tax refunds for abandoned projects, August 4, 1899, from Vernon Improvement Association re offset intersections along Central Avenue at 41st, 42nd and 43rd streets, May 9, 1905, and from Inspector of Public Works re pothole, December 17, 1908, all Box C-3.

⁴⁷ Hunter, *Municipal Organization*, 111-13, 120, 132; *Annual Report of the City Engineer*, 1912-13, 21; 1919-20, 1; and 1921-22, 9.

⁴⁸ Hunter, *Municipal Organization*, 113. Biographical data on Hamlin and other engineering staff from *Who's Who on the Pacific Coast* (Los Angeles: Hayden Publishing Co., 1913), 246; John S. McGroarty, *Los Angeles: From the Mountains to the Sea* (3 volumes, Chicago: American Historical Society, 1921), 2:378; *Who's Who in Los Angeles, 1928-1929* (Los Angeles: C. J. Lang, 1930), 114; and the data sheets for city officials compiled by the Works Progress Administration, Municipal Reference Collection, Los Angeles Public Library.

⁴⁹ "Board of Water Commissioners," s.v., in Hunter, *Municipal Organization*.

⁵⁰ Abraham Hoffman, *Vision or Villainy: The Origins of the Owens Valley- Los Angeles Water Controversy* (College Station, TX: Texas A&M University Press, 1981), 35-46, 146-47.

⁵¹ Hunter, *Municipal Organization*, 111-13, 120, 132; *Annual Report of the City Engineer*, 1912-13, 21; 1919-20, 1; and 1921-22, 9; on the good government reformers and the civil-service system, see Tom Sitton, *John Randolph Haynes: California Progressive* (Stanford: Stanford University Press, 1992), 107-15; Mowry, *The California Progressives*, 38-48; and Albert H. Clodius, "The Quest for Good Government in Los Angeles, 1890-1910," Ph.D. diss., Claremont Graduate School, 1953.

⁵² Biographical data in note 4, plus: *Who's Who in Los Angeles, 1926-1927* (Los Angeles: C. J. Lang, 1928), 57; *Men of California* (San Francisco: Pacific Art Co., 1901), 323, 422; *Who's Who in Los Angeles, 1928-1929* (Los Angeles: C. J. Lang, 1930), 96; and William A. Spalding, *History of Los Angeles City and County* (3 volumes, Los Angeles: J. R. Finnell and Sons, 1931), 311-12.

⁵³ Spalding, *History of Los Angeles City and County*, 3:113-16; "Henry Z. Osborne, Jr.," s.v. in Municipal Reference Department, Los Angeles Public Library, "Chronological Record of Los Angeles City Officials," volume 3, March 1938.

⁵⁴ Hunter, *Municipal Organization*, 132, 139-40.

⁵⁵ Logan W. Page, "Effects of Motors on Macadam Roads" *Engineering Record* 58 (September 26, 1908): 53; Page, "The Motor Car and the Road: Destructive Effect of High Speed," *Scientific American* 102 (January 15, 1910): 46-47.

⁵⁶ *Annual Report of the City Engineer*, 1912-13, 39-41, quotation on 39; 1913-14, 7-8; 1917-18, 16; and 1918-19, 2. Asphalt was a tar-based substance the use of which was pioneered in the third quarter of the 19th century, when it was primarily an imported product often known as “Trinidad asphalt.” By the time Los Angeles adopted asphalt surfacing, local sources were available; see Clay McShane, *Down the Asphalt Path: The Automobile and the American City* (New York: Columbia University Press, 1994), 60-1, 73-4.

⁵⁷ Hunter, *Municipal Organization*, 164.

⁵⁸ Stephen P. Erie, “How the Urban West Was Won,” *Urban Affairs Quarterly* 27 (June 1992): 519-54.

⁵⁹ *Annual Report of the City Engineer*, 1912-13, 18.

⁶⁰ H. Z. Osborne, Jr., “Good Roads and the Vrooman Act,” *The Architect and Engineer of California* 12 (February 1908): 59.

⁶¹ *Annual Report of the City Engineer*, 1912-13, 20-21; and 1915-16.

⁶² Osborne, “Good Roads and the Vrooman Act;” Olmsted et al., *Major Traffic Street Plan*, 56-66; State of California, *Statutes and Amendments to the Codes*, 53rd Session (Sacramento, 1939), 2203-4.

⁶³ *Annual Report of the City Engineer*, 1912-13, 19-20; 1913-14, 57-59. On the parkway plans, see Greg Hise and William Deverell, *Eden by Design* (Berkeley: University of California Press, 2000), 25-29.

⁶⁴ *Annual Report of the City Engineer*, 1914-15, 39; 1915-16, 34; 1916-17, 61-62, 110; 1917-18, 75-76.

⁶⁵ *Annual Report of the City Engineer*, 1915-16, 35-37; 1919-20, 81-85.

⁶⁶ *Annual Report of the City Engineer*, 1914-15, 39; 1915-16, 36-37.

⁶⁷ Greg Hise, “‘Nature’s Workshop’: Industry and Urban Expansion in Southern California, 1900-1950,” *Journal of Historical Geography* 27 (January 2000): 79-92, offers a thorough summary of the Chamber’s role in infrastructure and planning issues. Also see Kevin Starr, *Material Dreams: Southern California through the 1920s* (New York: Oxford University Press, 1990), 120-28; idem., “Watering the Land: The Colorado River Project,” *Southern California Quarterly* 75 (Fall-Winter 1993): 303-30.

⁶⁸ J. Allen Davis, *The Friend to All Motorists: The Story of the Automobile Club of Southern California Through 65 Years, 1900-1965* (Los Angeles: The Auto Club, 1967); Auto Club Board of Directors, Digest of Minutes, 31 January 1906, 25 October 1906; letter from Charles Hopper to Los Angeles Board of Public Works, reprinted in *Touring Topics*, November 1909, 14; “Good Roads Bond Issue,” *Touring Topics*, November 1909, 8; “Must Defeat Bond Issues,” *Touring Topics*, November 1910, 5-10; “California Road Needs Demand New Bond Issue,” *Touring Topics*, July 1916, 24-5. On support for changing the Board of Public Works, see *Los Angeles Herald*, 14 October 1904 and *Los Angeles Express*, 11 November 1904, 30 November 1904, 3 December 1904, 6 December 1904; thanks to Jonathan Spaulding for directing me to these articles.

⁶⁹ Davis, *Friend to All Motorists*, 16-19, 50, 57, 68, 76-78, 96, 99, 101, 125; “Vermont Avenue May Be Made World’s Greatest Boulevard,” *Touring Topics*, March 1911, 18;

⁷⁰ *Annual Report of the City Engineer*, 1919-20, 86; 1921-22, 1-6.

⁷¹ The best firsthand account of the early history of the Board of Public Utilities is Section 1, “Organization, Etc.” of the Board of Public Utilities and Transportation, “Seventeenth and Eighteenth

Annual Reports," 1926-28, typescript, n.p., City Archives, Box B-1054; the board had just been reorganized under the new city charter of 1925 (including the name change to add "Transportation") and this first chapter of the first report after the reorganization was a poignant attempt to maintain a strong connection to the reformist origins of the agency. Also see Hunter, *Municipal Organization*, 111-13, 120, 132; *Annual Report of the City Engineer*, 1912-13, 21; 1919-20, 1; and 1921-22, 9; Sitton, *John Randolph Haynes*, 107-15; and Fogelson, *Fragmented Metropolis*, 164-71.

⁷² Board of Public Utilities and Transportation, "Seventeenth and Eighteenth Annual Reports," 1926-28, typescript, n.p., City Archives; Report to the City Council of the Special Committee on the City Railway Engineer, 28 September 1914, City Archives, Box C-1; CM, 113:680 (1919) and 114:207 (1919).

⁷³ Report of the Special Committee on Traffic Congestion, July 30, 1912, and Report of the Special Committee on Tunnels, March 13, 1915, both in City Archives, Box C. On the parking ban, see Scott Bottles, *Los Angeles and the Automobile* (Berkeley: University of California Press, 1987), 64-88.

⁷⁴ Bottles, *Los Angeles and the Automobile*, 59 (quotation), 64-89.

⁷⁵ Deverell, *Railroad Crossing*, 149-77.

⁷⁶ Board of Public Utilities, *Annual Report*, 1919-20, 48-99.

⁷⁷ Bottles' own evidence documents the concerns of downtown merchants who were primarily concerned with a falloff in business rather than any broader policy implications; *Los Angeles and the Automobile*, 84. On the importance of parking to department-store shoppers see, Richard Longstreth, *City Center to Regional Mall: Architecture, the Automobile, and Retailing in Los Angeles, 1920-1950* (Cambridge: MIT Press, 1997), 43-55.

⁷⁸ Quoted words from Bottles, *Los Angeles and the Automobile*, 121.

⁷⁹ Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley: University of California Press, 1985), 222.

⁸⁰ Municipal Art Commission, *Report for the year 1904*; Hunter, *Municipal Organization*, 123-24; membership of the Municipal Art Commission in Los Angeles Public Library, "Chronological Record of Los Angeles City Officials, 1850-1938." Besides the members named, the commission also included the head of any city department whose work was under consideration by the commission.

⁸¹ *Report of the Municipal Art Commission for the City of Los Angeles* (Los Angeles: W. J. Porter, 1909).

⁸² Letter from Dana Bartlett to City Council, 3 January 1911, Los Angeles City Archives, Box C-2, "City Planning Committee" folder. Transcript of interview with Dana Bartlett, 27 April 1936, in Municipal Reference Department, Los Angeles Public Library, "Chronological Record of Los Angeles City Officials."

⁸³ Gayle Gullet, "Women Progressives and the Politics of Americanization in California, 1915-1920," *Pacific Historical Review* 64 (February 1995): 71-94.

⁸⁴ City Planning Commission, Minutes, volume 1, 1, 16 June 1920; volume 1, 18, 22 July 1920; volume 1, 279, 8 March 1921.

CHAPTER TWO

THE MERCANTILE PROCESSION: WILSHIRE BOULEVARD

Wilshire Boulevard became the most publicized street in Los Angeles in the early 1920s, when competition over plans for its reconstruction erupted into a bitter political struggle between elite metropolitan growth advocates and the property owners who controlled the frontage along Wilshire. Largely absent from the many previous analyses of Wilshire, the early battle over the character of this most celebrated street offers a striking demonstration of the opposition that attended all major highway projects in Los Angeles.¹ Architectural historian Reyner Banham's description of Wilshire as "the first linear downtown" captures the sense of innovation in urban form that has attached to Wilshire since the 1920s, but it fails to address the arguments that produced the actual street – its physical dimensions and its functional characteristics -- and thus omits the more difficult and contested aspects of the transformation in which Wilshire played such a prominent role.² Usually portrayed as an example of the city's leadership in automobile-based urbanization, the Wilshire story also reveals that deep-seated opposition to dedicated rights-of-way was endemic in Los Angeles. It compels the recognition that once roads reached a certain size and capacity, even the most blessed of them had to be built in the face of opposition.

Alone among the scholars who have considered Wilshire Boulevard, urban historian Robert Fogelson has considered the disputes of the early 1920s, but Fogelson interpreted them as a conflict over idealized metropolitan form – between decentralized

versus concentric metropolis -- an interpretation that does not take fully into account the arguments propounded by the participants in the events.³ To them, it was a contest over which people, which agencies, and which combination of public and private authority would have the ability to determine the size, the appearance, and the function of streets. In that confrontation, the significant result was that the city council removed the City Planning Commission from any basic responsibility in transportation policy.

With the eclipse of the Planning Commission, architects, planners, and elite clubwomen lost their voice in highway matters. The Planning Commission's approach to highway development foundered for reasons that were not necessarily connected to the merits of the commission's arguments. The magnitude and complexity of the development issues in the rapidly growing metropolis, combined with the commission's unwieldy board structure, produced confusion and technical errors on the part of the commission, which found itself in the awkward and untenable position of endorsing competing proposals. Gordon Whitnall, the commission's chief of staff, disliked the messy process of gaining citizen approval for planning issues, which was unavoidable in the contentious arena of highway development, and he appears to have welcomed rather than opposed the elimination of his agency's responsibility in that area. The clubwomen who had played an instrumental role in the formation of the commission also turned away from participation in the formal apparatus of spatial reform during the 1920s. Instead of asserting their role as citizen-reformers in the political arena, they embraced the role of citizen-consumers who would assert their opinions through their purchasing decisions. Neither the clubwomen, nor Whitnall, nor any of the other reformers who had helped

establish the Planning Commission objected to its radical reorganization under the new city charter of 1925, which focused the commission on its role as a device to facilitate real estate development rather than as an agent of Progressive reform. The scuttling of any role for the Planning Commission in highway affairs contributed to the dominance of the city engineering office. The ascendance of the engineers was not completed until later in the decade, when the other Progressive spatial reform impulse, descended from the Public Utilities Commission, also came to grief. The Wilshire episode helped to clear the way for the engineers by removing one set of participants from the fray.

Most of this chapter is devoted to the political struggle between 1921 and 1924 that established the basic character of the “fabulous boulevard.” The story of Wilshire is also carried forward beyond that time in order to recontextualize later, more familiar events in terms of the spatial origins of the street. The many representations of Wilshire Boulevard are also reinterpreted in light of the early 1920s political struggles. The portrayals of Wilshire offer a seminal instance of the sunshine and noir dichotomy that can inhibit clear understanding of Los Angeles history unless it is rooted in the material events that gave rise to the promotional efforts and their antitheses in the visual and literary arts.

The Archway Affair

In the early 1920s, Wilshire Boulevard retained much of its original character as the main thoroughfare along the north side of a high-toned residential subdivision laid out in 1895. At the eastern side of the plat, the residences of *Los Angeles Times* founder

Harrison Gray Otis and other wealthy families nestled up against Westlake Park (later MacArthur Park). Wilshire ran west from the park. Orange Street ran east from the park to downtown, more or less in line with Wilshire. Orange Street was a busy retail corridor, and the park served as a buffer between that commercial use and the exclusive residences to the west. As Wilshire proceeded west from the park, expensive houses, apartment blocks and hotels gave way to a spotty pattern of business uses such as shoe stores, dry goods stores, drug stores, medical offices, banks, automobile dealers and gas stations.⁴ Such commercial operations increased in density in the vicinity of Western Avenue, a little under two miles west of the park. Frontage on Western had undergone rapid commercial development since the end of World War I, and the intersection of Wilshire and Western formed a crossroads business district that was already becoming known for its traffic congestion in the early 1920s.⁵

Gordon Whitnall of the City Planning Commission saw this intersection as an appropriate site to experiment with one of the new forms of traffic channeling that he had first witnessed at an east coast planning conference – the rotary. It would eliminate left turns by forcing motorists counterclockwise upon entering the intersection; they would then veer off to the right when they reached their turn, in what Whitnall effusively described as “a perpetual whirlpool of traffic in which there is no confusion or conflict.” In 1922 he persuaded the city engineer, John Griffin, to install a center island at Wilshire and Western. Griffin first insisted on a new name instead of the straightforward “rotary,” and called it the “Magic Circle,” an innocuous, even whimsical act considered by itself, but one that demonstrated Griffin’s understanding of the importance of naming when it

came to road policy in Los Angeles. As it turned out, the rotary was neither magical nor circular, and it lasted only five months before the city had to tear it out in November 1922. Rationalizing the failure to resolve the congestion at Wilshire and Western, Whitnall pointed out that a center island by itself could not do the job, that the four surrounding corners had to be cut out to create the multi-lane circle for cars in the intersection. Without that added area, eight lanes of incoming traffic contended for space in the width of a single lane surrounding the island.⁶

Meanwhile, some of the most powerful men in the city hatched a bolder, more majestic plan to rebuild Wilshire Boulevard as a high-volume multi-lane thoroughfare. The principal sponsor was the Community Development Association (CDA) and the project's ultimate failure is all the more remarkable considering the people behind it. This was the group that was then building the Coliseum (completed in 1923) and that served as the organizing committee for the 1932 Olympics. The chief standard-bearer for the Wilshire project was the attorney and "establishment pillar" Henry O'Melveny. There were few significant issues in Los Angeles in which O'Melveny did not play a part, and in civic improvement and construction issues, his side usually won.⁷ Harry Chandler, Otis's son-in-law and heir to the *Los Angeles Times*, was the other chief promoter. His newspaper gave generous play to the plan, printing the handsome drawings and running the full text of O'Melveny's petitions to the City Council.⁸ Chandler and O'Melveny obtained the assistance of the Automobile Club of Southern California by enlisting one of its board members, Henry Keller. With some reluctance, Keller's fellow board members sanctioned the commitment he had made without first consulting them. The Auto Club

would help pay the fees of Aurele Vermeulen, whom the CDA had engaged to redesign Wilshire Boulevard.⁹

Vermeulen was a landscape architect, the discipline most linked with the drawing, if not the building, of far-reaching highway schemes in the early 1920s. He practiced comprehensive planning on the expansive scale possible in a rapidly urbanizing region. Vermeulen provided the plans for the elite subdivision of Bel-Air, the layout of Los Angeles Country Club, and the Homewood tract that later became Brentwood. Admiringly described by the *Los Angeles Times* for his “Parisian” training, Vermeulen also served as a landscape critic for the newspaper. He advocated the razing of Bunker Hill to provide a civic center and the demolition of “the shabbiest and most squalid quarters” of Los Angeles – the workingclass residences on the east side of the river, along the Pacific Electric’s West Covina line, where they despoiled the first impressions of the city for passengers approaching by rail.¹⁰

Vermeulen started work in June 1922 and completed the basic outline of the plan in July. The *Times* announced it with great fanfare, on the front page of the Sunday real estate section, under the headline: “Plan for Conversion of Wilshire Boulevard into Magnificent Thoroughfare Approved.”¹¹ The text of the article revealed that the approval had been rendered by the CDA, not by the city council, Board of Public Works, city engineer, or Planning Commission, the four components of government that had any authority to accept such a proposal. No doubt the announcement surprised the city engineers who had just installed the Magic Circle, and who had begun work on their own candidate for an east-west through artery – Tenth Street (later Olympic Boulevard). A

month after announcing the plan in the *Times*, O'Melveny appeared before the Planning Commission to seek its endorsement. The commission had considered Wilshire among the many candidates for east-west arteries when it first began to study the matter the year before, but it too had rejected Wilshire in favor of Whitnall's recommendations of Beverly Boulevard and Melrose Avenue. Nonetheless, gratified that energetic civic leaders were taking an interest in the commonplace matter of traffic arteries, and perhaps cowed by those eminent sponsors, the Planning Commission did endorse O'Melveny's Wilshire plan in late 1922.¹²

Though the details were sketchy at that juncture, Vermeulen had already determined the principal characteristics of the roadway. It would follow Wilshire westward from Westlake Park to the vicinity of the Soldier's Home (present grounds of the Veteran's Administration Hospital on Sawtelle), where it would join San Vicente Boulevard and proceed through Santa Monica Canyon to the coast. He projected an "average width" of 240 feet, at least four times larger than the most spacious thoroughfares then in place or under construction. Perhaps expecting the opposition that would soon surface, he reassured the owners of property at the eastern end of the route that "The more thickly settled portion of Wilshire Boulevard will not be widened to any great extent," a promise he did not keep in subsequent detailed designs. Aiming for a prevailing speed of 25 miles per hour, the principal feature of the plan would be "the concentration of automobile traffic in one main central driveway." Vermeulen had considered and rejected a divided road with a planted median because it was less "efficient" than using the entire width for traffic. He justified the decision on the basis of

appearance: trees and shrubs, by interrupting the expansive views afforded by the wide roadway, offered “less perspective beauty.” This claim might be the first use of the trope that would later become common in Los Angeles freeway promotion – the imputation of beauty in large swaths of concrete. It was a claim that required the listener to transfer the claim of easy movement to the realm of visual appeal, to perceive as attractive a landscape that would seem to offer a prospect of inexorable starkness if rendered in literal rather than symbolic terms: an unbroken band of concrete, 80 yards wide, stretching as far as the eye could see. That same association between movement and beauty would be expressed a decade later in the design trend of streamlining, which would round off the corners and add curved moldings to buildings, bridges, and industrial products from typewriters to locomotives. Like the Streamline Moderne styling of the 1930s, Vermeulen’s design for Wilshire also asserted progress, a sense of being up-to-date or even ahead of one’s time, of stepping briskly into the future. In early 1920s Los Angeles, that notion of progress found expression in imperial gestures rather than the stylized aesthetics of the Depression decade. It was classical Rome, where conquering armies marched home through triumphal arches, that inspired the roadway’s decorative treatment, an influence also seen in the design of the Los Angeles Coliseum, which was under construction in the early 1920s. (No matter that the neo-Roman Coliseum’s main tenants were named Trojans – the builders of the new imperial city of the Pacific employed a catch-all classicism that reveled in such historical anachronism.) The predominant design feature would be a series of 11 ornamental arches over the roadway, strategically placed where major north-south roads intercepted Wilshire. The arches

would house police stations and, as the plans evolved in the coming months, they would also mark grade separations with the intersecting streets. Vermeulen would rename this new thoroughfare “The Archway,” which, he noted, “Avoids the use of the terms avenue or boulevard, terms which have no standard usage and which have been much used.”

This ruse of nomenclature would distance the Archway from the prior failed attempts to widen Los Feliz and Griffith Park boulevards and from Osborne’s notion of “boulevarding” the city.

The presentation of the detailed plans, unveiled in an even gaudier spread in the *Times* in January 1923, was a similar tissue of grandiose claims, half-truths, and attempts to foreclose opposition by downplaying the impact on adjacent properties, a difficult trick to accomplish while also extolling the traffic-carrying benefits of the Archway’s large scale . The plans were attributed to Vermeulen and a “large staff of engineers recruited from the Automobile Club,” which at the time employed exactly one engineer, Ernest East. Authorship was also attributed to the city engineers, who could not have worked on it without orders from the council or Board of Public Works, and who would deny any such participation in their next annual report.¹³ The alignment west of the park had not changed, though Vermeulen had also considered how to link the Archway with downtown, to the east. Sixth Street ran along the northern edge of the park, Seventh Street along the southern edge of the park, and Orange Street was more or less in line with Wilshire. Vermeulen would have them all converge in the park to feed westbound traffic onto the Archway and distribute eastbound traffic back into the conventional road network. West of the park, almost to Western Avenue (a little under two miles), the

existing width of right-of-way for travel would be more than doubled, from 56 to 130 feet. For the next mile going west, to Crenshaw, it would widen out to 172 feet, and from there would run at 230 feet the rest of the way. Seven or eight lanes would be provided. The allusion to conquest would be carried through by naming the arches for explorers and founders of California – Cabrillo, Serra, Balboa, Fremont, Sutter. The arches acquired a fuller functional role, marking the “subways” for traffic crossing the Archway on foot, in automobiles, and in streetcars. A series of fountains also punctuated the route, each one celebrating values that the CDA held dear: the fountain of western spirit, the fountain of progress, the fountain of work and play, and the fountain of youth. A national educators' monument, a national artists' monument, a national poets' monument, and a hall of the U.S. presidents completed the civic uplift agenda. Triumphalism reached a crescendo in stucco at the eastern and western portals – at the park and the edge of the sea – where huge arches would rise ten stories into the sky, adorned with Neoclassical cornices and Spanish Colonial Revival balconies. Envisioned as “primarily a great scenic thoroughfare for automobiles,” the grade-separated roadway of enormous width would create a new linear environment, cut off from the adjacent communities. To mitigate that severing, Vermeulen called for “local block drives” on either side of the main roadway – frontage roads for local traffic and parking cars. O’Melveny offered no definite ideas as to financing except that several methods were under consideration. He did recognize the steep challenge of winning approval for the Archway, especially because it crossed Beverly Hills and Santa Monica as well as Los Angeles, and he proposed to obtain special legislation in Sacramento if necessary.¹⁴

O'Melveny and his cohorts did not anticipate the depth of resistance that their plan engendered, or the resourcefulness of their opponents. The opponents were peers of the promoters – real estate investors and developers – who had acquired frontage along Wilshire for a very different purpose. Real estate professionals understood that the real issue behind the objection to the downtown parking ban had been access to shopping. Combined with the spread of subdivisions to the west, that understanding supported their prediction that convenience for store customers was a sufficiently powerful consideration to alter the economic geography of retail business. By 1922, journalists attentive to development trends had forecast the growth of new commercial districts along various thoroughfares west of downtown.¹⁵ That was the calculus heeded by investors who began acquiring tracts or adding to their existing holdings along Wilshire between Westlake Park and Western Avenue. Far from shoestring operators, the Wilshire investors included some of the city's most successful real estate players, such as Henry de Roulet, Walter Fisher, and the banker Marco Hellman. They saw no benefit in a high-volume thoroughfare that would take away their valuable Wilshire frontage and limit the access to their remaining property. They also persuaded the smaller landowners and existing businesses that the Archway posed a threat to their prospects.¹⁶

Publication of Vermeulen's plans stimulated opposition to the Archway in the summer of 1923, and other events to the west on Wilshire inspired the specific tactics of resistance adopted by de Roulet and the other landowners. Between 1922 and 1924, six different annexations added more than eight square miles to Los Angeles along the Wilshire corridor between Western and Fairfax avenues.¹⁷ Annexation might have

helped the Archway promoters by bringing more territory under the city's jurisdiction, but a critical problem arose when the Planning Commission imposed its newly promulgated zoning and setback regulations on the recently incorporated lands. Developers A. W. Ross and Hector Zahn had purchased Wilshire frontage in the newly annexed areas and applied for a permit to build a modest retail building on one of the lots. When the city denied the permit because the Planning Commission had zoned the entire area for residential use, Ross and Zahn appealed to the city council, which turned them down. The denial argued that "Wilshire Boulevard is destined to become a show street," and further noted the kind of show contemplated by the council: "The encroachment of business upon this boulevard is at this time unnecessary and would be a great detriment to the future residence development of this thoroughfare."¹⁸ The developers then sued the city to rezone their property from residential to business use. They would win at the district appellate level in the summer of 1924, but the state Supreme Court reversed that decision and upheld the city's zoning authority in April 1925.¹⁹ Ross would later pioneer the tactic of "spot zoning" as the legal basis for the series of spectacular retail developments that became the Miracle Mile (between LaBrea and Fairfax), but long before those celebrated events, his neighbors to the east put a different twist on the zoning appeal in order to kill the Archway. Without their success, Wilshire could have been a dedicated traffic artery, it is doubtful that Ross or anyone else would have bothered with spot zoning, and the subsequent development of Wilshire would have followed a different course entirely. This episode surely ranks as one of the most trenchant ironies in the irony-laden history of Los Angeles: it was opposition to a road

project that shaped the Wilshire Boulevard that would come to symbolize the new automotive metropolis.

Henry de Roulet and his allies fastened on rezoning from residential to business use, but unlike Ross and Zahn, they enlisted a far broader base of support and a more diverse and sophisticated array of tactics. With more than 120 other property owners, who represented the great majority of frontage between Western and the park, he formed the Wilshire Development Association (WDA) after Vermeulen's detailed plans became public in the summer of 1923. Rather than basing the rezoning request on the use of one lot, the WDA submitted a petition in January 1924 to zone the entire stretch for business.²⁰ Faced with the overwhelming consent of the effected property owners, the city council approved the business zoning in February. The zone change would have been necessary for retail development, but it had a more immediate and alarming implication for the Archway plan that had stimulated the move in the first place. Rezoning by itself would cause an increase in valuation that would multiply the acquisition cost for the Archway's broad right-of-way. Experienced in real estate stratagems himself, O'Melveny understood the threat and moved to eliminate it by suggesting an unconventional financing plan. He proposed an ordinance that carefully avoided the mention of eminent domain by the paradoxical technique of a required donation: the landowners would deed the Wilshire frontage to the city for the Archway, and in return the city would not charge them for the cost of constructing it. The city attorney found the plan to be technically legal, but when the Finance Committee reported that the cost of the land would exceed the cost of construction by more than four hundred

percent, the council chose not to invite a few score damage suits and filed the plan with no action.²¹

O'Melveny's attempt to dictate to the council did not surprise the WDA, which had also collected signatures on another petition in case the rezoning failed. A clever use of the laws governing street construction, this tactic had emerged during a stormy meeting of property owners opposed to the Archway. Henry de Roulet persuaded them to pledge their money by use of the assessment-district process to rebuild Wilshire for their own purposes of retail development. Their petition requested widening Wilshire between Western Avenue and Westlake Park to 70 feet of paved roadway, which would enlarge the existing street but fall far short of the Archway dimensions. For that petition the WDA expanded its constituency to include the storeowners on Orange Street, east of the park, by pointing out that the Archway would likely diminish the value of their properties too. They expressed their common interest by proposing to create a street through the park to unite Orange and Wilshire, connecting them by means of a bridge over the lake in the middle of Westlake Park. This majority petition for street improvement would erect a legal barrier to the Archway by binding the city to a prior commitment for street construction in the exact same location covered by the Archway plan. The Planning Commission not only endorsed this plan, but enlarged it by suggesting that the Orange widening extend all the way to Figueroa in downtown, some two miles east of Westlake Park.²²

The Planning Commission apparently did not realize that the Orange-Wilshire widening proposal could mortally impair the Archway plan that the commission had

already endorsed. When that realization dawned, the commission found itself squeezed uncomfortably between two groups of wealthy citizens – the WDA, which had the law on its side, and the CDA, which was allied with the *Los Angeles Times* and one of the leading attorneys in Los Angeles. Gordon Whitnall of the Planning Commission asked the city engineering office for help in resolving the conflicting proposals but the city engineer was an unlikely source for help. The two agencies had earlier sparred over the engineers' plans to rebuild Tenth Street as the major east-west thoroughfare through the city, and the disagreement had boiled over into recrimination. In 1922, when the city council asked the Planning Commission to explain its lack of progress in producing a comprehensive plan for arterial streets, the commission had taken the unusual step of publicly chastising the city engineering department for not providing the necessary maps. When asked to comment on the Archway controversy in the summer of 1924, city engineer John Griffin only prolonged the humiliation of the Planning Commission by adopting a neutral stance, while also taking the opportunity to lecture the commission on the practical politics of street construction, which depended on consensus among property owners: “There is considerable chaos among the property owners. . . . No one knows what to build or where.” Such passivity was not typical of the engineering office, which was forcefully pursuing other highway initiatives at the same time, such as their controversial Tenth Street scheme, Mulholland Highway, and the river bridges (all discussed in a subsequent chapter). Griffin’s rebuke called attention to the confusion among the various agencies concerned with highways. The embarrassment of the Planning Commission endorsing two competing proposals in such a high-profile location

would soon move the city council to eliminate some of the institutional confusion. In February 1925, a few months after the denouement of the Archway struggle, the council removed the Planning Commission from any jurisdiction over the opening and widening of streets; the Planning Commission could offer recommendations, but no longer had the authority to approve such proposals.²³

O'Melveny meanwhile attacked the rezoning ploy by circulating yet another petition, this one calling for a citywide referendum on the rezoning between the park and Western Avenue. It was a haughty move, paternalistic in its assertion that he and his cohorts on the CDA could best determine the needs of the city as a whole, and confident in its assumption that they could swing public opinion to defeat the opponents of the Archway. The WDA sued to invalidate the petition, but the Superior Court allowed it to stand, and the rezoning of Wilshire became Proposition C on the November 1924 ballot, which also included the *Major Traffic Street Plan* that Henry Osborne had commissioned in his role as engineer for the Public Utilities Commission.²⁴

While the legal arguments ensued, O'Melveny marshaled the support of his formidable array of institutional allies. The Municipal League, the Civic Association, churches, synagogues, and the Ebell Club wrote to the council, urged their members to support the Archway, or took out advertisements to defeat the rezoning. The CDA exhausted its treasury and went to the board of the Auto Club to ask for another \$3,000, which was granted. The WDA and de Roulet did not raise the integrity of the debate but skillfully distorted the issues, much as O'Melveny's side had attempted to manipulate public perception with its promotional claims for the Archway. The WDA wanted to

defeat the Archway in order to preserve their opportunities for retail development, and to do so they claimed the issue of traffic relief for themselves by pointing to their companion proposal for widening Wilshire to 70 feet. In the parlance of our day, that might be described as excellent spin: seeking to defeat a larger road, the people proposing the smaller one portrayed theirs as the solution to traffic problems. The WDA also invoked the cherished principle of “essential rights in the ownership of private property,” and it raised the specter of an arrogant elite swooping down to destroy the interests of other property owners throughout the city if they were not stopped.²⁵

It is impossible to determine the extent to which the WDA’s various arguments swayed the electorate to support their side, but it was the issue of street policy that confounded their opponents, especially the Planning Commission. The Planning Commission acutely sought to protect its authority over land use rather than see property owners rezone large areas through political action. Conflicted and isolated on the subject of highway policy, and defensive about zoning, the commission issued a harsh “Open Letter” addressing the ballot proposition. It offered a closely argued refutation of the WDA’s pronouncements and accused the WDA of “libel,” “duplicity,” and “falsehood.” Seeking to distance the ballot measure from the perplexing arena of road policy, it declared: “Proposition C on the November ballot is a zoning issue and nothing else.” That was literally true, because the language of the referendum referred only to the business zoning between Westlake Park and Western Avenue. The statement was lethal to their cause, however, because it forced a clarification from the Auto Club, which had a bylaw forbidding it from taking sides “on any matters pertaining to zoning.” The Auto

Club could support the CDA and its Archway plan as long as it was a matter of highway policy, but when the Planning Commission framed the issue starkly as zoning, the Auto Club had to distance itself from any position on the referendum. Mired in confusion and retraction, and painted as the enemies to private property rights and jobs, the CDA and its allies went down to defeat, 61 to 39 percent. The Archway was dead after nearly two years of effort and considerable expense. O'Melveny's followers and associates continued to pepper the city council with letters of support for a few months, until finally in April 1925 he conceded that the CDA had "permanently abandoned" the Archway.²⁶

The familiar history of Wilshire Boulevard's spectacular growth began at that point, but the many analyses of that phenomenon have not recognized its origins in the opposition to the plan to create a high-volume, limited-access highway out of Wilshire in the early 1920s, and the role of that struggle in establishing the physical template on which the subsequent development would occur. The most authoritative account of Wilshire's significance as an automobile-based retail corridor, Longstreth's *City Center to Regional Mall*, noted that the WDA lobbied to have the street widened -- another victim of the WDA's skillful electioneering, overlooking that the nominal widening was actually a purposeful and hard-won narrowing down from the Archway plan.²⁷ Thomas Hines based his understanding of Wilshire as a functional thoroughfare on the intellectual pedigree of the "linear city," passing from Robinson's sketchy mention of Wilshire in 1907 to the *Major Traffic Street Plan* of 1924, and vaulting past the interval of tumultuous highway politics that established the character of the street.²⁸ Robert Fogelson concluded that the Archway was based on the efforts of downtown businesses

and their ostensible ally, the Planning Commission, to foil the growth of retail competition along Wilshire by making it a high-traffic artery that would preclude commercial use on the Wilshire frontage.²⁹ But zoning alone would have accomplished that without any need for the expensive plans that O'Melveny's group commissioned for the rebuilding of Wilshire. And as Longstreth has shown, the owners of downtown emporiums took part in the geographical redistribution of retailing in Los Angeles, rather than hunkering into a defensive stance based on single-minded protection of the downtown core.³⁰ The Planning Commission's own pronouncements refute Fogelson's downtown-protection argument, because Whitnall sought to provide alternatives to downtown shopping in order to reduce congestion: "This can be done by increasing the number and distribution of well-balanced, self-contained, commercial sub-centers. . . . All roads should not lead to Rome."³¹ Fogelson did perceive in the Planning Commission's strident statements about Wilshire a concern that the commission's position would be undermined. He misjudged its significance, however, by discounting the real institutional considerations of the commission and inserting a gospel of city form that reveals more about the limited set of conceptual tools available to urban scholars when Fogelson was writing in the 1960s than it does about the actions of the Planning Commission in the 1920s.³²

The Gendered Landscape of Consumption

In December 1924, barely a month after the election, the WDA left behind its resistance to the Archway scheme and assumed a wholly positive role as the principal

booster of Wilshire's retail development. The frontage owners pledged special assessments for new decorative light poles, an eclectic design of fluted columns in the Neoclassical mode topped by lamps dripping with floral motifs (Spanish Colonial Gothic). The property owners would also fund the planting of "ornamental trees and shrubbery" along the curb line, and agreed to submit all building plans to a review committee set up by the WDA to approve the designs of new structures. In promoting the Archway, O'Melveny and his allies had proposed to make Wilshire into a "Champs Elysees." As the WDA's own plans matured, their promotion crystallized into the claim that Wilshire would be the "Fifth Avenue of the West." When the new lights were turned on, the WDA proclaimed it to be the "Great White Way" of Los Angeles, borrowing a phrase used to describe Broadway in Manhattan. A few months later, when the WDA unveiled a new advertising campaign, the theme reverted back to "Wilshire Boulevard: Fifth Avenue of the West."³³ These comparisons did not refer to any actual similarities between Wilshire and those other celebrated streets, except that those streets were, in fact, celebrated. The Wilshire boosters knew they needed to publicize the place, but they had not yet fixed on a durable narrative and groped through this sequence of comparisons in the effort to find one that worked. Promotion of Wilshire Boulevard was eased considerably by the fact that it already enjoyed more press coverage than any other street in Los Angeles. The acrimony surrounding its planning had been a magnet for reporters and editors since the Archway plan of the early 1920s. The arrival of department stores, starting with Bullock's in 1929, was the final element in solidifying the constructed fame of Wilshire Boulevard.



Figure 3: In 1930, Wilshire Boulevard appeared as a thick line west of Westlake Park, but it had not yet been improved east of the park to downtown, nor did Wilshire yet extend through the park. Source: *Street Map of the City of Los Angeles* (Los Angeles: Automobile Club of Southern California, 1930). Used with permission; all rights reserved.

Department stores were not only the largest buyers of advertising in metropolitan newspapers, but the Wilshire stores and property owners also invested in creating a special character for the street and projecting it to their target audience of women shoppers.³⁴ Gender-specific and class-specific design had been part of late-19th century park planning, which created leisure settings identified with the domestic realm prescribed for middle-class and elite women. Part of what made such landscapes acceptable for white women was the implication of safety, accomplished not only by laws and social practices that enforced racial segregation, but also by functionally differentiated park designs that isolated promenades and other forms of contemplative leisure from the more active and noisy pursuits associated with workingclass park users. A sense of refinement communicated by a cultivated, contained nature further signaled that certain parts of parks were appropriate public places for middleclass women.³⁵

The step taken in the creation of Wilshire was to make a newly specified definition of women in public, from women as occupants of refined urban landscapes to women as consumers of refined goods and services, when the concept of women consumers necessarily included women as drivers. By the 1920s, women had to drive in order to shop because of the elimination of delivery service that accompanied the rise of mass marketing, as Ruth Schwartz Cowan has shown in her study of technology and domesticity. Virginia Scharff considered whether driving was more liberating or oppressing for women by examining the link between automobility and feminism in the 1920s. For white women of middleclass means, Scharff found that the automobile altered the texture of their travel if not the larger setting of their lives. With cars they

made more frequent trips, visited places where they had not previously ventured, and traveled with one or two companions rather than in larger group outings. Automobility did not unfetter these women from their domestic roles and did not undermine the practices that subordinated women in the family, in the economy, and in politics, but for certain women, automobility did distort and at times widen their sphere.³⁶

In its appearance and function, Wilshire Boulevard was the apotheosis of that widened sphere. It was created by an extractive process, taking parts of cities as previously conceived and relocating them spatially. The trees and the stylish light standards along Wilshire were borrowed from gender-specific park designs that signaled safety and refined comfort for middleclass women. Seized from their parks context, the landscape elements of the boulevard deployed an image of contained nature as the directly experienced visual counterpart to the advertising campaigns launched in print and later broadcast media.³⁷ The landscaped boulevard did not only provide the visual setting for the department stores, but also the means to get to them. As Longstreth and others have pointed out, the Wilshire department stores were themselves the product of a distinctive approach to retail architecture: the parking lots were behind the stores, and the design emphasis of the buildings also migrated from front to back, as the entry from the parking lot became more formal and ornamented than the vestigial front entry that faced the street. Elaborate porte-cocheres and driveways lined by planters and pillars were meant to ease the transition from driver to pedestrian, to welcome the shopper from parking lot to store.³⁸ The road on which they approached the store was conceived as one orbit of movement beyond the parking lot, and the road itself could shape the experience

of those who came: Was it pleasant? Was it easy to negotiate? Would I go back? To borrow landscape historian Dell Upton's phrase, the boulevard was a "processional landscape," meant to be experienced by people on the move and coordinated visually and functionally with its landmark stores. It was not based on a triumphal procession, like the failed Archway idea. It was a mercantile procession.³⁹

In 1927 the Ebell Club moved its headquarters from near downtown to the corner of Wilshire and Lucerne, along the processional landscape of consumption that Wilshire was just then in the process of becoming. It was a location entirely consistent with the club's new understanding of civic activism as something for women to exercise through their power as consumers. An editorial titled "Women as Buyers" in the Ebell member magazine claimed that women made 82 percent of all department-store purchases, 78 percent of drug-store purchases, and 81 percent of grocery purchases, and called on women to exercise the influence they held as "the purchasing agents for every family." Instead of taking visible stands on public issues or serving formally constituted policymaking roles on the boards of public agencies, the clubwomen's approach to civic duty took on a personalistic and private character, not only in choices about shopping, but also through a scholarship program for young women, who were evaluated according to appearance and manners as well as academic achievement.⁴⁰

Re-crossing the boundary from the public back to the private sphere, the clubwomen abetted their own exclusion from any opportunity to influence highway policy and the production of public space in the city. At the exact same time that the Ebell Club contemplated its move to Wilshire, the restructuring of the Planning

Commission brought an end to the commission's role as the clearinghouse for Progressive spatial reform and transformed it into a mechanism to assure the orderly development of real estate. The new city charter that took effect in 1925 reduced the planning board from its unwieldy 51 members to a pared-down body of five commissioners, thus reducing the chances of the board endorsing conflicting proposals. The long list of constituent groups that made up the commission in its first five years lost their seats on the board, and the extensive committee structure gave way to direct administration of various functions by the commissioners themselves. The first five-member board included two clubwomen who had served since the days of the Planning Committee, but after a brief transition one of them resigned and the other was not reappointed. In 1927 the Planning Commission was a male-only board drawn from the real estate and planning professions, and it would remain so for more than 30 years.⁴¹

The elegantly landscaped Wilshire Boulevard headquarters of the Ebell Club aptly symbolizes the decline of public activism on the part of organized womanhood. Historians have offered several explanations for the waning of women's activism in the 1920s. The success of the national suffrage amendment removed the strongest and most unifying motivation among women for political reform, and the new priority accorded by clubwomen to Americanization programs for immigrant families tended to separate the interests of women according to class, rather than reinforcing the gender-based, cross-class alliances evident in the suffrage struggle. The increasing bureaucratization of the state minimized the ability of citizen activists to shape government action, and the reorganization of the Planning Commission certainly fits the picture of a professional

bureaucracy internalizing the public's business at the cost of clubwomen's participation in debates about public space in Los Angeles.⁴² The embrace of consumption as ideology surely softened any disappointment over the loss of a more visible public role, at least for those women with the means to consume. But withdrawal from any chance to affect the policies governing streets might have had deeper implications than understood at the time. Street construction would transform the city in terms of the connections between different neighborhoods and between residential and commercial districts, would devour a rising share of municipal expenditures, and would help determine the pattern of subsequent development. Without a voice in the approval and funding of street plans, clubwomen lost connection with the processes that significantly shaped their city. The withdrawal of organized womanhood from urban spatial reform weakened their ability to act effectively in the public sphere for a generation to come.

Women's participation might have produced a different transportation network in Los Angeles, besides the aforementioned taking of playgrounds to assemble the right-of-way for Whittier Boulevard. In the 1930s, the improvement of Ramona Boulevard on the east side into a limited-access through highway (the predecessor to the San Bernardino Freeway) separated workingclass women who lived north of the highway from the grocery stores south of the highway, to which they traveled on foot. If any clubwomen had been in a position to review the project, would they have dismissed the resulting protests with no action, as did the city engineer and the state highway department? Might they have raised the issue of convenient access to groceries to feed children, rather than confining the deliberations to assessment of the new roadway's traffic capacity?

Similarly, the promotion of freeways during their formative period in the late 1930s and 1940s frequently used female models to adorn advertisements and public presentations. Would that tactic have been effective if authority over the plans had included the participation of clubwomen? We will never know, because in their retreat to the cozy embrace of Wilshire Boulevard, organized womanhood left those decisions to others.

Boulevards Not Taken: Progressivism and Highway Politics

The Archway episode did help to resolve some of the institutional confusion regarding road policy. Most significantly, the Planning Commission and the interests that had brought it into being would no longer play a formative role in transportation development. The city council had foreshadowed that outcome in February 1925, when it stripped the Planning Commission of authority over the opening and widening of new highways. The city charter of 1925 completed the job.⁴³

G. Gordon Whitnall survived the Planning Commission's transition, and for a time the reorganized agency with its refocused mission made a congenial setting for his efforts to establish "scientific zoning." He continued to decry the structural defects of city government in Los Angeles, which endowed localized interests with the means to undermine comprehensive planning. "The theory of Majority Rule is in fact Minority Rule," wrote Whitnall, and it produced "unwarranted improvements." He extolled the county Regional Planning Commission's forceful exercise of zoning authority to reserve land for arterial highways, in comparison with the more diverse and interest-laden process within the city. Both ideology and authority put Whitnall at odds with the city

engineers. The engineers built things, and in so doing they transformed the environment on a piecemeal basis and froze the allocation of resources. The Planning Commission could recommend but not initiate. Its power was in denial, in recommending against the approval of projects that did not fit a comprehensive plan for the city, and each time the city council or a group of property owners overrode one of his recommendations, Whitnall suffered another blow to his beliefs in the proper way to build a city. Weary of land-use politics, he asked the commissioners to excuse him from appearing at public meetings to explain the commission's policies, but the board insisted that such duties were a necessary part of his job.⁴⁴

After the Archway, visionaries of growth such as O'Melveny retreated from the development of specific highway projects in favor of a more abstract and policy-oriented role in the provision of transportation infrastructure, represented primarily by the *Major Traffic Street Plan* of 1924. O'Melveny himself overcame any feelings of resentment he might have harbored over defeat of the Archway and participated in the lucrative arena of Wilshire real estate by serving as a broker for land sales to department stores.⁴⁵ The city council, prodded by Osborne, took a lesson from the Planning Commission's early missteps in highway policy and set up the Traffic Commission, which would produce the *Major Traffic Street Plan* (detailed below). The Traffic Commission featured some of the breadth of representation of the original planning commission, but focused exclusively on streets and highways rather than the extensive range of issues pursued by the planning commission between 1920 and 1925. Most significantly, the city council

bestowed on the Traffic Commission the authority over opening and widening of streets that had been taken away from the Planning Commission.⁴⁶

The exercise of that authority by the Traffic Commission necessarily involved the city engineers. While public contention did not arise from this relationship, there is considerable evidence that the engineers continued to follow their own priorities. The city engineers contributed to broad-scale highway efforts like the *Major Traffic Street Plan*, and were attentive to their results, but placed the highest priority for their own efforts on projects that they could actually build, not just discuss. They found those opportunities where they had particular regulatory advantage, such as their dealings with railroads in the river corridor, or where organized property owners could produce political assent and money to build with, such as Mulholland Highway.

Wilshire at Risk

The processional landscape of consumption finally provided the narrative line that the Wilshire Development Association had sought for the promotion of their “fabulous boulevard” -- the “Miracle Mile” tag first suggested by an associate of A. W. Ross.⁴⁷ For the storeowners and real estate developers who understood the street's role in that way, and who put up their money to make it happen, the strategy worked spectacularly well. Wilshire was the most expensive street in Los Angeles. The light poles alone cost more than \$300,000, and the landholders readily committed further tax increments to pay for the installation of the new red-green-amber traffic signals and experiments in the progressive operation of those signals. City government and the property owners

justified the new signals on the basis of the enormous traffic volume, measured at over 4,300 vehicles per hour in 1931 at Wilshire and Western, which was said to be the busiest corner in the nation at that time, surpassing Park and 57th in Manhattan and Broad and Glenwood in Philadelphia. The landowners could easily afford the cost. By then, the WDA's advertisements could point to property values that had appreciated up to 1,300 percent in a few short years, and which continued to climb through the worst years of the Depression. Rising property values made Wilshire a safe choice for investors who purchased bonds secured by special assessments. Even in such desperate times as December 1930, bonds to pay for building Wilshire through downtown sold quickly with no discounting. This ability to attract capital from a national pool of investors (the bonds were underwritten in New York) is another potent reason why Wilshire Boulevard endures so firmly within attempts to assess the character of Los Angeles -- not just to build during the general misery of the Hoover years, but to build large and profitably with money brought into Los Angeles from outside. To those who owned the land, it was a miracle indeed.⁴⁸

The sunny expostulations of boosters invited negation from writers, artists and filmmakers, and Wilshire was a perfect foil for those who wanted to expose the cynicism, cupidity and exploitation of metropolitan life. As the depictions of Wilshire Boulevard continued to accumulate, they would provide a counter-narrative to the promotional efforts connected with the material and political origins of the place. In the seminal *noir* fiction of Raymond Chandler, Wilshire stands for a luminous yet disappointed promise of what might have been: "I used to like this town [when] there were trees along Wilshire

Boulevard. . . Little groups who thought they were intellectual used to call it the Athens of America. It wasn't that, but it wasn't a neon-lighted slum either." Chandler's Wilshire later becomes the normative habitat of sleaze, of pathetic stucco shacks pretending to be Moorish palaces, where the inhabitants are ugly and grasping. David Hockney's 1964 painting, *Wilshire Boulevard*, portrays two featureless people against a flattened landscape with a generic building and wretched, stringy palm trees -- the picture of rootless anomie, a city of sunstruck strangers among featureless walls.⁴⁹ Still later, the post-nuclear fantasy film, *Miracle Mile* (1988), took place along that most publicized stretch of the boulevard, and *Volcano* (1997) treated filmgoers to lava flows destroying the Wilshire streetscape.

As art and fiction repudiate the many images produced by the Wilshire boosters, they convey a critique of the advertising and publicity that are based on the deletion of the unpleasant and the soothing of anger and worry. The creative portrayals of a seamier Wilshire, a Wilshire at risk, allude however inchoately to the conflicts fought over the production of this place. Understanding the physical construction of Wilshire Boulevard should deepen our appreciation for its use in metropolitan mythology, and for the ability of mythology to sense reality, if not to analyze it. Nor can the enlistment of Wilshire in metaphorical endeavors be dismissed as something disconnected from the creation of its physical reality. The construction was a discursive process too, a series of arguments waged in the public prints, in neighborhood meetings, in the boardrooms and public forums of civic clubs, at city council hearings, and at the polls. How fitting that such a

monument to car culture should have a lively and material conflict like the Archway embedded in its origins.

NOTES TO CHAPTER TWO

¹ For overviews of Wilshire Boulevard's history see Richard Longstreth, *City Center to Regional Mall: Architecture, the Automobile, and Retailing in Los Angeles, 1920-1950* (Cambridge: MIT Press, 1997), 103-42; Thomas S. Hines, "Wilshire Boulevard, Los Angeles, California," in Jan Cigliano and Sarah Bradford Landau, eds., *The Grand American Avenue, 1850-1920* (San Francisco: Museum of the American Architectural Foundation/Pomegranate Artbooks, 1994), 307-37; Ralph Hancock, *Fabulous Boulevard* (New York: Funk and Wagnalls Co., 1949); and Douglas R. Suisman, *Los Angeles Boulevard: Eight X-Rays of the Body Politic*, Forum Publication Number Five (Los Angeles: Los Angeles Forum for Architecture and Urban Design, 1989), 23-30. All of these accounts provide valuable interpretation of the boulevard's commercial development but either omit or elide the early 1920s battle over the design of the roadway that is detailed below in the text.

² Reyner Banham, *Los Angeles: The Architecture of Four Ecologies* (1971; reprint, London: Penguin Books, 1990), 87.

³ Robert M. Fogelson, *The Fragmented Metropolis: Los Angeles, 1850-1930* (1967; reprint, Berkeley: University of California Press, 1993), 261.

⁴ Description of commercial uses along Wilshire in letter accompanying rezoning petition, 24 January 1924, Council File (1924); Council Files will hereinafter be cited as CF. Also see "Types of Architecture Representing Stately Homes of Los Angeles," *Los Angeles Times*, August 1, 1920; "Bank to Have Ten Branches by Year's End," *Los Angeles Times*, October 10, 1920.

⁵ Longstreth, *City Center to Regional Mall*, 67-71.

⁶ *Los Angeles Times*, June 25, 1922 and November 12, 1922.

⁷ Starr, *Material Dreams*, 122 (quoted words), 130, 161; W. W. Robinson, *Lawyers of Los Angeles* (LA: Los Angeles Bar Association, 1959), 53, 64, 71, 84, 125, 229, 314. Besides presiding over a thriving corporate law practice, O'Melveny helped to found the Title Insurance Trust Co., which became the largest title insurer in the country; was the president of the Los Angeles Bar Association; and was a founder of institutions such as the Southwest Museum and the California Club.

⁸ *Los Angeles Times*, 23 July 1922, 12 November 1922, 23 January 1923, 28 March 28 1924.

⁹ Automobile Club of Southern California, Digest of Minutes, Board of Directors, vol. 4, 101, 15 June 1922.

¹⁰ *Los Angeles Times*, 20 October 1912, 25 January 1913, 27 April 1913 (quotation), 19 February 1922.

¹¹ *Los Angeles Times*, 7 June 1922, 8 June 1922, and 23 July 1922. All quoted words in this paragraph and the following paragraph are from this last article.

¹² City Planning Commission, Minutes, 1:213, 8 January 1921; 1:290, 15 March 1921; 2:227, 10 January 1922; 2:388-89, 27 April 1922; 3:66, 22 August 1922; 3:312, 20 December 1922.

¹³ *Annual Report of the City Engineer*, 1923-24, 52.

- ¹⁴ *Los Angeles Times*, 23 January 1923. The detailed plan was also presented in a promotional pamphlet: Sherley Hunter, *Why Los Angeles Will Become the World's Greatest City* (Los Angeles: H. J. Mallen and Co., 1923), pp. 19-20.
- ¹⁵ Longstreth, *City Center to Regional Mall*, 57.
- ¹⁶ Names of property owners from petition of Wilshire Development Association, 24 January 1924, Council File 497, Box A196, oversize.
- ¹⁷ Fogelson, *Fragmented Metropolis*, 226-27.
- ¹⁸ Letter from Ross and Zahn to City Council, 18 July 1923, CM, 18 July 1923; denial in letter from City Clerk to Ross and Zahn, 19 July 1923, CF 4037. The letter from Ross and Zahn must have been received at least several weeks prior to its appearing in the minutes of the council, because it was referred to committee before the full council voted on the request.
- ¹⁹ Frank B. Williams, "Zoning Notes," *American City* 31 (July 1924): 63; idem., "Zoning Notes," *American City* 32 (April 1925): 465.
- ²⁰ Petition cited in note 41 above.
- ²¹ CM, 142:546, 5 February 1924; 142:715, 14 February 1924; 144:58, 27 March 1924.
- ²² Alyce de Roulet Williamson, "Reminiscences of Henry de Roulet," typescript, 1983, Pellissier Family File, History Department, Los Angeles Public Library, 12-13; *Los Angeles Times*, 28 March 1924; CM, 144:626, 21 April 1924; City Planning Commission, Minutes, 4:262, 11 October 1923; 4:769, 20 March 1924.
- ²³ *Annual Report of the City Engineer, 1923-24*, 52; City Planning Commission, Minutes, 2:454-55, 6 June 1922; 5:84-85, 5 August 1924 (quotation); 5:548-50, 24 February 1925.
- ²⁴ CM, 144:293-97, 7 April 1924; 149:407-08, 3 October 1924; 149:656, 672, 16 October 1924. City Planning Commission, Minutes, 2:454-55, 6 June 1922.
- ²⁵ CM, 144:593, 18 April 1924; 149:656, 16 October 1924.
- ²⁶ City Planning Commission, Minutes, 5:268-71, 27 October 1924 (quoted words from Open Letter); Automobile Club of Southern California, Digest of Board Minutes, 4:163, 22 May 1924; *Los Angeles Times*, 1 November 1924 (Auto Club quotation), 4 November 1924, 5 November 1924; CM, 151:267-68, 5 December 1924; 153:426, 6 February 1925; 153:472, 9 February 1925; 153:498, 10 February 1925; 155:591, 20 April 1925 (O'Melveny quotation).
- ²⁷ Longstreth, *City Center to Regional Mall*, 105.
- ²⁸ Hines, "Wilshire Boulevard," 321.
- ²⁹ Fogelson, *Fragmented Metropolis*, 261.
- ³⁰ Longstreth, *City Center to Regional Mall*, 88-9, 112-18. Fogelson's analysis also reverses the sequence of events: the rezoning proposal was a reaction to the Archway plan, not the other way around.

³¹ City Planning Commission, Minutes, 2:223, 10 January 1922.

³² Rigid formulation of U. S. urban spatial history based on an essentialized relationship between core and periphery originated with the Chicago School of sociologists, who ordered class, culture, and indeed all of urban life, according to an ecological model that produced a picture of discrete and monolithic rings and sectors; for a foundational statement of this literature, see Robert E. Park, Ernest W. Burgess and Roderick McKenzie, *The City: Suggestions for Investigation of Human Behavior in the Urban Environment* (Chicago: University of Chicago Press, 1925). In the 1960s, Sam Bass Warner's influential book applied this method to interpret the "streetcar suburbs" south of Boston. Over the next 30 years, city-specific case studies and syntheses of the suburban phenomenon undermined the Chicago model by observing the operation of cultural factors (the pastoral ideal, neighborhood diversity) and structural factors (geographic distribution of industrial employment) in the creation of differentiated urban places. By 1994, Nicholas von Hoffman could assemble these strands of critique of the core-periphery analysis into a re-examination of one of Warner's streetcar suburbs, where he found a highly diverse picture of spatially diffuse industrial development and a variety of commuting and travel patterns within the metropolis, which disrupted rigid formulations of core and periphery. See Sam Bass Warner, Jr., *Streetcar Suburbs: The Process of Urban Growth in Boston, 1870-1900* (Cambridge: Harvard University Press, 1962); Joel A. Tarr, *Transportation Innovation and Changing Spatial Dynamics in Pittsburgh, 1850-1934* (Chicago: Public Works Historical Society, 1978); Jon C. Teaford, *The Unheralded Triumph: City Government in America, 1870-1900* (Baltimore: Johns Hopkins University Press, 1984); Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (New York: Oxford University Press, 1985); Elizabeth Cohen, *Making a New Deal: Industrial Workers in Chicago, 1919-1939* (Cambridge: Cambridge University Press, 1990); Nicholas von Hoffman, *Local Attachments: The Making of an American Urban Neighborhood, 1850 to 1920* (Baltimore: The Johns Hopkins University Press, 1994).

³³ *Los Angeles Times*, 7 December 1924; Williamson, "Reminiscences," 12; *Los Angeles Evening Express*, 4 February 1928.

³⁴ On the central role of department stores in the advertising market for metropolitan newspapers, and in their formulation and projection of gender-specific constructions of urban life, see Susan Porter Benson, *Counter Cultures: Saleswomen, Managers, and Customers in American Department Stores, 1890-1940* (Urbana: University of Illinois Press, 1986), 17-18, 102-06; and Gunther Barth, *City People*, 140-44, 230-31.

³⁵ On the gender-specific aspects of park design, see Baldwin, *Domesticating the Street*, esp. chap. 5, "Segregating the Parks," and Bluestone, *Constructing Chicago*, 35.

³⁶ Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York: Basic Books, 1983); Virginia Scharff, *Taking the Wheel: Women and the Coming of the Motor Age* (Albuquerque: University of New Mexico Press, 1992), 135-41.

³⁷ This idea of the mediated landscape, the place that is conceived in conjunction with its promotional portrayals, and where the distribution of those portrayals is so widespread as to influence the expectations of most people who end up coming to the place, is frequently presented as one of the characteristics of the so-called postmodern condition. By pushing this practice back into the 1920s I do not mean to support assertions of LA's pathbreaker status among US cities by simply showing that one of its supposedly distinctive contributions is actually earlier than believed, but rather to break down the assertions of LA's uniqueness by situating the city within the many streams of both material and representational development that have shaped our urban places.

- ³⁸ Longstreth, *City Center to Regional Mall*, 112-41; Hines, "Wilshire Boulevard," 329-32.
- ³⁹ An early statement of Upton's approach to analyzing landscapes in terms of the experience of passing through them is found in "White and Black Landscapes in Eighteenth Century Virginia," *Places 2* (1984): 59-72; also see Upton, "The City as Material Culture," in Anne Yentsch and Mary Beaudry, eds., *The Art and Mystery of Historical Archaeology: Essays in Honor of James Deetz* (Boca Raton, FL: CRC Press, 1992), 51-74.
- ⁴⁰ *Ebell*, October 1927, 5-10, 14, 27; "The Ebell of Los Angeles, 1894-1994" *Larchmont Chronicle*, Special Centennial Edition, June 1994; Benson, *Counter Cultures*, 79.
- ⁴¹ Hunter, *Municipal Organization*, 218; Board of City Planning Commissioners, *Annual Report*, 1928-29, 3-4; Los Angeles Public Library, "Chronological Record of Los Angeles City Officials, 1850-1938."
- ⁴² On the decline of women's activism, see Linda K. Kerber, Alice Kessler-Harris, and Kathryn Kish Sklar, "Introduction," in Kerber, Kessler-Harris, and Sklar, eds., *U. S. History as Women's History: New Feminist Essays* (Chapel Hill: University of North Carolina Press, 1995), 1-14, and in the same volume, Estelle Freedman, "Separatism Revisited: Women's Institutions, Social Reform, and the Career of Miriam Van Waters," 170-88. Also see Gayle Gullet, "Women Progressives and the Politics of Americanization in California, 1915-1920," *Pacific Historical Review* 64 (February 1995): 71-94.
- ⁴³ Hunter, *Municipal Organization*, 218; Board of City Planning Commissioners, *Annual Report*, 1928-29, 3-4.
- ⁴⁴ Appeal for "scientific zoning" by Whitnall in Public Welfare Committee Report, CM, 157:279-81, 5 June 1925; G. Gordon Whitnall, "Saving Money in Street Widening," *American City* 40 (February 1929): 122-23; Board of Planning Commissioners, *Annual Report*, 1927-28, 15 ("Majority Rule"); Board of City Planning Commissioners, Minutes, 5:831-32, 9 June 1925.
- ⁴⁵ *Los Angeles Evening Herald*, 25 February 1928.
- ⁴⁶ Board of Planning Commissioners, Minutes, 5:548-50, 24 February 1925.
- ⁴⁷ Hancock, *Fabulous Boulevard*, 154. Neither Bullock's nor de Roulet's Pellissier Building (Wiltern Theater), which went up in 1931, were on the stretch that would be labeled Miracle Mile, with La Brea at its eastern end and Fairfax to the west. Pellissier was at the corner of Western, almost two miles east of La Brea, and Bullock's at the corner of Westmoreland, another mile east of Western. These buildings set the economic and legal precedents, and pointed the way toward the designs, for the Miracle Mile projects for which Ross would employ the spot-zoning strategy.
- ⁴⁸ *Los Angeles Evening Herald*, 18 February 1928, 25 February 1928, 19 October 1929, 4 December 1930, 21 December 1931.
- ⁴⁹ Hines, "Wilshire Boulevard," 307-08; Elizabeth Word and Alan Silver, eds., *Raymond Chandler's Los Angeles* (Woodstock, NY: Overlook Press, 1987).

CHAPTER THREE

THE PUBLIC RELATIONS OF URBAN FORM: THE LOS ANGELES TRAFFIC
COMMISSION AND THE *MAJOR TRAFFIC STREET PLAN* OF 1924

The *Major Traffic Street Plan* of 1924 is one of the most misunderstood episodes in the history of Los Angeles. Produced by a team of three prominent planning consultants under contract to the Los Angeles Traffic Commission, the *Plan* compiled existing data and proposed networks of main arteries, feeder streets, and specialized roads such as parkways. Historians and planning scholars describe it as a pivotal moment in the transportation history of Los Angeles, a point that divides everything that came before from everything that came after.¹ That is only true in a narrow sense: the *Plan* was undoubtedly the cause of an enormous increase in the amount of words printed about streets in Los Angeles, especially in publications that had not cared to mention the subject much before, such as newspapers, popular magazines, and travel books. The Traffic Commission made sure of that with a well-oiled publicity campaign that was part of its strategy to win the referendum held on the *Plan*, in November 1924, the same election in which the Archway was defeated.

Publicity concerning the *Plan* was magnified because everything about Los Angeles became more prominent in popular literature during the 1920s, not just its streets. The Chamber of Commerce, the All-Year Club, the Auto Club, the Santa Fe and Union Pacific railroads, local governments, and private real estate entrepreneurs

produced a torrent of press releases, broadsides, commissioned articles, and advertisements aimed at encouraging not just tourism, but relocation to "America's Mediterranean shore."² One of the main strategies in this outpouring of promotion was to portray Los Angeles as different from other American cities. Claims of novelty threaded through all the topics emphasized in the booster literature: the climate, the preponderance of single-family dwellings rather than apartment houses, the recreational opportunities, the thwarting of unions under the city's open-shop law, the dominance of a white Anglo elite, the Spanish-themed architecture. Into this setting, the Traffic Commission issued its urgent call for action, based on the assertion that the traffic emergency confronting the city demanded special arrangements. The commission argued that Los Angeles was unusual in the number of cars on its roads, that the city needed to *rebuild* to correct its horrific traffic problems, in effect that Los Angeles, with its "inadequate patchwork of narrow streets," was not very well-suited to the use of automobiles.³ By the end of the 1920s, the images of Angeleno automobility had broken free from the reality, or at least from the reality of the city's poor and poorly coordinated street networks. The sheer number of cars became the dominant image. Refracted through the claims of metropolitan exceptionalism, that image mutated into the new and widely repeated assertion that Los Angeles was the quintessential automotive metropolis. This subtle change of emphasis helped to produce the new, hybrid narrative of a distinctive local "car culture," based on the contention that cars meant more to people in Los Angeles than they did elsewhere. This aspect of the city's reputation was the most significant and lasting contribution of the *Major Traffic Street Plan*.

To Henry Z. Osborne, Jr., who brought the Traffic Commission into being and served as its chief of staff, the publicity campaign on behalf of the *Plan*, and indeed the *Plan* itself, had other, more down-to-earth, purposes, and it failed on all counts. Later commentators overestimated its impact because they relied on sources that all lead back to the promotional campaign, in which the *Plan*'s sponsors repeatedly and forcefully insisted that their work was important. An entirely different picture emerges in the minutiae of public business, such as reports to the city council, and in the private deliberations of the organizations that sponsored the Traffic Commission. Claimed as an innovative approach to right-of-way selection in the city, in fact the *Plan* repackaged Osborne's decade-old grid proposal along with other prior attempts to impose a purportedly rational geometry on the messy and contested process of laying out streets. The voters did approve the plan, along with a bond issue to implement it, but the \$5 million in bonds could not have built even five percent of the *Plan*, and only then if all the money went into construction, which it did not. Thus it is hardly surprising that the recommendations in the *Plan* were substantially not built, that the *Plan* had limited effect on the fabric of the city. Osborne's goal of superseding the difficult politics of major highway construction with an independent authority also suffered ignominious defeat, and the demise of the Traffic Commission in 1928 because of ineffectiveness and embezzlement undermined for a decade the credibility of citizens' committees participating in transportation policy.

Futile as a political strategy, negligible as a construction program, and notable in the long-term primarily for the effects of its public relations campaign on the image of

Los Angeles, the *Major Traffic Street Plan* nonetheless attempted to address real conditions that limited the ability of residents to move about the city. As development in the early 1920s spread to the areas between the spokes of settlement established by the street railways, residents in those newly opened subdivisions had little alternative but to travel in automobiles because there was no nearby trolley service. The city's streetcar companies had been chronically short of capital since the 1911 merger that created the Pacific Electric and the Los Angeles Railway. Their inability to build additional lines to serve newly developed residential areas between existing trolley corridors was the root cause of many of the complaints about rail service in the city.⁴ Buses were not a realistic option for most trips, even though more than 200 of them carried passengers on regular routes by 1925, because the bus routes precisely mirrored the trolley system, serving an arterial function as replacements for streetcar lines that had been abandoned.⁵ The increase in automobile usage as a percentage of trips during the 1920s did not reflect "the power of consensus," as Scott Bottles interpreted the politics surrounding the *Major Traffic Street Plan*, but rather the absence of alternatives.⁶ Even then, the balance was only beginning to shift, as people entering downtown on trolleys continued to outnumber those arriving in automobiles.⁷ At the time of the *Major Traffic Street Plan*, Los Angeles was not the city built for the car, as it became known in the literature of metropolitan exceptionalism, but the city that would attempt to rebuild around automobile transportation in order to sustain the rapid expansion of settled territory.

While traffic and infrastructure arguments were waged in terms of congestion, they concerned more fundamental matters: the near-total privatization of real estate in

the city and the piecemeal authority over road construction among various city agencies and interests. The acquisition of the right-of-way for a major highway from private landowners could only be justified by a claim of broad public benefit, but there was no single or unified means to define that public benefit. Highway politics in 1920s Los Angeles thus consisted of negotiating this boundary between public responsibility and private property.⁸ The formation of the Traffic Commission and its hiring of distinguished planning consultants was a strategy to readjust that relationship, to establish centralized authority for route determination and a means of funding that did not depend on property-owner approval. The images of Los Angeles created to sell the *Plan* were formulated to transcend disagreements among property owners and public officials, to provide a rallying point for highway construction in the face of some of the most formidable obstacles faced by roadbuilders in any American city.

Formation of the Traffic Commission

After moving from the city engineering office to the Public Utilities Commission in 1919, it must have seemed to Henry Osborne that there were too many plans rather than not enough of them. The Traffic Commission and the *Major Traffic Street Plan* did not fill a vacuum in transportation planning, but responded to the institutional confusion he confronted. Between the summer of 1920 and the summer of 1921, the Community Development Association began the Archway plan, the city engineers started working on Tenth Street/Olympic Boulevard, the City Planning Commission began to recommend routes for arterial highways, and the Auto Club commissioned consulting engineer J. B.

Lippincott to conduct the first citywide, empirical traffic study. Besides producing new data on vehicle movements, the Lippincott study also reintroduced the use of prominent consultants into the arena of city transportation policy for the first time since Charles Robinson's *City Beautiful* pastiche of more than a decade earlier.

J. B. Lippincott is an infamous figure in Los Angeles history because of his role in securing the water rights for the Owens Valley Aqueduct. He had been employed by the U. S. Reclamation Service while he was also secretly representing Los Angeles, a conflict of interest that transgressed even the lax definitions of corruption prevailing at the time. Dismissed from the Reclamation Service, Lippincott devoted himself fulltime to a Los Angeles-based consulting practice that specialized in water projects and enjoyed steady work from government clients and land developers throughout the west. Lippincott represented the Auto Club on a host of highway issues -- urging the city to complete the Arroyo Seco Parkway, lobbying the county to allocate money for the Angeles Crest Highway, and criticizing the excessive cost of the San Gabriel Canyon road planned by the U. S. Forest Service.⁹

Lippincott approached traffic like the hydraulic engineer that he was, in terms of flow. He stationed traffic checkers along main thoroughfares and at intersections to count passing vehicles and to record the timing and duration of tie-ups that brought traffic to a halt. No statistics were required to grasp that traffic slowed frequently in the "congested district" of downtown. The report did not recommend substantial construction there, but rather a series of incremental measures, such as turn prohibitions, leveling storm-drain catch basins so they did not create barriers to movement, and

realigning offset intersections. The survey also attempted to view traffic on a regional basis, with a study area of 75-miles diameter centered on downtown. The traffic counts revealed three patterns of regular congestion in this larger area: the routes between Los Angeles and Pasadena (20th Street and Pasadena Avenue, which was later rebuilt as North Figueroa); between downtown and the San Fernando Valley (Cahuenga Pass and San Fernando Road); and between the L. A. basin and points southeast and south (Stephenson Avenue, later renamed Whittier Boulevard). The surveyors tracked cars along these routes to determine if they were bound for Los Angeles or just passing through and found that only three percent of the cars entering the city represented through traffic. (At the same time, the state Division of Highways began to plan major arteries to serve that through traffic, and lack of coordination between city and state engineers would soon create enormous and intractable problems, especially east of the Los Angeles River.) Most of Lippincott's recommendations for the areas outside of downtown consisted of upgrades to existing streets, such as Pasadena (Figueroa), Macy and Boyle, though he also called for new diagonal arteries dedicated only to traffic, which would slice through the existing street grid. The report identified a connector running northwest from downtown to Hollywood as the most crucial route for this treatment. Except for the diagonal arteries, the report resembled Osborne's boulevard plan, augmented by traffic data to help identify which segments to build first. It emphasized the need to envision all these arteries as an integrated network, and used the phrase "major traffic street plan" to describe that process. Lippincott completed the study in late 1920 but the Auto Club did

not publish it until mid-1922, when it joined the growing stream of road plans that included Osborne's latest effort to promote his grid idea.¹⁰

After the imbroglio over the downtown parking ban died down in the spring of 1920, Osborne began to assemble a "comprehensive survey and report on the subject of traffic congestion and detailed methods of relief."¹¹ It took more than a year to complete, in part because Osborne and his staff conducted a series "driving tests" to record the time it took for an automobile to travel along Broadway, Hill Street, and other arteries.¹² Osborne also had to rewrite the report every time a city agency or private organization issued a new plan, and resolving that cacophony became Osborne's main focus. The Board of Public Works, the Bureau of Engineering, the Planning Commission, and his own Public Utilities Commission all had some oversight of transportation but none focused on it exclusively. Private efforts such as Lippincott's plan, the Archway, and the activities of various improvement districts pushing for major arteries had the additional disadvantage of proceeding without being required to notify all of the public authorities seeking to derive comprehensive solutions. Osborne proposed that "the representatives of the various civic and industrial organizations working on this problem should be called into a conference to secure the benefit of the work of each, and at the same time, to avoid duplication of the work and to adjust conflicting recommendations."¹³ After his board and the city council concurred, Osborne set out to assemble his coalition to solve "the grave traffic problems confronting the city."¹⁴

In January 1922 Osborne convened a meeting of city, county and state officials as well as some 60 private organizations, including all the rail and utility companies, trade

associations (automobile dealers, retail merchants, truckers, wholesale grocers), professional associations (architects, civil engineers, teachers), all the leading women's clubs, all six newspapers, the Board of Trade, the Merchants and Manufacturers Association, the Realty Board, the Chamber of Commerce and the Auto Club. The participants resolved to form a new organization, the Traffic Commission of the City and County of Los Angeles. The city council and the county board of supervisors both approved the formation of the Traffic Commission and allowed city and county engineers to participate in its work.¹⁵ Osborne served as chief engineer and president of the board, while continuing his duties at the Public Utilities Commission.¹⁶ By October, the Chamber of Commerce, the Auto Club, and other private sponsors had pledged sufficient funds to pay operating expenses.¹⁷ The commission issued its first recommendations just two months later, a sure sign that it was dedicated not to the creation of new plans, but to the repackaging and promotion of those that already existed.¹⁸

The main goal of the commission was to serve as the central transportation planning agency for the city and the surrounding area. Its private rather than governmental status did not represent a contradiction to the leadership because they identified democratic governance as the core of the problem. According to *The Los Angeles Plan*, the report issued in December 1922: "Public officials are, by the very nature of their office, prohibited from being participants. They must act in a judicial [sic] capacity and it is not appropriate for them to take sides for or against public improvements where there are conflicting interests and divided public opinion." The commission could serve as a "buffer between the public and the authorities," by

negotiating with property owners for easements, circulating street-improvement petitions, and advocating in the press on behalf of their projects. *The Los Angeles Plan* presented a list of 53 proposals to the city council, from the improvement of specific routes such as Venice and Beverly boulevards and the Cahuenga Pass road, to broad policies such as establishing pre-emptive setback lines for future highways.¹⁹ In total, this plan looked very much like Osborne's decade-old grid of boulevards, and it suffered much the same fate, never transcending the specialized discourse of experts to capture the attention and support of a broader, taxpaying public. The city council referred the list of urgent projects to its finance committee for a "cost survey" but the committee never reported back.²⁰

Osborne and the Traffic Commission then adjusted their tactics to emphasize not the technical matters of what to build and where to build it, but rather the creation and projection of a new image of the city, and the establishment of the political authority to supersede the legacy of the Vrooman Act. The commission hired a "News Director," Clarence Snethen, who signaled his methods by proclaiming that "We are dealing with a novel and highly complicated problem." In the curious alchemy of public relations, Snethen understood that the manufactured visibility would be more effective if the commission denied that it sought any, thus producing this paradoxical claim from the News Director: "It is not the policy of the Traffic Commission to seek publicity for the work it does."²¹ Such protests notwithstanding, the next step taken by the Traffic Commission was to provide Snethen with something to publicize.

The Dream Team: Olmsted, Bartholomew and Cheney

Rapidly growing Los Angeles was a cornucopia for planners and engineers who operated consulting practices. They benefited from alarmist descriptions of congestion, from the pleas that strong action must be taken, and from the ill-defined boundary between public and private responsibility for planning and building highways. Like much else in the city at that time, the institutional setting for the engineering and planning professions was more flexible than entrenched. Consultants moved between public and private-sector clients, and public agencies employed a mix of civil-service staff and outside consultants, often on the same job. The engineering or planning staff attached to a project was a source of political capital that could be helpful in gaining the necessary approvals, and, for consultants, the ability to attract clients was based on reputation and connections. Henry Osborne was as keenly attuned to the politics of engineering as anyone, familiar as he was with the chambers of the city council and the boardrooms of the Chamber of Commerce and the Auto Club. A year after winning the referendum for the *Major Traffic Street Plan*, Osborne would work the connection in the other direction, leaving public employ to open his own engineering practice, with clients that included his former employers in city government as well as the improvement associations attempting to widen and pave Venice Boulevard and Beverly Boulevard.²²

After the *Los Angeles Plan* died in committee, Osborne persuaded the board of the Traffic Commission to assemble a prestigious planning team to burnish their efforts with the highest degree of professional luster. The experts would have to be paid of course, and the commission's intentions first surfaced in the summer of 1923, when

Osborne asked the city council for \$10,000 to fund a "basic survey to determine which streets and traffic arteries shall be improved." The Finance Committee reported favorably this time, perhaps because the \$10,000 was only a fraction what it would have cost to build the *Los Angeles Plan*. It might also have been politically necessary for the council to display some positive action, given the luminaries that Osborne paraded before them on behalf of the appropriation, including the heads of the Realty Board, the Chamber of Commerce, and the Community Development Association.²³ In any case, the council approved the money, and Osborne set out to put his team in place.

He did not have to look very far. The three authors of the *Major Traffic Street Plan* -- Frederick Law Olmsted, Jr., of Brookline, Massachusetts, Harland Bartholomew of St. Louis, and Charles Cheney of Portland, Oregon -- had all been pitching their services in Los Angeles for years. Olmsted, one of the most celebrated landscape architects and planners of the day, continued the practice of his father, the designer of New York's Central Park. The firm operated on a national basis, and its previous California projects included the master plans for the campus of Stanford University, Balboa Park in San Diego, the city of Torrance, and, in the years leading up to the *Major Traffic Street Plan*, the city of Palos Verdes Estates, on a broad peninsula at the southwest edge of the Los Angeles basin, between Redondo Beach and Los Angeles harbor.²⁴ Bartholomew entered the nascent field of city planning in 1911 as a student worker on the plan for Newark, New Jersey. In 1919 he moved to St. Louis to serve as its director of planning, while also running a busy nationwide consulting practice and teaching planning at the university level. Bartholomew was one of the most influential

planners of the 20th century, head of a firm that produced over 500 city plans.²⁵ Cheney had trained as an architect at Berkeley and conducted city plans for Sacramento, Berkeley, Alameda, Fresno, Spokane and Portland before his work in Los Angeles. In 1922 he too was working on Palos Verdes Estates, conducting surveys for the road network in the “ocean suburb.”²⁶

Cheney and Bartholomew had both offered their expertise to the Los Angeles City Planning Commission soon after it was established in 1920. Cheney secured an audience with the commission during its first months of operation, when he proposed to provide all the professional services the commission would require: zoning plans and subdivision maps, traffic studies and railway regulation, park and recreation plans, legislation, and “intelligent and constructive guidance of these plans to completion.” The proposal was too comprehensive; it offered to take on virtually the entire mission of the commission, which voted against hiring Cheney.²⁷ Bartholomew’s pitch came soon after, in early 1921. He presented an incisive analysis of the problems faced by city planners in Los Angeles, especially the deficiencies of the assessment-district process. The commission did not see how professional expertise could by itself overcome what was essentially a political conundrum, and Bartholomew too left empty-handed.²⁸

The Olmsted firm had been approached as early as 1895 to prepare park plans for Los Angeles, and Olmsted, Jr., had corresponded with members of the City Planning Committee from 1911 through 1914 regarding cost estimates and the scope of services involved in conducting a comprehensive city plan, which came to naught at that time.²⁹ Olmsted, Jr., was treated as a celebrity during a visit to Los Angeles in 1912, when the

Civic Association invited him to give a speech and the *Times* recorded the proceedings with a mixture of tongue-in-cheek admiration for the esteemed visitor and self-consciousness over the city's raw appearance. "My goodness!" reported the *Times*, "Frederick Law Olmsted, the famous landscape gardener, city beautifier, park inspector, and all-around municipal housekeeper expert, took a walk around the southwest part of our city." The visit came during the January rains, and on his stroll along Adams Boulevard and Grand Avenue, Olmsted "got his feet wet and found the streets afloat." He refrained from calling Los Angeles a hick town, to the somewhat sarcastic gratitude of the reporter: "[Olmsted] was distinctly mild and extremely polite about it, but he just mentioned the fact that we do need storm water sewers rather badly." As the head of a firm that reaped consulting contracts far and wide, Olmsted could deftly avoid insulting potential clients while also opening the door for a discussion about his services: "Whatever I say may be taken merely as the chance observations of a traveler and not as the result of a thorough investigation."³⁰ By 1916, Olmsted's visits became more frequent because his firm was at work on the plans for Palos Verdes Estates. The local press accorded enthusiastic coverage to Palos Verdes, further solidifying Olmsted's iconic status.³¹

Cheney, the only one of the three authors of the *Plan* who lived in the area, probably took the lead in securing the contract. Bartholomew had his city and faculty jobs in St. Louis, and Olmsted supervised the work on Palos Verdes from afar, with the periodic "visit of several weeks."³² Cheney lived in Redondo Beach during his work on the road surveys for Palos Verdes and took an active role in local organizations, serving

on the boards of the San Pedro Chamber of Commerce and the Southern California chapter of the American Institute of Architects.³³ Once he secured Olmsted's participation, it was a short step to bring in Bartholomew; their two firms frequently operated jointly, made referrals back and forth, and maintained what a longtime Bartholomew employee called an "old boy network" to help in securing consulting commissions.³⁴ The temporary partnership met the promotional needs of the Traffic Commission and leveraged Cheney's local presence by putting him in charge of day-to-day supervision of the work. Cheney also served as the most frequent spokesperson for the *Plan*, delivering speeches to clubs and business groups.³⁵

The Traffic Commission's publicity campaign began before the consulting team was in place and achieved a crescendo on the eve of the referendum in early November 1924. The work of Clarence Snethen, the News Director, was aided considerably by the willingness of the commission's constituent organizations to push the program in their member magazines. The Chamber of Commerce, the Auto Club, and the trade magazine for the region's construction industry all featured articles on the city's traffic problems and the work of the commission to alleviate them.³⁶ It would be difficult to exaggerate the role of the *Los Angeles Times* in the promotion of the *Major Traffic Street Plan*. In December 1923, six months prior to the publication of the *Plan*, the *Times* softened the ground for its reception by printing Snethen's statement of the problem, "The Why of Congestion." He warned that "no one knows" how the city's streets would handle the increased traffic caused by the continued construction of new buildings, but that "It is a question which must be answered in the near future."³⁷ When Olmsted came to Los

Angeles in April 1924, the *Times* devoted a column and a half to its favorite planner, noting that he “has given much consideration to the park and highway problems of Los Angeles.”³⁸ The *Plan* was announced to the public at a gala banquet in the Biltmore Hotel. The mayor and city council were on hand to pass a mock resolution of adoption, simulating the consensus that the Traffic Commission sought to elicit from the voters. The *Times*’ front-page coverage of the event ran under the headline “Experts Offer Traffic Plans.” Here was a winning public-relations strategy, a gradual build-up of information culminating in a smoothly orchestrated event that proclaimed the city’s deliverance at the hands of “widely known city planners”.³⁹

There was more work to be done on both the political and the promotional fronts. Notwithstanding the political theater at the Biltmore, the city council still had to approve placing the *Plan* and its \$5 million bond issue on the November ballot. The *Plan* itself incited little controversy, but the bond authorization passed less than a month before the election.⁴⁰ With that technicality out of the way, the *Times* printed a large map of the *Plan*, complete with heroic vignettes of bulldozers, steam shovels, and cement mixers, and a headline describing it as “Commission Experts’ Practical Solution of Street Congestion Problem.”⁴¹

In the climax of publicity during the two days prior to the election, the *Times* continued to stress that the plan “was prepared by expert engineers.” The truth was stretched, if not shattered, with the statements that the experts had conducted “an exhaustive study” and offered “the first practical solution of our congestion problem,” because the contract had only lasted five months and was more a compilation of the work

that Osborne and others had been conducting for over a decade than an original work (a fact that the consultants themselves did not disguise).⁴² This was the kind of exposure that validated the hiring of celebrity consultants.

The day before the election, the *Times* unfurled a visceral, and visual, appeal on behalf of the *Plan*, in the form of a front-page cartoon labeled “Here’s Our Chance to Wallop Him!” The villain to be walloped was a masked robber labeled “Our Tough Traffic Congestion Problem.” With one hand, “Traffic” holds a gun to the chest of “Los Angeles Business,” embodied as a sober, portly man, attired in three-piece suit and homburg. The thug’s other hand smashes into the face of the wide-eyed “Miss L.A.,” whose crown is askew.⁴³

The commission’s two-pronged approach of hiring illustrious consultants and aggressively promoting their work paid off when the voters approved both measures in November 1924.⁴⁴ That was the same election in which the Archway plan was defeated, and the opposite results owed much to the differences in the communications about them. The proponents of the Archway issued fumbling, vitriolic, and contradictory statements, while the Traffic Commission conducted a consistent and coordinated campaign, bathed in the ethos of apolitical expertise (and the occasional brash cartoon).

Mapping Highway Politics

The *Plan* had value beyond the imprimatur of Olmsted, Bartholomew and Cheney. Their expertise was genuine, not just a means of mobilizing support, and their outsiders’ view of the streets and congestion of Los Angeles shrewdly illuminated the

problems, even if the proposed solutions failed of implementation. The consultants themselves downplayed the utility of the *Plan* because it isolated traffic as an object of study, thus violating a basic principle that Olmsted, Bartholomew and Cheney all insisted upon: plans must be comprehensive to be effective, involving not just transportation but also land use, parks, zoning and all the other issues concerned with the physical character of a city.⁴⁵ They took the job nonetheless, perhaps out of the realization that the Traffic Commission could only engage them in the arena of transportation, or through the remunerative expedience of acquiescing to the wishes of an impatient client with money to spend, or in hope that the plan would lead to opportunities to provide a fuller range of services to Los Angeles (which turned out to be true for Olmsted and Bartholomew). They might also have sincerely believed that a street plan could determine subsequent development, and was therefore a logical, productive first step toward broader efforts.⁴⁶ In any case, they delivered what was requested, an analysis of the many plans afoot, and an attempt to create “a broad, practical, well-balanced scheme for handling traffic.”⁴⁷

A second principle evident in their work is that the consultants believed that infrastructure for automobiles and for mass transit should be planned together. The *Major Traffic Street Plan* was neither a paeon to the automobile nor a tool to diminish the operational efficacy or political standing of the street railways, despite the claims of later commentators that the *Plan* expressed an ideology of automotive dominance.⁴⁸ Where trolleys and automobiles competed for space, primarily in the central business district, the *Plan* unambiguously favored trolleys: “The street car, owing to its economy of space and

low cost of operation per passenger, must take precedence over other forms of vehicles in the congested area whenever the traffic capacity of the arteries approaches its limit.”⁴⁹

The emphasis on “balance” was cast as scientific, but producing balanced plans was more a matter of “creative intuition” on the part of planners, as Peter Hall put it.⁵⁰ Balance was an aesthetic preference, and achieving it was guided by implicit values, ranging from the Classical ideals of harmonious design to the City Beautiful mission of imposing order on chaos. Cloaking the work of planners in the mantle of science was a metaphor that supported the planners’ assertion of apolitical expertise.⁵¹ As a rhetorical exercise, it corresponded perfectly with the use of expertise as a promotional device wielded by clients like the Traffic Commission. For planners themselves, the aura of science also helped to reconcile the uncomfortable fact that their efforts produced little in the way of tangible results. They reified the plan itself as the desirable goal and cast political considerations as enlightened or benighted, depending on whether the plans were used or not. Olmsted carefully distinguished the work of the planner from “the art political,” while using the distinction to argue for bigger, more encompassing plans as a means to transcend politics.⁵²

Such exercises in professional self-justification aside, a keen adherence to the contours of Los Angeles highway politics was one of the primary factors that shaped the *Major Traffic Street Plan*. The consultants were accomplished political actors who necessarily grew adept at navigating the corridors of power. Establishing the right connections and assembling the proper project team helped them win the job in the first place. These were negotiating skills, not technical skills, based on frequent contact with

potential client groups and sensitivity to the array of political goals that entered into the letting of a substantial planning contract. Olmsted, Bartholomew and Cheney adroitly incorporated their perceptions of Los Angeles highway politics into the drawing of the *Plan* and thereby distorted the balance they claimed to be striving for, as plainly exemplified in their treatment of Wilshire Boulevard.

Olmsted, Bartholomew and Cheney prepared the plan during the winter and spring of 1924, near the height of the controversies surrounding the Archway. Their client, the Traffic Commission, included groups and individuals on both sides of the Wilshire argument.⁵³ Rather than seeking to distill any balanced design solution to satisfy that jumble of interests, the consulting group instead tried to smooth over the acrimony by aggregating all the prior proposals, which only frustrated the planners and diminished the usefulness of the plan. They first noted that Wilshire was “a splendid radial of metropolitan characteristics,” that is, one suited for the location of businesses.⁵⁴ Then, in the discussion of “parkways and boulevards,” the plan recommended that to the west of the area contested in the Archway plan, Wilshire should be transformed into a landscaped parkway limited to passenger automobiles, thereby salvaging for a part of the corridor the functional attributes if not the specific design program of the Archway plan.⁵⁵ That was a reasonable spatial compromise: it gave the angry property owners their commercial frontage between Western Avenue and the park, and gave the influential Archway promoters their dedicated artery in the area where there was no organized resistance. It did nothing to move the future of Wilshire Boulevard out of the realm of political contestation and into the realm of rational planning discourse. It was an

unbalanced design that did not transcend politics, but instead mapped the politics directly onto the street plan.

If the overall shape of Wilshire could not be influenced by expertise, the consultants were nonetheless able to refine the details, and they were critical of both sides in doing so. They leveled a sarcastic critique at the real estate stratagems that warped the planning of Wilshire and decried the subordination of rational policy to the goal of “pulling local chestnuts out of the fire.”⁵⁶ Both Whitnall’s rotaries and Vermeulen’s fountains and monuments seem to have appalled the authors of the plan, but they retained both, presumably in deference to the powerful interests behind those ideas. If they could not eliminate rotaries or fountains, they could limit the damage they would cause by combining the two bad ideas at the same locations, as they reported, with faint praise, that the roadway could be “interrupted at important intersections or other focal points by large islands around which the one-way ‘gyratory system’ of traffic control is used and within which sites are available for more or less monumental decorative treatments.”⁵⁷

Though resigned to compromise, the *Major Traffic Street Plan* nonetheless did try to present a more far-reaching vision of Wilshire, beyond the localized interests and imperious vision of the two groups struggling over the boulevard at that moment. If it ran east all the way through downtown and bridged the river at Sixth Street, Wilshire was the best candidate for the cross-town artery that would resolve traffic congestion at Boyle Heights on the east side, provide an outlet for downtown, and serve as the main access to the west side and the coast. The planners did not even try to estimate the daunting cost of such an enterprise. They realized that the irreconcilable differences about the character

of the street must be resolved first: it could be a business street like the Champs Elysees, or it could be a dedicated traffic artery with pleasant views, like Ocean Parkway in Brooklyn, NY (a product of Olmsted's father), but not both: "There is no artistically satisfactory compromise between these two types."⁵⁸ They could not plan around that irreducible conflict.

The *Plan* was thus more of a summary than a strategy. It approached major highway development in the city as a whole, by including all the current proposals and pointing out where fundamental divergences must be resolved. All the familiar recommendations appeared: Osborne's grid of major traffic streets, Lippincott's radial arteries and interdistrict thoroughfares, the parkways called for by the Parks Commission, and the elimination of offset intersections in the business district.

The report discussed one novel technique – "Elimination of Traffic Congestion by Means of Street Grade Separation" – but counseled against its use, once again because of political considerations.⁵⁹ This part of the plan was prepared by William Hudson, an engineer who specialized in highway structures and was associated with Bartholomew's firm.⁶⁰ "Grade separation" meant installing bridges at intersections so that cars passed over or under crossing traffic instead of having to wait for a change of signal or a break in the line of cars. Hudson did not view it as a panacea. Where through highways crossed slower-moving local traffic, a single bridge could be effective, without having to build an entire grade-separated roadway. In dense urban areas, where traffic on crossing streets was roughly equal, a single grade separation would not help much, "just as enlarging a short section of pipe will not measurably add to the flow." In this "most acute situation,"

with high traffic volume on crossing streets, the “continuous elevated highway with approach ramps” offered a hypothetical solution. This was a dedicated artery, with no crossing traffic and no right of access from adjacent properties. It bore basic similarities to what would later be built as “freeways,” though at smaller scale.⁶¹ Its utility was only hypothetical because of the objections that Hudson anticipated to the “obtrusiveness and darkening effect” of the elevated roadway, which he quantified by the length of shadow it would cast at different times of day. Hudson coyly noted that “No immediate increase in the value of adjacent property can be expected.” If these “semi-psychological objections” were not enough to eliminate the option, the cost would do the trick: between one and two million dollars per mile, depending on the number of entrance and exit ramps and whether the grade separations were above ground or below. Hudson was aware that any advantages would be widely distributed, and the main outcome would be “better development and higher values of suburban sections.”

Because of the aesthetic effects, the cost, and the malapportioned benefit, Hudson concluded that the continuous elevated roadway “must be classed as a heroic measure, to be adopted only when an impasse has been reached and the other usual means of relief prove inadequate.” No one in Los Angeles argued otherwise at that time, although the city engineering office would scatter isolated examples of proto-freeway technology across the landscape over the next ten years by erecting grade separations at particularly troublesome intersections. The engineers would later revive the idea of the continuous elevated roadway, in the 1930s. In the meantime, Hudson contributed a term to Los

Angeles traffic lexicon that would survive down to the present: the use of “surface street” to distinguish conventional roadways from the elevated highway.

Though there was little that was new in the *Plan*, the compilation was valuable and the reputations of its authors helped the Traffic Commission attract attention and win a measure of political acceptance. The *Major Traffic Street Plan* illuminated the city’s highway politics with strobe-like clarity, but it did little to reorient highway politics onto a new track. Those battles would continue to be fought, and while the *Major Traffic Street Plan* would have a role in how they turned out, it was not the role that was claimed by the *Plan*’s sponsors and by subsequent commentators who relied on those claims.

The *Major Traffic Street Plan* and Los Angeles Exceptionalism

The national experience of the planning team enabled them to undertake comparisons between traffic congestion in Los Angeles and in other cities. For the most part, the reasons given for congestion were not exclusive to any one city, but the Traffic Commission’s publicity on behalf of the plan fused with other promotional efforts based on establishing an image of Los Angeles as distinct from other places. The result was a lasting reputation for Los Angeles as a city with a unique culture of automobility.

Of the eight reasons given in the *Major Traffic Street Plan* for the city’s congestion problems, six were also present in eastern and midwestern cities, and can be summarized as the vilification of disorderly growth: unscientific width and arrangement of streets, improper use of streets for parking and loading, “promiscuous” mixing of different types of traffic, narrow intersections, obstructions such as rivers and railroads,

and the concentration of business in a small area. While these conditions were common to many cities as they grappled with the spatial implications of the automobile revolution, local variations did exist. The most significant part of this litany that was peculiar to Los Angeles was the legacy of the council's action in 1854, when it ceded all land to private property owners without reserving any municipal rights-of-way. Combined with the difficulty of obtaining rights-of-way under California law, that provision left Los Angeles with very little land area devoted to roadways in the central business district: 21 percent, compared to 29 percent in Detroit, 39 percent in Cleveland, and 44 percent in Washington, D.C. Los Angeles suffered even in comparison to San Diego (41 percent) and San Francisco (34 percent), which in their formative years had not privatized real estate as thoroughly as did Los Angeles.⁶² If anything, this condition made Los Angeles particularly unsuited to the car.

The *Plan* claimed that two other causes for congestion distinguished Los Angeles among American cities: the climate and the rapidity of growth. Surely the climate – no snow, minimal rain, high average temperatures -- made motoring easier in Los Angeles, but there is little evidence to support the implied argument that climate deterred automobility in other North American cities. For one thing, by the time of the *Major Traffic Street Plan*, closed vehicles accounted for the majority of cars manufactured in the United States. Inclement weather no longer prevented year-round driving, in any latitude.⁶³ And snow did not cause people to stop driving their cars in colder cities, but rather to insist that their local governments remove the snow from the streets so they could keep driving.⁶⁴

The fast growth of the 1920s legitimately set Los Angeles apart from other metropolitan centers, especially because it was the first city to undergo such growth after low-cost, mass-produced automobiles became available.⁶⁵ As new subdivisions and commercial development spread beyond the reach of trolleys and buses, and into the interstitial areas between transit routes, commuters and shoppers had little alternative but to pilot their tin lizzies along unpaved and narrow thoroughfares, or to crowd onto those few arteries that offered smooth pavement and multiple lanes.⁶⁶ That particular circumstance was an appropriate and reasonable basis for the Traffic Commission's advocacy on behalf of more extensive highways. The commission's own pronouncements tended to conduct the argument in the empirical terms of traffic counts and square feet of pavement, but that dispassionate approach would be subsumed within the boosterism and regional exceptionalism that dominated media representations of the city. Osborne based his highway program on calculations of time lost in traffic: "If 500,000 passengers lose even an average of 7 minutes a day it means that 3,500,00 minutes in the aggregate are lost daily." The president of the Traffic Commission, Paul Hoffman, posed the question as one of reason rather than enthusiasm for automobiles: "The voters are asked to decide whether the city desires its street development to be carried out in an orderly manner, using the *Major Traffic Street Plan* of the Traffic Commission as a basis, or the same haphazard manner as in the past."⁶⁷ And while it singled out the automobile for special attention, the *Major Traffic Street Plan* nonetheless espoused the necessity of improving both automotive and street railway infrastructure. But such sober assessments fueled more grandiloquent and less data-dependent claims:

“From whatever angle you may view Southern California’s striking progress, you will be compelled to acknowledge that the automobile is responsible more than any other half dozen factors for its phenomenal advancement,” wrote one of the writers frequently employed in the city’s booster campaign.⁶⁸ Statements about the automobile in the popular press soon became completely uncoupled from the logic of planners and the accumulation of statistics: “How can one pursue happiness by any swifter or surer means available to the mass of mankind than by the use of the automobile?” asked the *Los Angeles Times* in 1926.⁶⁹ From the Traffic Commission’s concern about the approval process for new streets and highways, discourse about the automobile moved into claims of regional distinctiveness, then to blithe falsehoods about the automobile’s place in the region’s development, and then to an abstract association between the automobile and human contentment.⁷⁰

There was nothing new about the automobile serving as a powerful trope in the elevation of consumption to an inalienable right, as suggested by the parking ban and the creation of Wilshire Boulevard.⁷¹ The publicity surrounding the *Major Traffic Street Plan* served to intensify the rhetoric, and it provided the data that others would call upon in making claims about the unique character of Los Angeles. It would be difficult to separate automobile-related consumption from the hyperventilated culture of 1920s Los Angeles, which Carey McWilliams famously described as “one long drunken orgy, one protracted debauch.”⁷² The city’s most visible industry – the movies – helped to cement the perception of an essential relationship between Los Angeles and the automobile. From the early years of moviemaking, cars served as plot devices, production tools, and

the basis of spectacular stunts. They also ornamented the energetically promoted lifestyles of moguls and stars, who did not buy mass-produced vehicles but commissioned custom bodies from independent designers. In 1926 General Motors recruited Harley Earl, who made cars for the Hollywood set, to head its new styling division. Thus was consummated the relationship between movies and cars, at the corner of Hollywood Boulevard and Orange Street, where Earl had his custom shop before moving to Detroit.⁷³

Boosterism by definition sought national audiences, and when writers, editors and media outlets from beyond the city began to proclaim a particular affinity between Los Angeles and the car, they reinforced through repetition a set of impressions that were not necessarily connected with the everyday reality of residents and public officials. These depictions followed a familiar trajectory, first picking up on the well-documented yet alarmist messages of the Traffic Commission, and then, after the inflammatory campaigns surrounding the 1924 election, moving on to the indisputable truth that cars meant something different or more significant in Los Angeles than they did elsewhere. Six months before the election, the New York-based *Literary Digest* paraphrased the Traffic Commission's press releases in the article, "Los Angeles and Its Motor-Jam," which drily reported facts such as time lost in congestion on downtown streets.⁷⁴ After the election, automobility merged with boosterism and the car took its place in the feverish litany of regional distinctiveness:

People! Automobiles! Buildings! Orchards! Farms! Oil! Ships! Factories!
Climate! Vast stretches of undeveloped land! Mountains! Resorts! The Ocean!
Ah! Los Angeles!⁷⁵

Visitors and travel writers reified the transformation of necessity into choice. “Why not go to Los Angeles for pins?” asked a visiting New Yorker in 1928. “It’s only a motor spin of eleven miles.”⁷⁶ The writer neglected to mention that the friend who took her car on that minor errand lived in the Hollywood Hills, where no trolleys were available to those in need of pins. By the end of the decade, the relationship was portrayed as fixed and essential: “The significance of the automobile in California to all the inhabitants thereof really needs no discussion. It is too obvious.”⁷⁷

These representations of the car in Los Angeles contrasted with the fundamental reality that the under-built road system did not make the city particularly suited to the use of automobiles. The publicity surrounding the *Major Traffic Street Plan* was initially intended to reform the local politics of infrastructure development, but it fueled the claims of boosters and the assertions in the national media that cars held a special place in the culture of Los Angeles, and even in the personality of its inhabitants. The region’s famous “car culture” began as a mutated strain of boosterism, a hybrid that appropriated the measured arguments of the Traffic Commission into the efforts to project regional attributes that were claimed to be distinctive. The city was said to represent a novel form of urbanism, and the use of the car was incorporated into these claims of novelty: if Los Angeles was different, then its congestion must have been of a different order, and thus its relationship with the car was too. By the 1930s, these representations regarding the transportation proclivities of Angelenos took on a self-fulfilling quality by shaping the expectations of people who moved to Los Angeles from other regions.⁷⁸ The most

significant legacy of the *Major Traffic Street Plan* was the role of its promotional campaign in the construction of an enduring mythology of Los Angeles car culture.⁷⁹

The Legal and Regulatory Legacy of the Traffic Commission

The Traffic Commission did have some practical effects on the city, beyond the unbuilt street plan it left behind. The appendix of the *Major Traffic Street Plan*, written by David Faries, general counsel of the Auto Club, offered the first thorough analysis of the statutes governing street improvement and special assessments since Osborne's report of 1913. Faries paid mandatory obeisance to the property-owner autonomy enshrined in state law and did not suggest eliminating the right of abutters to protest against proposed improvements. But he also decried the over-generous opportunities for procedural opposition, and the speculation that took place during the long process of approval. The report suggested amendments to state law that would streamline the process by allowing the city to declare an assessment district and establish the tax increments on each property in advance of final approval.⁸⁰

Everett Mattoon of the city attorney's office drafted the proposed amendment and helped to secure its passage in Sacramento. The Mattoon Act featured a particularly onerous provision that was not mentioned in the *Major Traffic Street Plan*: delinquent taxes on one property in a district would be apportioned to all the other properties. With interest and penalties, this assessment method had the potential to drive up property taxes beyond the ability of individual homeowners to pay. In the smaller cities and towns of California, the abusive application of the Mattoon Act caused thousands of families to

lose their property. Los Angeles saw some of this problem, notably in a subdivision in the Normandie area where pyramiding assessments for streets and sewers caused abandonment of homes. Overall, however, Los Angeles experienced far less “tax blight” than other communities, in part because the office of the city engineer was remarkably conservative in its use of the act. The Mattoon Act only covered the costs of right-of-way acquisition, not construction, and the head of the Streets Division in the Bureau of Engineering was reluctant to invoke it until construction funds were also secured. Also, many of the properties in the city that were subject to foreclosure under Mattoon Act tax liens had not yet passed into individual ownership. They were still owned by subdividers, developers and builders, who had not protested against the assessments in the first place because they expected to pass on the obligations when they sold the homes or the vacant lots. Mattoon Act bankruptcies in Los Angeles afflicted real estate speculators more than individual homeowners. They scarcely interrupted the pace of the city’s growth because the bankrupt subdivisions were acquired by other developers willing to try their hand where others had come up short.⁸¹

The Traffic Commission viewed traffic operations as equal in importance to the construction of major traffic streets, and in 1925 it commissioned another consulting study, by Miller McClintock, one of the founders of the profession of traffic engineering in the United States. In comprehensively redrafting the city’s traffic regulations, McClintock introduced left-turn prohibitions, pedestrian rules, and a host of specialized signs and signals. His report was the basis for the city’s oversight of street operations for a generation to come, as much due to the lack of ambiguity over the city’s role in traffic

regulation than to the efficacy of the report. Though provided by the Traffic Commission, the McClintock study required no special funding and no novel institutional configuration to blend public and private functions. Traffic regulation was assigned to the Police Department, the most venerable municipal service and the one least subject to arguments over its legitimacy as a part of city government. A few years later, in 1930, the city council established the Bureau of Traffic Engineering as a civilian agency under the Police Commission. Its longtime head, Ralph Dorsey, pioneered many practices that are still used on the streets of Los Angeles, such as painted curbs and synchronized traffic signals.⁸²

The Traffic Commission also took the lead in efforts to rationalize the street railways. Its Rapid Transit Committee persuaded the city council to commission a study on rail operations from R. F. Kelker and Charles DeLeuw, authors of the Chicago Rapid Transit Plan and as prominent in their field as Olmsted and Bartholomew were in theirs. The report, submitted in April 1925, outlined a four-tiered strategy, retaining the interurban Pacific Electric Railway and the intracity Los Angeles Railway, and adding high-speed trains with limited stops for longer trips, and more bus routes to serve as feeder lines in newly developed areas. It also called for segregating the “promiscuously mixed” modes of traffic, as the *Major Traffic Street Plan* described the situation, by building grade separations where rail and road traffic crossed. Before the Kelker-DeLeuw plan came to the ballot in 1926, it became embroiled in a related controversy over the location of a new central depot for all the city’s rail lines. Kelker and DeLeuw had also recommended elevated tracks for the high-speed trains, because the alternative

method, underground subways, would cost more than twice as much. Property owners across the city objected to the “elevateds” on aesthetic grounds, much as Hudson had predicted that elevated highways would encounter “semi-psychological objections.” The Kelker-DeLeuw plan was also debated on the issue of cost. The trolley and railroad companies would have to bear the majority of the expense for all the new rail construction, but the city would have to contribute to the grade separations as well as the street construction associated with the elevateds, a tab estimated at \$130 million.⁸³ All these issues contributed to the transit plan’s failure at the polls, a result that could have represented antipathy toward the massive expenditure as much as resentment toward the rail companies.

In contrast, the Traffic Commission managed to avoid discussing the total costs of the work proposed in the *Major Traffic Street Plan* before the voters approved the \$5 million in bonds for it. Did the voters favor cars over trains, or were they simply more comfortable approving \$5 million than \$130 million in expenditures? While that must remain a matter of speculation, it is certain that the \$5 million was not enough to construct the street network proposed by Olmsted, Bartholomew and Cheney. As it turned out, the eventual cost of building just a portion of the *Major Traffic Street Plan* was later estimated to be around \$107 million, but that figure only came out after the city engineers had spent two years preparing detailed plans.⁸⁴

Implementation of the *Major Traffic Street Plan*

John Prince took over the Streets Division of the city engineering bureau after Osborne left for the Public Utilities Commission. Prince and his staff did not bicker with the Traffic Commission as they did with the Planning Commission. The plan's main sponsor, Osborne, was one of their own, and Osborne's consultants agreed that the city engineers should be responsible for putting the plan into place. The plan's call for a quasi-independent agency that would not require referenda or council approval for specific actions also had appeal for Prince, who experimented on his own with project-specific public authorities to build Mulholland Highway and other thoroughfares. Nor could the recommendation of staff and budget increases for their agency have displeased the city engineers.⁸⁵ Prince put the bond proceeds to use as soon as they became available in early 1925, not by pouring the money into street construction, but by setting up another operating unit within the Streets Division. He rented space, assigned staff, and hired more engineers and surveyors to get the plan underway. By the summer of 1925, the *Major Traffic Street Plan* employed 17 people in the office plus four field crews.⁸⁶

This Major Highways unit broke down the consultants' plan into separate projects totaling some 800 miles of new streets, then in consultation with the Traffic Commission selected 24 of them as priorities. Of the nine located in downtown, most called for eliminating offset intersections or cutting back projecting corners. The rest were scattered throughout the city and included a total of some 36 miles of streets, half representing the opening of wholly new alignments, and the other half the widening or

realignment of existing rights-of-way. By the summer of 1926, the city engineers had completed maps of the new highways and assessment districts, and began issuing public notices and fielding protests. Not one shovel of dirt had been turned to build any of the arteries called for in the *Major Traffic Street Plan*. Defending his record, Prince recited record numbers of maps drawn, and noted that the Streets Division still had to work on petitioned projects that did not fall under the comprehensive plan.⁸⁷ The Traffic Commission bragged that more new assessment districts had been approved than ever before, but failed to distinguish between those established to fund major highway projects and the ones that paid for the routine, uncontroversial work of paving existing rights-of-way or installing sidewalks and curbs.⁸⁸ As for the major highways, Tenth Street and Broadway had both been defeated in court, and Prince did not paint a hopeful picture for the rest of them. Far from basking in the consensus asserted by the Traffic Commission, the proposed new highways encountered *more* opposition than other work, as Prince reported: "A great deal more difficulty is experienced in getting the major traffic projects past the protest stage."⁸⁹

A year later, the offset intersections had been corrected but still no construction had occurred on any of the major traffic streets.⁹⁰ Prince noted that he could not proceed without an order from the council or a majority petition from the property owners affected by a project. The two procedures were essentially the same, because the council would not act without strong consent from their constituents. On that score, little had changed, according to Prince: "There has been considerable delay in many of these Major Traffic projects owing, in some instances, to differences of opinion on the part of

the property owners, and in other cases in [property owners] attempting to secure better and more economical lines therefore and in modifying the same.”⁹¹ The plan had neither resolved the real-estate-driven politics of major highways nor diminished the willingness of citizens to defy the recommendations of the experts.

Among themselves, the members of the Traffic Commission grew distressed at the lack of progress, even while their public statements pointed proudly to the reconstruction of downtown intersections and continued to proclaim the transformation wrought by the plan and the referenda of 1924. Ernest East, the engineer for the Auto Club, represented his employer on the Traffic Commission and reported back negatively to his board: “From a desire to gain favorable publicity, the Traffic Commission is depending upon accomplishments of minor importance to justify its existence.” East was referring to the commission’s practice of trumpeting the news every time a proposed street moved through one phase of approval, and his skepticism was based on the understanding that opposition grew stronger as the process moved forward. The commission’s emphasis on proclaiming good news might also have revealed the priorities of its new general secretary, Clarence Snethen, who took over the operations of the commission after Osborne left to open his consulting practice. Just as the details of the *Plan* reflected the politics of highway construction, the Traffic Commission institutionalized those same disagreements. “In dealing with the many problems which will develop in the carrying out of the *Major Traffic Street Plan*,” noted East, “The Traffic Commission itself will find serious conflict among its members.” Far from a mechanism to supersede stalemates, the commission was crippled by the same situation it

was intended to correct: “This inability to secure harmonious action on the part of the Traffic Commission on the major problems will result in the Traffic Commission avoiding these larger and complicated problems.”⁹²

Meanwhile, the payroll for the Major Highways unit consumed some \$70,000 per year, paid from the bond funds. Prince also had to hire consultants, to the tune of \$110,000 in annual fees, because his own staff could not keep up the required progress on maps and appraisals. The opportunity to leverage cooperation from property-owners by using the bond funds to acquire right-of-way and pay for construction diminished with every expenditure. To replenish its steadily declining pool of capital, the Traffic Commission appealed to the council for a special highway tax of nine mils on every parcel in the city for a period of five years, which the council placed on the 1926 ballot (the “nine-cent tax”). The Traffic Commission’s publicity effort succeeded again when the voters approved the tax, but did nothing to change the underlying problems of excessively privatized real estate and purposeful segmentation of the city’s infrastructure authority.⁹³

Starting in late 1927, Prince and his staff were finally able to begin construction of selected projects under the *Major Traffic Street Plan*. By 1932 they had built 78 miles of improved highways out of the 800 miles called for in the plan, though little of that occurred in the most developed areas of the city. Virtually all of those improvements were part of the 90-mile peripheral loop laid out in 1927 by Ernest East and the county highway engineer as a means for traffic to bypass the congested parts of Los Angeles. Long stretches of that loop fell within the city boundaries – San Fernando Road,

Sepulveda Boulevard, Alameda Street, and Figueroa Street north of downtown.

Opposition was slightest where development was thinnest, and this work benefited as well from the ability to secure county funds to augment the city's share of the cost.⁹⁴ The city engineers did eventually manage to spend all the money from the bonds and the nine-cent tax, but most of it was used to help fund projects that the engineers pursued independently of the *Major Traffic Street Plan*, such as the approaches to the bridges over the Los Angeles River and the street network in Hollywood just south of Cahuenga Pass.⁹⁵ Even when a stretch of new or wider right-of-way on a major boulevard fulfilled a recommendation in the *Major Traffic Street Plan*, the overall intention of the *Plan* was not met, and the city's congestion was not reduced, unless the entire artery was built out to the larger specifications. As Hudson had noted with reference to grade separations, improving the flow in part of a highway, but not along its entire length, only moved the bottlenecks to new locations.⁹⁶ Fragmentary implementation destroyed any chance for the *Plan* to achieve its material goal of smooth-flowing traffic, as Olmsted, Bartholomew and Cheney had warned: "To give adequate relief the plan must be carried out as a whole."⁹⁷

Ernest East became completely disenchanted with the Traffic Commission. He argued with increasing force that it was ineffectual and recommended that the Auto Club cease financial support of the commission. If only out of loyalty, the Auto Club board continued the payments, as did the Chamber of Commerce, several oil and construction companies, automobile dealers, and trade associations.⁹⁸ Then, in late 1928, Snethen left town with all the funds on hand, leaving behind thousands of dollars of unpaid bills. The

sponsors paid off the debts and the Traffic Commission perished quietly, without any press releases, although Snethen's eventual arrest, in Louisiana, did make the news.⁹⁹

The principals in the creation of the *Major Traffic Street Plan* continued to peddle their wares in Los Angeles and beyond. Cheney went on produce plans for other west coast cities, and to advise California state government on highway policies.¹⁰⁰ Olmsted and Bartholomew continued their lucrative consulting practices and in 1930 they produced a genuinely comprehensive plan for the region that was commissioned by a committee of the Chamber of Commerce. The plan was suppressed by the Chamber and never submitted for citizen approval, which might have disappointed the authors of the ill-fated *Major Traffic Street Plan*, but could not have surprised them.¹⁰¹ Henry Osborne continued his consulting practice but had to scrape for work during the early years of the Depression. In 1932 he arbitrated a condemnation proceeding for a boulevard project on the east side. Had he known, Osborne could not have appreciated that the city paid him from the *Major Traffic Street Plan* account, which by then had been reduced to a contingency fund for minor, unbudgeted expenditures on streets and highways.¹⁰²

The Traffic Commission in the History of Los Angeles

The corruption that ended the tenure of the Traffic Commission was not extraordinary in 1920s Los Angeles, where stock and oil-leasing swindles and the fast money of the real estate business and the movie industry all contributed to the "protracted debauch" reported by Carey McWilliams, and later studied by Jules Tygiel.¹⁰³ The only remarkable aspect of the short life of the commission and the circumstances of its demise

is the absence of this part of the story in the scholarship that addresses the *Major Traffic Street Plan* and the organization behind it. I mean no criticism of prior interpretations for omitting the embezzlement: the other members of the commission, who were victimized by the crime, were not interested in publicizing the sordid episode, and its discovery in the research for this work owed as much to luck as to diligence. No one has asked, however, why the commission was not missed after its abrupt disappearance from the scene, especially if it was so important to begin with. One likely reason is that the city engineers made more tangible progress constructing the *Major Traffic Street Plan* after the commission folded than during its brief life. Another is that the commission had already achieved its other goal of establishing public perceptions about roads and traffic in terms of the city as a whole. Before the commission's barrage of press releases, discourse about traffic had been dominated by localized arguments over specific projects or policy discussions conducted among small groups of experts. Once the commission's totalizing approach to automobility was ingrained within the portrayals of Los Angeles, it mattered little whether the commission survived or not. The images and their permutations outlived the original authors.

Despite voting for the *Major Traffic Street Plan*, the citizens of Los Angeles expressed no clear consensus in favor of massive reconstruction of the city for easier and less-congested automotive transportation. Or at least no consensus in favor of raising and spending enough tax revenues to build ambitious highway schemes, or on where the roads should be built. The public relations campaign surrounding the *Major Traffic Street Plan* was intended to create such a consensus by claiming that it already existed,

which produced the further claim that Los Angeles was uniquely constituted to make automobiles the favored means of travel. That was not true, because in the mid-1920s the existing patterns of settlement and infrastructure primarily bore the influence of street railways. Moreover, the popularity of the automobile was a national phenomenon, not a local one, albeit with local variations. But those claims of consensus and novelty account for the prominence accorded to the *Major Traffic Street Plan* in the historiography of Los Angeles. They also account for the tendency of later commentators to conflate the representations and the reality, or at least to compress the timing of the much longer transformation in which the *Major Traffic Street Plan* played a small, if highly visible, part. As the commission's descriptions of the city as an automotive metropolis merged with the rhetoric of growth, progress, and regional exceptionalism, Los Angeles came to symbolize something new on the urban scene – the city built for the car. The image was more prescriptive than descriptive: there were plenty of cars, but not much in the way of infrastructure built to accommodate them, and the disparity between vehicles and infrastructure would survive down to the present time. The depictions declaring an automotive metropolis were a collection of assertions intended to mobilize opinion in favor of a goal that would remain tantalizingly out of reach.¹⁰⁴

NOTES TO CHAPTER THREE

¹ Scott Bottles, *Los Angeles and the Automobile* (Berkeley: University of California Press, 1987), 101-20; Martin Wachs, "The Evolution of Transportation Policy in Los Angeles: Images of Past Policies and Future Prospects," in Allen J. Scott and Edward W. Soja, eds., *The City: Los Angeles and Urban Theory at the End of the Twentieth Century* (Berkeley: University of California Press, 1996), 119-20; Robert Fishman, "Re-Imagining Los Angeles," in Michael J. Dear, H. Eric Schockman and Greg Hise, eds., *Rethinking Los Angeles* (Thousand Oaks, CA: Sage, 1996), 254; Fogelson, *Fragmented Metropolis*, 251; Greg Hise and William Deverell, *Eden by Design: The 1930 Olmsted-Bartholomew Plan for the Los Angeles Region* (Berkeley: University of California Press, 2000), 6. An exception to the assertion of the plan's significance is found in Leonard Pitt and Dale Pitt, *Los Angeles from A to Z: An Encyclopedia of the City and County* (Berkeley: University of California Press, 1997), 366, which says: "Despite sound concepts of regional planning, nothing came of the specific proposals contained in the report."

² Clark Davis, "From Oasis to Metropolis," *Pacific Historical Review* 61 (August 1992): 357-86; Kevin Starr, *Material Dreams: Southern California through the 1920s* (New York: Oxford, 1990), 90-119; quotation from brochure for "La Venta," 1925, the country club built atop the palisades in Palos Verdes Estates, courtesy Jim Heimann Collection.

³ Quotation from Los Angeles Times, October 19, 1924.

⁴ On interstitial development and the financial straits of the street railways in the 1920s, see Board of Public Utilities and Transportation, *Annual Report, 1928-29*, 48-54; idem., *24th-27th Annual Reports, 1932-36*, 1-6, 2029; Fogelson, *Fragmented Metropolis*, 172-185.

⁵ Robert C. Post, "The Fair Fare Fight," *Southern California Quarterly* 52 (September 1970): 254-81.

⁶ Bottles, *Los Angeles and the Automobile*, 92.

⁷ November 1923 traffic counts revealed about 650,000 people per day entering the central business district by car and some 750,000 by street railway; Howard Nelson, *The Los Angeles Metropolis* (Dubuque: Kendall-Hunt, 1983), 277-78.

⁸ This "contradiction between private accumulation and collective action," as Peter Hall put it, was the central issue in the planning profession during its formative period; see Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century* (Oxford, UK: Blackwell, 1988), 319-41, quotation on 337. Also see Richard T. LeGates and Frederic Stout, eds., *The City Reader* (2nd edition, London: Routledge, 2000), 359-445. Planning history does not offer a wealth of specific guidance in interpreting the *Major Traffic Street Plan* in terms of this contradiction. Mark Foster tends to credit the planners' own claims that they were able to don the mantle of ideological purity by holding themselves above politics, which fails to encompass the abundant evidence of extensive political engagement on the part of planners. Christine Boyer views city planning in the 1920s as a means of disciplining citizens and the public sector to the pre-eminence of capital, which misses the fact that many of the arguments that crippled road planning were between different capital interests. Boyer views capital as monolithic, but in the arena of road policy it was pluralistic, or, in capital's own terms, competitive. For that matter, the public sector was pluralistic and competitive too, with different agencies serving different constituencies and agendas. Mark Foster, *From Streetcar to Superhighway: American City Planners and Urban Transportation, 1900-1940* (Philadelphia: Temple University Press, 1981), 5-36, and M. Christine

Boyer, *Dreaming the Rational City: The Myth of American City Planning* (Cambridge: Massachusetts Institute of Technology Press, 1983), 61-89, 116-35.

⁹ Automobile Club of Southern California, Digest of Board Minutes, volume 4, page 3 (hereinafter volume:page), 5 February 1920; 4:12 (20 May 1920; 4:16, 3 June 1920; 4:23 (5 August 1920); 4:35-6, 20 December 1920; 4:42, 3 February 1921. On Lippincott's career and his role in the aqueduct controversy, see Norris Hundley, Jr., *The Great Thirst: Californians and Water, 1770s-1990s* (Berkeley: University of California Press, 1992) 146-48, 161-64, 171; William L. Kahrl, *Water and Power: The Conflict over Los Angeles' Water Supply in the Owens Valley* (Berkeley: University of California Press, 1982), 300-323; Abraham Hoffman, *Vision or Villainy: Origins of the Owens Valley-Los Angeles Water Controversy* (College Station: Texas A&M Press, 1981), 57-79, 68-70, 103-06, 115-24, 165-66, 227-241, 273-74; *Who's Who in California* (San Francisco: Who's Who Publishing Co., 1929), s.v.; Gerald J. Giefer and Anelle M. Kloski, "Introduction," in *Water Resources Reports and Papers in the J. B. Lippincott Collection*, Archives Series Report No. 21 (Berkeley: Water Resources Center Archives, University of California, 1970), vi-ix.

¹⁰ J. B. Lippincott and C. H. Richards, *The Los Angeles Traffic Problem: A Detailed Engineering Report* (Los Angeles: Automobile Club of Southern California, 1922), "major traffic street plan" on 22; "Probing Deeply into Our Traffic Congestion," *Touring Topics*, November 1920, 18-9; Automobile Club of Southern California, Digest of Board Minutes, 4:91, 2 August 1922.

¹¹ "Los Angeles Traffic Commission," in Board of Public Utilities, *Thirteenth Annual Report*, 1921-22, typescript, n.p.

¹² Henry Z. Osborne, Jr., "Traffic Congestion and Business," *Southern California Business* 1 (June 1922): 21, 27-7; this was the monthly magazine of the Chamber of Commerce.

¹³ "Los Angeles Traffic Commission," in Board of Public Utilities, *Thirteenth Annual Report*, 1921-22, typescript, n.p.

¹⁴ *Los Angeles Times*, December 13, 1921.

¹⁵ "Los Angeles Traffic Commission," in Board of Public Utilities, *Thirteenth Annual Report*, 1921-22, typescript, n.p.

¹⁶ "Personal Experience Record of Henry Z. Osborne," Osborne Papers, File H-20, Box 17, Special Collections, University of Southern California Libraries.

¹⁷ Automobile Club of Southern California, Digest of Board Minutes, 4:107, 31 August 1922; 4:110, 9 October 1922.

¹⁸ Traffic Commission of the City and County of Los Angeles, *The Los Angeles Plan: A Selected Traffic Program* (Los Angeles: by the commission, 1922).

¹⁹ Traffic Commission, *The Los Angeles Plan*, quotations on 3, 24-25.

²⁰ Clarence R. Snethen, "Tackling a Metropolitan Traffic Jam," *Southern California Business* 2 (October 1923): 17, 38, 48.

²¹ Snethen, "Tackling a Metropolitan Traffic Jam," 48;

- ²² “Personal Experience Record of Henry Z. Osborne,” Osborne Papers, file H-20, Box 17; letter from Osborne to W. S. Weed, July 2, 1928, Box 8, Osborne Papers. In his private practice, Osborne also worked on openings and widenings for Jefferson, Adams, La Cienega and Manchester boulevards.
- ²³ *Los Angeles Times*, August 14, 1923.
- ²⁴ Pitt and Pitt, *Los Angeles A to Z*, 380.
- ²⁵ Eldridge Lovelace, *Harland Bartholomew: His Contributions to American Planning* (Urbana: University of Illinois Printing Services, 1993), 6-16; ; Foster, *From Streetcar to Superhighway*, 34-36, 39, 71, 94, 133, 147-48.
- ²⁶ Minutes of the Los Angeles City Planning Commission, 1:30 (July 1920); *Los Angeles Times*, June 11, 1922 (quotation).
- ²⁷ Minutes of the Los Angeles City Planning Commission, 1:18-29 (July 1920)
- ²⁸ Minutes of the Los Angeles City Planning Commission, 1:256-57 (February 1921); Harland Bartholomew, “Street Widening Methods with Particular Reference to Distributing the Cost,” *Proceedings of the National Conference on City Planning* 16 (1924): 166-87.
- ²⁹ Hise and Deverell, *Eden by Design*, 18-22.
- ³⁰ *Los Angeles Times*, January 3, 1912.
- ³¹ *Los Angeles Times*, September 5, 1916; August 30, 1919; December 31, 1919; September 14, 1921.
- ³² *Los Angeles Times*, August 27, 1922.
- ³³ *Los Angeles Times*, June 11, 1922; *Southwest Builder and Contractor*, December 12, 1919 (AIA).
- ³⁴ Lovelace, *Harland Bartholomew*, 17-21. In the historiography of planning, Lovelace’s memoir of the Bartholomew firm is a salient exception to the curious silence on the crucial matter of client acquisition.
- ³⁵ *Los Angeles Times*, April 13, 1924; October 4, 1924; Charles H. Cheney, “Palos Verdes Estates: A Model Residential Suburb,” *Pacific Coast Architect* 31 (April 1927): 21; Fogelson, *Fragmented Metropolis*, 157.
- ³⁶ “Untangling Our Traffic,” *Touring Topics* 15 (October 1924): 23; “Wider Streets and Better Streets,” *Southern California Business* 3 (November 1924): 13, 50; “Suggested Solution for Los Angeles Traffic Problem,” *The Architect and Engineer* 78 (August 1924): 125-26.
- ³⁷ *Los Angeles Times*, December 23, 1923.
- ³⁸ *Los Angeles Times*, April 13, 1924.
- ³⁹ *Los Angeles Times*, July 25, 1914.
- ⁴⁰ Council Minutes, 149:673-74, October 10, 1924.

⁴¹ *Los Angeles Times*, October 19, 1924.

⁴² *Los Angeles Times*, November 2, 1924.

⁴³ *Los Angeles Times*, November 3, 1924.

⁴⁴ Council Minutes, 151:267-8 (1924).

⁴⁵ *Major Traffic Street Plan*, 7. Cheney statement in Minutes of the Los Angeles City Planning Commission, 1:18-29 (July 1920); for Bartholomew see Lovelace, *Harland Bartholomew*, 54-56 and Harland Bartholomew, "The Principles of City Planning," *American City* 26 (May 1922): 457-61; Olmsted's view in Hise and Deverell, *Eden by Design*, 21, and Boyer, *Rational City*, 69.

⁴⁶ Planners in the 1920s argued both sides of the question of whether streets should be designed first, in isolation from other urban functions, or whether they should be part of a more comprehensive approach. See Foster, *Streetcar to Superhighway*, 36, and Boyer, *Rational City*, 89.

⁴⁷ *Major Traffic Street Plan*, 7.

⁴⁸ The ideology of automotive dominance as framed by Bottles, *Los Angeles and the Automobile*, is critiqued in Chapter One above, with reference to the downtown parking ban, and is also evident in the characterization of the *Major Traffic Street Plan* as proceeding from "the power of consensus;" see Bottles, chapter 4, esp. 92-95. Foster, *Streetcar to Superhighway*, 39-45, generally paints a picture of dissatisfaction with transit on the part of planners in the 1920s.

⁴⁹ *Major Traffic Street Plan*, 16.

⁵⁰ Hall, *Cities of Tomorrow*, quoted words on 323.

⁵¹ Boyer, *Rational City*, 61-63; Hall, *Cities of Tomorrow*, 322-24.

⁵² Hise and Deverell, *Eden by Design*, 21.

⁵³ *Major Traffic Street Plan*, 5.

⁵⁴ *Major Traffic Street Plan*, 28.

⁵⁵ *Major Traffic Street Plan*, 31.

⁵⁶ *Major Traffic Street Plan*, 40.

⁵⁷ *Major Traffic Street Plan*, 48.

⁵⁸ *Major Traffic Street Plan*, 28, 48.

⁵⁹ *Major Traffic Street Plan*, 50-53 for all quotations in this and the following paragraph.

⁶⁰ Hudson prepared similar studies of limited-access highways for at least one other plan undertaken by Bartholomew at the same time as the Los Angeles contract; see Harland Bartholomew, Earl Mills, L. D. Tilton, and William D. Hudson, *A Comprehensive Plan for Memphis, Tennessee* (Memphis: City Plan Commission, 1924).

⁶¹ Hudson's continuous elevated highway was much smaller than the freeways eventually built in Los Angeles. It had only four lanes, two in each direction, and lane width was only ten feet.

⁶² *Major Traffic Street Plan*, 11-16.

⁶³ The first mass-produced closed vehicle was made in 1919, the first inexpensive one in 1921, and in 1925 even the venerable Model T came in closed models. By 1927, 82 percent of the cars built in the United States had closed bodies and hardtop roofs. See James J. Flink, *The Automobile Age* (Cambridge, MA: MIT Press, 1988), 162, 213-14.

⁶⁴ Blake McKelvey, *Snow in the Cities: A History of America's Urban Response* (Rochester: University of Rochester Press, 1995), 79-84.

⁶⁵ Besides the longtime presence of the movie industry, this accident of timing -- the era of Los Angeles's greatest growth came when the diffusion of automobiles throughout American society was substantially accomplished -- looms as the attribute that most distinguished Los Angeles from other cities. One of the earliest commentators to note that simple congruence was the architect Richard Neutra, a European-trained architect who came to the city with an educated outsider's view; see Oliver Carlson, *A Mirror for Californians* (New York: Bobbs-Merrill, 1941), 138.

⁶⁶ See notes 4 through 7, above.

⁶⁷ Henry Z. Osborne, Jr., "Traffic Congestion and Business," *Southern California Business* 1 (June 1922): 21, 26-27; Paul G. Hoffman, "Wider Streets and Better Streets," *Southern California Business* 3 (November 1924): 13, 50.

⁶⁸ Ernest McGaffey, "The Automobile Transforms Business," *Southern California Business* 2 (August 1923): 17, 40.

⁶⁹ *Los Angeles Times*, June 18, 1926.

⁷⁰ For an extensive recitation of the media depictions of the relationship between the car and the region, see Ashleigh Brilliant, *The Great Car Craze: How Southern California Collided with the Automobile in the 1920s* (Santa Barbara, CA: Woodbridge Press, 1989), esp. 28-31.

⁷¹ As noted in Flink, *Automobile Age*, 189: "During the 1920s automobility became the backbone of a new consumer-goods-oriented society and economy that has persisted into the present."

⁷² Carey McWilliams, *Southern California Country: An Island on the Land* (New York: Duell, Sloan and Pierce, 1946), 136.

⁷³ The art historian Edson Armi has produced the most astute discussion of the visual and functional relationships between cars and movies, which were both new technologies in the early 20th century, both based on movement. The car served as a plot device in several ways, from the enactment of freedom or escape to the embodiment of status or wealth. As a production tool, the car-mounted camera was instrumental whenever filming had to follow the action, such as in chase scenes; Armi, *The Art of American Car Design* (University Park, PA: Pennsylvania State University Press, 1988), 13-29. Also see Kathleen McHugh, "Stopping Traffic: Women, Cars and the Cinema," in Kevin Jon Boyle, ed., *Rear View Mirror: Automobile Images and American Identities* (Riverside, CA: University of California Riverside and California Museum of Photography, 2000), 43-66, and Brilliant, *Car Craze*, 99-103. Comedians from

Chaplin to the Keystone Kops all featured car stunts; my personal favorite is the utterly gratuitous collision between a Model T and a Los Angeles Railway Co. yellow car in the Laurel and Hardy talkie, *Hog Wild* (1930). On the recruitment of Earl by General Motors, the best source is Alfred P. Sloan, *My Years with General Motors* (New York: Doubleday, 1964), 124-28. Earl ran the body shop at the Don Lee Cadillac dealership in Hollywood, at the corner of Hollywood and Orange, just west of Graumann's Chinese Theater. The dealership building is still there, adaptively reused as a T-shirt and souvenir shop.

⁷⁴ "Los Angeles and Its Motor-Jam," *Literary Digest*, 81 (26 April 1924): 68-71.

⁷⁵ Marshall Breeden, *California – All of It* (Los Angeles: Kenmore Publishing Co., 1925), 189.

⁷⁶ Alice M. Williamson, *Alice in Movieland* (New York: Appleton Publishing, 1928), 16.

⁷⁷ Rockwell Hunt and William S. Ament, *Oxcart to Airplane* (Los Angeles: Powell Publishing Co., 1929), 213.

⁷⁸ This dynamic is most insightfully discussed in David Gephard, "Introduction," in Jim Heimann and Rip Georges, *California Crazy: Roadside Vernacular Architecture* (San Francisco: Chronicle Books, 1980), 11-25.

⁷⁹ In highly specialized forms of automobility, there is evidence for distinctive practices specific to southern California. Racing was a year-round activity in the salubrious climate, and local race-car builders as well as numerous hobbyists established a substantial presence by the late 1920s. Harold L. Osmer's M.A. thesis (Geography, California State University Northridge) on the cultural geography of Los Angeles racing, is available as Osmer, *Where They Raced: Racing Venues in Los Angeles, 1900-1990* (Chatsworth, CA: by the author, 1996), PO Box 4741, Chatsworth, CA 91313; for a masterful rendering that picks up the story in the 1940s, see Robert C. Post, *High Performance: The Culture and Technology of Drag Racing* (Baltimore: Johns Hopkins University Press, 1994).

Los Angeles was also a center of production for automotive magazines, starting with the tabloids produced by auto dealer Earle Anthony in the 1920s and continuing through the establishment of such organs as *Hot Rod Magazine* in the 1940s; Anthony's publications are found in the Trade Catalog Collection, University of California Santa Barbara, Special Collections and Archives, and a full run of *Hot Rod Magazine* can be perused at the archives of the National Hot Rod Association, Glendora, CA. These automobile-related businesses benefited from the assertion of regional distinctiveness in automobility, i.e., they packaged local car culture for a national audience. Such publications, as well as LA-based advertising agencies and movie and TV production, have continued to issue depictions that assert a unique car culture in greater Los Angeles. To counter those self-interested claims, and to demonstrate that such a culture exists more fully in the depictions than in lived experience, see the list of best-selling cars in Los Angeles County in *Los Angeles Business Journal*, August 23, 2004, in which the Honda Civic and Toyota Corolla top the charts. Or walk through any large parking lot in the region to see that the Civics, Corollas and Ford Tauruses far outnumber the hot rods, custom cars, and high-end production models, except, perhaps, in certain boutique zip codes. In LA car culture, there is far more culture than car.

⁸⁰ *Major Traffic Street Plan*, 56-66.

⁸¹ City Engineer, *Annual Report*, 1924-25, 81; Boyle Workman, "Abusing the Street Work Petition," *Southern California Business* 5 (April 1926): 9-11, 54; *Los Angeles Evening Herald and Express*, August 1, 1932. Becky M. Nicolaidis, *Life and Politics in the Working-Class Suburbs of Los Angeles, 1920-1965* (Chicago: University of Chicago Press, 2002), 143-56 describes the highly deleterious effects of over-

eager application of the Mattoon Act in South Gate, one of the southeastern suburbs, which had a population around 20,000 in the 1920s, or less than 5 percent the size of Los Angeles.

⁸² Traffic Commission, *Annual Report*, 1925, 3-4; Burton L. Hunter, *The Evolution of Municipal Organization and Municipal Practice in the City of Los Angeles* (Los Angeles: Parker, Stone & Baird, 1933), 238; John E. Fisher, "Vintage Traffic Control in Southern California," *The Westernite: Bulletin of District 6, Institute of Transportation Engineers* 55 (January-February 2001): 1-4. Ralph T. Dorsey, "Traffic Control Automatically," *The Municipal Employee* 2 (December 1925): 3-5; on McClintock's career, see Daniel Marc Albert, "Order Out of Chaos: Automobile Safety, Technology and Society, 1925 to 1965," Ph.D. diss., University of Michigan, 1997, chapter 2; on the role of police in municipal government see Eric Monkkonen, *Police in Urban America, 1860-1920* (Cambridge, UK: Cambridge University Press, 1981).

⁸³ Bottles, *Los Angeles and the Automobile*, 126-57; Traffic Commission, *Annual Report*, 1925, 16-17.

⁸⁴ *Los Angeles Times*, November 15, 1926.

⁸⁵ *Major Traffic Street Plan*, 63-64.

⁸⁶ City Engineer, *Annual Report*, 1924-25, 85-86.

⁸⁷ City Engineer, *Annual Report*, 1925-26, 71-83,

⁸⁸ Traffic Commission, *Annual Report*, 1927, 19-35.

⁸⁹ City Engineer, *Annual Report*, 1925-26, 75.

⁹⁰ *Los Angeles Times*, January 4, 1927.

⁹¹ City Engineer, *Annual Report*, 1926-27, 96-98.

⁹² Letter from Ernest East to Henry Keller, October 26, 1925, East Papers, Auto Club Archives.

⁹³ Council Minutes, 171:647 (August 19, 1926); City Engineer, *Annual Report*, 1925-26, 71; Traffic Commission, *Annual Report*, 1926, 15-17; Bottles, *Los Angeles and the Automobile*, 114-15. Bottles interpreted the nine-cent tax the same way it was presented by the Traffic Commission, as a powerful sign of consensus, rather than a desperate measure on the part of the Traffic Commission to stave off the complete failure of the Major Traffic Street Plan.

⁹⁴ *Los Angeles Evening Express*, 12 May 1927, 23 May 1927; *Los Angeles Times*, 12 May 1927, 22 May 1927; *Pasadena News*, 26 May 1927; Ernest East, "Ways and Means of Improving Entrances to Metropolitan Los Angeles," speech delivered to the City Club, 11 May 1927, East Papers, Auto Club Archives; City Engineer, *Annual Report*, 1927-28, 83; City Engineer, *Annual Report*, 1928-29, 10-13; City Engineer, *Annual Report*, 1932-33, 7.

⁹⁵ City Engineer, *Annual Report*, 1928-29, 5.

⁹⁶ J. B. Lippincott also noted the pyrrhic nature of partial openings and widenings, in *Los Angeles Times*, November 1, 1925.

⁹⁷ *Major Traffic Street Plan*, 9.

⁹⁸ Automobile Club of Southern California, Digest of Board Minutes, 5:128, November 1, 1928.

⁹⁹ Automobile Club of Southern California, Digest of Board Minutes, 5:144, April 11, 1929; *Los Angeles Times*, November 6, 1928 and December 28, 1928. The total loss from the embezzlement was about \$14,000.

¹⁰⁰ Charles H. Cheney, *Major Traffic Street Plan and Report for Riverside, California* (Riverside: Riverside City Planning Commission, 1928); "To Prevent the Choking of State Highways by Rational Design and Effective Zoning," *American City* 41 (July 1929): 120, describes the work of a study commission chaired by Cheney.

¹⁰¹ Hise and Deverell, *Eden by Design*, reprints the 1930 plan and discusses how it was commissioned and then buried.

¹⁰² Letter from City Attorney to City Council, August 15, 1932, and letter from City Clerk to City Engineer, August 17, 1932, both in Council File 8206, City Archives.

¹⁰³ Jules Tygiel, *The Great Los Angeles Swindle: Oil, Stocks and Scandal during the Roaring Twenties* (New York: Oxford University Press, 1994).

¹⁰⁴ This disparity between cars and the infrastructure to accommodate them would not be a uniform condition through the rest of the 20th century. Near the end of the era of extensive freeway production, which lasted from 1959 to 1971, the extent of construction might have outpaced the growth of population and traffic for a brief time. Not coincidentally, this is the period when Reyner Banham lived in and studied Los Angeles. Thus his generally appreciative portrayal of the freeways as "not a limbo of existential angst, but the place where [Angelenos] spend the two calmest and most rewarding hours of their daily lives," did not necessarily reflect an alternative means of analysis from the generally critical literature on freeways produced by humanities scholars. He simply saw them during the ephemeral period when they worked best. The difference between Banham and other scholars might not have been epistemological, or teleological, but accidental, a matter of timing. See Banham, *Los Angeles: The Architecture of Four Ecologies* (1971; reprint, London: Penguin Books, 1990), 213-22. Similarly, David Brodsky, *L.A. Freeway: An Appreciative Essay* (Berkeley: University of California Press, 1981) dates from approximately the same period, which helps explain why it takes the form of an appreciation rather than the condemnation that animates most writing about freeways.

CHAPTER FOUR

ONE ROAD AT A TIME: THE WORK OF THE CITY ENGINEERS

The staff of the Los Angeles city engineering office were mostly an anonymous group, whose names rarely made the newspapers. They labored in the long shadow cast by William Mulholland, the aqueduct builder, the head of the water department, and a prodigious figure who personified engineering in popular representations of the city. Henry Z. Osborne, Jr., was the other main exception to the obscurity of municipal engineers, mainly because of his deliberate strategy of mobilizing support through publicity. The colleagues he left behind when he went to work for the Public Utilities Commission conducted their work mostly out of the public view. The names of some of these engineers appear on bronze plaques on the monumental bridges over the Los Angeles River, including Merrill Butler and Herbert Cortelyou, the chief engineer and the structural engineer for the bridges, respectively. Otherwise, their influence must be read in the reports to the Board of Public Works and the city council, where one name, John R. Prince, Osborne's successor as head of the Streets Division, appears on most of the crucial documents that determined what streets the city would build in the 1920s. Prince was neither a diarist nor much of a correspondent. Except for official documents, the chief record of his work and that of his colleagues is the structures that they put in place, an expressive if unarticulated statement for men who spoke, for the most part, with their steam shovels and cement mixers.

Despite their nominal subordination to the Board of Public Works and the city council, the city engineers did play a determining role in the creation of the automotive infrastructure. Every major street project, and most small ones, required approval from the city council, but the council tended to follow the recommendations of the engineers. Nor did the roads and bridges constructed under the city engineers necessarily correspond to the instructions they received, because the engineers exercised considerable latitude during design and construction and in negotiations with organizations outside of city government. Professional expertise – the knowledge of how to design and build large structures – provided one source of the engineers’ authority. Their influence over the built fabric of the city was also based on mastery of the day-to-day processes of public administration. To build a street was “extremely technical,” as reported by the engineering office in 1914, but their definition of “technical” included negotiation and legal skills, not just the ability to design and build: “It is necessary to establish street lines by survey, run profiles, secure deeds for undedicated portions of streets, rights of way for sewers, signatures for waivers of damage, establishment or modification of street grades and curb lines, plans and specifications for improvements . . . and many other things too numerous to mention.”¹

Shepherding a project through all its phases became an end in itself, a worthy accomplishment in the difficult setting for street improvements under California law and the privatized landscape of Los Angeles. Keen focus on bringing individual projects to fruition made the engineers into dedicated incrementalists. An equally keen awareness of the obstacles made political feasibility an important consideration in evaluating a right-

of-way. For the engineers, a right-of-way with a chance of adoption was a good right-of-way, regardless of whether it fit into comprehensive plans. They did not necessarily follow the path of least resistance, but chafed at opposition and at times promoted favored projects in the face of a hostile citizenry, notably the Tenth Street improvements.

In practical terms, feasibility often meant collaboration with the railroads and street railways, which already owned linear rights-of-way. The city engineers were also the public-sector agents for the more coercive provisions added to the Vrooman Act under the state Improvement Act of 1911. As Prince reported to the city council when one of the railroads objected to giving up land for an approach to the Macy Street bridge, “This improvement can be forced through.”² The construction of the first concrete bridge over the Los Angeles River, in 1911, when automobiles were just beginning to alter the demands placed on the city’s streets, served as the model for subsequent highway projects in which the engineers took advantage of railroad property and railroad money.

Unlike the anti-railroad Progressives, the engineers did not attempt to score political points by antagonizing the rail companies, but generally maintained cooperative relations with them. Though the electric trolley companies, the Pacific Electric and the Los Angeles Railway, lacked the capital for major expansion, they could still fund selected projects, and the engineers valued the chance to tap the railways for a share of construction costs for streets and bridges.³ The opportunity for cost-sharing was even greater with the steam railroads, the Union Pacific and the Santa Fe, which were profitable enterprises. The city engineers did not deal with the rail operators solely as regulated businesses over which the engineers held specific powers under the state

improvement statutes, but also as large, wealthy property owners who could help marshal approval for an ambitious highway scheme. The Union Pacific Railroad supplied the initial stimulus for the Tenth Street project, acting not solely in its capacity as a railroad but also in its collateral role as a land developer. Prince and his staff cooperated similarly with the landowners who requested the construction of Mulholland Highway and countenanced a massive assessment district to pay for it.

On these and hundreds of other street projects, the engineers carved out a role for themselves as brokers between public authority and private property. They built roads and highways through a series of project-specific arrangements, based on localized opportunities to use assessment districts, combined with the capture of funding from other sources whenever possible, including the rail companies, the city's general fund, and, when the city council could be persuaded to float bonds, the nation's capital markets. Historian Christine Boyer's observation that planners institutionalized the gap between private and public interests is valid within the realm of promotional strategies, but it does not come to terms with what was actually built.⁴ In the literal shaping of the city, it was the municipal engineers who negotiated that divide.

The engineers were also determined to preserve and expand the authority of their agency amid the institutional confusion over street construction. This competitive attitude was usually submerged because of the engineers' position as civil-service functionaries rather than highly visible policymakers. Only on rare occasions did it break through the studied blandness of bureaucratic communication, and usually to fend off an attack, as when John Prince twisted the knife into the Planning Commission when called

to account for lack of progress on Wilshire Boulevard. This rivalry surfaced again a few years later, when the Planning Commission and the engineering office disagreed over improvements to the road through Cahuenga Pass, the principal route between the Los Angeles basin and the San Fernando Valley. In a letter to the city council, Gordon Whitnall of the Planning Commission blamed the engineers for delays and asked that “the City Engineer’s Office be required to make an early and definite engineering report on the project. . . . We urge every possible speed in connection with the studies we herein suggest.”⁵ City engineer John Shaw’s response departed from the typical report on projects not completed, which often mentioned the need for more information but hardly ever reproached others for its lack. On this occasion, he wrote to the council that “It is not feasible for me to make a definite report on the project from the meager information furnished by the Planning Commission.”⁶

Bureaucratic sniping aside, this conflict between city planners and city engineers expressed a substantive disagreement. Whitnall wanted the Cahuenga Pass road to be improved as part of an extensive street network spanning the north part of Hollywood and reaching into the foothills that separated the basin and the valley, including another main highway to be constructed along the route of Hollywood Way. Shaw wanted to proceed immediately with the Cahuenga Pass road using land and cost-sharing to be obtained from the Pacific Electric, which had a trolley line through the pass, and he prevailed when the council ruled that “the report of the city engineer be adopted,” and that “the Cahuenga Pass project is a distinct one unto itself.”⁷ The engineers had no objection to building more roads in the vicinity. They had previously completed Mulholland

Highway, which opened in 1924, and they were already at work on the “Five-Finger Plan,” which would widen the streets at the southern outlet of the pass.⁸ Their insistence on proceeding with the road through the pass as “a distinct one unto itself” manifested the values that configured their approach to streets and highways. The city engineers shaped the city’s infrastructure not only by determining the priorities for construction in their role as brokers, and not only through their bureaucratic competition with other agencies that contended for control over streets, but also by the content of their work, the specific designs that they executed or advocated. Though never reduced to a manifesto like the *Major Traffic Street Plan*, these values can be inferred from the engineers’ conflicts with other agencies and interests and from the material evidence of their completed projects.

The Engineering Culture of Los Angeles

William Mulholland and the Owens Valley aqueduct loomed large in shaping the values of the engineers, and that they in turn etched onto the landscape of the city. A linear system through rugged terrain, the aqueduct fulfilled the functionalist aesthetic that landscape historian J. B. Jackson described as engineers’ deep appreciation of their own skill in conveying energy and material from one place to another.⁹ The other main training ground for the engineers who built the first generation of Los Angeles highways was railroad work, and a railroad, like an aqueduct, also embodied dynamism in a point-to-point system that was complete in itself. This reverence for flow was satisfied in spatial terms by a line across the map, or across the land itself. It contrasted with the

planner's ideal of balance, which was graphically represented by the grid, a pattern of many intersecting lines.

The aesthetics of engineering also included a visual quality described by historian David Nye as the "technological sublime." Large-scale civil engineering involved the fundamental transformation of the landscape, not necessarily the subjugation of nature, but setting nature off with the "dramatic contrast" of human achievement.¹⁰ The Owens Valley aqueduct impeccably illustrates this idea. One of the largest engineering projects on Earth in its day, it also traversed the spectacular landscapes of the eastern Sierra and the Mojave Desert. The urbanizing environment of Los Angeles did not offer the same kind of opportunity to indulge in the visual appeal of landscape transformation, but rather multiple opportunities at a smaller scale. The construction engineer for Mulholland Highway expressed this aesthetic value when he extolled the vantage points that the road would afford: "In driving over the completed portion of the highway, one is charmed and amazed at the wonderful view of the surrounding country, which is continually changing as the vision sweeps from one side of the summit to the other."¹¹

The technological sublime could also derive from the structure itself, without the contrast between nature and technology. The city engineer's praise for the bridges over the Los Angeles River owed much to his hopes for their visual impact: "The character of these structures will be such as to excite comment from visitors who enter and leave Los Angeles by the railways."¹² The river bridges, with their applied ornamentation derived from various historicist architectural styles, fit neatly into the traditional conception of aesthetic intent, but the engineering eye also found beauty in the most utilitarian,

unadorned structures, especially those made of concrete. Historian Amy Slaton has demonstrated how the purveyors of concrete structures “were formulating new ideas of what was of value to American culture in the new century.” They complemented assertions of cost-efficiency by weaving a functionalist aesthetic around the “‘realism’ of economical construction methods.” The use of concrete produced “an architectural language different from that of older styles but no less self-conscious.”¹³ Pouring concrete was a cultural project, and the engineers could derive satisfaction from the results apart from any claims of efficiency in the reduction of traffic congestion.

All of these aesthetic values – the dynamism of linear-flow systems, the technological transformation of nature, and the particular kind of beauty perceived in concrete structures – resided in a road or a bridge as a stand-alone artifact, whether or not it fit into comprehensive plans for congestion relief. They dovetailed perfectly with the engineers’ incrementalist approach to the politics of right-of-way approval, and the goal of building one road at a time became the central mission of the city’s highway builders. The engineers did not immediately perceive streets in this context when automobiles began to ply the public rights-of-way. Until 1913, the city engineers did not seek to increase street capacity for more traffic flow, as the engineering office reported to the council, but “strongly advocated narrow roadways” that left ample space for flowers and ornamental shrubbery next to the roads.¹⁴ The creation of the Streets Division with Henry Osborne as its chief succeeded in bringing new prominence to street construction, but his approach to “boulevarding the city” would play out after he left the engineering office for the more hospitable setting of the Public Utilities Commission and the Traffic

Commission. The functionalist cultural values of linear-flow systems, landscape transformation, and utilitarian aesthetics could reign supreme in the agency that Osborne left behind, especially because the increase in staff to meet the demand for street construction was accomplished by the transfer of engineers from the aqueduct project, which was completed in 1913.¹⁵ Building one road at a time was not just an expedient political strategy, and not just a tactic of bureaucratic rivalry, but also a source of professional fulfillment to the city engineers.

A final set of considerations in understanding how the city engineers approached their work involves the concern for recognition and the apprehension over their status in society. Amid the clamor of boosterism and the awe-inspiring growth of the city, the engineers sought appropriate acknowledgment for their indispensable role. They basked in the reflected glory of William Mulholland and sought to emphasize their connection with him, and they built memorials to themselves into the decorative treatments of bridges, tunnels, and, incongruously, into the arched openings of sewer outlets.

Their fondness for concrete also expressed a concern over the social position of engineering at a time when school-trained engineers began to supplant “practical engineers” like Mulholland, who began his career with a shovel in his hands before ascending through the ranks. Amy Slaton has shown how the adoption of concrete as a building material involved extensive negotiation over the definition of expertise, as engineers sought to “translate knowledge into occupational . . . advantage.”¹⁶ The promulgation of technical standards and testing procedures was not simply a scientific program, but a social program that put the control of concrete construction in the hands of

a small number of highly trained individuals. Quality control in concrete construction fell short of scientific objectivity because testing procedures included such instructions as applying “moderate pressure” or measuring the volume of sand by packing it in “the usual way.”¹⁷ Such directions could only make sense within assumptions about the identity of the practitioners. Standards and specifications were not regularized to the extent that the results could be replicated by any reasonably attentive person, or in any social context. Their successful application was confined to those who already possessed familiarity with the work, or, as formal education replaced practical experience as the entry to the engineering profession, to those who were admitted into the coterie of experts.

Those lines were drawn significantly according to gender, evident in one educator’s pamphlet on the “Fundamental Manhood Qualifications of Engineers,” or another professor’s list of desirable character traits for engineers as “Specifications for a Man.”¹⁸ It is possible that the city engineers’ antagonism toward the City Planning Commission expressed gender anxiety provoked by the prominence of women reformers in the formation of the commission. Even absent such direct and conscious confrontation, a concern for their own occupational status shaped the engineers’ sense of their role and their mission. As Slaton put it, “Technologies . . . do not incidentally encourage a particular social order as they pursue a material end, but rather bring into being a technical order as they pursue a social end.”¹⁹ Seeking to reinforce their own status by staking out a determining role in the production of streets and highways, the city

engineers of Los Angeles enacted a technical order that could proceed whether it resolved traffic congestion or not.

Roads and Plans

John Prince and his staff did not explicitly disdain comprehensive planning. They cooperated with the *Major Traffic Street Plan* after it was approved by the voters because it increased the staff and budget for their agency, but they did not view highway planning as synonymous with the *Plan*. They understood the *Plan* for the political and promotional device that it was and supported those efforts to overcome the difficulties of street approval.

Even while the engineers were mainly concerned with building individual projects, they had their own inexplicit version of a citywide street network, which sometimes agreed with the *Major Traffic Street Plan* and sometimes did not. The tremendous increase in subdivisions west of downtown made obvious the need for more east-west arteries in the Los Angeles basin. Prince's main solution involved the expansion of Tenth Street into the principal thoroughfare to serve this traffic. When the authors of the *Plan* dutifully included it, they provided Prince with one more argument in favor of a road that he had already resolved to build. Osborne's grid of boulevards, which had originated in the Streets Division before its incorporation into the *Plan*, also seemed a perfectly suitable blueprint to the engineers. They made steady progress on securing rights-of-way for it as opportunities arose during the department's review of subdivision applications, when the engineers could ask developers to set aside highway

easements. The engineers could not force the easement donations, but they did hold a persuasive position with respect to developers who sought to get their subdivisions approved, and who expected to pass on the tax increments to homeowners in any case. The template for the major east-west boulevards in the Los Angeles basin, which have been credited to Olmsted, Bartholomew and Cheney, was actually put in place by this method before Osborne hired the consulting team.²⁰ Similarly, congestion along both banks of the Los Angeles River, where the traffic included steam railroads and electric trolleys as well as trucks and cars, had been a priority for everyone concerned with traffic since the Bion Arnold report of 1911. The bridges over the river, with their grade-separated approaches, addressed this complex issue, and the city engineers embraced the massive bridge program with exceptional zeal. Some of the bridges they built accorded with the *Major Traffic Street Plan*, but others, notably Sixth Street Bridge, made it impossible to follow the recommendations of the Traffic Commission's consultants.

Prince and the city engineers also undertook individual projects that were not even mentioned in the *Plan*. Mulholland Highway was illogical as a traffic artery but it did not directly contravene the premises of the *Plan*. It did undermine the spirit of the *Plan* by enabling the engineers to inscribe onto the landscape the values of the engineering department at the precise time when the Traffic Commission was trying to establish a framework for administering transportation infrastructure that would diminish the hands-on approach of the engineers. East of the Los Angeles River, the work of the city engineers diverged thoroughly from the comprehensive recommendations. The *Plan* called for the upgrade of Valley Boulevard to serve as the main artery leading northeast

out of the city.²¹ Starting in the late 1920s, the city engineers instead began to develop Ramona Boulevard, three-quarters of a mile south of Valley, as the principal corridor serving traffic to the northeast, creating a path dependency in concrete that would be littered with legal and technical difficulties for generations to come.

When a constructed project departed from comprehensive plans, it subverted the plans by changing the conditions on which they were based. A nonconforming highway project could cause the wholesale scrapping of superceded possibilities, change the priorities among different options for subsequent work, and present new options inconceivable under prior conditions. Each construction episode was embedded in its own contingencies, the product of site-specific political feasibility and property-owners' intentions, as mediated by the city engineers. These processes produced results that were a mix of the expected and the unanticipated. Some cases were marked by confusion, many by improvisation, and virtually all major completed projects caused changes in the plans and policies that would encompass roadbuilding as a public function. As Prince refined and extended the project-specific approach to providing infrastructure, his agency would effectively, if not intentionally, undermine Osborne's pursuit of comprehensive solutions to the city's traffic problems.

This chapter follows the work of the city engineers in their role as engineers rather than as participants in policy debates. They had their own notions about what should be built, and they were able to act on those preferences outside the broad policy considerations that have occupied the existing interpretations of transportation in Los Angeles. They were also able to proceed without necessarily fulfilling the intentions of

those who funded the work, by negotiating on a case-by-case basis the boundary between private economic interests and the political authority of the city council. To grasp the ability of these engineers to conceive – and, more importantly, to construct – large portions of the city outside of the systemic policy considerations that dominate the existing interpretations is a necessary step in comprehending the cultural landscape of transportation in Los Angeles.²²

“Pontifex Maximus”: The Los Angeles River Bridges

Between 1925 and 1932, the city engineering department completed ten spectacular bridges over the Los Angeles River. Taken together, the bridges created a thoroughly engineered corridor, between Fletcher Drive at the north end and Washington Boulevard to the south, and established the spatial relationships that survive to the present day among the railroads, the street railways (or their former locations), the streets, and the river.²³ The smallest of them is almost a thousand feet long, a massive scale that allowed the bridges also to span the railroad tracks running along both banks of the river. The predominant structural material is reinforced concrete and the predominant structural form is the arch. The plainest of the bridges feature ornamental railings and light standards, but most of them have more extensive decorative treatments in a range of architectural styles, from Neoclassical to Spanish Colonial Revival. A recent study by Historic American Engineering Record, the federal agency charged with documenting the nation’s technological heritage, concluded that these structures comprise one of the finest urban bridge ensembles in the United States.²⁴

The river bridges have been the subject of a substantial body of scholarship that has emphasized their significance as examples of the City Beautiful movement, as illustrations of the development of reinforced-concrete technology, and as nodal structures in the development of the region.²⁵ These works have provided authoritative accounts of the bridges' design and construction, which I do not intend to replicate. My interest lies in how the funding methods for the bridges fit into the broader story of the city engineers' efforts to establish their agency's role in the planning and construction of the automotive infrastructure of Los Angeles.

The city raised its share of the construction budgets from four bond issues approved by the voters between 1923 and 1926, but the bonds paid for less than a quarter of total project cost. The county matched the city's share, and the city engineers obtained the balance from the railroads and street railways in a series of site-specific transactions. The agreements varied according to the amount of rail property taken for each structure and the configuration of nearby streets, which determined the number and the scale of grade separations to isolate rail traffic from street traffic. To build First Street Viaduct, for instance, the city and county each put in 23.5 percent, the Los Angeles Railway 18 percent, the Santa Fe Railroad 25 percent, and the Union Pacific, 10 percent. For the new bridge at Seventh Street, the city and county paid 18 percent each, the Union Pacific and Santa Fe 25 percent each, and the Los Angeles Railway, 14 percent.²⁶ These agreements served as a laboratory for the expansion and refinement of the engineers' brokering skills as they pieced together the construction budgets. The bonds for the city's share represented the crucial portion because they paid for street improvements sought by

public authorities but resisted by the railroads. On that score the engineers might have learned their lesson too well. After the first bond referendum for the river bridges, they obtained funding for other highway projects through the same means for three more years, until the city council put a stop to it.

Before 1910, the river bridges in the central part of Los Angeles were the timber or iron structures erected by the rail companies. They were all multiple-span trusses of timber or iron, with their decks and approaches at the level of the surface streets. Rotting timber and rusting metal imposed constant maintenance demands. The river's periodic floods occasioned more serious repairs when water-borne debris crashed into the bridge piers or the rushing water undermined foundations. The bridges also accommodated pedestrians and, starting in the early 1900s, automobiles, which brought them under the purview of the city engineers. Every year the engineers requested funds to repair or rebuild parts of the bridges, especially the ones closest to downtown, at First and Macy streets. The council occasionally complied with the more urgent requests, but there was scant prospect of replacing the bridges or building new ones at additional crossing locations until a group of developers on the east side took matters into their own hands.²⁷

Property owners in Lincoln Heights, organized as the East Side Improvement Association, sought to replace the "rickety viaduct" at Buena Vista Street (later North Broadway) with a new viaduct. In 1905, they negotiated with the Union Pacific Railroad and the Los Angeles Railway Co. to obtain half the anticipated construction cost.²⁸ They also arranged to obtain space for an elevated approach to the bridge on the east side by bartering city land along Downey Road for a piece of railroad property adjacent to the

bridge site, a deal that subsequently received the blessing of the city council.²⁹ The plan dragged on for years despite such promising steps, because the city council declined to commit public funds for the other half of the construction cost. The booster-friendly *Los Angeles Times* urged the council to act, pointing out the new trolley bridges planned for Main and Seventh streets, and gushing that “Los Angeles is the Pontifex Maximus of the day,” after the bridge-builder of ancient Rome. The *Times* argued that the cost share by the rail companies offered a timely opportunity, and urged expenditure from the general fund to “avoid the necessity of selling bonds.”³⁰ The council held firm until the East Side Improvement Association successfully ran one of their own, Reuben W. Dromgold, for a seat on the city council, with the purpose of winning approval for the Buena Vista bridge. Dromgold secured appointments to the Bridge Committee and the Finance Committee, pushed through the city’s 58-percent share of the construction budget from the general fund, enlisted the participation of the Los Angeles Railway, and even arranged for the city to sell a portion of Elysian Park to the Union Pacific for additional track facilities on the west side of the river.³¹

City engineer Homer Hamlin did not squander the chance to display the prowess of his agency. His staff designed the city’s first concrete-arch bridge, which was also the largest of its type in California at the time, and one of the largest in the nation. For the decorative treatment Hamlin enlisted architect A. F. Rosenheim, a member of the Municipal Arts Commission, who framed the bridge’s portals with imposing pylons and accented the mid-river pier locations with miniature Roman temples. Buena Vista Viaduct won praise as an ornament to the city from reformers and boosters alike. Before

it was completed, the Municipal Arts Commission published Hamlin's paean to its Neoclassical form and ornament as an appendix to Charles Mulford Robinson's report, *Los Angeles: The City Beautiful*. When the viaduct opened in 1911, the *Times* pronounced it a "majestic" addition to the city.³²

Buena Vista Viaduct has been described as the "paradigm of the bridge building process" in Los Angeles, but it was only partially so.³³ It lacked the key ingredient of bond funding that propelled subsequent construction in the river corridor. The city engineers pioneered that strategy in their efforts to build a tunnel to conduct Second Street under Bunker Hill, in downtown. Henry Osborne administered the project as head of the Streets Division, but encountered a familiar problem, as he reported in 1914: "The process of harmonizing the large number of conflicting property interests and finally determining the matter of damages is a problem which is necessarily slow of solution."³⁴ He could, however, get the property owners to agree on getting others to pay, and they helped him persuade the city council to place a citywide bond referendum on the ballot in 1916.³⁵ After it was defeated in a close election, Osborne enlisted the city council and the state Railroad Commission to order the Los Angeles Railway to reroute its tracks from First to Second Street. That would place the tracks in the tunnel and win a cost share from the railway, and the recommendation cited the precedent of the railway's contribution to Buena Vista Viaduct.³⁶ To the engineers who constantly encountered the impediments to large road projects, any method that succeeded in prying open a niche of approval was memorable, and worth trying again. The track-relocation ploy worked and construction began in 1921, after Osborne had left the engineering office to join the

Public Utilities Commission.³⁷ The 1916 bond issue, despite its failure at the polls, had established an important precedent: it was the first time the council allowed onto the ballot a citywide bond referendum for a highway project.

The engineers continued to call attention to the deteriorating condition of the river bridges, but the long-sought remedy would only come when the state Railroad Commission ordered the rail companies to build grade separations to rectify the congestion of rail and street traffic in the vicinity.³⁸ A Railroad Commission survey found that railroads and trolleys accounted for more than 3,300 daily “train movements” in the river corridor, where they were crossed by almost 200,000 automobiles per day.³⁹ Trains and trolleys crossed each other too, and a horrifying collision in 1916 between a Santa Fe train and a Pacific Electric trolley set the reconstruction program in motion.⁴⁰ After the collision, the Municipal League, a Progressive organization devoted to political reform, filed a complaint with the Railroad Commission requesting action “to ameliorate the grade crossing situation within the city limits” as well as the consolidation of all the tracks in the city and construction of a new union station and freight facilities.⁴¹ The Chamber of Commerce and the Community Development Association wrote letters of support, as did the cities of Pasadena and South Pasadena. Conspicuously absent was the city of Los Angeles, but that was no oversight. Separating the rail and street grades at the river bridges would entail considerable expense for the city, not just the railroads. To ward off the drain on its budget, Los Angeles filed a counterclaim protesting that the Railroad Commission did not have jurisdiction to force the grade separations.⁴² The state Supreme Court upheld the commission’s authority, and in 1921 it ordered the railroads,

street railways, city and county to separate the grades where tracks intersected city streets along the river. Marshall Stimson, an attorney and Progressive reformer who took part in these events, would later claim that the commission's order was the "proximate source" of the river bridge program, but it was only a start, because there was still no funding for the city to pay its share.⁴³

Two days after the Railroad Commission's decision, the city council resurrected the idea of a citywide bond issue. It came at the suggestion of the Public Utilities Commission, which probably means that it originated with Henry Osborne, who was familiar with the case through his participation in the Railroad Commission's study of train and vehicle movements in the river corridor.⁴⁴ The referendum for \$1 million in bonds to pay the city's share of grade separations came to the ballot two months later. After it was defeated, the Chamber of Commerce and the *Los Angeles Times* applauded the result. They maintained that the more basic issue concerned a new union station, and that the voters "declined the bait held out to them to begin eliminating grade crossings piecemeal, determined to wait until they can be entirely abolished as part of the union terminal project."⁴⁵ That convoluted claim omitted the fact that the Railroad Commission had not ordered a far-reaching overhaul of the city's track facilities nor the construction of a union depot. In hindsight, a simpler explanation helps account for the defeat of the bonds, as it was consistent with the propensity of Angelenos to decline raising their taxes for projects that did not directly benefit their own individual properties or neighborhoods.

The city engineering staff had prepared preliminary designs for new bridges at all the major bridge locations before the Railroad Commission's mandate to eliminate the

grade crossings. They identified the important intersections between road and rail and penciled in the new street alignments and grade separations. Mindful of the positive reception for Buena Vista Viaduct, they sketched the elevations of all the river spans as clones of the 1911 bridge. The failure of the 1921 bond referendum gave the engineers some breathing space to survey the bridge locations, complete the construction drawings, and negotiate the cost-sharing arrangements with the various rail companies.⁴⁶ Cost estimates based on the finished plans put the city's share for the first five bridges closer to \$2 million than \$1 million, and the city council authorized a bond referendum at the higher amount for the election in early June 1923.⁴⁷

The campaign on behalf of the bonds emphasized the perils of the existing situation, the economic benefit that new viaducts would bring to the city by improving the efficiency of the steam railroads, and the relief of automobile congestion in the river corridor. The supporters also pointed out that it was a good deal for the city, based on the fact the city's \$2 million share for the five viaducts would be exceeded by the rail companies' total contribution of \$7.2 million. The familiar roster of organizations urged passage: the Chamber of Commerce, the Community Development Association, the Auto Club, the City Planning Commission, the Traffic Commission. The Chamber sent speakers to improvement associations and civic groups throughout the city. They found particularly receptive audiences on the east side. At a "mass meeting" in Boyle Heights, the president of the Hollenbeck Heights Improvement Association appealed to the financial interest of the property owners: "The proposed viaducts would increase property values . . . to such an extent as to more than justify the necessary expenditure of

funds for their completion.” At the same meeting, the president of the city council insisted that the council only followed the wishes of the voters, and placed the city’s reluctance to approve highway bonds squarely on their shoulders: “Don’t prod the council. Prod yourselves.” No one mentioned the appearance of the bridges.⁴⁸

The passage of the bonds launched the city engineering office on its most extensive program of transportation development to date. Bridge engineer Merrill Butler, who was hired to oversee viaduct construction, conferred with the Municipal Arts Commission on the decorative treatments, which were selected according to site-specific themes. “Because the Macy St. viaduct is on the El Camino Real,” reported the Arts Commission, “Spanish colonial architecture was adapted for the design.”⁴⁹ Butler gave a streamlined, modernistic look to the Glendale-Hyperion Bridge by “carrying up the lines of the abutments through and above the handrails, terminating them in four large pylons.”⁵⁰ Before the passage of the bonds, city engineer John Shaw had praised the “character of these structures” and their ability to “excite comment from visitors who enter and leave Los Angeles by the railways.”⁵¹

But the comments never came, until recent times, when the appreciation for the appearance of the bridges became linked with their historical significance. The viaducts surely incited eager comment, but more for their impact on the real estate market than for their ornamentality. “Los Angeles is today spending millions on great steel and concrete VIADUCTS spanning the Los Angeles River to meet tremendously increasing traffic conditions to and from the east side,” ran a typical advertisement, which contined, “Drive

out today over the new 7th or 9th St. Viaducts. . . . Big sales campaign now under way. All lots priced for the average investor.”⁵²

A walk or a drive along the river to view the bridges makes evident why they did not “excite comment” for their appearance, why they were only identified with the City Beautiful movement by the Municipal Arts Commission that was brought into being in service of that reform program.⁵³ The river corridor is, and was, a gritty, utilitarian landscape of railyards, warehouses and factories strung out along the river, not the type of cohesive civic or institutional center that was the paradigmatic site for City Beautiful planning. Perhaps Shaw’s visitors entering and leaving the city by train could catch a sidelong glance at the viaducts, but only for a few seconds as the train rolled past. The bridges are undoubtedly impressive, even majestic, and if the residents of the city cared more about their economic impact than their appearance, that did not trouble the the engineers, who did not mind presenting such grand gestures to a limited audience consisting significantly of themselves. They did crave recognition, however, and on one of the last river bridges, at Washington Boulevard, they indulged in a wistful exercise of self-memorialization. Around the tops of the pylons are bands of panels containing terra cotta relief sculptures that depict the stages of designing and building a bridge.⁵⁴

The engineers also appreciated the implications of a highway bond issue financed by tax increments on all the real estate in the city. Soon after the 1923 election, they prepared specifications and negotiated cost shares from the railroads for another river bridge at North Spring Street. In the final bonding package presented to the council, they also included bridges that did not cross any rail lines and thus had no claim on the rail

companies for a share of the construction (Avenue 26 across the Arroyo Seco and San Fernando Road over Pacoima Wash). The council placed it on the ballot in 1924 and the voters came through. Besides using the money for the bridges named in the referendum, the engineers spent some of the proceeds on other favored projects that had no previous source of funding, such as a small bridge on Malibu Road over Santa Ynez Creek.⁵⁵ The formula worked again in 1925, with a bond issue for two river bridges (Glendale-Hyperion and Fletcher) and the rest of the proceeds for bridges throughout the city. And once more, in 1926, when the river bridges at Sixth Street and Washington Boulevard headlined the referendum but the engineers also spent the money on “six smaller bridges in various parts of the city.”⁵⁶ The engineers assured their own ability to allocate construction funds as they saw fit by inserting vague language into the text of the referenda. The 1926 bond, for example, began with a detailed description of the Sixth Street and Washington Boulevard projects, then stated that the proceeds would also be used “for the completion, construction, reconstruction, replacing, repair and alteration of various bridges and viaducts.”⁵⁷ The city council might have become alarmed over the balance of bonded debt, or might have realized that the engineers had seized for themselves the ability to apportion municipal resources. In any case, the council brought an unambiguous end to the practice when assembling the election ballot for 1927: “The Council has decided to place no bond issue on said ballot.”⁵⁸

At a total cost of \$17 million, the ten Los Angeles River bridges designed by the municipal engineers represented the largest and most expensive transportation improvements undertaken by the city up to that time. They corrected an egregious safety

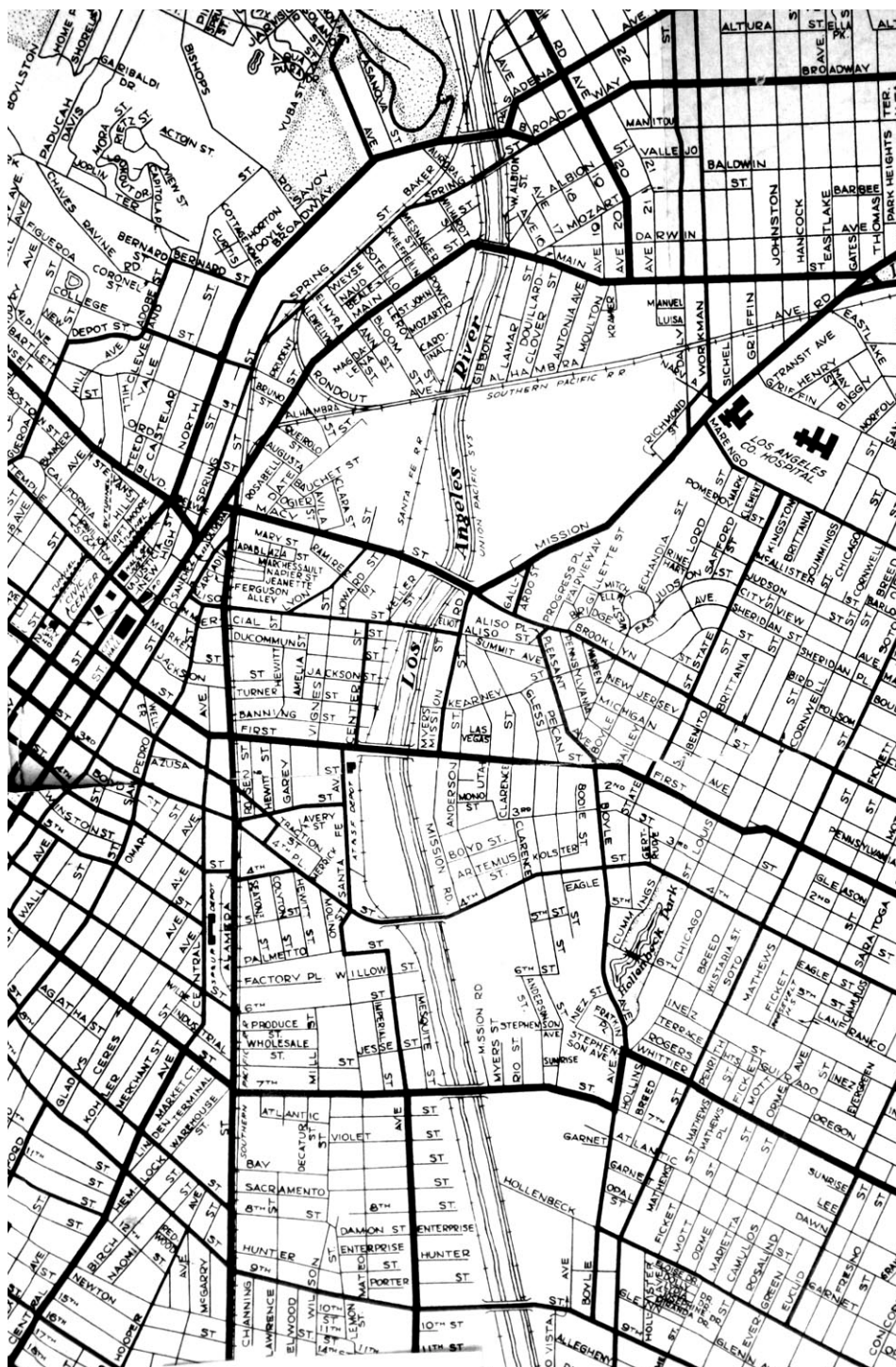


Figure 4: The Los Angeles River Corridor, 1930. Most of the river viaducts were completed or under construction, with the notable exception of Sixth Street Bridge. The areas adjacent to the river that do not have dense street grids were either railyards or complexes of factories and warehouses. (North is to the right.) Source: *Street Map of the City of Los Angeles* (Los Angeles: Automobile Club of Southern California, 1930). Used with permission; all rights reserved.

and congestion problem, propelled the local economy by improving access to the industrial districts and subdivisions on the east side, and won the support of voters throughout the city. The engineering staff provided innovative technology on a staggering scale and a tight schedule.⁵⁹ They dutifully served the directives of elected officials and the citizens who gave with their ballots and with their wallets, but the engineers also maneuvered within the interstices of a complex legal and political process to establish pockets of administrative autonomy that they used for their own ends. They spent money earmarked for the most densely built-up part of the city to build a bridge on the remote and undeveloped Malibu Road, colonizing with concrete the splendid coastal landscape. They were pleased to have their work on the river bridges applauded as architecture, even if they were the only ones clapping. And when they coveted recognition, they molded their narrative into the Washington Boulevard Bridge. Subtly interwoven into the highly visible viaduct program, the agendas of the city engineers would emerge more starkly in projects that they initiated or controlled themselves.

The Tenth Street Improvements

In early 1922, while Henry O'Melveny and his cohorts were hatching the Archway scheme, Gordon Whitnall and the City Planning Commission were advocating the upgrade of Beverly Boulevard, and Henry Osborne was forming the Traffic Commission to oversee the creation of major streets, John Prince and the Streets Division began to push their own idea for the primary east-west crosstown artery in Los Angeles: the opening and widening of Tenth Street. The idea began as part of an industrial

development strategy undertaken by the Chicago-based Union Pacific Railroad and a group of investors associated with the Union Pacific who proposed to build the Los Angeles Central Manufacturing District. Union Pacific owned some 1,000 acres along the east bank of the Los Angeles River between Fourth and Tenth streets. The Central Manufacturing District owned another 300 acres south of Tenth. Seeking to transform this undeveloped property into a vast landscape of production, the plan called for providing road, rail, water and sewer service, then subdividing the property and leasing or selling it to manufacturing and warehouse operations. Public-sector participation in infrastructure development was a critical part of the plan, and the landowners petitioned the city to upgrade Tenth Street into an arterial thoroughfare.⁶⁰

The industrial developers were primarily concerned with the traffic congestion in the river corridor, where the viaduct and grade-separation construction had not yet begun. To the city engineers, a larger scope of improvements to Tenth Street could allow traffic to skirt the southern edge of downtown, provide access to the western subdivisions, and replace busy Whittier Boulevard as the outlet to the east and southeast. By emphasizing the claim that a new 100-foot-wide right-of-way would become a "great cross-town boulevard," Prince also promoted Tenth Street as a project of obvious benefit to the entire city, and therefore a means to avoid the usual stalemates over highway approval and funding. The claim of broad public benefit emboldened Prince and his chief, city engineer John Griffen, to ask the city council for construction money from the city's general fund. Any contribution from the city would reduce the assessments on abutting properties, and thereby minimize opposition too.⁶¹

The industrial promoters obligingly expanded their petition to take in the larger goals of the city engineers, and spearheaded the formation of the Tenth Street Improvement Association to lobby for its approval. The amended petition might have been drafted by Prince himself. It echoed his phrasing (e.g., "great cross-town thoroughfare" instead of "great cross-town boulevard") and included goals that fell far outside the concerns connected with building an industrial district next to the river: accommodating traffic to and from "the beach cities to the west," as well as to the Imperial Valley and San Diego. Based on the engineers' claims of citywide benefit, and attentive to powerful interests like the Union Pacific and the Central Manufacturing District, the city council took the unprecedented step of appropriating \$1.5 million from the city general fund. That would pay one quarter of the \$6 million estimated by the engineers for acquiring the right-of-way and opening or widening Tenth Street across the entire city, from the eastern to the western boundary of Los Angeles.⁶²

The rest of the cost would have to come from special assessments, and protests began trickling in from individual homeowners before the engineers even starting laying out the boundaries for the assessment district. When the shape of the district boundaries began to emerge, the objections grew far more vociferous. To raise the \$4.5 million beyond the direct funding provided by the council, Prince had to widen the assessment district three blocks north and three blocks south of Tenth Street, thus taking in properties fronting on other streets that were subject to pending assessments, including, at various locations, Eighth, Pico, Wilshire and Whittier. Soon the opponents began to collect signatures on petitions and coordinate postcard campaigns. One petition represented all

the property owners on three blocks of the proposed right-of-way. Another had signatures from at least one property owner on every block in the assessment district, 460 people in all. Small retailers in the residential neighborhoods on both the east and west sides also joined the opposition.⁶³

The supporters of the project portrayed the protestors as selfish money-grubbers, interested only in avoiding taxes, and that was certainly one of the frequently mentioned objections. For the most part, however, the protests did not focus directly on taxes, but rather on fairness and on competing visions of the public good. The most common objection resonated with the engineers' claim of citywide benefit, but turned it around to oppose tax increments charged to the frontage owners: "The proposition is so expansive that it may rightfully be considered a public improvement and should therefore be borne by the public as a whole."⁶⁴ The question of who would benefit produced a crossfire of claims and counterclaims. Small business owners on the east side thought the project would primarily benefit downtown, and west side business owners thought it would further the interests of those developing suburban property outside the city limits. Storeowners on Pico, two blocks south of Tenth, observed that they would be paying for the improvement of a competing street. Contrary to the imagery of Los Angeles car culture, there was no consensus as to the desirability of automobiles among the citizenry: "I have no automobile," wrote one resident, "so the widening of Tenth Street is no more benefit to me than to a man that lives in Alaska or China." There were objections based on safety: "It [will be] a nuisance and dangerous to the people that live near and have to cross Tenth Street."⁶⁵ Others complained on aesthetic grounds: "The elimination of the

graceful bend in the street at Wilton [Place] will not enhance the beauty of the street but on the contrary detract from it." Given the origins of the project, the opponents had reason to resurrect the Progressive tactic of demonizing the railroads: "[Tenth Street] is intended to benefit special interests such as the Union Pacific Railroad."⁶⁶ Far from expressing widespread accord on rebuilding the city to accommodate the automobile, Angelenos instead proved adept at identifying reasons why that should not be done.

Though widespread, the resistance did not coalesce around a single issue or leader, which made the protest difficult to sustain. In June 1923, when the city council convened a public hearing prior to voting on the assessment district, over 1,800 valid objections had been received. That was the largest road protest the city had ever seen, but only about 17 percent of the 11,000 properties within the assessment-district boundaries, far short of the majority that was needed to stop the project.⁶⁷ The council voted to proceed with the final design of the alignment, and Olmsted, Bartholomew and Cheney subsequently incorporated the improved Tenth Street into the recommendations of the *Major Traffic Street Plan*. The expansive configuration of the district would soon prove to be its undoing. A group of property owners sued the city because the required legal notices were all titled "Tenth Street," but properties that did not front directly on Tenth would also be assessed for the cost of the improvements. Owners of some of those properties charged the city with "knowingly proceeding under a misleading ordinance of intention and notice of public work with the intent to deceive and defraud plaintiffs." The city lost in Superior Court and, in March 1926, lost its appeal in state Supreme Court. The largest highway project in the city was stopped.⁶⁸

An extensive debate ensued in the city council concerning the future of the project. One side favored the aggressive action proposed by the city engineers: fix the technical deficiency of the project name and proceed as before, "with such speed that no time might be allowed for any opposition to develop." Those who wanted to move more slowly pointed out a potential inequity: the Tenth Street improvements had been approved before the adoption of the *Major Traffic Street Plan*, and the network of arteries in the *Plan* had created the possibility of assessments on the same property for many different streets.⁶⁹ Caution prevailed and the council instructed the engineering office to map out three different alignments with corresponding assessment districts. Over the next two years, the engineers tinkered extensively with the route and the boundary to avoid the pockets of most obdurate resistance.⁷⁰

Those who opposed the Tenth Street improvements did not speak with a unified voice or a common set of arguments, but if their reasons for opposition were different, they all proceeded from the same impulse – to stop the expansion of Tenth Street into a through artery. Even though their reasons cannot be aggregated, their voices should not be lost to us. When people across the entire path of the project found reason to oppose it, their resistance cannot be dismissed merely as shortsighted and selfish. It was a different vision of the city. It was as yet an inchoate vision, but there was one common theme: none of the dissenters wanted to have a 100-foot-wide right-of-way with multiple lanes of high speed traffic. That impulse toward opposition would be mobilized in formally organized citizens' groups as the revised Tenth Street moved through the subsequent steps of design and approval, in the process of becoming Olympic Boulevard. The next

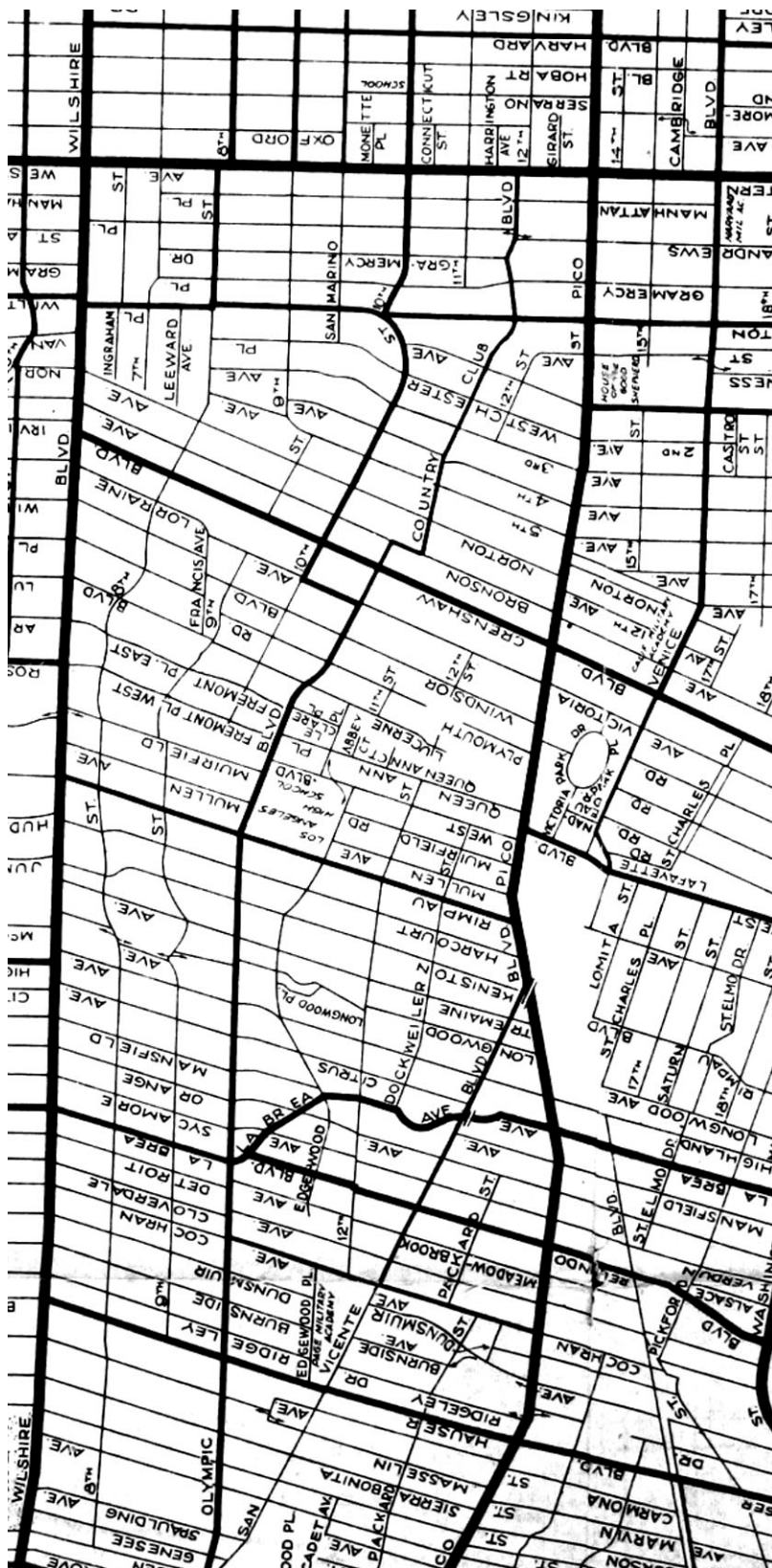


Figure 5: In the mid-city area, around Crenshaw Boulevard, the Tenth Street/Olympic Boulevard improvements encountered determined resistance from homeowners. The right-of-way was interrupted just west of Crenshaw, where Tenth Street stands to the north of the alignment for Olympic. Source: *Street Map of the City of Los Angeles* (Los Angeles: Automobile Club of Southern California, 1930). Used with permission; all rights reserved.

decisive conflict came in the early years of the Depression, when public works became entwined with the politics of unemployment relief, and that struggle is considered in Chapter Six.

In the viaduct project, the city engineers threaded their own preferences and priorities through a large and complex undertaking. In Tenth Street, the engineers drew a line on the map but the property owners of the city quickly erased it by capitalizing on one of the many opportunities for procedural opposition provided by the state improvement statutes. As streets and highways became increasingly prominent in the politics, the economy, and the culture of Los Angeles, the engineers who cast themselves in a central role in roadway development had their views either submerged or defeated. Overlapping in time with their work on the viaducts and Tenth Street, Mulholland Highway would provide the sought-after chance for the engineers to express their vision of road construction in Los Angeles.

Mulholland Highway

Mulholland Highway, a 22-mile, twisting roadway completed in 1924 along the ridgetops of the Hollywood Hills, meant different things to the real estate investors who first promoted it and to the engineers who designed it and supervised its construction.⁷¹ "The property in the district is owned by a small group of capitalists who expect to be rewarded for their enterprise by the subdivision of the frontage on the highway into building sites," wrote the trade journal for the region's construction industry.⁷² But Mulholland Highway did not raise property values and development opportunities in the

hills and the adjacent San Fernando Valley until a generation later than anticipated, when its original advocates were no longer in a position to benefit. The reasons are apparent in retrospect: the highway created a cul-de-sac rather than a connection with the principal roads of the growing city, and the threat of fire and landslide in the chaparral environment of the hills discouraged development and settlement. Despite the known fire threat and the city's established practice of integrating the construction of highways and underground utilities, the roadbuilding project did not incorporate provision for water mains. The fire hazard only surfaced in the proceedings when the city engineering staff sought a pretext for accelerated administrative procedures, and it still did not cause modification of the design or construction.

The disjunction between the expectations of its promoters and what the engineers produced was so extreme that the promoters petitioned to close the road barely five years after raising a million dollars to complete it.⁷³ This disparity cannot be explained away as unanticipated consequences because, for one thing, the engineers knew the consequences while they conducted the work. For another, they pursued the project with uncommon fervor, including successful requests for dispensation from standard administrative practices. If the engineers were not simply compliant technicians leashed to the aims of business and political elites, how did they decide what to build? During the approval process and the construction itself, the city engineers left a record of their aspirations in testimony to the city council, in departmental reports, and in naming the highway after William Mulholland. As city engineer John Griffin wrote: "It is named as a tribute and to be built as a monument to 'Our Bill,' Bill Mulholland, the builder of the Los Angeles

Aqueduct and the one man among all others who put our beloved City of Los Angeles on the map."⁷⁴

To the city engineering department, Mulholland Highway was a massive reordering of the natural environment that followed in several ways the pattern of their greatest triumph, the aqueduct that which opened in 1913 and carried water to the city across 233 miles from the Owens Valley. The highway accorded with the engineers' sense of beauty in the landscape, the aspect of engineering that David Nye described as the "technological sublime."⁷⁵ Its construction engineer, Dewitt Reaburn, described one aspect of this aesthetic when he extolled the vantage points that the road would afford: "In driving over the completed portion of the highway, one is charmed and amazed at the wonderful view of the surrounding country, which is continually changing as the vision sweeps from one side of the summit to the other. The Mulholland Highway is destined to be the heaviest traveled and one of the best known scenic roads in the United States."⁷⁶ Creating vistas for scenic motoring was a conscious goal in much of the parkway construction throughout the nation in the 1920s and 1930s. As their name implied, however, parkways also were thorough, polished designs in their own right, with picturesque light fixtures and railings as well as fully thought-out landscaping along the roadside.⁷⁷ Mulholland Highway lacked all such amenities. It was a simple graded cut through the hills that afforded pleasant views but was not part of them. The road itself and the act of building it through mountainous terrain satisfied the engineers' esteem for linear-flow systems.

William Mulholland had nothing to do with the planning or construction of Mulholland Highway, but the engineers' symbolic association between him and this road indicates the importance of the aqueduct in shaping their sense of mission and their desire for an autonomous administrative structure. The significance of the naming cut both ways: they chose this particular construction project to venerate the aqueduct builder. The highway through the hills was a most appropriate memorial because it enabled the engineers to act on their vision of beauty as transformed landscapes of movement and flow, and because it was an opportunity to transfer crucial aspects of their aqueduct achievement to the arena of their greatest disappointment – through highways. They consciously sought to reproduce the aqueduct experience, even hiring aqueduct veterans when they could. Mulholland Highway offered a chance to build without opposition and to devise a model for project administration that could ease subsequent undertakings. It also demonstrates how the municipal engineers carved out a role as brokers between private economic interests and the political authority of the city council, enabling them to hijack an effort like Mulholland Highway for their own ends. To them, the road was its own justification -- the technological transformation of nature to a sublime engineered landscape, and a memorial to the revered forefather. When venturesome real estate promoters concocted the plan to open a vast new territory for development by running a highway atop the Hollywood Hills, the engineers saw an opportunity to build an uninterrupted corridor, to honor their own work and those associated with it, and to frame nature with artifice. The ideal of transportation efficiency, which dominated the

contemporary policy debates as well as many later interpretations of the city's transportation history, had little effect on Mulholland Highway.

A Small Group of Capitalists

The subdivision and development that transformed the landscape of the Los Angeles basin in the 1920s also created an imbalance that threatened to end the prospects for further profitable speculation. The basin was completely subdivided by 1924, even though much of the property stood vacant as subdivisions that existed only in legal, rather than physical, form.⁷⁸ To the north, in the San Fernando Valley, a different kind of problem disrupted the plans of subdividers. Almost two decades earlier, Harry Chandler, H. J. Whitley, Moses Sherman and other real estate moguls had projected the San Fernando Valley as the ultimate suburban frontier. In the transactions central to that stratagem, they optioned almost 50,000 acres of valley land and profited handsomely by reselling after the aqueduct brought water to the valley. The lucrative proceeds from this scheme were the gains of the speculator who sold to other investors, not of the subdivider who bought land by the acre at wholesale and sold it by the lot, at retail, to homeowners. These machinations pushed up the price of the land, which made development more difficult by increasing the price of entry for those who would attempt it. William Mulholland complained in 1912 that "The capitalists have stolen the unearned increment for the next 20 years."⁷⁹ In the early 1920s, much of the Valley land just north of the hills was still identified by section nomenclature rather than lot numbers or street addresses, a sure sign of stalled development.⁸⁰

Constrained by thorough exploitation in the basin and an oversupply of valley land that was overpriced and still distant from the built-up part of the city, real-estate investors in the 1920s turned their attention to the Hollywood Hills that stood between the basin and the valley.⁸¹ The imposingly steep topography had delayed the advance of development into the hills and left them relatively undisturbed in comparison to the feverish speculation on either side. Reporting in 1924 on residential development in the hills, John Prince commented that "a tract located in the hills implies irregular lots and curved streets, wherein the grades afford many problems."⁸² Prince agreed to relax the street-width requirements to enable development in the hills. "Subdivision streets," he had reported a year earlier, "may be [as little as] 50 feet in width, and in rare instances 40 feet will be allowed. Hillside streets, 26 to 30 feet."⁸³

Winning cooperation from the city engineers posed less of an obstacle than overcoming the reluctance of home-buyers to consider dwellings on precarious sites subject to brush fires. Hillside charm was not yet a saleable commodity, especially when so many other home sites were available in the flats. Extravagant advertising and promotion accompanied most subdivisions in this period, but those in the hill sections set new standards for flamboyance and creativity. W. H. Woodruff's daring lunge into the hills, with his Beachwood Canyon development of 1922-23, occasioned the construction of an enormous sign atop Mount Lee, proclaiming the new subdivision's name of Hollywoodland.⁸⁴ Alphonzo Bell's scheme for Bel-Air, hatched in 1923, differed in two significant ways from the hundreds of subdivision applications filed for flat land in the Basin that year. The hilly, rugged land was expensive to build on; and Bell sought to

overcome this limitation by establishing an aura of elegance and exclusivity, including imposing, but non-functional, gates. Bell also donated prime property for the creation of the Bel-Air Country Club and his landscape architect laid out bridle trails for the residents.⁸⁵

The difficulties of developing the hills were already evident to some 400 property owners who convened at the Hollywood Country Club in December 1922. Their goal was to promote construction of a road traversing the top of the hills, running west for some 22 miles from Cahuenga Pass to Calabasas, in the Valley. They formed two organizations that day, the Hollywood Foothills Improvement Association, which was the umbrella group for promotion, and Municipal Improvement District Number 22, which was the legal entity for the payment of property-tax increments to finance the project.⁸⁶

There was more to their vision than building homes in the hills. The members of the Municipal Improvement District controlled virtually all the land between Sunset Boulevard and the Valley's Ventura Boulevard, more than 50,000 acres in all.⁸⁷ Besides advancing development in the hills, these promoters wanted to start the process of connecting the Basin and the Valley in order to bring the Valley more fully into the profitable orbit of the city's real estate market. "The proposed route," reported Prince, "will intersect many beautiful canyons, among which are mentioned Laurel, Benedict, Sepulveda, Franklin, Coldwater and Mandeville, through which roads will eventually be opened from the San Fernando Valley to Los Angeles."⁸⁸

Harry H. Merrick, a partner in the real estate firm of Merrick and Ruddick, served as president of the Hollywood Hills Improvement Association. He represented more

substantial stakeholders: real estate speculators such as Victor Girard, W. F. Holt, the Whitley family, Thomas C. Bundy, Alvaro Pratt and Louis Evans; movie moguls Sid Graumann, Thomas Ince and Edgar Rice Burroughs; bankers Marco Hellman and Willis Longyear; and representatives from the powerful Title Insurance and Trust Co. The roster was also sprinkled with city officials who owned land in the hills or the Valley, including those connected with the city's work on the project, such as John Shaw, who worked in the engineering office and would soon become the city engineer, and Clarence Dykstra, who served on the Board of Public Works that oversaw the city engineer.⁸⁹

The formation of Municipal Improvement District Number 22 only started the process of securing funding for the project. It took Merrick eight months to collect signatures on a petition from the landholders in the District.⁹⁰ Merrick's group also retained engineer Dewitt Reaburn, an Aqueduct veteran with a close relationship to Prince and his colleagues, to survey the assessment-district boundaries. With the boundary certified, the city clerk needed only a week to check the names on the petition against the voter rolls, an uncommonly short interval for that process.⁹¹ Then the City Council scheduled the minimum public-notice period and set the bond-issue referendum for October 9, 1923. The property-owners approved the bond issue by a 2-1 margin.⁹²

The petition and the referendum gave the city council the assurances it needed to allow the project to proceed. The council acted much in the way that Robin Einhorn has described the elected officials in nineteenth-century Chicago: if property owners wanted to pledge property-tax increments to pay for the work, the council would not stand in the way.⁹³ Certainly the scheme also fit the picture of booster-led development of Los

Angeles in the 1920s, but the congenial setting afforded by the council depended fundamentally on the lack of expenditure from public funds. None of the members offered opinions on the Mulholland proceedings, but merely voted the necessary authorizations to proceed. During construction they would also approve the municipal engineers' requests for accelerated operating procedures. All the votes on Mulholland Highway carried unanimously.

After the referendum passed, the City Attorney advertised for bids to underwrite \$1 million in bonds and received a single submission, from a consortium of seven banks and securities brokers.⁹⁴ The Council voted to accept the bid, then on advice of the City Attorney contracted for outside counsel to review the procedures. Henry O'Melveny's firm got the job for a fee of \$2,000 "in the event [the opinion] is favorable and \$1,200 in case said attorneys are unable to give an approving opinion."⁹⁵ There was no delay. The bonds went on sale in January 1924 and yielded a million dollars to build Mulholland Highway. For the next forty years, until 1963, land owners in the Improvement District would carry a special increment on their property taxes to reimburse the city for the principal and interest that the city paid to the bondholders.⁹⁶

Merrick and his colleagues eagerly consented to higher taxes because they expected to pass them on to the people who bought houselots in the hills and in the adjacent section of the San Fernando Valley. Their fondest dreams, however, were not fulfilled in their lifetimes. The hilltop highway did not become the spine for main roads linking the Basin and the Valley. Even while Prince dutifully reported the intention that Mulholland Highway would serve as a meaningful link in the surface transportation

system, he and Reaburn knew that it would not make the crucial connection with Cahuenga Pass. It would indeed be an uninterrupted artery for twenty-two miles through the hills, but an isolated one leading nowhere.

Not until the real estate boom of the 1950s would dense settlement extend throughout the San Fernando Valley. Before World War II, despite the completion of tract homes in the southern sections of Van Nuys and Lankershim/North Hollywood, much of the subdivided land on the Valley side of Improvement District Number 22 remained unimproved. During the Depression, the City Planning Commission noted that to avoid taxes that would be higher on houselots than on undivided parcels, subdividers filed to have their holdings "reverted to acreage." The planners envisioned a landscape of small farms in the San Fernando Valley, as previously approved subdivisions were consolidated back into larger tracts. The largest landholder in the Improvement District, Girard's Boulevard Land Co., went bankrupt without selling its Valley acreage as houselots.⁹⁷ In the Hollywood Hills, development was similarly spotty. The success of Hollywoodland was more exception than rule. In Bel Air, sales were only modest during the 1920s and fell off sharply in the 1930s. By 1947, when Alphonzo Bell died, the disappointing results had contributed to Bell's insuperable financial predicament. Similarly, H. J. Whitley's opening of Whitley Terrace, and the completion of several prototype hillside houses, did not prevent the financial debacle that marked the end of his long, successful career as a developer. Only after World War II was the attraction of a house in the hills finally marketed more broadly to a well-to-do clientele.⁹⁸

The term of the bonds for Mulholland Highway turned out to be prophetic: it took most of those forty years to fulfill the pecuniary ambitions of the people who first proposed building it and many of them missed out on the payoff. However, the money they devoted and the political influence they applied had another, more immediate impact, by enabling the city engineers to create one of the transformed landscapes that they relished so deeply.

A Monument to "Our Bill"

The overt association with William Mulholland only came after Merrick's group formulated its proposal for the highway. A year and a half after the establishment of the Improvement District, Dewitt Reaburn put forward his version of an appropriate history: "The idea of constructing a scenic highway along the crest of the Santa Monica Mountains westward from Cahuenga Pass [sic] originated some ten or fifteen years ago with Chief Engineer William Mulholland of the City Water Department."⁹⁹ Whether that was true or not, it was certainly not part of Merrick's petition. The only change between the petition language and the text of the referendum was the insertion of the phrase "commonly known as Mulholland Highway."¹⁰⁰

The city engineers' verbal identification of the road with the leader of the Aqueduct project corresponded to the characteristics of the work that they most fervently wished to reinforce. Both projects had proponents from among the same civic leaders and real estate speculators; both projects followed a vision of metropolitan growth stimulated by constructing extensive works of civil engineering; both received

overwhelming endorsement in bond-issue referenda that allowed the engineers to prosecute the work without further concern over funding; and both entailed the construction of linear-flow systems through inhospitable terrain.¹⁰¹

In contrast to the contested character of most large road projects, William Mulholland had acted with extraordinary independence in building the aqueduct. He set up a structure for administering the project that served as its own government, with internal departments for accounting, supply, engineering, legal affairs and construction.¹⁰² Mulholland and his staff also derived satisfaction from the character of the work. Rearranging the hydrology of California was no small task, but beyond the enormity of the construction work, living in wilderness camps and withstanding harsh conditions contributed to the conscious sense of re-engineering nature. Civil engineering of that magnitude commonly took its practitioners to environments that contrasted with any notion of urban civility and the aqueduct was a radical example, spanning both the eastern Sierra and the Mojave Desert. Exhilaration from outdoor life was not diminished by altering nature with dynamite and caterpillar tractors, as the "natural sublime intertwined with technological conquest," in David Nye's words.¹⁰³

The work was an adventure in the landscape, a camping expedition with a purpose. The Aqueduct project employed as many as 4,000 workers at a time along the route, and living in construction camps fostered a hard-edged male comraderie that was often expressed in terms of drinking and gambling. Many years later, a surveyor recalled: "Bill Mulholland, the aqueduct's chief engineer, used to say that it was whiskey that built the aqueduct. Pressed for an enlightening word, Mulholland declared that no

man would do the hard, hazard-filled work of driving tunnels or skinning mules through the canyons, while putting up with blistering heat, biting cold, dust storms and indifferent food, if whiskey didn't keep him broke."¹⁰⁴ Perhaps Mulholland appreciated the harsh ethos of the construction camp because he associated it with boldness in the face of dangerous working conditions, or because the control he could exercise in the camps was far greater than could be applied over a commuting work force. It is certain that the veterans of the Aqueduct included construction camps in their conception of subsequent landscape-altering engineering projects.¹⁰⁵

Completion of the aqueduct was barely a decade in the past when Merrick began circulating the petition for a roadway in the Santa Monica Mountains. Veterans of the aqueduct worked throughout the ranks of the city engineers, including two men, A. C. Hansen and Homer Hamlin, who would go on to lead the department.¹⁰⁶ The engineers understood what the bond issue represented and set to work to reproduce their aqueduct experience, free from the irksome necessities of public hearings, court cases, and appropriation requests to the city council. In February 1923, six months before Merrick filed the petition and almost a year before the sale of the bonds, surveys and exploratory excavation had already begun. The Hollywood Foothills Improvement Association hired on its own account engineer Dewitt Reaburn, who was well known to the city staff from his service on the Aqueduct. The city would later reimburse the Improvement Association out of the bond proceeds for the fees paid to Reaburn and the crews he hired.¹⁰⁷

With the active cooperation of city street engineer John Prince, Reaburn established the basic design of the roadway: maximum grade of six percent, minimum curve radius of 100 feet, and width of 30 feet.¹⁰⁸ Driving there today, it is hard to imagine that the engineers worried about the difficulties of negotiating some of the narrow, steep, and sharply curved sections of the road in an automobile. It seems more like a pipeline or electrical transmission line right-of-way, fit for the movement of liquids or current, but perversely troublesome for a human in an automobile. The project's ironies go beyond the tortuous roadbed. Development in the area indeed required water mains and providing a pipeline right-of-way might have been an appropriate criterion in setting the course and shape of the road, but water service had no place in the original design. Reaburn and Prince did not perform the center-line survey that would have provided the fundamental data necessary to integrate the road with below-grade utilities. That survey was underway two years after highway construction was completed.¹⁰⁹ Not convenient to drive, and not based on utility service, the design of Mulholland Highway reflected aesthetic and political considerations more than anything else. Insofar as the pragmatic concerns associated with engineering practice entered the project, they were directed toward resource utilization: finish as fast as possible.

During this preliminary stage of the work, in 1923, the engineers began articulating the association with William Mulholland and pressed the city to name the road in his honor. The scenic character of the new highway also entered the discourse, at the same time that the engineers specifically ruled out the immediate possibility that the road would fill any role in the larger transportation network. Prince and Reaburn noted

that Mulholland Highway would not connect with anything at its eastern terminus near Cahuenga Pass. It ended at an elevation high above the pass, requiring a bridge or causeway to bring it to level grade, which the bond issue could not pay for. (This bridge for Mulholland Highway was tacked onto the 1925 viaduct bond issue, but the engineers spent the money on other projects.)¹¹⁰ Scenic enjoyment was also construed quite narrowly. When the Bridle Path Association asked that the design allow for horseback riding along the side of the road, the City Council filed the request with no action, on the advice of the engineering department.¹¹¹ Mulholland Highway was not to be a transportation link but neither was it to be a sylvan setting for active recreation. Its beauty would be appreciated in the making of it, or perhaps through a windshield, or not at all.

Reaburn and Prince applied the Aqueduct model in highly practical terms when they recommended that the city set up the Mulholland Highway Department as part of the city engineering office. Reaburn would supervise the work for an annual salary of \$10,000 from the city. When the engineers presented this plan to the City Council in December 1923, they justified the extraordinary set-up with a line of reasoning not previously applied toward the project: "Owing to the fact that the supply of water from the Municipal System to a large section of the territory in the western part of the city, particularly that part known as Laurel Canyon Section, is dependent on the construction of said highway; and, having in view the necessity of such a supply of water, both for domestic purposes and for the purpose of protection from fire, it appears to this Board that the earliest possible construction of said highway is of great public importance."¹¹²

The city engineering establishment yearned to build the road but could not claim any transportation necessity and could not justify a special operating department on the basis of providing a scenic amenity or the desire to enrich some subdividers. They understood the volatility of the chaparral environment, however, and, presciently, fastened on that as the rationale for extraordinary operating procedures.¹¹³

The council not only consented to set up the department under Reaburn, but also agreed to lend it \$25,000 from reserve funds in order to start heavy construction before the city received the bond proceeds. Two days later Reaburn submitted his staffing plan, a total of 411 people. Besides 200 laborers and fifty skilled workers of unspecified trades, he asked for a full complement of steam-shovel operators, mechanics, blacksmiths, drivers, teamsters, surveying crews, clerks, and a supervisory staff of assistant engineers, foremen, and shift bosses. Lest heroic engineering plans chafe under the reins of bureaucracy, Reaburn made a further request: "In order to get this work started at the earliest possible date, and to push it through to completion within the prescribed period of one year, it is very important that all of these employees be exempt from Civil Service rules." The council approved unanimously.¹¹⁴

Completing the picture of a small-scale revival of the aqueduct project, over the next month Reaburn and the city engineering staff submitted plans for a series of construction camps. It was true that the project area was generally inaccessible to vehicles, and that getting crews to and from the work sites would consume time and resources better spent on blasting rock and bulldozing soil. However, one of the camps stood on the grounds of the Hollywood Country Club, a genteel and easily accessible

location. The engineers' idea of heroic engineering included construction camps, whether or not they were required by the conditions of the work.¹¹⁵

Reaburn did not hesitate to ask, nor the council to grant, exemption from civil service rules for the frequent adjustments in staffing.¹¹⁶ The project routinely benefited as well from waiver of the bidding provisions that governed city purchases, by claiming that the project fell "under the emergency provisions of the city charter". The project staff negotiated with vendors then received ratification from the council for rental of construction equipment and purchase of explosives and vehicles. These were no small expenditures; the blasting-powder order filled five rail cars.¹¹⁷

Most of the massive earth-moving was completed by April 1924, when monthly expenditures peaked at \$149,000. For every square foot of roadway, the crews had to scrape away or otherwise reconfigure some nine cubic feet of soil. By July much of the skilled work was in place, notably a concrete retaining wall along a curving section of road near the eastern terminus. After that, the outlays ran between \$50,000 and \$70,000 per month, until December. With the opening ceremonies just two weeks away, completion of the gravel surface required an extra fifty dump trucks working around the clock.¹¹⁸

They did finish on time, and for the first three months of 1925 the city assigned traffic checkers to measure the use of the new highway. They counted 750 cars a day, less than the streets in the built-up areas saw in an hour, and about five percent of the traffic that plied an outlying highway such as Long Beach Boulevard.¹¹⁹ The sparse use did not disappoint the city engineers, who never intended Mulholland Highway to carry

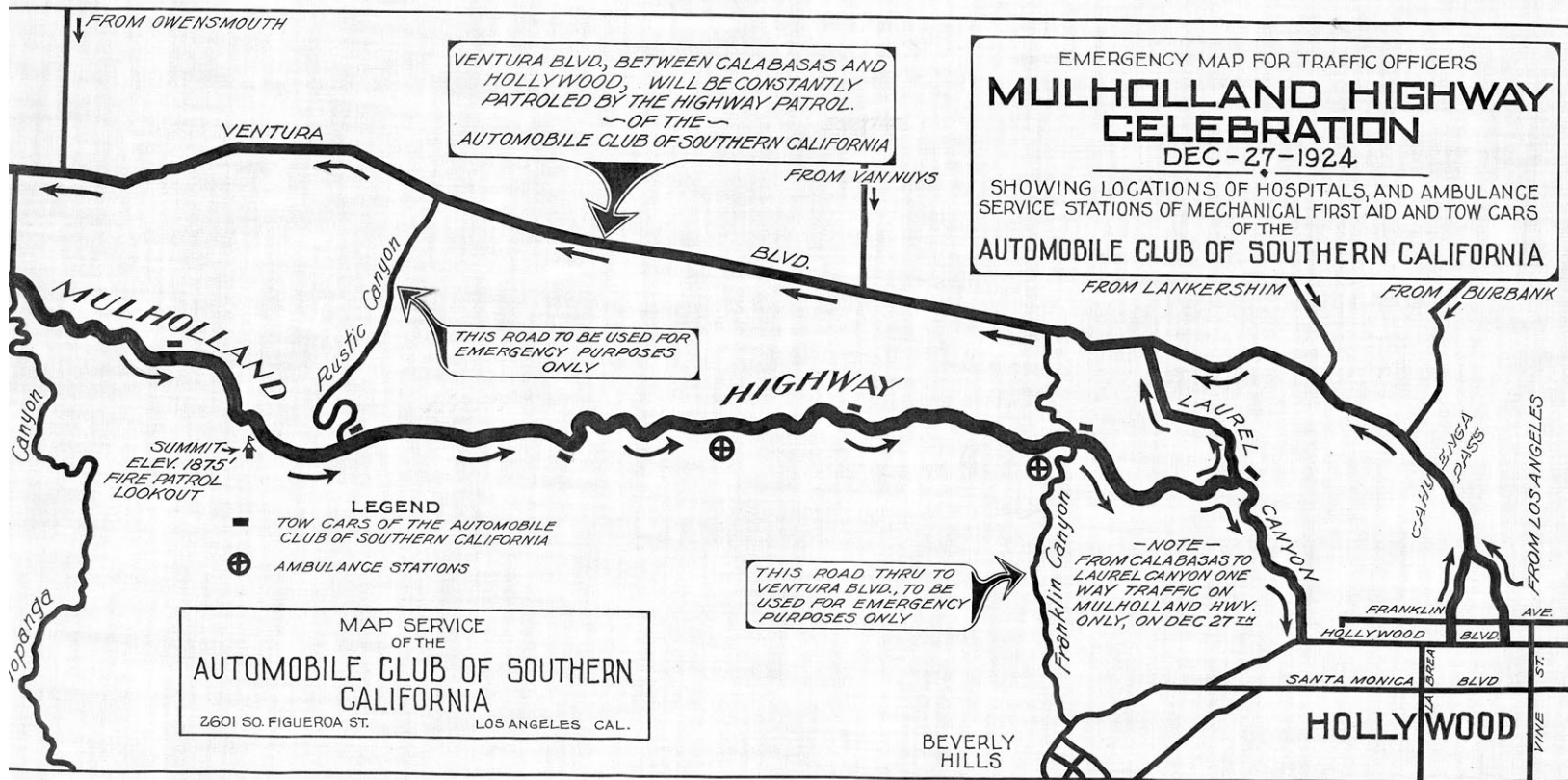


Figure 6: Map showing the route of the parade marking the opening of Mulholland Highway, 1924. Note that the parade stopped at Laurel Canyon, rather than having the cars approach too close to Cahuenga Pass, where the new highway ended abruptly at a cliff. Source: *Mulholland Highway Celebration, 1924* (Los Angeles: Automobile Club of Southern California, 1924). Used with permission; all rights reserved.

traffic in any great capacity. After all, its eastern terminus dead-ended on a cliff. Its importance to them sprang from the chance to indulge their passion for complementing nature with construction. Generations of motorists who have enjoyed the view from Mulholland would testify to the engineers' success, although the turnouts that enable safe contemplation of the vistas were not part of the original design of the road.¹²⁰

The engineers also viewed the project as an opportunity to install a construction regime that could approximate the autonomy of the Aqueduct enterprise. It succeeded in that goal too, at least when designated tax increments provided a modicum of funding. Six months after the project ended, Reburn and the Mulholland Highway Department were still in business, building Beverly Boulevard.¹²¹ The Mulholland Highway Department later worked on the Cahuenga Pass road, and several smaller projects, until the city auditors caught on to the arrangement. In August 1928, the staff of the council's Personnel and Efficiency Committee called for disbanding the Mulholland Highway Department, and the council had no choice but to accede.¹²²

At that particular moment, association with William Mulholland had turned into a liability, which might also have been connected with the department's termination. In March 1928, a dam of his design in Ventura County had failed, causing hundreds of deaths and irrevocably staining his reputation. No longer could the aura of the Aqueduct builder contribute to the administrative objectives of the city engineers.¹²³

Fire in the Hills

The connection between roadbuilding and the provision of water mains for fire suppression had been commonplace in municipal engineering since the 1880s, and the Los Angeles city engineering office had a special committee to coordinate road construction with installation of sewer and water service.¹²⁴ Reaburn clearly understood the environmental implications of planting settlement in the hills and, when submitting his construction plan in late 1923, seized the fire hazard as a means of winning emergency status that would loosen the administrative requirements for the project. He did not mention then that the water mains would come later, and at considerable additional cost.

The real estate speculators who petitioned for the highway must have been aware of the fires that periodically consumed the brush in the hill sections. As suggested above, this condition might have accounted in part for the delay in exploiting the hills, and for the particular attention given to promotion and image-building to counter that negative reputation by establishing fashionable cachet for the area. If such observations are necessarily speculative, it is nonetheless certain that the developers, like Reaburn, expressed abundant awareness and concern once construction was underway.

In July 1924, when the last rain had fallen months earlier and the summer sun parched the chaparral into so much dry kindling, Merrick alerted the City Council to the urgent matter of "prevention of fires in the hills during this most hazardous season." The project itself had elevated the problem by depositing "cut brush along the Mulholland Highway." Merrick did not confine his apprehension to the vicinity of the road

construction but also asked for help in "cutting new fire breaks in the hills." He recommended assigning convicts from the city jail, which the council agreed to do.¹²⁵

The fire breaks did not help at all when fire raged through the mountains in September. On October 2 the Board of Public Works reported that "A very serious fire has just been extinguished after the most strenuous efforts on the part of the fire department and the employees of the Board in the Mulholland Highway [Department]." The Fire Department asked the council for \$20,000 to establish two new fire companies along Mulholland Highway and an additional \$31,000 for surveys and construction to lay temporary water mains, install communication lines, and cut more fire breaks. "I believe that the late experience with fire in these mountains," wrote the Fire Department's chief engineer, "will be sufficient argument for the establishment of these companies without any further statement from me."¹²⁶

The Fire Department's urgent request reflected the recognition of a new situation. Brush fires in the hills did not concern them when the area was uninhabited, but the highway was intended to stimulate development. The fires also had the paradoxical effect of accelerating the urbanization of the region. Before the embers had cooled, the investors who owned the land in Benedict Canyon donated a right-of-way through their property: "In order to provide that the City of Los Angeles may lay a water pipeline from Mulholland [Highway] to the territory within Benedict Canyon and south of same, [we] have provided for a road which will extend from the end of the present road in Benedict Canyon to Mulholland." They had not intended to open the road for "some years," but desired the "benefit of protection," and even offered to pay half the cost.¹²⁷

Mudslides also afflicted the hill regions, particularly after fires had cleared the slopes of the vegetation that helped to retain the soil. Two years after the highway opened, in December 1926, a flood obliterated seventeen of its twenty-two miles. Part of the problem was that Reaburn had stunted on drains to conduct runoff under the roadway. Silt had clogged the minimal drains that did exist, forcing mud and debris to cascade over the road, where much of it remained when an inspection team from the city engineering department was finally able to survey the damage. On the City Engineer's recommendation, the council appropriated money for repair from the city's share of motor-vehicle registration fees. The remaining money from the bond funds was earmarked for the center-line survey so that water mains could be installed along the route.¹²⁸

The city and the landowners struggled with the issues of fire and mudslides through the rest of the 1920s. The engineering department estimated the water-main installation at \$2.5 million and wanted to assess the property owners for the cost.¹²⁹ Opposing the assessment, the Mulholland Highway Committee of the Ventura Boulevard Chamber of Commerce (which had Merrick on its board) proposed instead "that the closing of the Highway will minimize the fire hazard in this hill area. This is the attitude of the Los Angeles Fire Department." They asked the city to gate the highway and supply keys to those "certain property owners who find it necessary to use the highway occasionally."¹³⁰ John Shaw, who had become the head of the city engineering department, countered that the entire project would be lost if it were not maintained as a public right-of-way: "Whenever heavy rainfalls occur it is necessary to spend several

thousand dollars to make it passable, and I do not believe that the city would be justified in closing the road and still keep it in passable repair. If this road is not kept in a certain degree of repair, much of it will be lost, and I do not think that it would be a good thing to close Mulholland Highway.”¹³¹ In this beguiling statement Shaw proposed to save the property owners "several thousand dollars" in repairs by keeping the road open as a city-owned right-of-way. The property owners sought to avoid a \$2.5 million assessment by closing the road. Despite the apparent mismatch in the arguments, Shaw's recommendation prevailed and the highway remained open.

While the different agendas of the property owners and the city engineers had reinforced each other during the initial construction, they did not provide the basis for any long-term alliance. In 1929, the Board of Public Works proposed paving Mulholland Highway with concrete in order to facilitate the bulldozing of debris off the road after mudslides. The property owners saw the need for the work but balked at pledging more tax increments to be spent at the discretion of the city engineers. They mustered the votes to defeat the ordinance and decided to contract for the paving themselves.¹³²

Mulholland Highway and the events surrounding it demonstrate that the provision of automotive infrastructure in Los Angeles always grappled with a range of views contingent on localized and temporal circumstances, and could reflect aesthetic, emotional, or political considerations that had nothing to do with the nominal purpose of building a road. It was possible, even probable, that people could like their automobiles but not approve the allocation of resources to build highways. It was possible, too, that

major road projects could go forward without any basis in transportation efficiency and without widespread public support.

In Mulholland Highway, the engineers exploited the possibilities for action that resided in these tensions. They built a road that connected to nothing, that was not part of the comprehensive strategy of the *Major Traffic Street Plan*, and that spent an amount equal to twenty percent of the bond funding for that much-heralded plan. It did not enrich the promoters who funded it, nor did it fulfill the engineer's hope for a long-term method to circumvent citizens' ability to impede ambitious road projects. Mulholland Highway did not result from rational, comprehensive planning, but from a fragmentary process, a collection of goals representing a wider array of interests than have been recognized. Chief among these unacknowledged interests are the city engineers, whose goals were clearly separate from the speculators' even though at times congruent with them. The case of Mulholland Highway and the events surrounding it suggest that the city's transportation system resulted not from conspiracy and not from consensus, but from temporary convergences of diverse and sometimes impractical agendas.

Engineers in the City

In their quest for administrative autonomy and control over the construction of roads and highways, the city engineers competed with other agencies and well-organized private interests such as the Traffic Commission. After those other efforts collapsed or withdrew from the arena of street construction, the engineers still had to grapple with individuals and groups of citizens privileged by the property-owner autonomy

institutionalized in California law. The engineers honed their ability to overcome procedural opposition, established a role as brokers between public authority and private interests, and became skilled at capturing or diverting resources from every possible source of public and private financing.

The office of the city engineer became a formidable agency based on technical prowess and mastery of the laws and regulations governing public improvements. In 1927, when the California legislature made a portion of the proceeds from the state gasoline tax available to municipal governments, the city engineers immediately incorporated the new funding source into their broker's role and expanded their ability to construct broad-scaled highway schemes, such as North Figueroa Street and Ramona Boulevard. The gas tax also launched the state Division of Highways into prominence as an agent of landscape transformation. Just when the city engineers emerged from the institutional confusion spawned by Progressive reform to become the city's strongest voice in street and highway construction, the state highway department began to impinge on their hard-won prerogatives. That encounter would provide the contours of the next era of transportation policy, and of the streets and highways in Los Angeles.

NOTES TO CHAPTER FOUR

- ¹ City Engineer, *Annual Report*, 1913-14, 17-18.
- ² CM, 115:746-47, November 5, 1919.
- ³ In 1927, for instance, the Pacific Electric contributed part of the construction cost for street improvements associated with new grade separations on Downey Road, Pico Boulevard, and San Vicente Boulevard; City Engineer, *Annual Report*, 1926-27, 81.
- ⁴ M. Christine Boyer, *Dreaming the Rational City: The Myth of American City Planning* (Cambridge: Massachusetts Institute of Technology Press, 1983), 118.
- ⁵ Letter from Gordon Whitnall to City Council, June 26, 1928, Council File #6017, City Archives.
- ⁶ Letter from John Shaw, City Engineer, to City Council, City Planning Committee, September 20, 1928, Council File #6017, City Archives.
- ⁷ Letter from City Clerk to City Engineer and City Planning Commission, October 10, 1928, Council File #6017, City Archives.
- ⁸ City Engineer, *Annual Report*, 1925-26, 1-2; Edwin O. Palmer, *History of Hollywood*, vol. 1 (Hollywood: Cawston, 1937), 224; *Los Angeles Times*, April 26, 1925.
- ⁹ John Brinckerhoff Jackson described this functionalist aesthetic on the part of engineers in "A Puritan Looks at Scenery," in *Discovering the Vernacular Landscape* (New Haven: Yale University Press, 1984), 57-64. In an assessment of engineering similar to Jackson's, Eugene S. Ferguson agreed with a statement made in 1828 by a British engineer, who emphasized that a fundamental sense of dynamism ("directing the great sources of power in nature") characterized engineering practice more fundamentally than any association with certain types of objects or structures; see Ferguson, *Engineering and the Mind's Eye* (Cambridge, MA: MIT Press, 1992), 1.
- ¹⁰ David Nye, *American Technological Sublime* (Cambridge, MA: MIT Press, 1994), 76, 86-87, 126.
- ¹¹ City Engineer, *Annual Report*, 1923-24, 23.
- ¹² City Engineer, *Annual Report*, 1922-23, 30.
- ¹³ Amy E. Slaton, *Reinforced Concrete and the Modernization of American Building, 1900-1930* (Baltimore: Johns Hopkins University Press, 2001), 187.
- ¹⁴ City Engineer, *Annual Report*, 1912-13, 29.
- ¹⁵ Burton L. Hunter, *The Evolution of Municipal Organization and Municipal Practice in the City of Los Angeles* (Los Angeles: Parker, Stone & Baird, 1933), 111-13, 120, 132; *Annual Report of the City Engineer*, 1912-13, 21; 1919-20, 1; and 1921-22, 9.
- ¹⁶ Slaton, *Reinforced Concrete*, 4.
- ¹⁷ Amy Slaton, "As Near as Practicable: Precision, Ambiguity, and Industrial Quality Control," *Technology and Culture* 42 (January 2001): 51-80, quoted words on 72, 78.

¹⁸ Slaton, *Reinforced Concrete*, 56-57.

¹⁹ Slaton, "As Near as Practicable," 80.

²⁰ By mid-1923, virtually no construction had occurred, but the easements had been put in place by this method for extensive stretches of the east-west arteries between central Los Angeles and the ocean, including Santa Monica, Beverly, Pico, Washington, Adams, Jefferson, National, and Exposition boulevards, as well as the western extension of Wilshire Boulevard, beyond the contested terrain of the Archway proposal; see City Engineer, *Annual Report*, 1922-23, 48.

²¹ *Major Traffic Street Plan*, 28, 43.

²² This effort to illuminate the work of the city engineers complements prior efforts to interpret the role of engineering in urban society. Bruce Seely's research on the Bureau of Public Roads has shown how federal engineers established expertise as a political value and formulated transportation policy out of the public view. This study extends those observations to the municipal setting, where the bulk of highway construction occurred, and expands the view of engineers as political actors. Jameson Doig and David Billington explained how engineers concerned with a single transportation project could mediate among political and economic interests to serve their own ends; by examining place-construction episodes that proceeded simultaneously, I mean to demonstrate not only the resourcefulness of these technical professionals juggling multiple responsibilities, but also the cumulative effects of their site-specific tactics. Doig and Billington probe deeply within tight geographical limits, thus converging with Bruce Sinclair's call for the exploration of localism as a factor in twentieth-century engineering. This chapter takes up that challenge, as well as Sinclair's proposition that emotionalism demands further inquiry as a factor in engineering practice. Bruce Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987); Jameson W. Doig and David P. Billington, "Amman's First Bridge: A Study in Engineering, Politics and Entrepreneurial Behavior," *Technology and Culture* 35 (1994): 537-70; Bruce Sinclair, "Local History and National Culture: Notions on Engineering Professionalism in America," in *The Engineer in America: A Historical Anthology from Technology and Culture*, ed. Terry S. Reynolds (Chicago: University of Chicago Press, 1991), 249-59.

²³ From north to south, the bridges are: Fletcher Drive (1927), Glendale/Hyperion (1929), North Spring Street (1929), Macy Street (1926, now Cesar Chavez Boulevard); First Street (1929), Fourth Street (1930), Sixth Street (1932), Seventh Street (1927), Ninth Street (1925, now Olympic Boulevard), and Washington Boulevard (1931). The full roster of Los Angeles River bridges also includes the North Broadway Bridge, erected by the city in 1911, and the Main Street Bridge, erected by the Pacific Electric in 1910. The trolley company also built a bridge at Seventh Street in 1910, which serves as the substructure for the 1927 bridge at that location.

²⁴ Portia Lee, Andrew Johnston, and Elizabeth Watson, *Los Angeles River Bridges Recording Project*, Historic American Engineering Record Recording Project No. CA-271, 2000, U. S. National Park Service, copy courtesy of Eric Delony and Portia Lee.

²⁵ Lee et al., *Los Angeles River Bridges*; Stephen D. Mikesell, *Historic Highway Bridges of California* (Sacramento: California Department of Transportation, 1990), 98-108; Stephen D. Mikesell, "The Los Angeles River Bridges: A Study in the Bridge as a Civic Monument," *Southern California Quarterly* 68 (Winter 1986): 365-86.

²⁶ Board of Public Utilities and Transportation, "Seventeenth-Eighteenth Annual Reports," 1926-1928, typescript, n.p.

²⁷ Letter from Harry Stafford, City Engineer, to City Council, July 7, 1901, Box 304-C, City Archives; CM, 93:123-24, July 28, 1913 (summary of repairs to Macy Street Bridge) and 93:169, August 5, 1913 (summary of repairs to First Street Bridge).

²⁸ *Los Angeles Times*, November 7, 1905. This article actually named the Southern Pacific as the railroad that the developers negotiated with, but that was not technically correct. There is an immense amount of confusion over the correct names for the railroad companies that operated on the east bank of the river in early 20th-century Los Angeles. I doubt that I will sort it all out, but I will use consistent nomenclature that is only a little bit arbitrary. The Southern Pacific, the first of the intercontinental railroads in Los Angeles, had its tracks and many of its yard facilities on the east side of the river, especially in the vicinity of downtown. The Union Pacific Railroad, which ran between Salt Lake City and Los Angeles, had a track-sharing agreement with the Southern Pacific. The Union Pacific acquired the Southern Pacific in 1901, but divested it in 1913 following an anti-trust case decided by the U.S. Supreme Court; see *United States of America v. Union Pacific Railroad*, 226 U.S. 61 (1912). The Union Pacific retained much of the track facilities and real estate on the east side of the river. For that reason, I will use the Union Pacific in referring to railroad property in this vicinity, regardless of the usage in the contemporary sources, which seem to be wrong as least as often as they are right, notably in connection with the acquisition and divestiture. I will use Southern Pacific only in reference to specific legal agreements that use that name in the determination of cost shares by rail operating companies. Fortunately, the situation on the west bank is more straightforward, with the Atchison, Topeka and Santa Fe constituting the railroad presence (except north of downtown, but that is another story).

²⁹ *Los Angeles Times*, November 2, 1906.

³⁰ *Los Angeles Times*, August 17, 1908.

³¹ Lee at al., *Los Angeles River Bridges*, 14; *Los Angeles Times*, September 24, 1911.

³² *Los Angeles Times*, September 11, 1911; *Report of the Municipal Art Commission for the City of Los Angeles* (Los Angeles: W. J. Porter, 1909).

³³ Lee at al., *Los Angeles River Bridges*, 14-15 (quotation); Mikesell, "Los Angeles River Bridges," 375-76.

³⁴ City Engineer, *Annual Report*, 1913-14, 8.

³⁵ City Engineer, *Annual Report*, 1916-17, 10.

³⁶ CM, 113:707, April 14, 1919. Also see CM, 118:210-11, May 28, 1920, in which the engineers cited the same precedent in an unsuccessful attempt to win council authorization to put together a deal to replace the bridge at First Street.

³⁷ City Engineer, *Annual Report*, 1921-22, 25-27.

³⁸ After the flood of 1914, the city engineer warned the council that the main structural connections on the First Street Bridge were in danger of imminent failure and requested money for major reconstruction, but the council only provided \$2,000 for patching; CM, 101:363, July 30, 1915.

³⁹ Richard Sachse, "Proposed Railroad Grade Crossings Elimination and New Passenger and Freight Terminals for Los Angeles," *The Architect and Engineer of California* 62 (September 1920): 46-54, quoted

words on 51. Sachse was the chief engineer of the Railroad Commission. The data on vehicle movements were collected in 1918.

⁴⁰ Marshall Stimson, "The Battle for a Union Station at Los Angeles," *Southern California Quarterly* 21 (June-September 1939): 37-44. The wreck killed five people and injured dozens.

⁴¹ Sachse, "Grade Crossings Elimination," 47. On the Municipal League, see Tom Sitton, *John Randolph Haynes: California Progressive* (Stanford: Stanford University Press, 1992), 23.

⁴² Mikesell, "Los Angeles River Bridges," 370.

⁴³ Stimson, "Union Station," 41; Mikesell, "Los Angeles River Bridges," 371.

⁴⁴ CM, 122:458, April 28, 1921; the Railroad Commission's order was issued on April 26. Also see *Los Angeles Times*, April 23, 1921 and May 21, 1921; Board of Public Utilities, *Annual Report*, 1919-20, 46.

⁴⁵ *Los Angeles Times*, June 23, 1921.

⁴⁶ Mikesell, "Los Angeles River Bridges," 376-78.

⁴⁷ City Engineer, *Annual Report*, 1923-24, 33; *Los Angeles Times*, April 21, 1923. The six bridges in the 1923 bond were at Macy, First, Fourth, Seventh and Ninth streets.

⁴⁸ *Los Angeles Times*, May 8, 1923; May 11, 1923 (quotations); June 3, 1923; Automobile Club of Southern California, Digest of Board Minutes, 4:132, May 17, 1923.

⁴⁹ *Southwest Builder and Contractor* 63 (September 19, 1924): 46.

⁵⁰ Merrill Butler, "The City of Los Angeles Building 'Million Dollar Bridges,'" *Pacific Municipalities* 43 (June 1929): 256-57; Mikesell, "Los Angeles River Bridges," 380-81.

⁵¹ City Engineer, *Annual Report*, 1922-23, 30.

⁵² J. D. Ransom Corporation advertisement in *Los Angeles Herald*, February 11, 1928.

⁵³ Municipal Art Commission, *Annual Reports [for the years] 1921-1929*, 54-67.

⁵⁴ Mikesell, "Los Angeles River Bridges," 383-84, also notes that the decoration at Washington Boulevard "paid homage to the [viaduct] program."

⁵⁵ City Engineer, *Annual Report*, 1924-25, 22.

⁵⁶ City Engineer, *Annual Report*, 1926-27, 78.

⁵⁷ *Los Angeles Times*, March 21, 1926.

⁵⁸ CM, 180:658, May 19, 1927.

⁵⁹ In the river bridges, Merrill Butler and his staff pioneered the application of the three-hinged arch in reinforced concrete. Intended to allow the bridge to withstand shrinkage and settlement, they have since

been recognized as weak spots in the event of an earthquake. Lee et al., *Los Angeles River Bridges*, Appendix (measured drawings), n.p.

⁶⁰ Greg Hise, "'Nature's Workshop': Industry and Urban Expansion in Southern California, 1900-1950," *Journal of Historical Geography* 24 (January 2001): 74-92, esp. 82-84; City Engineer, *Annual Report*, 1921-22, 39.

⁶¹ City Engineer, *Annual Report*, 1922-23, 47-48.

⁶² Report of Public Works Committee of the City Council, Council Minutes, 130:69-70, July 28, 1922; letter from Union Pacific Improvement Club to City Council, Council Minutes, 130:225-26, August 7, 1922.

⁶³ Council Minutes, 130:78, July 21, 1922; 130:179-80, August 2, 1922; 130:222, August 7, 1922; 130:294 (August 10, 1922); 130:350-52 (August 14, 1922); 134:564-67 (March 12, 1923); 134:590-95 (March 14, 1923); 689 (March 16, 1923); 734 (March 19, 1923); 137:78-87 (June 15, 1923); 137:90-159 (June 15, 1923); 137:179-210 (June 18, 1923).

⁶⁴ Council Minutes, 137:78, June 15, 1923.

⁶⁵ Council Minutes, 137:85, June 15, 1923.

⁶⁶ Council Minutes, 137:111, June 15, 1923.

⁶⁷ Council Minutes, 130:207-09, June 18, 1923.

⁶⁸ Quotation from "Viola Bogue et al. v. the City of Los Angeles," in *Report of Cases Determined by the Supreme Court of the State of California*, vol. 198 (San Francisco: Bancroft-Whiting Co., 1926), 327-28; also see City Engineer, *Annual Report*, 1924-25, 82; 1925-26, 74.

⁶⁹ Council Minutes, 167:549-52, April 23, 1926, and 167:804-06, May 4, 1926 (quotation).

⁷⁰ Report of city engineer to city council, May 20, 1929, Council File #4434, City Archives; City Engineer, *Annual Report*, 1926-27, 95-96.

⁷¹ The name of the road was changed from Mulholland Highway to Mulholland Drive in 1939; CM, 286:21 (1939) and 286:600 (1939).

⁷² "Progress of Work on Mulholland Highway Reviewed in Report of City Engineer," *Southwest Builder and Contractor*, August 1, 1924, 7.

⁷³ Joseph Tanner, managing director, Ventura Boulevard Chamber of Commerce, to Los Angeles City Council, May 18, 1927, CF #3776, City Archives.

⁷⁴ City Engineer, *Annual Report*, 1922-23, 49.

⁷⁵ Nye, *American Technological Sublime*, n. 10 above.

⁷⁶ City Engineer, *Annual Report*, 1923-24, 23.

⁷⁷ Clay McShane, *Down the Asphalt Path: The Automobile and the American City* (New York: Columbia University Press, 1994), 21-40; Bruce Radde, *The Merritt Parkway* (New Haven: Yale University Press, 1993).

⁷⁸ City Engineer, *Annual Report*, 1923-24, 58.

⁷⁹ Abraham Hoffman, *Vision or Villainy: Origins of the Owens Valley-Los Angeles Water Controversy* (College Station, TX: Texas A&M University Press, 1981), 157-170, quotation on 161; Catherine Mulholland, *The Owensmouth Baby: The Making of a San Fernando Valley Town* (Northridge, CA: Santa Susana Press, 1987), 73, 81, 89, 96, 104, 132; W. W. Robinson, *History of the San Fernando Valley* (Los Angeles, 1961), 37-40.

⁸⁰ See petition for Municipal Improvement District No. 22, Council File 4536 (1923). Section nomenclature described multi-acre parcels whereas a street address or lot number usually identified a property of 5,000 square feet, the most common lot size in Los Angeles. "R 16 W Sec 25," meaning Range 16 West Section 25, is a typical section designation from this petition. The range designation itself dates from the initial Public Land Survey of California under United States jurisdiction, which was mandated by Congress in 1853. For southern California, the surveyor general for the state laid out a grid of squares, six miles on a side, from the datum of Mount San Bernardino. East-west divisions were called "ranges" and north-south divisions "townships." Each square was in turn divided into 36 sections. Thus at the time of the Mulholland petition, the legal description for much of the San Fernando Valley still reflected the Public Land Survey undertaken in the 1850s; the petition lacked "township" designation because the entire area fell into one north-south unit but extended across three east-west "range" units. See W. W. Robinson, *Land in California: The Story of Mission Lands, Ranchos, Squatters, Mining Claims, Railroad Grants, Land Scrip, Homesteads* (1948; reprint, Berkeley: University of California Press, 1979), esp. 208-11.

⁸¹ The contemporary documents use Hollywood Hills and Santa Monica Mountains more or less interchangeably to describe this feature that divides the Basin from the Valley. In current usage, the Sepulveda Pass generally separates the Hollywood Hills to the east and the Santa Monica Mountains to the west.

⁸² City Engineer, *Annual Report*, 1923-24, 58.

⁸³ City Engineer, *Annual Report*, 1922-23, 53.

⁸⁴ Edwin O. Palmer, *History of Hollywood*, vol. 1 (Hollywood: Cawston, 1937), 223.

⁸⁵ John O. Pohlmann, "Alphonzo E. Bell: A Biography, Part II," *Southern California Quarterly* 46 (December 1964): 325-26; Joseph K. Horton, *A Brief History of Bel Air* (Los Angeles: The Bel-Air Association, 1982).

⁸⁶ Improvement District No. 22 petition; City Engineer, *Annual Report*, 1923-24, 20.

⁸⁷ Letter from City Engineer to City Council, January 23, 1928, Council File 3776 (1927); Improvement District No. 22 petition.

⁸⁸ Improvement District No. 22 petition; City Engineer, *Annual Report*, 1922-23, 48.

⁸⁹ Except for the communications with the City Council, the records of the Hollywood Foothills Improvement Association were privately held, probably by Merrick, and have not been found to survive in any repository. The membership of the group has been reconstructed to the extent possible from various

correspondence and transactions in the city records: Easement deeds transmitted to city, 18 March 1924, in Council Minutes, 143:597-98 (1924); petition re Benedict Canyon, Council Minutes, 149:444 (1924) and Council File #6378 (1924); petition re fire breaks, 26 July 1924, in Council Minutes, 47:463 (1924) and Council File, 4908 (1924); petition to reduce right-of-way, December 11, 1929, in Council Minutes, 212:510 (1929). The Improvement District No. 22 petition gives the names of 431 property owners, but the Improvement Association was a smaller, more select group. Occupations and affiliations of participants from *Los Angeles City Directory* (Los Angeles, 1920-30).

⁹⁰ Council Minutes, 138:602 (1923).

⁹¹ Council Minutes, 138:647 (1923). The petition was filed on August 17 and the City Clerk validated it on August 22.

⁹² Council Minutes, 139:449 (1923), 139:647-48 (1923). Only property owners in the Improvement District voted in the referendum.

⁹³ Robin Einhorn, *Property Rules: Political Economy in Chicago, 1833-1872* (Chicago: University of Chicago Press, 1991), 14-19.

⁹⁴ Council Minutes, 140:310-11 (1923), 140:404-05 (1923), 140:507-08 (1923), 140:548 (1923), and City Clerk report in Council File 6096 (1923).

⁹⁵ Council Minutes, 140:242-43 (1923), 140:559 (1923).

⁹⁶ Ordinance for bond issue in Report of City Attorney, Council File #218 (1924) and Council Minutes, 142:13 (1924).

⁹⁷ City Planning Commissioners, *Annual Report, 1932-33*, 18; interview with Milton Breivogel, principal planner for City of Los Angeles (retired), transcript in Department of Special Collections, UCLA, interview #339, 88.

⁹⁸ Pohlmann, "Alphonzo E. Bell," (n. 40 above); Mulholland, *Owensmouth Baby* (n. 34 above), 94-100; *Los Angeles Times*, November 9, 1928; "Ecology II: Foothills," in Reyner Banham, *Los Angeles: The Architecture of Four Ecologies* (1971; reprint, London: Penguin Books, 1990), 95-109.

⁹⁹ Dewitt L. Reaburn, "Report on Mulholland Highway," in City Engineer, *Annual Report, 1923-24*, 20.

¹⁰⁰ Council Minutes, 138:647 (1923).

¹⁰¹ The Owens Valley Aqueduct was certainly not without controversies, but those centered on the contention between the region from which the water came and the one that appropriated it, and on the question of unethical behavior on the part of J. B. Lippincott during the securing of the Owens Valley water rights. Among the citizens who approved the Aqueduct bond issues by more than 10-1 margins, and the city employees and elected officials responsible for the work, the Aqueduct benefited from overwhelming support. See Hoffman, *Vision or Villainy*, 91-99, 141-45.

¹⁰² "Board of Water Commissioners," and "Board of Water and Power Commissioners," s.v., in Burton L. Hunter, *Evolution of Municipal Organization and Administrative Practice in the City of Los Angeles* (Los Angeles: Parker, Stone and Baird, 1933); Hoffman, *Vision or Villainy*, 35-46, 146-47.

¹⁰³ Nye, *Technological Sublime*, 76.

¹⁰⁴ Frederick C. Cross, "My Days on the Jawbone," *Westways*, May 1968, 3-8, quotation on 6-7. The Jawbone was one of the most onerous stretches of the work, in Kern County north of the town of Mojave.

¹⁰⁵ Hoffman, *Vision or Villainy*, 150-51; Los Angeles Board of Public Service Commissioners, *Complete Report on Construction of the Los Angeles Aqueduct* (Los Angeles: by the commission, 1916), 256; Remi Nadeau, *The Water Seekers* (New York: Doubleday, 1950), 41-43.

¹⁰⁶ Hoffman, *Vision or Villainy*, 250.

¹⁰⁷ Letter from Hollywood Foothills Improvement Association to City Council, in Council File, 4908 (1924); the Improvement Association also gave Reaburn a seat on its board. Reaburn described his Aqueduct experience in testimony to the City Council, December 20, 1923, Council Minutes, 141:408-09 (1923). Reaburn was a principal in the consulting engineering firm of Reaburn and Bowen; *Los Angeles City Directory* (Los Angeles, 1924), 1868. Reimbursement to Improvement Association in Council Minutes, 147:252 and 147:356-57 (1924); the amount of reimbursement was \$17,596.

¹⁰⁸ City Engineer, *Annual Report*, 1922-23, 48; 1923-24, 20-21.

¹⁰⁹ Council Minutes, 175:387-88 (1926).

¹¹⁰ City Engineer, *Annual Report*, 1923-24, 20-21; Council Minutes, 164:214-16 (1926).

¹¹¹ Council Minutes, 141:167 (1923). The minutes do not record any reason for rejecting the request, but I infer that it was related to cost because the bridle path would have required widening the roadbed.

¹¹² Report of Board of Public Works, December 5, 1923, in Council Minutes, 141:55-56 (1923).

¹¹³ In the annual reports of the City Engineer from 1913 through 1934, Mulholland Highway is the only case in which a project-specific operating department was set up within the engineering office.

¹¹⁴ Report of Board of Public Works, December 5, 1923, in Council Minutes, 141:55-56 (1923); Report of Dewitt Reaburn to the Board of Public Works (quotation), submitted to City Council on December 7, 1923, Council Minutes, 141:141-42 (1923).

¹¹⁵ Council Minutes, 141:408-09 (1923), quotation; and 142:311 (1924); Hollywood Country Club in City Engineer, *Annual Report*, 1923-24, 21.

¹¹⁶ Council Minutes, 141:681, 142:5, 143:193-94, 143:323, 144:150, 144:584, 144:783, 146:226, 146:353, 146:506 (1924).

¹¹⁷ Quotation in Council Minutes, 141:157-58 (1923); equipment rental in Council Minutes, 149:521 (1924); vehicle purchase in Council Minutes, 141:586 (1923); blasting powder in Council Minutes, 147:54-55 (1924).

¹¹⁸ Monthly expenditures in Council Minutes, 144:260 (1924), 149:522 (1924), 150:543 (1924), 151:326 (1924); retaining wall in Council Minutes, 147:741 (1924); dump trucks in Council Minutes, 151:610 (1924). Excavation statistics in Dewitt Reaburn, Report to the Board of Public Works on the Mulholland

Highway Department, 24 June 1925, Council File 4003 (1925). Reaburn reported an aggregate excavation figure of 70,000 cubic yards per mile; unit calculations by the author.

¹¹⁹ Traffic-count comparisons from *Major Traffic Street Plan*, 19.

¹²⁰ Council Minutes, 286:21 (1939) and 286:600 (1939).

¹²¹ Dewitt Reaburn, Report to the Board of Public Works on the Mulholland Highway Department, June 24, 1925, Council File #4003 (1925).

¹²² Council Minutes, 209:256 (1928).

¹²³ Doyce B. Nunis, ed., *The St. Francis Dam Disaster Revisited* (Ventura, CA: Ventura County Museum, 1995); Charles F. Outland, *Man-made Disaster: The Story of St. Francis Dam* (Glendale, CA: A. H. Clark, 1977).

¹²⁴ Improved roads were a prerequisite for the installation of underground systems because the level pavement provided the necessary baseline for setting vertical placement. See McShane, *Asphalt Path*, 31, 66-67; City Engineer, *Annual Report*, 1925-26, 7.

¹²⁵ Letter from Harry Merrick to City Council, July 26, 1924, and instruction to City Attorney to draft ordinance for convict labor, July 30, 1924, both in Council File #4908 (1924); Council Minutes, 147:463 (1924), 147:553 (1924). Fire breaks are swaths cleared of all brush and vegetation that, in theory, arrest the spread of fire.

¹²⁶ Report of Board of Public Works (first quotation) and letter from R. J. Scott, Chief Engineer, LAFD (second quotation), both to City Council on 2 October 1924, Council File #6302 (1924); Council Minutes, 149:368 (1924), 149:370 (1924), 149:583 (1924).

¹²⁷ Letter from Thomas Ince, Sid Graumann and Joseph Schenck to City Council, 6 October 1924, Council File #6378 (1924); Council Minutes, 149:444 (1924). Mike Davis, "The Case for Letting Malibu Burn," in Davis, *Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Metropolitan Books, 1998), 93-147, uses the city's history of fire suppression as an incisive case study to analyze the capture of public resources for the benefit of elite residential districts.

¹²⁸ Council Minutes, 175:360 (1926), quotation; and 175:387-88 (1926).

¹²⁹ Letter from the Mulholland Highway Committee of the Ventura Boulevard and Hollywood Chambers of Commerce, reported to City Council on November 3, 1926, in Council Minutes, 174:201 (1926). This organization succeeded the Hollywood Foothills Improvement Association.

¹³⁰ Letter, May 18, 1927, Council File #3776 (1927).

¹³¹ Report of Shaw to City Council, January 23, 1928, Council File #3776 (1927).

¹³² Council Minutes, 212:543 (1929), 218:584 (1930), 224:6 (1931); *Los Angeles Examiner*, December 2, 1930.

CHAPTER FIVE
TRUNK LINES: THE STATE OF CALIFORNIA AND ROADBUILDING IN LOS
ANGELES

Major highways are by definition multi-jurisdictional: they traverse municipal and state boundaries. Even while the city engineers in Los Angeles labored to build roads within the municipal boundaries, they were keenly aware of the need to connect with larger road networks and to enlist the support of neighboring cities and the county government for such projects as Wilshire and Olympic boulevards and Figueroa Street.¹ Because the freeways loom so significantly in any discussion of transportation in Los Angeles, these discussions tend to point toward the role of state highway builders and federal funding under the Interstate Highway Act of 1956, as will this one. However, I also mean to demonstrate how the earliest encounters between local and state highway builders, in the 1920s, played a determining if underappreciated role in those subsequent events.

Historians and planning scholars have tended to characterize the multi-jurisdictional nature of road construction according to the concepts of “highway federalism” and “burden-shifting.” Highway federalism informs Owen Gutfreund’s work on roadbuilding and urban decentralization and Bruce Seely’s study of the federal Bureau of Public Roads.² They see the freeways as the result of a planning vision and a certain kind of professionalism that flowed from federal agencies into state agencies. Though deftly analyzing the role of federal officials, these works cannot do justice to the

municipally employed engineers whose work was shaped by a different set of concerns. In Los Angeles at least, city engineers played a determining role in the location, design, structure of authority, and funding strategies for the formative stage of freeway development. In the definitive study of the federal Interstate Highway Act of 1956, Mark Rose described the Act as “federal funding for localistic and largely impermeable commercial and professional subcultures.”³ But those subcultures are not impermeable to site-specific analysis. Locally based studies can enlarge the idea of highway federalism by including the other end of the federalist relationship, the places outside the Beltway, in keeping with the original meaning of federalism as the sharing of power among the national government, the states, and local jurisdictions. Only half the story of highway federalism has been told. The other half must proceed from the ground up.

Planning scholars concerned with transportation tend to emphasize the economics of highway federalism.⁴ Based on the generally productive tactic of following the money, this interpretation portrays freeways primarily as an example of “burden-shifting,” from local to state to federal outlays. There is a basic truth to that sequence, but looking only at the source of the money obscures the extensive struggles over who would control how the money was spent. Again, in Los Angeles at least, municipal employees and the city council held firmly to that authority for as long as they could and, as it turned out, that was long enough to set the basic pattern for the freeways in the city. Moreover, viewed in the fine grain, the sequence takes on a more complex texture, especially in the 1930s, when municipal engineers had far more direct access to funding for urban transportation from New Deal programs than did state or even federal

engineers. Los Angeles city engineers capitalized on this access to build the key projects that established the freeway system.

The encounter between city and state highway engineers in Los Angeles began in the 1920s and unfolded over the next three decades. Sweeping explanations such as highway federalism and burden-shifting cannot encompass the variety and complexity of the project-specific negotiations that took place and the diverse results of the many joint efforts between city and state roadbuilders. At times an easy cooperation prevailed, when each side could serve its own distinctive goals on a project, such as the completion of Olympic Boulevard or the upgrade of North Figueroa Street into a through highway between Pasadena and Los Angeles. The projects that proceeded on an amicable basis usually were initiated by the city engineers, who adjusted their plans to justify cost-sharing by the state Division of Highways, which was concerned with inter-regional traffic. When tensions arose, it was generally because inter-regional arteries planned by state engineers did not fully consider the political and technological setting of the city.

The city and state highway engineers had a great deal in common, starting with their profession and the distinctive values it fostered. Both groups had been trained primarily in railroad and water-supply engineering and carried the values and practices associated with these linear-flow systems into their highway work. Both embodied the ideology of the technological sublime – the transformation of nature by setting it off with the works of engineering, and the assertion of aesthetic value in a functional object or structure that could be starkly expressed in concrete. Both were servants of empire, who cultivated constituencies among the capitalists who profited from land development.

Both operated within the tight strictures that made roadbuilding so difficult in California: the structure of political authority for infrastructure that privileged opposition over approval, and the general stinginess of California taxpayers that made it very difficult to fund ambitious infrastructure projects that did not promise any operating revenue. And both groups had to serve as brokers among diverse and competing interests to gain approval for ambitious highway projects and to assemble the financing for these most expensive public endeavors.

There were also important differences between the city and state engineers. By virtue of their mandate that covered a vast state with most of its acreage as yet undeveloped during the formative years of the agency, the state engineers had a rural focus and a rural constituency that had no place in the work of the city engineers. And the goal of building inter-regional highways often impelled the state engineers to discount the concerns of city-dwellers. The muddy-booted tradition of the intrepid engineer modernizing the wilderness was part of the origins of both the city and state agencies charged with highway building, but the city engineers had to adapt more quickly to the urban setting, with conflicting interests arrayed around virtually every major project and the corresponding premium those conditions placed on negotiating and political skills on the part of engineers. By the late 1920s, the leaders of the city engineering function in Los Angeles were accomplished coalition-builders, while the state engineers clung more tenaciously to their sense of themselves as pioneers charged with civilizing an inhospitable natural landscape.

To illuminate the encounter between city and state engineers on the streets of Los Angeles, this chapter first fills in the background of the state highway agency and state highway financing in California. A case study of the Pacific Coast Highway offers a chance to discern how the values and operating principles of the state highway engineers were forged in the difficult process of completing a distinctive inter-regional highway, and how that highway came to occupy a central place in the image and reputation of southern California. Another extensive case study, the construction of Whittier Boulevard, shows the collision between the mandates of the city and state engineers and the beginnings of the exploitation of the east side of Los Angeles for highway purposes.

Highway Bureaucracy and Highway Funding

The state roadbuilding function in California had its origins in the “Good Roads Movement” of the 1890s, which was initially spearheaded by bicycle enthusiasts organized as the League of American Wheelmen and bankrolled by the bicycle manufacturers. Throughout the United States, the Wheelmen lobbied for the formation of state highway departments; the first was formed in New Jersey in 1891.⁵ Though the Wheelmen were the first organization to campaign for road reform, in California and other western states the adoption of roadbuilding as a function of state government fundamentally depended on the economic development agendas of rural communities and agricultural interests, who sought to bring the standards of highway transportation up to the level enjoyed by communities served by the railroads. These were the constituencies that enlisted the support of Governor Henry Markham, sponsored a Good Roads

Convention in Sacramento in 1893, and were rewarded in 1895 when the state legislature created the State Bureau of Highways.⁶ This Bureau had no professional staff and scant budget beyond the reimbursement of expenses for the three appointed state highway commissioners to traverse the state and conduct a preliminary study of the state's roads. In its first report, the Bureau justified itself and the need for good roads in California by cataloguing the costs and limitations to growth imposed on farmers, miners, merchants, and manufacturers: "Every industry of the State finds its heaviest burdens incident to bad roads. . . . The industrial development of our State has nearly reached the limit possible with bad roads."⁷

The commissioners of the fledgling bureau realized that they could do little to address highway development over the vast territory of California without professional staff and money for construction. The legislature complied with the first request by creating the position of state highway engineer and changing the Bureau to the Department of Highways, but the pleas for reform in funding methods went unheeded. Just as in cities, the state depended on property taxes for any infrastructure improvements, though the legal structure was slightly different outside of incorporated cities. The state could assess counties for a share of property taxes collected in unincorporated areas, and that money was used to pay the salary of the state highway engineer and to hire more engineers to assist with the tasks of surveying for state highways and imploring the counties to contribute more money to actually build some roads, either by special assessments or the sale of bonds. But the low-tax mentality that prevailed in the state legislature trumped any efforts to raise further money for highways,

even after a 1906 study on California fiscal policy called out the problems of relying on property taxes for road funding: it was a “school for perjury” that “imposed a handicap on the growth of the State.”⁸

The rapid adoption of automobiles in California brought new urgency to the issue of highway construction and political support for increasing the engineering staff and reorganizing the department. In 1907 the legislature created the Department of Engineering as the umbrella agency for all state infrastructure responsibilities. Roadbuilding was lodged within this department as the Division of Highways; the other main function of the agency was water supply and flood control. The Division of Highways operated under the oversight of the California Highway Commission, consisting of three appointees and the state highway engineer.⁹ In 1912 the Division divided up the state into highway districts; District 7 included Los Angeles, Ventura, Riverside, San Bernardino, Orange, San Diego and Imperial counties. One of the first employees of District 7, Spencer V. Cortelyou, would be appointed the chief of the Los Angeles-based district in 1924 and would continue in that position until his retirement in 1949. He was the most influential state official in southern California highway matters for a generation, and he played a crucial role in the creation of the freeway network. Cortelyou arrived in Los Angeles after graduating from the University of Nebraska in 1902 with a degree in engineering. He worked as a location engineer for the Los Angeles and Salt Lake (later Union Pacific) Railroad, then spent five years in the Phillipines with the U.S. Army Corps of Engineers before returning to Los Angeles as a road surveyor for

the county. His brother, Herbert Cortelyou, was engineer of structures for the Los Angeles city engineering office.¹⁰

In 1909, during the first attempts to address the infrastructure demands of automobility, the legislature authorized a state referendum to let the voters decide whether the state should issue bonds to pay for highways.¹¹ Bonding proved to be an imperfect method of road financing, particularly at the parsimonious levels set by tax-averse officeholders in the Assembly, a story that is detailed below in the discussion of the Pacific Coast Highway. To help service the state share of the bond debt, in 1913 the state legislature enacted the first user-fee charged to motorists -- the registration, or vehicle-license, fee. Though bonding raised over \$70 million for road construction between 1910 and 1919, the state Division of Highways still could not acquire right-of-way or design and build bridges, roadways and other structures without substantial contributions from county governments. This conundrum was resolved with the enactment of the state tax on gasoline in 1923.

The gasoline tax -- not an *ad valorem* sales tax but a levy assessed per gallon of motor fuel -- has been described somewhat over-effusively as “evidence that Americans were willing to pay for the almost infinite expansion of their automobility.”¹² It is true that there has been little resistance to the gas tax on the part of citizens and elected officials since it was first enacted in Oregon, Colorado and New Mexico in 1919.¹³ The reasons for the lack of protest, however, can be accounted for in other ways than as a positive statement in favor of infinite automobility. To legislators, it had the advantage of being a new source of revenue that did not disrupt existing fiscal policies or take

money away from other public functions. The initial passage of gas-tax statutes in state legislatures thus did not arouse opposition from competing interests that would lose financing as a result of the gas tax. The amounts were also small at the start, two cents per gallon in Oregon and the same in California, though the California tax was increased to three cents a few years after initial passage. It was cheap to collect and administer, because the gasoline wholesalers were responsible for reporting sales and remitting the appropriate tax to the state. And vehicle-registration fees had paved the way for the concept of assessing motorists for the costs related to driving. The idea of taxing gasoline to build roads spread rapidly among state highway engineers, and legislatures in all 48 states (as well as Canada and Mexico) enacted the tax by 1930.¹⁴

As the gas-tax bill proceeded through the California Assembly in 1923, some objection arose from large growers and utility companies, but they were mollified by exemptions and credits for large consumers and enterprises deemed to perform necessary service to the public.¹⁵ To blunt resistance from local governments, the California bill allocated a third of the revenues directly to county governments. Los Angeles County agreed to earmark at least half of its share to the city of Los Angeles, which yielded \$400,000 for city streets in 1924, the first year of the tax.¹⁶ The state legislature later made the municipal share a permanent part of the gas-tax program. The gas tax accounted for than half the money spent on highway construction over the next generation and launched the state Division of Highways into a formidable agent of landscape transformation across the state.¹⁷ The control of gas-tax proceeds by the state engineer and Highway Commission constitutes the main support for interpreting highway

policy as a matter of burden-shifting from local to state jurisdiction. But the local share and the ability of city engineers in Los Angeles to win a substantial portion of the county share as well as the funds allocated directly by the state engineers complicates the burden-shifting argument. Nor does the economic scenario account for how the engineers decided what to build, how they responded to the political and operational obstacles they encountered, and the irrational outcomes of much of their work. Seen from a bird's-eye level concerned with policy, the growth of the state highway bureaucracy and the move toward user-based taxes could seem a logical response to an obvious need. But from the ground, the actions of the state engineers take on a far less predictable and reasonable cast. The difficult politics of road construction in California endowed the state engineers with illogical and at times unreasonable goals, and, at crucial junctures, the engineers were motivated by professional aggrandizement and the arrogation of technical and financial prerogatives to their agency as much as by service to the motoring (and taxpaying) public. In-process adjustments to salvage projects, improvisation in design, and roads that did not fulfill their stated purposes (or at least the original purposes) characterized the work of the Division of Highways in its formative years. The roads that they did manage to complete would bestow on generations to come an imperfect template for subsequent highway development.

Pacific Coast Highway and the Cultural Construction of Southern California

Pacific Coast Highway ranks alongside Wilshire Boulevard and Mulholland Highway as one of the iconic roads of southern California. The coast highway has it all:

sunshine, tourism, movie stars, cars, incomparable views of the seascape, and a host of recreational opportunities associated with salt water and sand. Is there any other road that is both so celebrated and so representative of its region?¹⁸ The tightly intertwined relationships between the coastal highway and the coastal landscape are certainly necessary in any attempt to come to grips with the significance of southern California in 20th-century urbanism and culture, but they have nothing to do with the initial impetus to build the road. The scenic and recreational qualities of the coast highway only emerged during its construction, when state engineers fastened onto its beauty as the justification for a project that was poised at the brink of failure and that had previously enjoyed scant justification for the enormous public expenditure it required, beyond the institutional objectives of the state highway agency. The state highway engineers and their allies in local government sought to solidify their authority over route selection and road construction, and in the process they generated a durable image of the region and won from the highest court in the United States a new legal status for pleasure driving. Providing visual and physical access to the coastal landscape was not an initial objective of constructing the coast highway, but it became a crucial element in shaping the values and practices of the California roadbuilding regime, and a central part of the image and culture of southern California.

The coast highway was not descended from Olmstedian urban doctrine, like Rock Creek Parkway in Washington or Ocean Parkway in Brooklyn.¹⁹ It was not intended to provide access to scenic or recreational landscapes, like Robert Moses's Southern Parkway or the roads into Yosemite.²⁰ Nor was it a strategy for congestion relief that was

then enhanced by landscape design, like Merritt Parkway in Connecticut.²¹ It was mandated vaguely, even inchoately, in the dreary legalism of the 1909 State Highways Act, which authorized the 1910 bond referendum for building the first state highways. The bill and the ballot measure specified the creation of two highways that would run “north and south through the state, traversing the Sacramento and San Joaquin valleys and along the Pacific coast by the most direct and practicable routes.”²² The first was the inland route that later became I-5 and the second would become the Pacific Coast Highway.

The reasons for specifying a coastal route were not based on any reasonable assessment of the demand for such a road. Not that the beauties of the state’s coastline had been unrecognized, but the shoreline was a remote place, valued for its isolation, the domain of the recluse and the eccentric. Traveling the length of the California coast was only possible on horseback.²³ After the Southern Pacific Railroad completed its Coast Line route in 1907, the railroad modestly promoted its scenic attributes, and accepted passenger fares, but the route was primarily intended as an outlet for agricultural produce from the coastal counties and it cut far inland in Los Angeles County, to serve the freight depots in the city of Los Angeles.²⁴ The infirm and the moneyed who were attracted to the Mediterranean climate of southern California avoided the coast, which was seen as foggy, damp and cold. In the early 20th century, the railroad resorts of Santa Monica and Redondo Beach were seasonal attractions, not nodes of development.²⁵

Including the coast route in the 1909 highway act and 1910 ballot measure only made sense within the the pork-barrel calculus of the state Assembly and the referendum

campaign. Governor James Gillet was the chief architect of the bill, and the main opposition came from the San Francisco delegation, which generally opposed taxation for infrastructure and which energetically opposed it when most of the money would be spent elsewhere. Gillet assured neutrality from San Francisco legislators by exempting San Francisco from having to contribute any money toward serving the bond debt. J. M. Eddy, the president of the California Good Roads Association, denounced the exemption as an act of “extreme cunning” that vitiated any claim of equity among the state’s taxpayers, and his group opposed the bill and the referendum on that basis.²⁶ Another predictable ally for road funding, the Automobile Club of Southern California, also opposed the measure, not only because of the imbalanced tax burden but also out of the belief that the \$18 million designated for state highways was inadequate for the task and would raise expectations only to frustrate them (which turned out to be correct). The opponents pointed out that the language calling for a coastal highway was only a tactic to attract the support of legislators and citizens from coastal counties.²⁷ That was probably true, and in any case it worked; the bill squeaked through the Assembly and the voters approved the referendum.²⁸

The mandate to build a coastal route certainly mystified the engineering staff of the state highway commission. The statute also specified that the state highways should connect all the county seats; to combine that goal with a road down the coast would have created a zigzag path that would almost double the necessary mileage. Another clause in the act obliged the state highways to link the “centers of population,” which conflicted with idea of a road along the coast. The California shoreline was thinly populated except

for San Francisco and San Diego, and entirely unpopulated for long stretches of rugged terrain where the transverse ridges of the coastal range ended abruptly at the edge of the sea. The engineers appealed to the state attorney general for clarification of these “divergent and irreconcilable policies,” and won relief from the most onerous conflicts embodied in a statute that made political sense but topographical nonsense. The attorney general declared that specific route selection would be vested in the state engineers, and that county seats could be connected to the north-south “trunk lines” by a system of “laterals” built with money obtained from the respective counties. There was no room for maneuver, however, in the obligation to build a coast highway: that language was simple, clear, and binding.²⁹

That obligation was also impossible to fulfill under the terms of the act. Governor Hiram Johnson, who succeeded Gillet, told the state Highway Commission: “You face a tough job. You are expected to build for eighteen million dollars a highway system which the best engineers of the country have estimated will cost thirty-five to fifty million.” In order to stretch the \$18 million, the highway commission devoted its initial efforts to devolving cost and responsibility onto local jurisdictions. The state highway bonds carried a low interest rate and a 50-year term, which made them unattractive to investors.³⁰ The commission prevailed on county governments to buy the bonds, with the understanding that the money would be allocated in proportion to the financial participation of the respective counties. That only guaranteed that the coast highway would be a series of isolated sections that did not necessarily connect with each other. San Diego County, in a frenzy of boosterism fueled by apprehension over being

surpassed by Los Angeles, exceeded even the bond request and pledged over a million dollars of credit guarantees to complete the highway along its entire coast.³¹

The coast highway crossed dozens of river and hundreds of small streams and drainages, all requiring bridges that would consume many times over the entire state budget available for state-highway construction. The county governments agreed to construct the bridges and culverts for the coast road, but the purchase of state highway bonds exhausted the money that most of the counties could devote to the project. In the mid-1920s the state was still waiting for many of these bridges to begin construction. Even when the counties did provide the bridges, the results could be disastrous. San Diego County's hasty efforts to complete the coast road in 1912 and 1913 included a 600-foot long bridge over the estuary of the San Luis River in the northern part of the county. It was an impressive structure, a multiple-span concrete arch design that to all appearances utilized the most up-to-date materials and technology of the day. In their haste, however, the county highway officials stinted on the substructure, and the bridge washed out to sea in 1918.³² The state engineers understood that the unstable subsurface conditions of the shoreline environment contributed to the disaster and believed that the county highway departments did not employ sufficient expertise to cope with the unusual demands of large structures in those conditions. As the state engineer reported to the Highway Commission, in tortuous and indirect language calculated not to offend anyone in San Diego: "Time has demonstrated in many instances the absence of ultimate economy in permitting local influence." The commission resolved that it would thereafter reserve to itself the responsibility for designing structures along the coast.³³

This consolidation of technical functions ran counter to the decentralized financial strategy that was necessitated by the lack of sufficient funding under the state bond issue. In this tension between state and local responsibility for the coast road, the state highway department began to forge its institutional identity as the pre-eminent engineering authority, as the disinterested experts who would transcend local concerns for a broader common good.

That tension was even more acute in the crucial task of securing rights-of-way. Both county and state officials emphasized the importance of acquiring these easements through donation, because of the low budget provided by the bonds. The chief attorney for the highway commission asserted early in the process that peer pressure and public-spiritedness would win the day: “A belligerent or unreasonable land owner soon discovers himself very unpopular in his own community.”³⁴ Even if that were the case for most of the route, it only took a small minority of recalcitrant property owners to compromise the entire project, and by 1915 the rosy predictions of cooperation had given way to a catalog of the difficulties attending right-of-way acquisition, including the implication that local officials could not move forcefully against prominent citizens in their own communities without fear of reprisal. The commissioners and their attorneys insisted that only the state agency could surmount all these obstacles. The highway commission’s own reputation and its ability to justify further expenditures for the state highway program rested significantly on the vital matter of right-of-way acquisition, and the state agency could not countenance any hindrance to that effort: “It usually happens that pugnacious land owners demand some exorbitant sum. . . . Such a system is

absolutely hostile to progress. . . . If the deeds cannot be acquired by diplomatic methods, war must be declared in the courts.”³⁵ The state highway establishment could not survive without the funding commitments from the counties, but the commissioners and their staff would determine the routing, the technical characteristics and the methods of obtaining the rights of way.

The highway commission soon found itself in the awkward position of asking for another bond issue to complete the two state highways while also claiming exemplary performance and remarkable progress in utilizing the money that had already been made available. In 1914, the chairman of the Highway Commission, Charles Blaney, described the roads as “city streets in country places,” which allowed drivers to traverse the state “without having shifted gears once from Oregon to Mexico.” He declared that the coast road would be “an exhibit of the World’s Expositions of 1915, since it stretched from the doors of the Panama-Pacific Exposition at San Francisco to the Panama-California Exposition at San Diego.”³⁶ The illuminating omission in these assertions is the lack of any praise for the scenery those drivers would encounter: the road itself would be the “exhibit.” The landscape it traversed would only enter the discourse concerning the coast highway in the coming years, as a means to overcome the resistance to its completion. The engineer’s description was also more hopeful than descriptive. At numerous locations along the route of the coast highway, the right-of-way was tied up in litigation and no construction had occurred. Construction had yet to begin on most of the bridges. At many points, the only work consisted of minor regrading without any surface treatment. Lack of drainage facilities made the road impassable during the rainy season.

Grades as high as nine percent, such as Ortega Hill just south of Santa Barbara, required that motorists travel with a sense of adventure and some stout rope.³⁷ Staking its reputation for administrative efficiency and technical mastery on such a highly compromised undertaking was a huge risk for the state highway bureaucracy in its formative period. The commissioners and the engineers and attorneys who staffed the agency understood the risk, and it only increased their desperation to complete the job that they already claimed to have finished. At the most critical juncture in those subsequent efforts, when the feasibility of completing the coast highway was most threatened, the value of scenic landscapes would play a critical role in salvaging the project and solidifying the standing of the highway commission.

The contradictions embedded in the legal origins of the coast highway would reach a crescendo in the northern stretch of Los Angeles County, where some 22 miles of coastline lay within the expansive landholding known as Malibu Ranch. Frederick Rindge, the scion of a wealthy Massachusetts family, had purchased the ranch in 1891. In between managing his extensive investments, Rindge dabbled in agriculture and led an idyllic existence on the ranch with his wife, May, and their three children.³⁸ Rindge waged a resolute struggle against the Southern Pacific's plans to build its coastline railroad through Malibu Ranch, and May Rindge then continued that effort after his death in 1905. Their main tactic was to incorporate their own railroad and then donate to it the right-of-way through the ranch, thereby precluding the Southern Pacific's plan. May Rindge undertook the minimum amount of construction necessary under state regulations to retain the legal priority of her railroad against the continued attempts by the Southern

Pacific to overturn it. She also periodically incorporated successor firms to receive the right-of-way easement, thereby restarting the compliance period. In 1908 the Southern Pacific abandoned its attempt to build through Malibu Ranch. Rindge's construction slowed to a halt and by 1916 her rail company's filings with the state railroad commission consisted only of Rindge's forwarding address.³⁹ In the meantime, Rindge extended her defense of the ranch against the new transportation technology of automobiles by stationing armed guards at the boundaries to turn away tourists, and by dynamiting sections of the rudimentary road that passed along the shore of the ranch.⁴⁰ In 1903, Rindge sued the county in federal court to prevent condemnation of her land for road purposes. The case dragged on for ten years, but she ultimately prevailed in a judge's ruling.⁴¹

The state Division of Highways had no objection to routing the coastal highway inland from the Rindge property, across the base of the broad peninsula occupied by Malibu Ranch, to approach the city of Los Angeles through the San Fernando Valley. In 1913, the same year that Rindge won her federal case, the state highway engineer, Austin Fletcher, issued the operating principles that his staff would use in fulfilling the terms of the 1909 State Highway Act. "The routes chosen must be direct and not meandering. . . . The saving of mileage is the essence of the act." Bypassing the ranch would save some 12 miles according to Division of Highway estimates. It took some verbal gymnastics to apply that standard under the language of the Highway Act: "The expression 'along the Pacific coast' does not mean a literal 'shore line' but is used in a most general sense. . . . The words 'along the Pacific coast' are used with the meaning of traversing the Pacific

coast, but in order to make the phrase somewhat clearer, the term ‘along’ was used in a most general sense, namely, ‘in line with the length of,’ and not in the sense of ‘immediately by the side of the shore.’⁴² A wealthy landowner, the state highway agency, and the U. S. Court of Appeals all agreed that the coastal route did not have to traverse Malibu Ranch, and the matter might have rested there if another set of landowners and the Los Angeles County board of supervisors had not proposed an alternate plan.

The county board of supervisors, though hardly the mindless puppets portrayed in the *noir* historiography of Los Angeles, were indeed attentive to the wishes of the real estate industry, and among their more ambitious clients were the developers and subdividers mapping out communities along the southern reaches of Santa Monica Bay, between Venice and San Pedro. The most formidable of this group was Frank Vanderlip, often referred to as an “eastern capitalist” in the more ardent newspaper accounts, who headed the syndicate that had purchased Palos Verdes Ranch and planned to develop it as a seaside suburb. Born in 1864, Vanderlip had an eclectic early career including stints as a machinist and a newspaper reporter in Chicago, before becoming secretary to bank president Lyman Gage, who was appointed Secretary of the Treasury in 1897 by President McKinley. Serving as Assistant Secretary of the Treasury, Vanderlip won distinction among financiers for his handling of the loans to finance the Spanish-American War. He joined National City Bank in 1903, became its president six years later, and in 1913 he purchased the Palos Verdes Ranch with an eye toward investment and development.⁴³

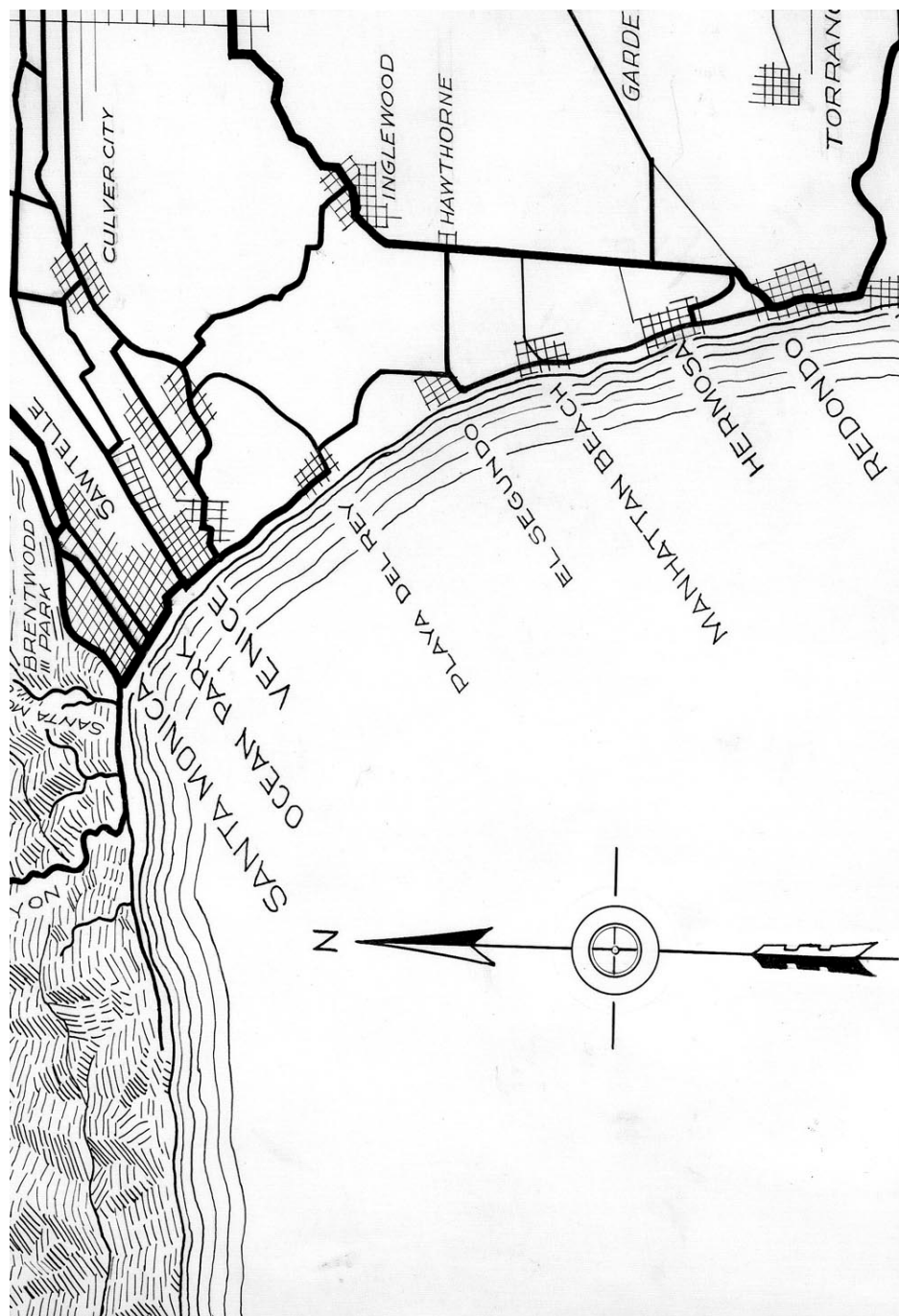


Figure 7: The coast of Los Angeles County, c.1920. North of Santa Monica, the coastal route ended at Topanga Canyon. South of Santa Monica, there was no continuous route of travel between the growing beach cities. Source: *Touring Routes in the Vicinity of Los Angeles* (Los Angeles: Automobile Club of Southern California, [c.1920]). Used with permission; all rights reserved.

Landowners and speculators in San Pedro and the South Bay, disappointed that they would be bypassed if the coast highway did not hug the shoreline, placed their hopes on the possibility of Vanderlip's intervention. After May Rindge won her federal case in 1913, realtor Carl Schader mourned "the all-but-abandoned scheme to extend the coast branch of the State highway around the shore line of the Malibu ranch . . . the highway which he and others of the Santa Monica Bay and South Coast districts have been laboring for years." At this key moment, the south coast real estate interests represented by Schader inserted the shoreline scenery into the discourse about the highway: "Such a highway would traverse a winding course, commanding from almost every point an outlook upon some one or more picturesque natural features . . . beaches, grottoes and rugged palisades in an endless panorama would unfold before the eyes of the traveler over the road." It was a regional vision of "continuous beach development from the Santa Monica Mountains to the limits of the developed South Coast district. It would be the connecting link in the the projected coast highway to San Diego." Schader closed his public plea for reconsideration of the routing decision by invoking the influence of Vanderlip: "Before definite plans are adopted that might eliminate all possibility of securing the coveted right of way, it strikes me that the state Highway Commission would do well to consult with Mr. Vanderlip and his associates with reference to the highway plan."⁴⁴

Vanderlip surely grasped the importance of improved roads to a massive development such as planned for Palos Verdes. He even agreed to serve as a one-person assessment district to fund the southern extension of Western Avenue so it reached his

planned community.⁴⁵ Chambers of commerce from Santa Monica to San Pedro provided political cover to the board of supervisors by forming committees to promote the coast route, hosting dinners to drum up support, and sending delegations to Sacramento.⁴⁶ Running the coast road through the beach communities of the South Bay required it to pass through Rindge's property to the north, and in early 1916 the county accordingly filed suit to obtain the right-of-way through Malibu Ranch. Rindge prevailed on procedural matters, but the case also provided the opportunity for her attorneys to dissect the justification for routing through the ranch. "Except as a scenic trip for automobilists, who can find ample gratification in that line elsewhere," they argued, "there is not now, and has never been, any public or other necessity for any such road."⁴⁷

When the county corrected the technical deficiencies in its suit and again moved to condemn a right-of-way through the ranch, in December 1917, Rindge and her attorneys used the language of the 1909 highway act and the routing policies adopted by the Division of Highways to refute the county's claim of public benefit. The road through the ranch could not be considered part of any state highway system because no improved roads connected to it at either end. Moreover, a few miles north of the ranch, on the coast in Ventura County, the route would encounter the formidable obstruction of Sycamore Canyon, and the highway commission had not even begun to contemplate how to cross that barrier at the time of the suit. The route through the ranch would not connect county seats, and would even cause the highway to bypass the county seat of Los Angeles. There were no centers of population anywhere along the alignment through the ranch, and again, the coastal right-of-way would cause the road to detour away from the

largest city in the vicinity. The road would offer no advantages for hauling freight because it was a roundabout route between existing destinations. And, drawing directly from the Division of Highways' analysis of the routing options, Rindge pointed out that the coastal route would be 12 miles longer than the inland route. Unable to oppose any of those points with facts, the county attorneys argued on the basis of the law: California statutes invested in the board of supervisors the authority to determine the nature of improvements undertaken for public benefit.⁴⁸

That won the day in Superior Court, but Rindge appealed. When the state Supreme Court considered the case in 1918, the county buttressed its position by claiming that the specific public good at issue was the right to drive through scenic landscapes. The county won again, and Rindge appealed again in the federal courts. The U. S. Supreme Court ultimately decided against Rindge, in 1923. The decision hinged on a new definition of the public good. It first noted that numerous precedents had established parks and recreation as valid public benefits:

Public uses are not limited, in the modern view, to matters of mere business necessity and ordinary convenience, but may extend to matters of public health, recreation and enjoyment. Thus, the condemnation of lands for public parks is now universally recognized as a taking for public use.

The court then applied those precedents to the new conditions of transportation:

A road need not be for a purpose of business to create a public exigency; air, exercise and recreation are important to the general health and welfare; pleasure travel may be accommodated as well as business travel; and highways may be

condemned to places of pleasing natural scenery. . . . Manifestly, in these days of general public travel in motor cars for health and recreation, such a highway as this, extending for more than 20 miles along the shores of the Pacific at the base of a range of mountains, must be regarded as a public use. For these reasons we conclude that this highway and the taking of land for it is a public use authorized by the laws of California.

Providing access to scenic landscapes was not part of the original purpose of the coast highway. It only entered the discussions about the roads when South Coast real estate speculators invoked scenic driving as a justification for a public highway to access their property, and it only entered the legal proceedings as a supplementary argument to overturn the resourceful efforts of the stubborn May Rindge. Yet the fundamental significance of the Pacific Coast Highway rests on this decision: in order to build it, the county first had to establish a new right under the Constitution of the United States, the right of driving for pleasure.⁴⁹

The state Division of Highways remained silent on this conflict until its final resolution by the U.S. Supreme Court, and it is easy to see why, beyond the routine disclaimers of public officials when asked to comment on legal proceedings. The state engineers were torn between their political alliance with county government and the fact that their own substantive analysis of routing principles for the coast road constituted the arguments used by the county's most vociferous antagonist. The booster-driven politics of Los Angeles made the county government one of the Division of Highways' most valued clients. In 1913, when the first highway-bond issue failed to attract investors

because of its disadvantageous terms and the state prevailed on county governments to purchase the bonds, Los Angeles bought \$1 million of them, more than any other county, and did not even require that the money be spent in the county where the money originated.⁵⁰ Moreover, in the midst of the Rindge appeals, in 1919, California's third highway-bond issue came on the market, and the state engineers apparently took the South Coast realtor's advice to "consult with Mr. Vanderlip," who satisfied the boosters' expectations by buying \$4 million of the bonds -- some ten percent of the entire issue. Before Vanderlip's purchase, reported the *Los Angeles Times*, "there was no sale for the bonds" because of the low interest rate they carried. Vanderlip "made arrangements with the State Highway Commission that the proceeds of the bonds are to be used in the construction of the scenic coast boulevard from Oxnard to San Juan Capistrano. . . . Mr. Vanderlip agreed to buy the bonds on condition that the proposed road be built at once."⁵¹ If the state engineers were willing to compromise their principles and adopt the goal of scenic motoring even if it required circuitous routing through Malibu Ranch, at least they exacted a steep price. In any case, \$4 million did not buy a lot of highway, even in 1919, and there was little the state could do before the enactment of the gas tax in 1923, which fortuitously coincided with the Supreme Court decision in favor of pleasure driving.

The engineers of the state highway department eagerly adopted the scenic and recreational value of the coast highway. Few could have appreciated the landscapes more, in part because they were among the only people who could see them before the road was completed. Rindge's lawyers and armed guards had prevented anyone except her own family and employees from appreciating the shoreline of Malibu Ranch. Up the

coast in Ventura, Santa Barbara and San Luis Obispo counties, the spotty progress of construction had done little to alter the generally inaccessible condition of the coastal region. Those with the most direct experience of the sublime vistas were the survey parties of the state highway department. The newly validated legal standing of pleasure driving, and the newly established pool of funding to pursue their work, merged with the state engineers' assertion of pre-eminent technical expertise, their relish for accomplishing the most difficult construction tasks, and the deep satisfaction they found in transforming nature by human actions. The coast highway shortly became the signature project for the department. With the zeal of the converted, and with appreciation for the victory the scenery had won in California's most hotly contested right-of-way case, state highway engineers adopted scenic values as one of their central goals. They rewrote the history of the state highway system to profess that opening picturesque vistas to the motoring public had been their objective all along. They carefully distinguished their work from the parkways of the eastern states, where landscaping and refined roadway accoutrements such as fences and light standards contributed to the carefully planned views. To the staff of the California highway department, "enhancing the scenic value of highways" was a task for the engineer, not the landscape architect or the urban planner, and it would be accomplished by the location and design of the highway itself, not by augmenting the highway with unnecessary flourishes. In 1928, the restated goal of the coast road in southern California was to provide a view of the ocean in every mile of the 235-mile stretch between Santa Barbara and the Mexican border.⁵²

The state highway engineers expressed their new landscape ethic most spectacularly in the vicinity of Sycamore Canyon, in a monumental construction episode that penetrated deeply into the culture and identity of the agency. They relished the difficulty of their work and boasted of their prowess in rappelling down cliffs to mark the highway alignments that would have to be blasted out of the jagged western edge of the coastal range. “Climbing perpendicular cliffs and dangling from ropes above the waves is all part of a day’s work,” recounted the resident engineer in a display of *macho* understatement.⁵³ The new highway had to be carved as a shelf into the sides of the cliffs that lined the water’s edge, a process known as “benching down,” which required at one location near Point Mugu, “perseverance and the judicious use of 18 tons of 60 percent hand grenade powder.”⁵⁴ The construction crews drilled down from the tops of the cliffs, placed blasting powder in the holes, and exploded the cliff face. A single blast could extend as far as two thousand feet, and the largest charges consumed 40 tons of explosive. To haul away the loosened rock, the department built a temporary railroad; as many as 100 hopper cars a day carried debris to Santa Monica during the height of the project. This was landscaping with a vengeance, and the most expensive construction contract ever let by the state of California up to that time. The new roadbed between Santa Monica and Oxnard was completed in 1925, but it proved to be exceptionally unstable, and frequent slides repeatedly caused the opening of the road to be postponed. Much of the rock that had been hauled away was brought back and used to support the water side of the roadbed, until finally the surface could be paved in 1928.⁵⁵

Even where the construction was less spectacular, the coast highway served as a laboratory for the department's methods. The hurriedly built section through San Diego County bedeviled the state highway department for more than a decade because of its inferior specifications. The 15-foot wide roadway barely allowed two cars to pass each other and produced high rates of head-on collisions. As tragic as that was, it could be solved by the simple means of adding another lane. Far more troubling to the state engineers was the concrete itself, which was only four inches thick and did not have any steel reinforcing. The roadway crumbled to pieces in less than five years and devoured the department's maintenance budget in constant reconstruction to remain passable. In that process, state engineers tested different compositions of concrete and different methods of building forms, pouring the mixture, and curing it. The coast highway through San Diego County was entirely rebuilt by 1926, when it served as a showpiece for the state highway department. The tile-lined drains, the ample width, and the robust subsurface all came in for their share of praise, but the highest plaudits were reserved for the concrete itself – nine inches thick and, according to the division engineer, the smoothest concrete surface to be found in the world.⁵⁶

Though intensely focused on the construction itself, on burnishing their reputation for technical acuity, and on reinforcing the political, legal and financial position of their agency, the state highway engineers were also attentive to the transition that occurred when they finished building a piece of the coast highway and it passed into public use. The landscape ethic served them well in those moments too. The conflicting mandates, the lawsuits, the long years of meager budgets, the washed-out roadways, and the

precarious balancing act of claiming progress while requesting more appropriations were all passed over, and the public benefit was framed in terms of visual enrichment and tributes to the dramatic vistas their work had created. When Governor C. C. Young presided over the opening of the road through Malibu, the state highway department reported: “The magnificent new highway, its scenic setting along the sea, and the beaches and the cliffs that adorn it won the commendation of all for the vision of those who had planned the highway and the genius of those who had built it.” To state highway officials who hungered for recognition and relied on visually constructed ideals to attain it, only a short step separated the idea of a photogenic highway, built for the views it afforded, from the ritual of the celebrity photo opportunity. To celebrate the final section of the coast highway in Orange County, the highway department enlisted the participation of “America’s Sweetheart,” Mary Pickford, who posed as “The Spirit of Progress,” and Douglas Fairbanks, who played Vulcan the blacksmith, forging the last link. Thus began the coast highway’s role in media production, a role it would continue to play in succeeding generations, even while America’s Sweetheart changed from Mary Pickford to Sandra Dee’s Gidget, and Fairbanks’s Vulcan gave way to James Darren’s Moondoggie.⁵⁷

May Rindge remained steadfast in her opposition to the highway and fought the project at every opportunity. She sued the highway department for scaring livestock, for taking down trees, and for excessive noise. She obtained an injunction to prevent the use of any water from her property, which forced the state to build a 21-mile long pipeline to supply the construction work. Rindge had another use for the water by then: she had

given the water rights to Marblehead Land Co., the corporate entity under which she developed the ranch. In 1929, when the coast road was opened, Marblehead issued a leather-bound brochure offering land from houselots up to 640-acre estates. Among the selling points were the oceanfront highway, which brought Hollywood within a 30-minute drive, and, of course, the “unmatched scenic splendor [of] nature’s masterpiece framed by a towering background of majestic mountains.” The compelling visual experience of the coastal landscape had finally supplied a point of common interest between Rindge and the highway builders she had fought for so long.⁵⁸

The coast road certainly served the goals of Vanderlip and the South Coast developers, and it provided a riveting visual script to accompany the rise of the state highway agency. The gas tax produced more than \$18 million in construction funds in its first year and the Division of Highways employed 900 people by the end of 1924.⁵⁹ The drive along the Malibu coast has certainly entertained millions of motorists over the years, but the instability of the terrain has exacted enormous continuing costs in rebuilding the roadway after portions slide into the sea, and in buttressing or removing the looming cliffs that periodically threaten to destroy the highway.⁶⁰ Pacific Coast Highway contributed to the residential development of the canyons and hills above Malibu, a perilous environment subject to brush fire and mudslide, which requires substantial public expenditure for fire suppression and the construction of drains and debris channels.⁶¹ Any celebration of the highway requires that the costs and perils it has incurred be ignored or discounted. If it can only be deemed a success in the most narrowly construed terms, at least those who bear (much of) the cost and face the peril do

so at their own choosing. The irrational results of the state highway engineers' efforts in the more urbanized areas of Los Angeles were borne by residents who had little say in the matter. To trace the effects of state highway construction on that much larger proportion of the population requires turning our attention to the workingclass neighborhoods of East Los Angeles.

Whittier Boulevard and the Origins of Transportation Exploitation in East Los Angeles

The other "trunk line" mandated by the 1909 State Highways Act, the inland route, generated much less controversy for the Division of Highways than the road through Malibu Ranch. Except for one dispute in Tulare County, north of Bakersfield, where the growers and dairy farmers at the east and west extremities of the county both sought to pull the highway closer to themselves, the highway surveyors encountered little resistance. The inland route, "San Francisco to San Diego via Los Angeles," was 592 miles long, and it was no difficult trick to map out "the most direct and practicable route" through the centers of population and commerce and the county seats.⁶² "There was a predominance of argument one way or the other," the Highway Commission could report in 1913, "and an intelligent decision could be reached. There were local disappointments, but no sense of irreconcilable injustice."⁶³ Building the road was another matter. When Spencer Cortelyou took over State Highway District 7 in 1924, the entire route between San Diego and Los Angeles had been graded to the minimal width of 15 feet and was unpaved except for a 6-mile stretch in southeastern Los Angeles County.⁶⁴

There was never any doubt that the highway would go through the city of Los Angeles. It was “the heaviest traveled of all state highway routes,” according to Cortelyou, where “great volumes of food stuffs are trucked into Los Angeles” by means of a “large number of commercial vehicles.”⁶⁵ The highway was also a priority for Los Angeles County, which was responsible for the right-of-way outside of incorporated cities. The most important stretch was some eight miles of highway east of the Los Angeles city boundary (Indiana Street) and west of the city of Whittier. Within county territory, where the highway was known as Whittier Boulevard, it passed through “fruit orchards and nut groves,” but by the time Cortelyou contemplated the reconstruction of Whittier Boulevard, his agency noted that “Whittier boulevard passes through a territory undergoing transition from country to city. Orchards are being subdivided for residential, business, and industrial purposes and problems of both a rural highway and a city street [have] to be met.”⁶⁶ Cortelyou and the Division of Highways went to extraordinary lengths to accommodate the county, especially in designing a new highway that exceeded the state’s standard specifications. Thus it is all the more remarkable that the Division of Highways pointedly ignored the effects of the Whittier Boulevard project on the city of Los Angeles. In this first significant encounter between state and city engineers, the state bestowed an enormous problem on the city, which struggled for nearly a decade to cope with the westbound traffic on Whittier Boulevard, and only accomplished a stopgap solution that degraded the quality of life on the eastside for generations to come.

Cortelyou and his staff avoided the most controversial highway politics by leaving the city out of their plans, but the route just east of the city, through rapidly

urbanizing county territory, gave them a taste of the what city engineers contended with on a daily basis. Though spared any arguments with the county about the location, the Division of Highways still had to negotiate with the county planners over the specifications for the roadway. The county planning commission, which was established in 1923, sought to create a high-traffic artery out of Whittier Boulevard by laying out an easement 80 feet in width.⁶⁷ Before the gas tax, the county could not raise the money to construct such a road except by assessment district, and it did not even attempt to force through such a plan. The planning commission could, however, require that all subdivisions along Whittier Boulevard set aside an easement sufficient for the expansive roadway as a condition of approving the subdivision applications.⁶⁸ That was just the kind of cooperative local condition envisioned by the Division of Highways legal staff when it based the state-highway program on the assumption of donated rights-of-way.

The state and county disagreed, however, over the roadway plans. To stretch the gas tax revenues as far as possible, the state engineers declared that “We hesitate to commit the state to a policy of construction . . . of pavements in excess of 30 feet in width.”⁶⁹ Even when they compromised on a width of 56 feet – four lanes of traffic with gutters and curbs – Cortelyou could not win a commitment from the Highway Commission to exceed its guidelines for the extra expenditure. Cortelyou then undertook the irksome process to which his local counterparts had become accustomed, and assigned the project engineer, A. N. George, to solicit frontage owners to form a special-assessment district to pay for building a wider highway. George reported that numerous “petty disputes” required “months of patient negotiation and adjustment.” Where

agricultural use still prevailed, he had to obtain agreements with growers to move irrigation lines back from the planned roadway alignment. Subdivisions and individual homeowners had to relocate fences or have the cost of moving them tacked onto the construction budget. One farmer extracted the promise that the contractor “muzzle his mules while grading operations were underway to prevent the animals from browsing on the overhanging limbs of the . . . walnut trees.” Not that George encountered opposition at every turn. Two east side groups, the Belvedere Gardens Chamber of Commerce and the East Side Association (the same group that put the deal together for North Broadway bridge) promoted the plan and even helped to collect signatures.⁷⁰

The financial structure of the project manifested all the complications that went into its design and approval. The state could only pay for half of the work. The other half consisted of the county’s share of gas-tax proceeds plus the money raised from the assessment district. Because state law prohibited the commingling of property-tax funds, the attorneys at the Division of Highways devised a pair of legally and physically parallel contracts. The highway was divided along its length and one contract was let for the northern lanes, paid for directly by the state, while another was let for the southern lanes, paid for by the county expenditures and the special assessment. The same contractor won both jobs, the specifications were identical, and the work proceeded as if it were a single job.⁷¹

Whittier Boulevard served an exemplary role within the state Highway Commission’s mandate to connect the far-flung communities of California with a network of modern roads. The width and the drainage facilities exceeded the standards

that the state was struggling to put in place. The bridge over the San Gabriel River carried the full four lanes of the improved boulevard, the widest roadway of any bridge in the state, at 52 feet. The reinforced-concrete beam structure replaced an 18-foot-wide wooden truss erected by the county at the turn of the century. In contrast to the truss, which had bracing over the roadway, the new bridge was supported entirely from below, providing unlimited vertical clearance for trucks, another aspect of the project that the state engineers intended as a model for subsequent projects.⁷²

The new state highway served another purpose too, the one pursued by the chambers of commerce and the property owners who agreed to help pay for it. The broad boulevard accelerated the transformation of orchards into commercial strips and residential subdivisions. Between 1925 and 1927, the 435-acre Babbitt Ranch was developed as the community of Montebello Park.⁷³ Such real estate windfalls assured the cooperation of county officials and their business-sector clients, a necessary alliance for Cortelyou because this stretch of Whittier Boulevard was the most expensive state highway built up to that time, both in total cost and in cost per mile. The project benefited from comfortable coexistence between the goals of building a through highway and enhancing local real estate opportunities.

That congenial setting ended at the city boundary of Los Angeles, and the construction project did too. Cortelyou was certainly aware of the competing interests arrayed around the improvement of Whittier Boulevard within the city, as well as the highly charged setting for road policy in city government, where approval consumed years rather than months, and where a majority of proposals reach fulfillment. Not only

did Cortelyou have more than a decade's experience in the regional highway establishment, but his brother, Herbert, had worked in the city engineering department since 1911, and starting in 1924 Herbert served as principal construction engineer for the river bridges.⁷⁴ Cortelyou simply ignored the concerns of Los Angeles property owners and city officials and presented them with the *fait accompli* of an improved highway pouring traffic into the east side. He either did not consider the effects within the city boundary of the improved Whittier Boulevard or he understood the effects and ignored them. Either way, he initiated the practice of blanking out the east side on the state highway map, while at the same time establishing long-term traffic problems for the area so pointedly missing from the plans. He need only have consulted the city's *Major Traffic Street Plan*, which was issued the same year he initiated negotiations for Whittier Boulevard, and which correctly predicted that westbound traffic on an upgraded Whittier Boulevard would have to travel north on Boyle Avenue in order to continue through the city.⁷⁵ This unwieldy configuration of movement would persist through the following decades and eventually require extreme measures to resolve (including, ultimately, the East Los Angeles Interchange).

Within the city, the Whittier Boulevard right-of-way was 35-feet wide and unpaved for most of its length. It dead-ended on a high bluff overlooking the Los Angeles River – hardly the appropriate setting for a bridge that would allow inter-regional traffic to continue through Los Angeles. If the alignment were projected across the river, it would have lined up with Sixth Street, but there was no bridge at Sixth, and no plans for one. The bond-issue for the river bridges, approved by city voters in 1923,

did not include a bridge at Sixth, but one to the north, at Fourth Street, and another to the south, at Seventh. The low-lying land along the river, below the bluff, was all owned by the Union Pacific Railroad, which had initiated the plans to upgrade Tenth Street as part of the scheme to transform that vast acreage into the Central Manufacturing District. Any major artery north of Tenth would bisect the railroad property, taking land that could otherwise be profitably developed.⁷⁶

On the east side, along Whittier Boulevard, a different kind of growth interest and a different kind of transportation vision prevailed. The members of the Whittier Boulevard Chamber of Commerce were proprietary manufacturers and retailers who sought improved transportation access for their businesses, and small-scale property owners seeking to increase the development potential of their land. In 1925 the Chamber president, realtor W. F. Ault, acknowledged that his members already enjoyed the advantages of proximity to the busy street, which, he noted, “Has helped more than any other Boulevard to build up the East Side of Los Angeles.” They wanted to expand that advantage by enlarging Whittier from its 35-foot width, and by extending it from Boyle Street to the river. Ault and the small businesspeople of the east side did not subscribe to the same goals as the Union Pacific. On the contrary, Ault viewed the Union Pacific plan for the Central Manufacturing District as a direct threat to the upgrade of Whittier Boulevard: “Property in the route required for this opening is fast developing into an industrial district and delays will add unnecessary expense.” The added expense would come from the higher cost of acquiring land for the road after factories and warehouses were constructed, rather than buying undeveloped land. Ault frankly admitted the

competition: “The Union Pacific industrial promoters will resent cutting across their tract.” He did not shy away from it, but asked the city to take the property by eminent domain for a route through the railroad tract.⁷⁷

Highway-planning on the east side was stalemated by the conflicting prerogatives of two powerful interests, the Union Pacific on one side and Ault’s chamber of commerce on the other. John R. Prince, the head of the city engineering department's Streets Division, gave the city council a discouraging report on Ault's request in December 1925. Under the 1923 bond issue, the bridge at Fourth Street would be replaced and the one at Seventh Street upgraded for heavier traffic. It made no sense, he argued, to enlarge an east-west artery that fell between those two possible crossing locations. He admitted that Whittier could not handle its current level of use, particularly the cars heading west into the city. Diverting the Whittier traffic south to Seventh Street bridge offered only a partial solution because it was a narrow crossing, barely affording one lane in each direction when the streetcar line was also taken into account. Routing the Whittier traffic north to the new bridge planned at Fourth would require a diagonal connector running northwest from the corner of Whittier and Boyle, which would have to cross the railroad property. It was a prohibitively expensive option because of the length of the connector and the likelihood that the Union Pacific would oppose it in court. Sixth Street seemed the proper location for Whittier Boulevard traffic to cross the river, but there were no bond funds or any other source of money for a bridge there. Even if there were, the property owners west of the river had expressed no desire for a new bridge and highway, and the city would need their participation in order to complete Whittier across the river.

Prince concluded that any plans for the city to improve Whittier Boulevard were “premature.”⁷⁸ This was the intractable issue that Spencer Cortelyou wrote out of the state’s plans for the boulevard when he declined to take into account what would happen to wetbound traffic on the new state highway when it crossed the municipal boundary.

John Prince, however, could not ignore that traffic. Buoyed by the success of the 1923 bond referendum and the progress on the river bridges, in early 1926 the council was considering another bridge-bond referendum for the April election. Alarmed about the predicament that would ensue when Cortelyou’s highway opened, Prince inserted \$500,000 into the referendum for a bridge over the Los Angeles River at Sixth Street and to widen Whittier Boulevard between the bridge and the east city boundary in order to accommodate the new levels of traffic coming from that direction. To connect the west end of Whittier Boulevard with the bridge over the river, a long approach span was required to cross the Union Pacific property in the floodplain. The railroad agreed to donate an easement over its property after Prince pointed out that an elevated roadway would interfere less with the development of the industrial district than would a highway that ran through at grade. Spanning the railroad property meant carrying the road above grade all the way from Boyle Avenue to the river, more than doubling the length of the structure and adding hundreds of thousands of dollars to its estimated cost.⁷⁹

Another factor that increased the estimates was the continued development of property along Whittier Boulevard. As raw land filled up with buildings, the city’s damage payments for acquiring the frontage needed to widen the right-of-way rose accordingly. The price of vacant land also escalated in the frenetic economy of growth.

According to one admiring report in the *Los Angeles Times*, land in the Ransom Tract, on the south side of Whittier Boulevard just east of the Union Pacific property, had risen in value from \$700 to \$5,000 an acre between 1922 and 1925. Prince, the city council, and the chamber of commerce understood from the start that the bond issue would have to be augmented by tax increments, especially for the boulevard portion of the work. As the project cost and the anticipated tax increments kept climbing, the frontage owners began to balk. Local support was further eroded by the city engineers' roadway design, which called for straightening out the Whittier alignment at several locations through the east side. That meant taking land and buildings at strategic corners. The chamber of commerce still supported the improvements, but petitioned for changing the routing at those corners so that existing buildings would not have to be removed. The east-side property owners also asked the city to economize by narrowing down the right-of-way so that less land would be taken. In 1927, Prince's staff complied with all these requests by redesigning the road twice, but the goal of economy was defeated by the continued increase in real estate values. Each time, the width of the right-of-way shrank, but the cost of acquiring it grew.⁸⁰

The project cost also kept spiraling upward because of further industrial development in the congested river corridor. On the west side, in 1927, a six-story warehouse went up right at the curb line on the south side of Sixth Street, just two blocks in from the river. The warehouse extended about 12 feet into the roadway that the engineers had planned to build for the western approach to the bridge. Damage payments to remove that one building were estimated to be \$100,000. The west side property-

owners had already ruled out a high-level approach span above their properties, so the city council ordered the engineers simply to jog the right-of-way to the north to avoid the warehouse. That produced a sharp skew on the bridge itself and a further cost increase for the complex fabrication of the river spans. At that crucial juncture, the city council approved the most extreme cost-saving measure that the engineers had been able to devise. The council endorsed a design option that would route the Whittier improvements as much as possible onto property already owned by the city. The final alignment through the east side took land from five schoolyards, eliminated a city playground, and clipped off what was then the southern end of Hollenbeck Park.⁸¹

The final design of Whittier Boulevard called for a width of 56 feet, the bare minimum needed to provide the four lanes that would correspond to the state highway that ended at the city border. The jogs in the existing street would be preserved rather than eliminated, and public recreational spaces would be shrunk all along the route. It was a design based on political feasibility as much as a response to the traffic emergency created by the state Division of Highways. Whittier Boulevard would reflect the lobbying of diverse property holders with no unity of interest or opinion. The residents who used the park, playground and schoolyards were not heard in the deliberations, nor were they asked whether an improved highway was worth the sacrifice of their recreational areas.

Sixth Street Bridge finally opened in 1931, but not before recurring shortfalls forced Prince to take money from six other projects to complete the budget for it.⁸² The bridge received the usual plaudits from its builders and the organs of civic progress. The

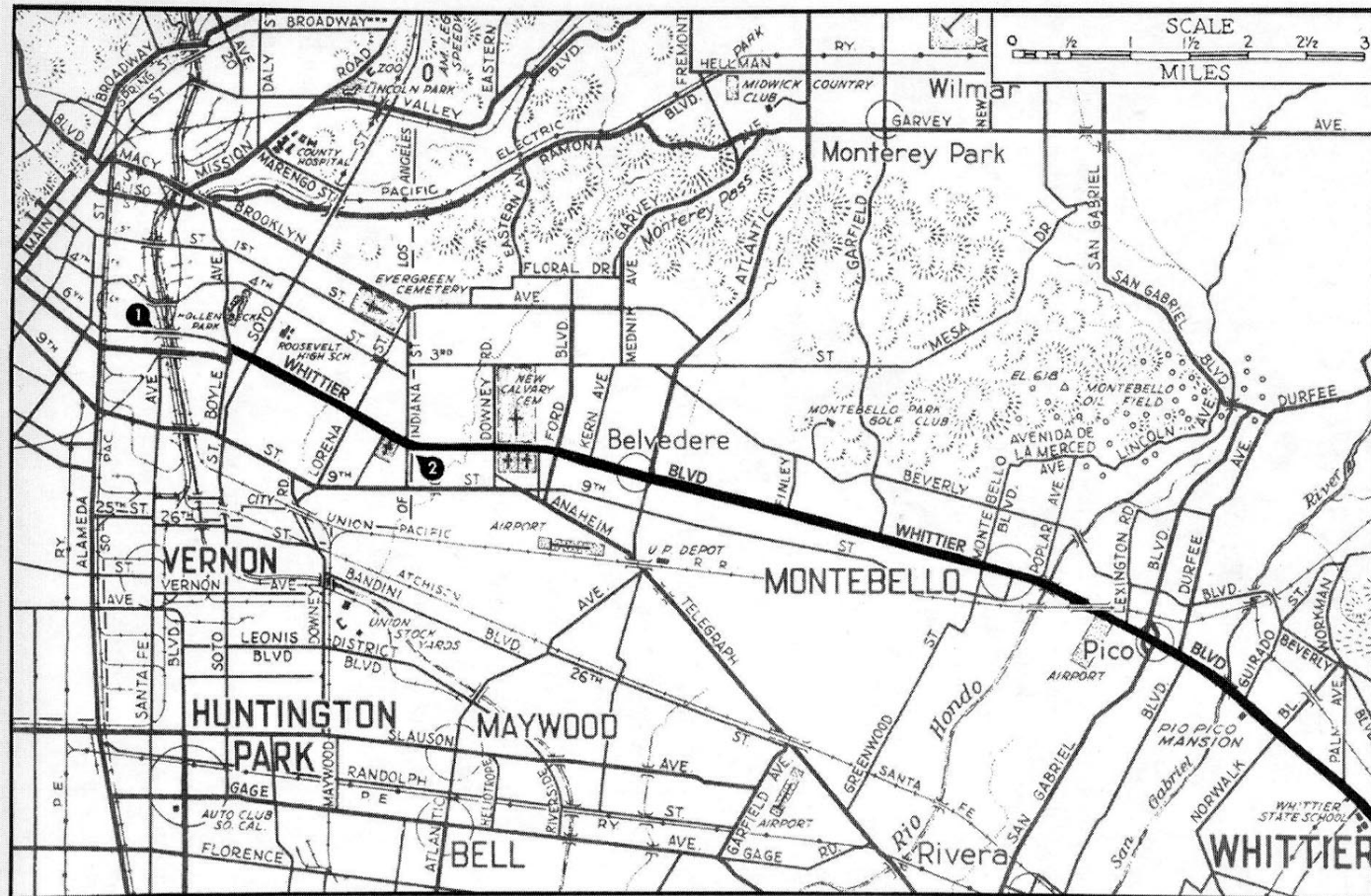


Figure 8: East Los Angeles and surrounding area, 1935. Whittier Boulevard is shown as a bold line. Number 1, Sixth Street Bridge; Number 2, Los Angeles City boundary. Source: *Road Map of Metropolitan Los Angeles* (Los Angeles: Automobile Club of Southern California, 1935). Used with permission; all rights reserved.

fitness of its structure, the restrained stylishness of its design, and the panoramic views from the span all came in for their share of praise, but the remarks seem like half-hearted groping for some positive statement when all attempts to find one rang hollow. The best that the chief engineer could say for the asymmetrical, through-arch river spans was that they were an “unusual design,” based on the high clearance necessitated by crossing over the railroad property on the east side, combined with the bend in its middle that was necessitated by avoiding the warehouse to the west. With little money for non-structural features, the architect for the bridge concentrated on the design of the light standards and the pylons, which read like isolated flourishes, in keeping with the afterthought that they were. The architect could not even fall back convincingly on the rhetoric of harmonious line and proportion, because the bridge was too narrow for its height, followed a deformed alignment, and was completely out of balance, with a long eastern approach and barely any approach at all to the west. The creators of the bridge strived for elegance, but they realized that their accomplishment was more novel than graceful. Their most unabashed comments were reserved for the view of the city afforded from the bridge.⁸³

All the distortions that made the bridge an unwieldy structure and Whittier Boulevard a narrow and tortuous thoroughfare had their origins in the contested politics of transportation development in Los Angeles during the 1920s and 1930s. Caught between the conflicting demands of two influential business interests and constrained from exploring alternative routes by the pre-emptive actions of the state Division of Highways, the Los Angeles city engineers found an economical way to thread the route

through the east side by imposing the social cost of transportation onto the workingclass residents who were flooding into the area during the negotiations over this project. There is no “smoking gun” in the archives, no statement by any of the principals in these events that they could capitalize on the social submission of east side residents in order to bring the project to fruition at a price that was acceptable to the more influential stakeholders. There is, however, the evidence of the structures themselves, and the neighborhood onto which they were imposed.

The east side grew rapidly after World War I as a workingclass community of Mexicans, Jews, Japanese, and other people who had little choice in where they lived. These people were part of the labor force for the industrial growth of Los Angeles, which accelerated in the 1920s with branch plants of companies based in the east and midwest as well as large-scale development plans such as the Central Manufacturing District. Another factor in the transformation of the east side was the relocation of tens of thousands of Mexicans, both new immigrants from Mexico and people who had previously lived in “Sonoratown,” around the old plaza on the west side of the river. At the same time that the expansion of downtown Los Angeles pushed out the residents of Sonoratown, realtors and developers adopted the use of racially restrictive covenants to prohibit “undesirables” from buying homes in much of the newly developing area of the city. Undesirable groups included Japanese, Jews and African Americans, as well as Mexicans. These covenants shaped the racial geography of Los Angeles not only by where they were used, but equally by where they were not used. The combination of population growth and exclusionary real estate practices helped to make the east side into

a multi-ethnic community of working people who were prevented from living in most other parts of the city. By the end of the 1920s, the east side was home to about fifteen percent of the city's population, which during that decade had surged from a little under 600,000 to over 1.2 million. More than a third of the eastsiders were Mexican. A like number of eastside residents were Jews, either newly arrived from Europe or, especially after 1924, relocated from cities in the eastern United States.⁸⁴

Also embodied in the choices of the engineers and the city council is the pattern of what they chose not to do: they chose not to refrain from exploiting the residents of Boyle Heights and the east side when that possibility arose as the resolution to a stubborn problem. Just as the real estate covenants established the city's ethnic and racial distribution according to where they were not used, the transportation choices that were not taken helped to shape the everyday lives of the people of Boyle Heights. Another choice not taken during the same years that the Whittier alignment was under negotiation involved the use of pedestrian tunnels to ameliorate some of the dangers posed by traffic. Between 1925 and 1928, the city built 40 pedestrian tunnels under busy thoroughfares adjacent to schools. Though Whittier Boulevard not only ran alongside five schools, but had actually taken land from the schoolyards, just one of the new tunnels was on Whittier.⁸⁵ The placement of a high-traffic artery through the center of Boyle Heights, the diminution of play areas, and the minimal pedestrian amenities helped to define that neighborhood as a place where the residency of "undesirables" would be tolerated. The creation of Whittier Boulevard was part of a progression of actions that caused the identification of certain people with certain places in Los Angeles, a process that

unfolded over decades and that reflected the accumulation of many decisions and their results. This embedded quality of socio-spatial identification helps explain how prejudice can be literally built into the fabric of the city, and suggests as well why it can be so difficult to overcome.

Spencer Cortelyou and the state Division of Highways forced the timing and shaped the spatial conditions in which the city engineers designed Sixth Street Bridge and their portion of Whittier Boulevard, but the municipal construction project did not fulfill the state's goal of creating an efficient inter-regional highway through Los Angeles. Because west-bank property owners prevented the improvement of the route beyond the river corridor, Sixth Street petered out into a narrow thoroughfare immediately west of the river, suited only for local traffic. While the city struggled with its plans, Cortelyou and the state could only tinker around with their route designations in the attempt to establish a highway for inter-regional traffic. They followed the lead of all the cars that turned north onto Boyle Avenue before Whittier and the bridge were completed, and christened that as the state highway route for through travel. As predicted in the *Major Traffic Street Plan*, that traffic then crossed the river to the north, at the First and Macy street bridges.⁸⁶ The problem of accommodating regional rather than local traffic was postponed until the freeway plans that began to take legal shape in the early 1940s. The most difficult problem for the state highway engineers at that remained how to get traffic across the Los Angeles River. Spencer Cortelyou still headed State Highway District 7 during those negotiations, and once again he readily sacrificed the quality of life on the

east side to capitalize on a narrow window of opportunity to build a highway of unprecedented scale.

City, County and State

After completing the state's portion of Whittier Boulevard in 1926, Cortelyou and the District 7 staff devoted the bulk of their efforts to highways in far less developed areas of the region. The coast highway occupied much of their attention, and in the late 1920s the state engineers' relish for massive landscape transformation found an outlet in the reconstruction of the Ridge Route through the Tehachapi Mountains. The built-up areas of metropolitan Los Angeles could not be ignored; except for mountain ranges the dense traffic of the city represented the foremost obstacle to inter-regional traffic. But Cortelyou's role was largely to evaluate proposals from city and county engineers for the allocation of state funding to projects designed and initiated locally.

The county hired a professional engineer, George T. Jones, as its highway commissioner. Starting in 1927, Jones laid out the peripheral loop of highways around the city with help from Ernest East, the Auto Club engineer, and the city engineers used the "nine-cent funds" from the second Major Traffic Street Plan referendum to build those portions of the loop within their boundaries, including North Figueroa Street and San Fernando Road. Never again did the county partake in highway construction that effected city traffic without consulting with John Prince and the city engineers. In 1928, Jones approached the city with a plan to build a regional artery running northeast from Los Angeles, along the line of the Pacific Electric's Covina Line. Later known as

Ramona Boulevard, this project would make use of the recently completed bridges that carried the street-railway tracks over city streets, to make a grade-separated roadway through east Los Angeles.⁸⁷ The city managed to complete the section east of Soto Street, but further west, where the right-of-way approached Mission Road and the industrial district along the river, the project foundered. Its completion would only occur under a new public-works regime in the city, which was a response to the economic crisis of the Great Depression.

NOTES TO CHAPTER FIVE

- ¹ Osborne from 1913-14 report.
- ² Owen D. Gutfreund, *Twentieth Century Sprawl: Highways and the Reshaping of the American Landscape* (NY: Oxford University Press, 2004); Bruce Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987).
- ³ Mark H. Rose, *Interstate: Express Highway Politics, 1941-1956* (Lawrence: The Regents Press of Kansas, 1979), 98.
- ⁴ Brian D. Taylor, "When Finance Leads Planning: The Influence of Public Finance on Transportation Policy and Planning in California," Ph.D. diss., Urban Planning, UCLA, 1992; Jeffrey R. Brown, "Trapped in the Past: The Gas Tax and Highway Finance," M.A. thesis, Urban Planning, UCLA, 1998; Clifford Ellis, "Visions of Urban Freeways, 1930-1970," Ph.D. diss., City and Regional Planning, University of California, Berkeley, 1990; Mark Foster, *From Streetcar to Superhighway: American City Planners and Urban Transportation, 1900-1940* (Philadelphia: Temple University Press, 1981); Jeffrey R. Brown, "Statewide Transportation Planning: Lessons from California," *Transportation Quarterly* 56 (Spring 2002): 51-62; Martin Wachs, "The Evolution of Transportation Policy in Los Angeles: Images of Past Policies and Future Prospects," in Allen J. Scott and Edward W. Soja, eds., *The City: Los Angeles and Urban Theory at the End of the Twentieth Century* (Berkeley: University of California Press, 1996), 106-59.
- ⁵ Seely, Gutfreund [page #s]; Frederic L. Paxson, "The American Highway Movement," *American Historical Review* 51 (January 1946): 236-53; Wayne E. Fuller, "Good Roads and the Rural Free Delivery of Mail," *Mississippi Valley Historical Review* 42 (June 1955): 67-83.
- ⁶ Richard M. Zettel, *An Analysis of Taxation for Highway Purposes in California, 1895-1946, Submitted to the Joint Fact-Finding Committee on Highways, Streets and Bridges, California Legislature* (Sacramento: State Printing Office, 1946), 6-7.
- ⁷ California Bureau of Highways, *Biennial Report*, 1896, 8.
- ⁸ Commission on Revenue and Taxation in the State of California, *Report to the Legislature* (Sacramento: State Printing Office, 1906), 9-109.
- ⁹ Zettel, *An Analysis of Taxation*, 16.
- ¹⁰ "Cortelyou New Head of Los Angeles Division," *California Highways and Public Works* 1 (April 1924): 15; "Au Revoir: Spencer Cortelyou Concludes 38 Years of Loyal State Service," *California Highways and Public Works* 28 (September-October 1949): 19-23, 59.
- ¹¹ "State Highways Act of 1909," March 22, 1909, in *California Statutes, 1909*, Chapter 383: 647.
- ¹² John C. Burnham, "The Gasoline Tax and the Automobile Revolution," *Mississippi Valley Historical Review* 48 (December 1961): 435-59, quotation on 435.
- ¹³ Thomas H. McDonald, "How Highway Financing Has Evolved," *Engineering News-Record* 104 (January 2, 1930): 4-7; McDonald was the head of the federal Bureau of Public Roads.

¹⁴ Burnham, "The Gasoline Tax;" clippings from *Oregon Voter*, January 11, 1919 and March 8, 1919, courtesy of Robert Hadley, Oregon Department of Transportation; *Los Angeles Times*, September 28, 1923, December 28, 1923.

¹⁵ *Los Angeles Times*, November 28, 1923.

¹⁶ *Los Angeles Times*, October 24, 1923.

¹⁷ Zettel, *An Analysis of Taxation*, 48-53.

¹⁸ The central role of the coast highway in the popular representation of southern California can be observed across all media. Since the 1930s, newspaper and magazine articles have continually asserted that role, e.g., "A Fortnight among Pacific Wonders: A Short Guide to the Coast's Scenic Attractions," *Touring Topics*, July 1932, 28-38, and more recently, John Odell, "The Soul of a State: The Coast Route," *Los Angeles Times*, 27 May 1999. The numerous guidebooks and photo books include Stephen Wilkes, *California One: The Pacific Coast Highway* (New York: Friendly Press, 1987); Kenn Oberrecht, *Driving the Pacific Coast: Scenic Driving Tours along the Pacific Coast Highway* (Chester, CT: Pequot Press, 1991); Stephen L. Smoke, *Pacific Coast Highway* (London: Headline, 1994); Tom Snyder, *Pacific Coast Highway Traveler's Guide* (New York: St. Martin's, 2000). Among the many movies that depict the coast highway, the recreational resources strung along it, and the imputations of a distinctive regional culture centered on those locations, see *Beach Blanket Bingo*, directed by William Asher, American International Pictures, 1965; *How to Stuff a Wild Bikini*, directed by William Asher, Warner Brothers, 1965; and *It's a Bikini World*, directed by Stephanie Rothman, United Artists, 1967. The main songwriter for the Beach Boys, Brian Wilson, described his syncretic creative process in formulating the image of the group as the conscious attempt to graft the extant reputation of the highway and its beaches onto the rhythm and blues forms that emerged from African American culture, in Brian Wilson with Todd Gold, *Wouldn't It Be Nice: My Own Story* (New York: Harper Collins, 1991), 19-21.

¹⁹ Timothy Davis, "Rock Creek Park and Potomac Parkway, Washington, D. C.: The Evolution of a Contested Urban Landscape," *Studies in the History of Gardens and Designed Landscapes* 19 (Summer 1999): 192-209; "Ocean Parkway," in Kenneth T. Jackson, ed., *Encyclopedia of New York City* (New Haven: Yale University Press, 1995), s.v.; on the origins of scenic roadways for automobiles in urban parks practice see Clay McShane, *Down the Asphalt Path: The Automobile and the American City* (New York: Columbia University Press, 1994), 21-40.

²⁰ Robert A. Caro, *The Power Broker: Robert Moses and the Fall of New York* (New York: Knopf, 1974); "Improved Tioga Road Opened to Motorists by Government," *Touring Topics*, May 1919, 14; "All California Backs New Yosemite Road Project," *Touring Topics*, May 1919. *Touring Topics* was the monthly member magazine of the Automobile Club of Southern California.

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Francisco and Santa Barbara, Prepared from Data Furnished by Agents of the Company (San Francisco: Southern Pacific [Railroad] Company, 1907).

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- ⁴⁵ *Los Angeles Times*, August 16, 1916.
- ⁴⁶ *Los Angeles Times*, January 12, 1914, February 6, 1914, February 22, 1914, January 23, 1918.
- ⁴⁷ *Los Angeles Times*, February 1, 1916; May 14, 1916 (quotation); April 10, 1917.
- ⁴⁸ “The People v. May K. Rindge et al.,” 174 Cal. 743, Docket # LA 3752, 1917, in *California Supreme Court Records and Briefs*, volume 2107; *Los Angeles Times*, January 23, 1918.
- ⁴⁹ “Rindge Co. et al. v. Los Angeles County,” 262 U.S. 700, 701, 11 June 1923, available at www.supremecourt.us/casefinder (keyword = Rindge) and at www.caselaw.findlaw.com/cgi-bin/getcase (court = US, vol = 262, “invol” = 700). Also see Charles C. Carleton, “Legal Department,” in California Highway Commission, *Biennial Report, 1922, Part II of the First Annual Report of the Department of Public Works* (Sacramento, 1922), 84-89; Spencer V. Cortelyou, “Division 7 Report,” *California Highways and Public Works*, March 1924, 14-15.
- ⁵⁰ “Administering the State Highway Trust,” *California Highway Bulletin* 1 (May 1913): 4-6.
- ⁵¹ *Los Angeles Times*, September 19, 1919.
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⁷⁴ Herbert Cortelyou obituary in *Los Angeles Evening Herald*, October 30, 1947.

⁷⁵ Frederick Law Olmsted [Jr.], Harland Bartholomew, and Charles Henry Cheney, *A Major Traffic Street Plan for Los Angeles* (Los Angeles: Traffic Commission of the City and County of Los Angeles, 1924), 36.

⁷⁶ On Tenth Street and the river bridges, see Chapter Four.

⁷⁷ Letters from W. F. Ault, president, Whittier Boulevard Chamber of Commerce, to Los Angeles City Council, 21 September 1925 (first quotation) and 23 September 1925 (second and third quotations), Council File # 5814, City Archives.

⁷⁸ Report of John R. Prince to City Council, 17 December 1925, Council File #5814, City Archives.

⁷⁹ Reports of J. R. Prince to City Council, 6 July 1926, 11 August 1926, Council File #5814, City Archives; *Los Angeles Times*, March 21, 1926. The Sixth Street bridge is 3,546 feet long from its western terminus to the east bank of the river; the approach causeway spanning the Union Pacific property on the east side, which begins at Boyle Avenue and blends into the bridge at the east bank of the river, is 4,275 feet long. Thus, more of the structure passes over land on the east side than over the river channel and the west side combined. See Merrill Butler, Sixth Street Viaduct, Los Angeles, " *Western Construction News and Highway Builder*, 10 July 1932, 385-91; Butler was engineer in charge of bridges and structures for the city of Los Angeles.

⁸⁰ Letter from Ninth District Chamber of Commerce (successor to the Whittier Boulevard Chamber of Commerce) to City Council, 12 April 1927, Council File #2693. Letter from City Clerk to City Engineer, 5 August 1927; letter from John Prince and John Shaw to City Council, 3 October 1927; both in Council File #5814; Ransom Tract in *Los Angeles Times*, February 27, 1925.

⁸¹ Report of Merrill Butler, Engineer of Bridges and Structures, to City Council, 20 May 1927, Council File #2693. Whittier Boulevard did not run directly through what had been Hollenbeck Park, but because of the traffic problems where Whittier met Boyle Avenue, the city engineers also included in the project the improvement of the streets north of this intersection, and that required taking land from Hollenbeck Park. The warehouse put up at the curb line in 1927 is still there today, at the southeast corner of Sixth and Mateo streets.

⁸² *Annual Report of the City Engineer, 1927-28*, chap. 6, p. 82; 1928-29, chap. 6, p. 3, 12-13; 1930-31, chap. 7, p. 7; 1931-32, chap. 6, p. 2; Report of Board of Public Works to City Council, 31 October 1931, Council File #8320; Merrill Butler, "Sixth Street Viaduct, Los Angeles," *Western Construction News and Highway Builder*, 10 July 1932, 385-91.

⁸³ Butler, "Sixth Street Viaduct;" Louis L. Huot, "Lighting the New Sixth Street Viaduct," *Western City* (July 1933), 19-20, and Louis L. Huot, "Modern Lines Are Reflected in New Los Angeles Viaduct," *Architect and Engineer* (October 1933), 25-30; Huot was the project architect.

⁸⁴ George J. Sanchez, *Becoming Mexican American: Ethnicity, Culture and Identity in Chicano Los Angeles, 1900-1945* (New York: Oxford University Press, 1993), 73-80, 259; Albert Camarillo, *Chicanos in a Changing Society: From Mexican Pueblos to American Barrios in Santa Barbara and Southern California, 1848-1930* (Cambridge, MA: Harvard University Press, 1979), 35-38; 35-38; Ricardo Romo, *East Los Angeles: History of a Barrio* (Austin: University of Texas Press, 1983), 61-80; Edward J. Escobar, *Race, Police and the Making of a Political Identity: Mexican Americans and the Los Angeles Police Department, 1900-1945* (Berkeley: University of California Press, 1999), 166-67. Escobar notes that people of Mexican heritage were undercounted in the censuses before World War II, which makes it difficult to derive precise population figures.

⁸⁵ The city engineers, the traffic commission, and the city council all made recommendations on where to build the tunnels, and the final roster of sites (1928) reflected a combination of statistically demonstrated necessity and the political exigencies of council members needing to win expenditures for their own districts. It is possible as well to detect another, inexplicit transcript in the decisions over tunnel locations, as certain parts of the city were singled out for these new refinements in pedestrian safety and others were consigned to the more perilous condition of autos and pedestrians having to share the same street space. In the formula for allocating the tunnel bonds, no council district would receive fewer than two tunnels, and it was that minimum that was built in the district containing Whittier Boulevard. The Whittier tunnel was at the corner of Euclid and the other tunnel in the district was at the corner of Brooklyn Avenue and Breed Street. See memo from Ivan Kelso, General Counsel, to E. E. East, Chief Engineer, Automobile Club of Southern California, 23 October 1925, and H. H. Holley, Assistant Chief Engineer, table of locations, "Pedestrian Subways, 1925 Bond Issue," 4 September 1928, both in Box 38, Folder 427, Ernest E. East Collection, Auto Club of Southern California Archives; Miller McClintock, "Pedestrian Tunnels for School Children," *American City* 34 (January 1926): 81-2.

⁸⁶ Traffic on Whittier Boulevard at the eastern city boundary was counted at about 26,500 vehicles per day in January 1929; though no count was taken for Sixth Street just west of the river at the same time, that count was taken eight years later, and was about 10,000 vehicles fewer than the traffic at the eastern city boundary. The difference must have been even greater in 1929, before completion of the Sixth Street bridge. Some of the difference can be accounted for by local traffic, i.e., vehicles bound for local destinations on the east side that turned off Whittier before reaching the river, but the bulk of the difference was the through traffic that turned north on Boyle or Soto to continue on through the city; see *Los Angeles Herald*, 2 March 1929, and County of Los Angeles, Regional Planning Commission, *Report of a Highway Traffic Survey in the County of Los Angeles* (Los Angeles: Regional Planning Commission, 1937), 54, 61.

⁸⁷ Letter from George T. Jones to Los Angeles City Council, November 16, 1928, and Report of John C. Shaw, City Engineer, to City Council, December 18, 1928, both in Council File #10357, City Archives; *Los Angeles Times*, September 6, 1931.

CHAPTER 6

NEW DEALS: LLOYD ALDRICH AND THE IMPROVISED ORIGINS OF THE LA
FREEWAYS

During his lengthy tenure as city engineer, from 1933 to 1955, Lloyd Aldrich refined the dealmaking culture of public engineering in Los Angeles to its highest stage of development, abetted crucially by his complementary role as the city's coordinator for all federal relief programs during the Depression. His acuity in piecing together construction-funding agreements brought Aldrich to the attention of Harry Hopkins, Franklin Roosevelt's key lieutenant, when Hopkins was setting up the Works Progress Administration (WPA), and Aldrich's role in devising the guidelines for WPA projects further enhanced his efforts to capture federal money for Los Angeles. By 1936, three years into the New Deal, the Federal Coordinating Division in Aldrich's engineering bureau had been the conduit for just under \$100 million for "public improvements of all kinds in this city."¹ Not all the money was spent yet, because extensive storm drain systems, highways, and harbor facilities took years to build, but the figure was nonetheless staggering: at that time, the value of all the city's infrastructure built since 1915 -- sewers, storm drains, streets, sidewalks, lighting, parks, government buildings, schools -- was valued at only about twice that amount.²

Such largesse could only cause massive transformation of the metropolitan landscape, and, more than anyone else, Lloyd Aldrich determined how and where it

would be spent. He was no Robert Moses, whose authority derived directly from the New York State constitution and who had his own dedicated funding mechanism from toll revenues.³ Aldrich nominally reported to the Board of Public Works, and even if he managed the board more than the board managed him, Aldrich was genuinely subordinate to the city council, which had to approve every contract. Aldrich had to cajole rather than dictate, to capitalize on transient opportunities to align otherwise competing interests. That was how he put in place the defining characteristics of the Los Angeles freeway network

Aldrich's funding-based power and his operational methods could not help but to stimulate controversy. Nor did Aldrich shy away from it. He never disavowed his loyalty to the mayor who appointed him city engineer, the notoriously corrupt Frank Shaw, who was driven from office in a 1938 recall election. Shaw's successor, the reformist Fletcher Bowron, who had a prominent role in the crusade against Shaw, tried to dismiss Aldrich, but Aldrich survived every attempt. Aldrich also fought Bowron to a stalemate in Bowron's attempts to diminish the power of the city engineer. And he struck back at his antagonist, mounting three futile campaigns to challenge Bowron for the mayoralty and deploying the initiative process to build more autonomy into the engineering function.⁴

To trace the impact of Aldrich's career and its implications for transportation in Los Angeles, this chapter first provides a brief biography of Aldrich and an assessment of his rivalry with Fletcher Bowron. While the blare and glare of electoral politics provide trenchant anecdotes and neatly encapsulated narratives of triumph and defeat, the more

mundane work that Aldrich conducted out of the spotlight had far greater and more long-lasting effect on the lives of Angelenos than his well-publicized forays into the political arena. That story begins by examining the politics of relief and infrastructure in the continuing story of the Tenth Street improvements (Olympic Boulevard) during the early years of the Depression, before Franklin Roosevelt took office in 1933. The rest of the chapter dwells on Aldrich's work as the city engineer, especially his role as relief coordinator and his often uncanny ability to leverage sponsors and funding sources in the effort to build infrastructure for his adopted city. The origins of the freeway network are covered in the stories of the Ramona, Arroyo Seco, and Cahuenga parkways, predecessors to the San Bernardino, Pasadena, and Hollywood freeways. A brief interlude considers the many highway plans afoot from 1937 to 1946 and the disconnection between these comprehensive plans and the built landscape that is seemingly associated with them. The climax of this story is a case study of the Aliso Viaduct, which was built between 1939 and 1944 and is still in use today, conveying the Hollywood/Santa Ana (101) Freeway across the Los Angeles River. Because Aliso Viaduct was the first freeway crossing of the river, it exerted gravitational force on the layout of subsequent construction. The creation of Aliso Viaduct also established the imperious practices of route selection that would shape the postwar freeway program, both in its planning and in the opposition it engendered. The conclusion of the chapter considers how that program played out.

ALDRICH AND BOWRON

There are few pictures of the city engineers before Aldrich (with the exception of Mulholland), but his face was a common sight in the press during his 22 years in the post. Of angular mien when he became city engineer in 1933, at age 47, he grew jowlier as he advanced through middle age, while still projecting an intense focus in his portraits and candid photos. Aldrich had the appearance of Midwestern rectitude affected among the city's white, male, Anglo elite during the middle third of the 20th century: hair slicked back on top and cropped high and tight on the sides, wire-rimmed glasses, and grey or dark-hued suits worn with a starched collar and a tie knotted high at the throat. His one concession to the splashy reputation of Los Angeles was the occasional garish tie. If Aldrich had a style, its exemplar was Harry Truman.⁵

Lloyd Aldrich was born in Marion, Kansas, in 1886.⁶ Orphaned at age 12, he went to live with his older sister in Galesburg, Illinois, and spent summers with his brother in Grand Junction, Colorado, where, according to his 1949 campaign biography, he encountered Theodore Roosevelt when Roosevelt came to Colorado on a hunting trip. Aldrich would later cite the counsel that Roosevelt bestowed: the West was the place for an ambitious young man, and the engineering profession was the backbone of progress.⁷ At first Aldrich followed only half of the advice, staying in Illinois to attend the state university, where he studied engineering for two years before going to work as a railroad surveyor. He moved to Colorado in 1908 to survey the 175-mile fence line that separated the grazing areas set aside for sheep and cattle, later serving as a crew chief for the U.S. Bureau of Reclamation in the construction of Palisades Dam on the Colorado River. In 1910 Aldrich moved to Los Angeles, a fruitful place to find work for someone skilled at

domesticating the western landscape. He ran pipe-laying crews for the gas company and laid out subdivisions for the Janss Investment Co., developers of Beverly Hills and Westwood, among other communities. After four years he moved north to serve as irrigation engineer for the San Joaquin Valley Land Company, then laid out the highways for Stanislaus County, and in 1920 took on a novel project for the Columbia Steel Company, heading up a pavement-research facility in Pittsburg, California. The state Division of Highways was just then struggling to correct the deficient pavements installed by county governments under the state highway bonds, and found the research facility so useful that the state took it over. Aldrich set up as a consulting engineer in the Bay Area, where his accomplishments included building China Basin in San Francisco Bay and the Posey tunnel under the estuary between Oakland and Alameda. He moved his practice to Los Angeles in 1930 and spent three years designing roads and water systems for private developers and under contract to the city. He apparently caught the eye of Frank Shaw, who took office as mayor in the spring of 1933. The incumbent engineer, J. J. Jessup, stayed on until August to let Aldrich conclude the business of his consulting firm.⁸

Aldrich was highly qualified for the position, with experience in private business and government service as well as technical expertise in every type of municipal engineering including ports, sewers, highways, water supply and utilities. He had administered large construction projects, presided over bureaucratic organizations, and gained familiarity with the statutes governing infrastructure in California. He was also loyal to Shaw, which was probably a main source of the subsequent antipathy between

Aldrich and Bowron. Long after Shaw's recall, Aldrich would continue to declare his admiration for the disgraced former mayor.⁹

The charges that brought down Shaw centered on payoffs to police in return for protection of gambling and prostitution rackets, not public works.¹⁰ The millions flowing through Aldrich's office certainly represented an opportunity for wholesale graft, but despite numerous investigations, no charges were ever brought. In 1938, soon after he wrested the mayor's office from Shaw, Bowron appointed an auditor to examine the accounts of the engineering bureau, which resulted in the resignation of Shaw's appointees to the Board of Public Works and the firing of the head of the street maintenance division, amid charges of favoritism in the awarding of city contracts and the bureau's insistence on the use of a patented paving method that was more expensive but not superior than conventional paving methods.¹¹ Aldrich nonetheless remained in office, despite being targeted by his political enemy, which suggests that Aldrich's hands could not be found in the till.

But he was no choir boy. Aldrich's record of securing approval and funding for infrastructure owed much to his canny political sense, which he also applied to the matter of his own survival in office. In 1937, likely out of awareness of the growing reaction to Shaw's criminal regime, Aldrich enlisted his allies in the construction industry and organized labor to sponsor a successful charter-amendment initiative to change the city engineer from an appointed office to one with civil-service protection, clearly a strategy to allow Aldrich to retain his position if his sponsor lost the mayoralty.¹² In the course of Bowron's 1938 investigation, four former construction-crew supervisors for the

engineering bureau helped explain the success of this ballot measure: they and their workers had been ordered to canvass on behalf of the proposition. Their testimony also revealed the source of Aldrich's consistent support among city councilmembers: the department staff had passed out leaflets and collected money from their employees to support friendly city council candidates.¹³ As Bowron's biographer, Tom Sitton, pointed out, Aldrich could count on support from the city council because he "always helped to find jobs in his department for the political workers of cooperative council members."¹⁴

Throughout Bowron's tenure (1938 to 1953), the reform-minded mayor, whose chief political asset was his reputation for honesty, confronted the resourceful city engineer, who deployed the substantial assets of his agency to shore up his political support. Though Bowron prevailed against Aldrich in three mayoral contests -- the 1949 general election, the 1950 recall against Bowron, and the 1953 primary -- Aldrich's supporters on the city council blocked every attempt to remove him as head of the engineering agency. Bowron also tried to limit the authority of Aldrich's office, which Aldrich fought to a stalemate. The mayor did succeed in moving the engineering bureau's accounting division from Aldrich's control to the Board of Public Works, once the board was filled with Bowron's appointees, and he vetoed staff and budget increases for the agency. But Aldrich beat back several attempts to eliminate his role as liaison with funding authorities in city and state government, and the city council declined to authorize two investigations of the city engineer requested by Bowron.¹⁵ In their electoral campaigns, the two lobbed charges back and forth that invoked many of the salient political issues of the day. They red-baited each other and accused each other of

corruption and inefficiency. Bowron claimed that Aldrich was supported by the gangster Mickey Cohen, and Aldrich criticized Bowron for tolerating police brutality against people of color. The claims and counterclaims amounted to smear tactics or transparent appeals to certain voting blocs and constituencies. Overall, their rivalry was based less on ideas than on personal enmity and the pursuit of power. As one knowledgeable political figure said during the 1949 mayoral campaign, it was “a conflict of ambitious personalities, nothing else.”¹⁶

Aldrich and Bowron did not fight over the plans, priorities or accomplishments of the engineering office, and Bowron did not shy from presiding over the ribbon-cutting ceremonies for bridges and other structures completed under Aldrich. Apart from the charges of corruption that never stuck, and his desire to move some of the engineer’s programmatic authority to the mayor’s office, Bowron’s major complaint against Aldrich was that construction was not moving fast enough. When Aldrich, at age 70, was finally forced to retire by Bowron’s successor, Norris Poulson, it was precisely for that reason: slow progress on the sewage treatment plant.¹⁷ For the most part, Aldrich and Bowron both wanted the same thing -- more storm drains and parkways to abet the city’s continued growth.

How, then, to assess Aldrich’s place in the history of Los Angeles? Based on the more visible aspects of his career, the political campaigns and the rivalry with Bowron that played out in the newspapers, we are left with a choice between Aldrich as the bagman for Frank Shaw and a series of venal city councilmembers, or as a dedicated public servant who put the unemployed to work during the Depression and created the

vast infrastructure befitting the size and significance of Los Angeles. As usual, the sunshine-and-*noir* dichotomy obscures as much as it reveals about the city. It was unfortunate for Aldrich's reputation to oppose Bowron, a politician without an organization or party, whose "primary resource in governing was his personal integrity" according to Sitton.¹⁸ Contesting an opponent who claimed to be honest did not make Aldrich dishonest, but in the reductive arenas of campaign rhetoric and Los Angeles journalism in the 1930s and 1940s, and in light of Aldrich's association with the discredited Frank Shaw, it is easy to grasp how that impression could result. Aldrich, however, is best understood in the context of the agency he led for so long, the city engineering bureau, which through administrative and technical expertise had emerged from the institutional confusion of the Progressive period as a potent force in shaping the fundamental physical characteristics of the city. In the field of transportation, the city engineers accomplished that by assembling site-specific coalitions in support of the projects they wished to build. Aldrich represented the apotheosis of these practices, not only through his skills as an engineer and an administrator, but also as the public official responsible for implementing Franklin Roosevelt's New Deal in Los Angeles. He dispensed patronage as part of his coalition building, accepted and probably solicited help in his electoral campaigns from construction companies under contract to the city, rewarded his friends and tried to punish his rivals. Rather than enriching himself, he engaged in these practices as part of the incrementalist approach that already characterized the agency he led. A completed project was a good project to Aldrich. If his record is problematic, it is not because of his procedural excesses and contingent

ethics, nor because his career can be crudely conceptualized within the mythology of Los Angeles *noir*, but because of what he built, and because of the options foreclosed by the structures that constitute his main legacy to the city.

ROADS, RELIEF, AND THE CONTINUING SAGA OF TENTH STREET

When Aldrich took office in 1933, the city engineering bureau could boast of such accomplishments as the river bridges and portions of major arteries including Wilshire Boulevard, the truck highway to the harbor (later Alameda Street), Sunset Boulevard, and the city's pieces of the county peripheral road network. Yet it would nonetheless be accurate to characterize the city's roadbuilding function as beleaguered. Whittier Boulevard and Sixth Street Bridge had only been completed by pulling in bits of money appropriated for other purposes, which compromised those projects that had been the source of the critical funds. The enlargement of Tenth Street into the city's principal east-west thoroughfare had been the favored highway project of John Prince and the Streets Division since they first proposed it in 1921. After their plans were repudiated in a 1926 court decision, they kept tinkering with the proposed alignment to avoid pockets of the more bitterly opposed residents, notably in the mid-city district, between Crenshaw and Rimpau. The engineers did not submit the plans for council approval until 1928 and did not conclude the extensive procedures to set up the assessment district before the onset of the Depression in late 1929. By then, property owners were even more wary about special assessments for road construction, and more vigilant in resisting their

imposition. In November 1932, just a few days after Roosevelt's election, the enlargement of Tenth Street into a principal thoroughfare was roundly defeated by a mobilized citizenry that laid siege to city hall.

Its defeat illustrates the troubles that Aldrich inherited and provides a coda to the era of stalemated projects, while its prompt resurrection, thanks to statutory and procedural adjustments that allowed gasoline-tax proceeds to be spent in the city, was the overture to the coming era of mass employment and massive investment in public works. The political alignments and realignments arrayed around the Tenth Street proceedings allow a glimpse into the localized practices that shaped the implementation of the New Deal's public works policies, a microcosmic version of the discourse about the appropriate means for government to relieve poverty and unemployment. Tenth Street allows us to witness the demise of Herbert Hoover's "collective individualism" as it was undermined by the inability of private-sector efforts to alleviate the misery of millions. Abhorrence of the "dole," not only by Hoover but also by the Roosevelt administration in its first term, elevated work relief into a favored option.¹⁹ Work relief enabled public officials and private citizens to preserve the moral distinction drawn between the worthy and the unworthy poor, which had suffused welfare policy in the United States since the first asylum statutes of the early national period.²⁰ The early years of the Depression were a time of groping and adjustment in the attempts to fit highways into this new political context. Locally, advocates of expanded public works programs had to contend with the orphan status of road funding in relation to other forms of infrastructure. During the Hoover years they could not overcome the continued reliance on special assessments

to pay part of the cost for highway construction, even when they justified the levies as providing construction jobs to feed hungry families, because the homeowners who were called upon to help those less well-off than themselves by accepting higher property taxes also felt the squeeze of the deflated economy. At this crucial juncture, middleclass homeowners began to frame their opposition to roadbuilding more fully than before in terms of anti-tax rhetoric.²¹

The people and organizations involved in the next phase of the Tenth Street improvements took part in this debate about the role of public works according to their place-specific interests, not their political affiliations or apparent ideological positions. Men like the real estate developer William May Garland, founder of the Community Development Association, chair of the organizing committee for the 1932 Olympics, relentlessly dedicated to free-market dogma and the profits he hoped to secure from its exercise, invoked the plight of the unemployed to promote government spending on new highways as long as the highways ran alongside property he owned. Much of the direct political action in opposition to Tenth Street was organized by attorney Marshall Stimson, one of the architects of the Progressive victories in 1909 and 1910, who was hired by the Tenth Street dissidents. The spectacle of Stimson fighting on behalf of middleclass homeowners -- the "haves" in this clash -- while Garland championed the needy whose plight would be alleviated through highway-construction jobs, illuminates not only the site-specific character of highway disputes, but also the fault lines within free-market liberalism during the early years of the Depression. Another factor that shaped the arguments over Tenth Street in the Hoover years was the growing frequency

of marches and mass demonstrations, which the highway opponents adapted to their cause.²²

Place-specific issues like the disputes over Tenth Street offer a distinctive perspective on the response to the Depression, a perspective dependent less on ideology than on such prosaic matters as the appearance and function of streets. If the New Deal represented the rebirth of Progressive ideas about the efficacy of state intervention and the role of experts, it might also be seen as a reaction to the kind of Progressivism practiced by Marshall Stimson. Stimson always saw himself as a reformer crusading for justice, even when his clients' interests caused him to argue against relief for those in far more dire need.²³ The liberal historians of the 1950s and 1960s, who interpreted the New Deal as an emerging consensus in favor of a more fully institutionalized welfare state, underestimated the conservatism of reformers while also overestimating the realignments of traditional interests. New Left historians of the 1960s and 1970s characterized the New Deal as a series of palliatives intended primarily to prevent class-based revolutionary change. Such issues as Tenth Street suggest that these revisionists were correct to question the consensus behind the New Deal, but they did not need to construct the new premise of a revolution snuffed out by a marginal approach to reform and relief. The contradictions of early 20th-century Progressivism were resurrected along with the reformist ideas that propelled the New Deal.²⁴

Between 1926 and 1928, while the city engineers worked on redesigning the proposed improvements to Tenth Street, the sponsorship of the project also changed. Tenth Street was no longer a priority for the Union Pacific Railroad and its Central

Manufacturing District. Their initial goal of upgrading the infrastructure in the river corridor proceeded on a separate track as part of the bond-funded viaduct projects. The new leaders of the Tenth Street Improvement Association were west-side real estate investors, notably William May Garland and Edward Doheny, Jr., son of the oil tycoon. By the time the city filed the condemnation suit to acquire the redrawn right-of-way, in late 1928, the estimated project cost had grown from \$6 million to \$16 million, primarily because of the rising value of property that would be condemned to create the 100-foot-wide alignment, but also because the new plans pushed the project further west, beyond the city boundary. The ultimate cost was expected to reach \$20 million once negotiations were completed with Santa Monica to extend the project all the way to the ocean.²⁵

The number of individual properties in the assessment district had nearly doubled, from 11,000 to almost 22,000, not only because of the westward extension of the alignment, but also the continued subdivision of real estate in the city, as large tracts were cut into individual parcels. The opponents still objected to the conception of public benefit espoused by the city engineers. East-side business owners saw the advantages of the project accruing to the west side, and all along the alignment people decried the sacrifice of local interests on the altar of purported citywide advantage. Mid-city property owners, in the vicinity of Lucerne Avenue and Country Club Drive, were particularly implacable in their resistance. In mid-1930, when the council approved paving plans for a few short stretches of widened right-of-way, the dissident homeowners appealed to Mayor John C. Porter to veto the ordinance. Porter had already established

tax relief for homeowners as his signature issue during his campaign for office earlier that year. He had also clashed with the Board of Public Works over the authority to decide which infrastructure projects to build. Opposing Tenth Street was a perfect issue for him because of the anti-tax argument and the chance to erode the autonomy of the city engineering department. Porter duly cast his veto, only to see it overridden after furious lobbying by Garland and the Tenth Street Improvement Association.²⁶

The city council seems to have supported Garland because of the strong support he organized in the form of letters, hearing testimony, and personal visits to council members, not because the council necessarily agreed with the claim of public benefit the proponents had adopted from the city engineers.²⁷ Even the Automobile Club of Southern California could offer only a lukewarm response to the merits of Garland's case. The Auto Club naturally supported improved highways, and Garland had served a term on its board. He did get quick action, as the Auto Club board dispatched Ernest East to look into the matter. But East's substantive critique trumped any inclination toward support of Garland. East found no reason to question the project's "desirability . . . from a traffic-carrying standpoint." But he also described the destruction to yards and landscaping that would be caused by cutting back slopes to widen the thoroughfare. He noted that the underlying premise of the assessment-district statutes was to obtain payment from those who benefited from the work and found it perverse to tax those who were instead most damaged by it. East concluded that the city Board of Public Works should ensure a more "equitable distribution" of the cost before the Auto Club could support the Tenth Street improvements.²⁸ It was the issue of scale that came between

Garland, the elite booster and developer, and his traditional ally, the motor club that lobbied for improved highways. The unprecedented width of the new roadway would create ugly scars on the landscape, making it difficult to sustain an argument of broad public benefit.

The scale of the project had also bedeviled the city attorneys, whose condemnation suit, covering thousands of properties, consumed 375 linear feet of paper. That was too many for the court to consider all at once and the case proceeded in small batches. Through 1929 and 1930, the city obtained final judgments on some 600 parcels and secured agreement on damage payments for another 500 by means of arbitration. These were a small percentage of the parcels affected by the project, but they were concentrated in a few tightly confined portions of the corridor, so that in 1931 the city could let construction contracts for short stretches of the right-of-way. Bits of newly widened Tenth Street took shape near its intersections with Robertson, Fairfax, Ogden, Genesee, and Spaulding. The city engineers pointed proudly to these signs of progress, but they understood as well that the completed sections represented a meager portion of the proposed improvement, and that the traffic-carrying capacity of the artery was not expanded at all by the completion of isolated sections.²⁹

On the tenth anniversary of the project, in the summer of 1931, the city council finally considered the comprehensive reauthorization of the Tenth Street improvements. This "ordinance of intention" was a prerequisite for establishing the boundary of the assessment district and the drawing of the final alignment by the engineers. Pressed by Garland and the improvement association, and encouraged by the completion of those

isolated segments of the work and the progress in litigation and arbitration to secure the right-of-way, the council once again approved the opening and widening of Tenth Street. Garland's wide-ranging promotional tactics utilized any available argument to urge the council's endorsement of the project, and during this phase of the process he began to embrace the notion that Tenth Street construction would alleviate unemployment. He also parlayed his role on the Olympic organizing committee into a ploy of nomenclature. There was no particular association between the highway location and the Olympic venues, but, seeking to wrap the controversial project in the useful aura of civic pride, in 1931 Garland began referring to Tenth Street as Olympic Boulevard. Four years later the council made the name change official.³⁰

Two property owners between Lucerne and Crenshaw, unmoved by the council's approval or Garland's influence, hired Marshall Stimson to carry their objection to the courts. A seasoned activist, Stimson would orchestrate a combination of legal and political action in opposition to the Tenth Street expansion. In framing the issue primarily as resistance to monied interests who would build their infrastructure by extracting payment from small property holders, Stimson dusted off the old Progressive anti-railroad tactics for one last round. He even singled out the Union Pacific as a principal exploiter in the proceedings, long after the railroad had ceased any active role in the promotion of Tenth Street.³¹ Stimson's efforts on behalf of middleclass homeowners made taxes the foremost issue. Homeowners did face the real prospect of losing their homes during the early years of the Depression, and burdensome taxes could push them into insolvency. But the anti-tax campaign also showed the limits of the middleclass

Progressivism practiced by men like Stimson, and its similarity to Hoover's collective individualism.

In April 1932, after filing for a restraining order against the project, Stimson took the battle directly to the citizenry by organizing the Tenth Street Defense League (pointedly ignoring Garland's appropriation of Olympic symbolism). The Defense League heralded its own formation with a "mass meeting" at Los Angeles High School. Mayor Porter showed up to declaim against the project, as did Roy Donley, the city councilman whose district included the most hotly contested area, around Lucerne, Crenshaw and Country Club Drive. Some 1,200 property owners attended to hear Donley complain that the city had already spent a million dollars in legal and consulting fees for Tenth Street, and to demand that the \$1.5 million appropriated by the council ten years earlier be reallocated to more worthy projects. These first steps in the elevation of Tenth Street into an explosive public issue took place against a background of deteriorating municipal finances. The collapse of real estate values in the city had caused sharp reductions in property tax proceeds, and the city's declining bond rating made it difficult to sell bonds for general revenue purposes. Donley and the council slashed the city budget by layoffs, salary reductions, and shorter hours. To appease those citizens more concerned with their tax bills than with the plight of the unemployed, Porter and Donley portrayed Olympic Boulevard as a luxury that the city could not afford.³²

Attentive to a conflict that could turn out over a thousand constituents, Donley filed a city council motion to abandon the project. Similarly attentive, his colleagues did not oppose the motion but referred it to the council's Streets Opening and Widening

Committee, where it languished despite Donley's continued diatribes aimed at the committee chair. Garland and Stimson prevailed upon their respective supporters to write letters to the council, which was deluged with the correspondence. Stimson held further public meetings in May and July. He painted the homeowner as victim to the large property interests in the city, who would receive inflated prices for their holdings in the assessment district. When the city clerk issued the final boundaries of the assessment district, along with the list of 21,918 property owners who would be taxed for the project, Stimson had a clear-cut procedural method to kill the Tenth Street improvement: collect the signatures of a simple majority -- 10,960 of those property owners -- on a petition to abandon the project.³³

The council scheduled the vote on the final assessment district ordinance for November 15, 1932, one week after Roosevelt won his first term as president, and the dramatic political temper seems to have carried over. Garland and Simpson issued frequent statements and enjoyed extensive coverage from reporters and editors who delighted in a bitter struggle personified by such well-known figures. Three weeks before the vote, Stimson asked that the city council have loudspeakers mounted outside of City Hall on the day of the hearing because he expected overflow crowds who would have to follow the proceedings from the sidewalks. The loudspeakers turned out to be necessary, as 6,000 people showed up in opposition to the project on the day of the vote. They shouted down the representatives of the improvement association and cheered wildly when Stimson described the plan as "so much gravy for the owners getting big [damage] awards." The city clerk announced that 14,090 (64 percent) of the property

owners in the district had signed petitions opposing the improvement. Under state law, the council had no choice but to move for abandonment. As the *Evening Herald* described the scene: "Slowly, each councilman droned 'Aye,' and the project, begun ten years ago, was doomed. . . . Abruptly, one of the most ambitious street improvement projects ever attempted in Los Angeles was hurled into the discard."³⁴

Even as the Tenth Street improvement died its second death, the seeds of its next rebirth had been planted in Sacramento. Driven by the crisis of urban unemployment, in 1931 the state legislature had expanded the definition of state highways to include those portions of through routes within the boundaries of incorporated cities. Previously, state highway money could only be spent in unincorporated territory. (If this law had been changed earlier, the state could have paid for the city's portion of Whittier Boulevard.) Garland and his supporters had tried without success to delay the council vote in order to buy time for Olympic Boulevard to be declared a state highway and thus allow it to qualify for the gas tax funding and obviate the need for special assessments.³⁵

Stimson's tactic of channeling all the objections into the narrow cause of tax relief would, in the end, work against his clients who opposed the project. By framing the issue in purely economic terms, Stimson submerged the other reasons for protesting against the road. Boosters like Garland had already begun to recast highways as laudable public works that provided thousands of jobs in Los Angeles. Along with changes in their legal status and new sources of funding, this new social role for highways in urban society would overcome most of the economic objections to their construction. Highway opponents would have far more limited means to force consideration of the aesthetic and

functional problems they had identified. Even with New Deal funding and the subsequent changes in public authority over infrastructure, however, Olympic Boulevard would never be completed as a 100-foot-wide right-of-way through the entire city. A paved width of 50 feet is still found at numerous locations, notably south of downtown, east of Los Angeles Street. Even with the subsequent gas-tax funding, the city could not overcome the objections of the dissident homeowners around Lucerne Street and Country Club Drive in the mid-city neighborhood. Present-day Olympic Boulevard takes a sharp jog to the south at that location, marking in concrete the limits of public enthusiasm for the entwined principles of modern infrastructure and unemployment relief.

The lawsuits, rallies, hearing testimony, correspondence, and petition drives by which the opponents of Tenth Street defeated its comprehensive improvement are not visible in the narratives of metropolitan automobility, from the *Major Traffic Street Plan* of 1924 to the scholarship of Scott Bottles. The scene of 6,000 Angelenos crowding the sidewalks outside of City Hall to protest a road project should decisively undermine any claim of consensus in favor of the automobile and the infrastructure to accommodate it. Any interpretation of automobility in Los Angeles that fails to account for such deep-seated opposition to improved highways is bound to be incomplete, and to provide an insufficient basis to comprehend what happened later, starting in the late 1930s, when the potent opposition to highways was temporarily overcome – but not eliminated. The many varieties of highway opposition never disappeared, least of all from the thinking of the engineers and their allies who tried to build more, larger highways in Los Angeles. The difficulty of securing approval and funding for major road projects helps account for

the urgency with which Aldrich approached highway development, the eagerness to charge ahead when a niche of opportunity opened, even if the implications of the work were not fully understood, or even considered.

THE NEW DEAL AND PUBLIC WORKS IN LOS ANGELES

Aldrich was appointed city engineer in August 1933, just five months after Franklin Roosevelt's inauguration, and he immediately reorganized the department to take advantage of the newly advantageous setting for financing public works. First he secured from Mayor Shaw, with city council approval, the appointment as "Coordinator for the City of Los Angeles of Relief and Emergency Activities," the sole point of contact for the city with all state and federal relief programs. Then he started sending proposals to the Federal Emergency Relief Administration (FERA), the successor to President Hoover's Emergency Relief Administration. Hoover had finally moderated his opposition to relief programs when he signed legislation in 1932 to establish the agency, with the primary goal of stabilizing the financial system through loans to local banks. Upon taking office Roosevelt retained the administrative framework of the agency, renamed it, and expanded its mission to include grants to state and local governments for public works projects that would put the unemployed to work. Aldrich cherry-picked the city's lengthy backlog of proposed infrastructure in this first request for federal money and secured some \$4.5 million. The projects included nine miles of sewers and storm drains and the grading of 15 miles of road.³⁶

Aldrich also set up the Division of Special Cooperative Projects, which, though not apparent in its Orwellian, name, was charged with “improvement of the main highways within the city which have been added to the State Highway System.” This was the mechanism for funding roads from state gasoline-tax revenues. The new division was a direct response to a California statute signed into law in June 1933, which allocated one-twelfth of the gas-tax proceeds directly to cities (one-quarter cent from the total tax of three cents per gallon, usually referred to as the “quarter-cent funds.”). Before the end of 1933, Aldrich’s new division obtained gas-tax funding for 106 miles of road construction in Los Angeles, including parts of Olympic Boulevard, Santa Barbara Avenue, Manchester Avenue, and Ramona Boulevard, the artery that ran northeast from the Los Angeles River, across from the site selected for the new Union Passenger Terminal.³⁷ By February 1934, the city received \$675,000 for the purchase of properties along the Olympic Boulevard right-of-way and broke ground on the portion through the troublesome mid-city district. William May Garland was so pleased that he threw an opulent luncheon at the Ambassador Hotel for the governor, the state highway commissioners, the mayor, and Aldrich.³⁸

The Roosevelt administration meanwhile formulated more far-reaching strategies for public works. The National Industrial Recovery Act was presented to Congress in June 1933 as part of the legendary “Hundred Days,” the first three months of FDR’s term, when he fulfilled his promise to seek swift economic recovery. This legislation established the Public Works Administration (PWA), under Secretary of the Interior Harold Ickes. Its \$3.3 billion budget would subsidize the construction of public works as

a means of providing employment, enabling Americans to resume the habits of consumption that had proved such a boon to industry in the 1920s. Roosevelt had scaled back the initial proposals out of concern over accusations of fraud and waste, and an innate conservatism would continue to characterize the operation of the PWA. Under regulations formulated by Ickes, the PWA would generally sponsor only 45 percent of a project's cost, requiring local participation to demonstrate that the projects were indeed desirable. It only paid the money directly to private contractors to assure that the funds were not used for administrative costs or less savory disbursements to public officials and their friends. The PWA also had a staff of engineers to scrutinize its projects and imposed rigorous technical standards on the specifications. Because the concern for efficiency was paramount in the operation of the PWA, it embraced mechanized construction methods and did not assess applications on the basis of how many unemployed people would be put to work; contractors were encouraged but not required to hire the jobless. The PWA was responsible for many of the monumental structures of the 1930s, such as Triborough Bridge and Grand Coulee Dam, but most of its work was less spectacular. Between 1933 and 1939 the PWA built over 11,000 highway projects (a third of all PWA projects) and just under 7,500 schools.³⁹

Aldrich took office two months after Congress authorized the PWA, and he immediately assigned the Streets Division to work on a proposal to address one of the city's more intricate roadway issues. The mainline railroads, the street railways, the state railroad commission, and several city agencies had recently completed negotiations to establish the location of the new Union Passenger Terminal, along with the necessary

adjustments to track routings.⁴⁰ Commonly known as Union Station, it would be built on Alameda Street, north of Aliso Street, three blocks west of the Los Angeles River.

Aldrich's surveyors determined that some 200 trains per day would cross traffic at grade along the river adjacent to Aliso Street, and estimated that automobile, truck, and trolley movements around the station would cause traffic as dense as anywhere in the city. The remedies included grade-separated intersections along Macy Street, just north of the station, and the widening and realignment of a half dozen other streets. The PWA rejected the initial proposal on technical grounds: the slopes of the streets that would pass under Macy were too steep and lacked sufficient drainage. Aldrich expressed indignation at this intrusion on "local authority," but he made the required adjustments and obtained one of the city's first PWA funding agreements in early 1934.⁴¹ He also assigned the Bridges and Structures Division to begin design of a new bridge to replace the 1905 structure that carried Aliso Street across the Los Angeles River. The Pacific Electric's Covina line crossed the river on Aliso bridge, as would the westbound traffic coming into the city from the planned artery of Ramona Boulevard, which would end about 1,600 feet east of the river. The Aliso bridge had been scheduled for replacement with the 1923 bridge bonds, but that money had been reallocated to other work (notably Sixth Street Bridge), leaving the narrow width and inadequate load capacity to bear traffic that was expected to be the heaviest in the city.⁴²

Rebuilding Macy and the other streets around Union Station was based on anticipating future needs, but there were also hundreds of deferred or incomplete projects throughout the city, and most of the relief projects pursued under Aldrich were based on

reducing this backlog. It took Aldrich only a year after the PWA was established to resolve the decade-long effort to rebuild the intersection of Sunset and Glendale boulevards, in the Echo Park neighborhood. Situated immediately northwest of Echo Park Lake, the location was regularly flooded. It was already a grade-separated intersection, with Sunset crossing over Glendale on a narrow timber trestle erected by the Pacific Electric in 1908, when the railway company extended the Glendale line. There were double tracks on both streets, and two lanes for automobiles, but the trolley traffic frequently made it impossible for more than one automobile at a time to pass over or under the bridge. The city engineers surveyed the drainage problem in 1923 after local residents complained, but once the cost for a drain was established the locals swallowed their grievance rather than pay for the work.⁴³ This troublesome situation was compounded when construction began on the Hyperion Aqueduct, one of the Los Angeles River bridge bond projects, which would allow traffic heading into the city from the northeast to bypass downtown on Glendale Boulevard. Concerned about the bottleneck at Sunset, the city engineering office put \$45,000 in the 1926 bridge-bond referendum for a new crossing. Replacing the bridge and widening the Glendale right-of-way to the north and south of the bridge would require tax increments from the nearby propertyowners, whose protests delayed the matter until it was finally abandoned in 1928. Three years later the engineers took the Sunset-Glendale bond money to complete Sixth Street Bridge.⁴⁴

The prediction of deteriorating conditions came true when Hyperion Viaduct opened in 1929, and when Aldrich took office he found a pile of letters and petitions

from local residents and the Northside Chamber of Commerce urging “immediate action to eliminate the dangerous condition . . . The present structure on Sunset Boulevard creates a bottleneck that is a great hazard both to pedestrians and automobiles.”⁴⁵ In heeding the request, Aldrich started to work out the process of leveraging relief programs against each other to build structures that would otherwise be impossible to contemplate. The Glendale-Sunset bridge was part of the city’s first package of funding proposals submitted to the PWA, which also included Ramona Boulevard, San Fernando Road, and several streets in the harbor district.⁴⁶ These proposals represent a refinement of the department’s prior methods rather than an abrupt departure, resembling the arrangements that produced the river bridges, and in one respect the Sunset-Glendale project was a direct continuation: Merrill Butler, chief designer of the river bridges, served the same role for the Glendale-Sunset span. Like the river bridges, the Glendale project also involved the Pacific Electric, which was in no position to share the cost but instead was asked to assign its easements back to the city and to suspend service or reroute its trolleys during construction.⁴⁷

The most significant alteration in the department’s practices was the newly amicable relationship with Spencer Cortelyou and the state Division of Highways, which for its own part sought to avoid debacles of local-state relations such as Whittier Boulevard. As Fred Grumm, the state’s director of surveys and plans put it: “Sections of unpaved or deteriorated pavement through communities who were financially unable to improve their streets brought this question more forcibly to attention.” Regional directors like Cortelyou were charged with “a more intelligent correlation of local and state

highways, the fostering of a spirit of active cooperation.”⁴⁸ Aldrich too was motivated to repair relations, because the “quarter-cent funds” allocated to cities from the state gas tax were released on a project-by-project basis at the authority of Cortelyou’s boss, the director of the state Department of Public Works. Aldrich wanted to apply for the 45 percent cost share from the PWA and to furnish the local contribution from the “quarter-cent funds.” Cortelyou obliged with an enthusiastic recommendation, and in November 1933 also helped press the case for urgent action before the city council: “It is imperative that the project . . . be underway before the first of the coming year or the city may be in danger of losing the [state] money.”⁴⁹ Aldrich also requested help from Cortelyou in supervising the construction. It was an odd request, because the Division of Highways had none of its own money in the project and no oversight authority because neither Glendale nor Sunset had been designated as state highways. The city staff was certainly capable of handling the work, as the proposed structure was smaller and less complex than the river bridges. Not that it was a simple job: in order to provide an unobstructed roadway for Glendale, Merrill Butler designed a reinforced-concrete arch without any intermediate piers. At a span of 240 feet and a stringent height limit determined by the existing grade of Sunset, the arch had to be very flat, which required specially fabricated girders for reinforcing (the “Melan Arch” system). The project certainly satisfied the goals of Ickes and the PWA in deploying innovative technology and alleviating a dangerous problem that had frustrated all attempts to fix it with local resources. And while the PWA did not mandate minimum employment levels, Aldrich wanted to demonstrate the social efficacy of public works and the contractor was “required to make

use largely of hand labor methods.”⁵⁰ Combining up-to-date technology with crude construction methods, the Glendale-Sunset bridge was a transitional project that served several goals. Besides resolving the bottleneck at a significant intersection, it validated Aldrich’s approach of stacking relief entitlements together, helped establish a cooperative relationship with his counterparts at the state Division of Highways, and provided valuable experience to his staff in coordinating the different program-review and technical requirements of various funding sources. All these capabilities would come into play as the federal government continued to experiment with work relief as a response to the Depression.

The measured approach adopted by Ickes and the PWA did not satisfy Harry Hopkins and other advisors to FDR, who continued to insist on direct public employment of the jobless, particularly as summer turned to fall and forecasts of a particularly harsh winter raised the spectre of even more misery and anguish. In November 1933, Roosevelt announced the establishment of the Civil Works Administration (CWA), with Hopkins in charge, and endowed it with a budget of \$1 billion for grants directly to state and local governments to pay workers on public construction projects. Ickes harshly criticized the CWA as wasteful because of its high wage levels, perfunctory vetting of designs and specifications, and inefficient use of resources because its guidelines encouraged applicants to pad the estimated labor requirements. He was hardly alone in his censure, and despite providing some 4 million jobs, the CWA was eliminated by act of Congress in April 1934, after five months of operation.⁵¹ Some 5,200 of those jobs were in Los Angeles, where Aldrich did not mind the inefficiency of sending out hordes

of laborers with buckets and shovels to excavate storm drains and grade roadbeds, even if skilled operatives with steam shovels could have accomplished more in less time for less money. Mindful of the accusations leveled at the CWA, Aldrich mitigated any charges of boondoggling by limiting those paid with CWA funds to 10 days of work per month.⁵²

That unusual limitation was probably what caught the attention of Hopkins when he was assigned to set up the CWA's successor agency, the Works Progress Administration (WPA), which Roosevelt established by executive order in May 1935. By that time, Aldrich had formalized his approach to securing relief funds by setting up the Federal Coordinating Division within the engineering bureau. Consisting of one engineer, one accountant, one assistant, and one secretary, who all sat at a single long table, this new division checked plans and proposals against the guidelines for the various relief programs, prepared the applications and contracts, and assisted Aldrich during his frequent presentations to representatives of the federal agencies. They also monitored wage levels on relief projects, and this was another aspect of the Los Angeles program that was incorporated into the WPA funding rules, along with the limitations on hours worked per month.⁵³ Aldrich's utility to Hopkins was also based on the political setting in which Aldrich operated: open-shop Los Angeles was a superb proving ground for public-works policies that had to withstand reaction from free-market ideologues and red-baiting politicians. Besides nurturing the support of such unlikely allies as William May Garland, Aldrich also courted the conservative *Los Angeles Times* and won some favorable coverage for his emphasis on relief programs for infrastructure, with such headlines as "Public Works Projects Called Good Business."⁵⁴ Hopkins, a social worker

by profession who was the most liberal proponent of work relief among Roosevelt's "kitchen cabinet," had little in common with the pragmatic engineer who had spent much of his career in service to business. Perhaps that was why Hopkins valued Aldrich's counsel: it helped disarm his critics in configuring the WPA. Aldrich would later claim that he "was co-author with the late Harry Hopkins of the first WPA Act and its early amendments."⁵⁵ In any event, they shared the goal of maximizing the social resources expended on public works, and the relationship certainly benefited the city. During its eight-year tenure, from 1935 to 1943, the WPA provided work for about 8.5 million people, and 85,000 of them were in the city of Los Angeles. From 1935 to 1939, the WPA was the city's largest employer.⁵⁶

The changes wrought by the WPA were abrupt, far-reaching, and evident to everyone in the city. The Los Angeles program was equally important to the WPA as a demonstration of the agency's capacity to fulfill its mission of putting people to work. The relationship between Aldrich and Hopkins, Aldrich's intimate familiarity with the legal and regulatory framework under which the WPA operated, and the WPA's stationing of liaison staff in Los Angeles all made for a smooth beginning. By November 1935, work was underway on the first batch of projects in Los Angeles and by the end of the year \$30 million worth of work had been authorized. Los Angeles was the site of the largest single project funded by the WPA up to that time (in terms of jobs), the Slauson Storm Drain, which employed a daily average of more than 7,500 workers.⁵⁷ The drain was first proposed in 1925 as a means to reclaim the vast area south of Santa Barbara Avenue and west of Vermont Avenue from endemically swampy conditions. It was

analogous to Tenth Street (albeit a reclamation project rather than a highway): it was expansive, it required an assessment district encompassing thousands of properties, and it was defeated by property-owner protest (in 1928).⁵⁸ Recognizing the employment potential of a colossal excavation job, Aldrich dusted off the plans and enlarged them in accordance with the vision of Harry Hopkins. By January 1936, thousands of workers equipped only with shovels and wheelbarrows had begun a 100-foot-wide, 15-foot-deep trench along the southern flank of the Baldwin Hills, which would ultimately extend more than three miles from the Crenshaw district to Ballona Creek. The *Times* struggled for comparisons to describe “such a sight as has never before been seen in Los Angeles,” first noting that it was “strangely parallel to methods of the ages when the pharaohs built their ancient cities,” before settling on a reference closer to home: “Like some fantastic motion-picture scene, the sight resembles nothing so much as some huge ant hill from which the top has just been kicked.” The local WPA coordinator admitted, “We could do it with machinery with but a handful of men and do it much faster and at less expense.” But that was not the purpose: “It is being done to give these men work. They were on the dole.”⁵⁹

From the Melan Arch to the pharaoh’s ant hill, the work-relief programs conducted under Lloyd Aldrich encompassed an enormous range of building technology as well as a diverse set of project-specific financial and administrative arrangements. Aldrich and his staff were entrepreneurial bureaucrats. Their creativity was in tailoring design specifications and construction methods according to the most likely source of funding. Overall, between August 1933 and January 1940, the WPA paid for 51 percent

of public works construction in Los Angeles; the state gas tax, 23 percent; the PWA, 17 percent; and the remaining 9 percent came from various relief programs undertaken by the state of California.⁶⁰ Conspicuously absent was any money from special-assessment districts; Aldrich had suspended the review of tax-increment plans soon after taking office and by the middle of 1937 all existing proceedings had been closed.⁶¹ As the 1930s progressed, the engineering staff became adept at changing on the fly, quickly redesigning a bridge or a highway to adapt to new guidelines when a potential sponsor fell through. They also brokered hundreds of compromises among local, state and federal agencies as they assembled budgets from multiple sources to fit the needs of a given project. At times the sponsor dictated the design, especially the PWA, but Aldrich would also shop a project among potential sponsors to obtain funding for a design he did not want to change.

This flexibility was fully evident in the production of the viaduct that was built in 1940-41 to carry First Street and Beverly Boulevard over Second Street and Glendale Boulevard, about three-quarters of a mile northwest of downtown. A confluence of four major streets, it was congested with trolley traffic as well, because it was the terminus of the Hollywood Subway (more recently known as Belmont Tunnel), opened in 1925, which ran between the First and Beverly intersection and the Pacific Electric downtown terminal at Sixth and Main. Four years after the tunnel opened, Aldrich's predecessor won approval from the city council to rebuild the intersection as a multiple-span bridge that would traverse some 450 feet.⁶² Bridge engineer Merrill Butler opted for a steel truss because, though hardly light and airy, it would be less monolithic at that length than the

city's favored form, the reinforced-concrete arch, and local residents had already started to protest against the visual impact of an elevated roadway.⁶³ The plans languished because, as the city attorney reported in early 1933, "There is some question about available funds for the city's share of the cost."⁶⁴ Aldrich did not attempt to revive the project until 1938, as part of a larger scheme to rebuild First Street. Though the idea of a "continuous elevated highway with approach ramps" -- something resembling a freeway - - had been rejected for Los Angeles as far back as the Major Traffic Street Plan, the city engineers considered a series of grade separations along an existing street as a viable option in such locations as Ramona and Sunset boulevards. In the late 1930s, when numerous agencies and private organizations had begun to formulate parkway plans, First Street was the likely candidate for a principal artery between downtown and Hollywood. The bridge had to be longer to accommodate through traffic, and the new design was 900 feet long, twice the size of the original proposal. Aldrich had submitted the earlier proposal to the PWA, but by the time the plans for the longer truss were filed in 1939, Ickes had begun to phase down the program. The PWA required a "change of scope to allow this work to be constructed," but the timing was off, the PWA docket was closed before the change order was ready, and the project was denied funding.⁶⁵

Aldrich then approached the WPA, which required the total redesign of the bridge. Only a handful of national firms were capable of providing the precise fabrication and highly skilled installation of a truss bridge; the steel members were manufactured in Pittsburgh or Chicago, shipped by rail, and assembled by specially qualified crews sent by the fabricating firms. A steel truss fit comfortably into the PWA

guidelines, but it did not generate as many local jobs as a concrete arch, which required laborers to hammer together forms and falsework and to mix and pour the concrete. As Aldrich reported: “When the construction of the improvement as a WPA project was proposed, it became advantageous to revise the design to provide for a reinforced concrete structure.” While asking the city council to approve the change, he also made the cryptic request of “permitting the city attorney to file condemnation of ingress and egress rights.”⁶⁶ The adjacent homeowners would not be allowed to access their property at the grade separation: Aldrich was contemplating parkway plans, and First Street seemed the best bet for a limited-access route between downtown and Hollywood.

Much had changed from the days when city engineers would assemble funding from property owners, railroads and street railways, and direct city appropriations, but the basic approach exhibited a certain continuity: a project with a chance of approval was a good project, all the more so if it could be justified as keeping people off the dole. The priorities for construction proceeded from opportunity as much as rationality, even when seizing the opportunity required the hasty redesign of sophisticated structural forms. Not that Aldrich disdained planning. He was anticipating future needs in the upgrade of First Street, and he would embrace (and try to lead) the attempts to conceive regional parkway networks in the late 1930s. He was also capable, however, of ignoring existing plans and scrapping painstakingly developed designs when convenient to do so. This highly fluid character of public works development in Los Angeles was the crucial context in which freeways took shape.

BITS AND PIECES: THE FIRST LIMITED-ACCESS HIGHWAYS

Despite the proliferation of comprehensive parkway and freeway plans after 1937, the creation of the freeway network proceeded from the ground up, as Aldrich and the city engineers planted pieces of limited-access and grade-separated highways at key locations across the city. The implications of many pivotal decisions were not grasped at the time they were being made. The engineers engaged in a process of design inflation as they adapted to changing traffic conditions, accommodated diverse interests, approached different sponsors for financial participation, and attempted to correct egregious blunders committed in the hurried efforts to push ill-conceived ideas through to completion. The new potential for mega-construction unleashed by the New Deal did not replace the previous system of highly constrained authority for infrastructure development, but was layered on top of it. There were fundamental similarities between the origins of the freeway network and the accretion of functional requirements in response to demands from businesses or opposition from residents that produced, for example, the behemoth but thinly trafficked bridge at Sixth Street. Similar too was the lack of consideration for the effects of major transportation arteries on the texture of life in urban neighborhoods, at least until white, Anglo middleclass homeowners began to feel those effects. Yet the hasty origins of this network of limited-access thoroughfares continued to influence the subsequent elaboration of the freeways. The city engineers created the kind of path dependencies that were virtually impossible to overcome -- thousands of tons of concrete poured in a line.

As the 1930s drew to a close, three sections of proto-freeway were in place or under construction: Ramona Parkway on the east side, Arroyo Seco Parkway north of downtown, and Cahuenga Parkway in the pass between Los Angeles basin and the San Fernando Valley. In both structure and function, they were practically serendipitous in their origins, their conceptual enlargement the result of design inflation during the compromises and negotiations among public agencies and private interests that had different goals and different stakes in the proceedings. These fragments were not conceived together, did not constitute an integrated whole, and did not as a group correspond to any of the plans in place or under development at the time. First Street, with its planned series of grade separations, or Whittier Boulevard, which was part of an existing state highway route, were just as likely to become limited-access highways as the corridors that eventually became freeways.

To view the coming of freeways to Los Angeles as orderly, inevitable, or the rational response to an obvious problem is a retrospective distortion that occludes the uncertainty and, at times, desperation on the part of Aldrich, Cortelyou, and their colleagues, allies and opponents who were responsible for the freeways. The distortions began with Aldrich himself, when the problems of uncoordinated development, poorly conceived designs, burdensome effects on neighborhoods, and fierce opposition to further construction put the emerging program at risk. “It was obvious that something needed to be done,” he pronounced in 1947 to a friendly audience of engineers, eliding the conflicts with the claims that his plan was “generally accepted” and that “There is also substantial agreement as to the priority of construction.” The title of his speech made clear that there

was no other possible answer: “Increasing traffic in Los Angeles Metropolitan Area demands adequate freeway and parkway system.” While Aldrich pronounced the inevitability of freeways and the consensus that supported them, the state legislature had just concluded hearings to investigate why so many Los Angeles constituents were flooding the state capital with complaints of neighborhood destruction and no lessening of congestion. The hearings resulted in some modifications to the laws governing right-of-way acquisition and the doubling of the gas tax to drown with money the tribulations of urban freeway construction.⁶⁷ At that time the legislators did not consider the source of the problems, which lay in the origins of the program.

Ramona Boulevard

When the Los Angeles County surveyor first proposed improving Ramona Boulevard, in 1928, as part of the peripheral highway network, it was all but indistinguishable in design and function from the plans for other through arteries such as Whittier, Olympic or Venice boulevards. The route was entirely east of the Los Angeles River and intended to serve the rapidly developing San Gabriel Valley. Only a mile of the 6-mile highway lay within the city of Los Angeles; the rest passed through unincorporated land and the city of Alhambra. Within Los Angeles, the existing unpaved roadway ran along the south side of the Pacific Electric’s Covina Line, which hugged the bottom of the low ridge known as Brooklyn Heights. The Covina Line crossed the river

at Aliso Bridge, but the adjacent road petered out in the vicinity of Pleasant Street, about a third of a mile east of the river, and the proposed improvement ended there too.⁶⁸

One factor that distinguished Ramona Boulevard was the series of bridges recently constructed by the Pacific Electric to carry Soto, Marengo, Cornwall, State and Lorena streets across the Covina line. The bridges, or grade separations, had been mandated by the state Railroad Commission as a safety measure because residential development on the east side had pushed up to Brooklyn Heights. When John Prince of the city engineering office's Streets Division recommended that the city accept the county's offer to create a "joint highway," he noted the significance of the bridges: "The further fact that a traffic separation may be effected at practically all the important highways intersected will constitute this a high speed highway." By extending the Pacific Electric bridges across the new roadway, Ramona Boulevard would also have the benefit of eliminating crossing traffic at those locations. According to Prince, the main reason for the city to cooperate with the county was to provide another outlet for the east side and relieve traffic on Mission Road, the industrial street that ran parallel to the east bank of the river, which was "heavily over taxed."⁶⁹ At the time, the grade separations on Ramona were not part of a vision for limited-access highways, but were instead functionally similar to the proposals for separating grades at Macy Street, First and Glendale, and other congested locations.

A familiar litany of obstacles and conflicts ensued. In 1929 the city council appropriated money to buy most of the land for the city's mile-long stretch from the Major Traffic Street Plan bond funds (for a road that was not even mentioned in the

Plan), but lacked any means to pay for extending the Pacific Electric bridges over the highway.⁷⁰ Negotiations with the Pacific Electric dragged out until 1934; the railway did not object to the city lengthening the bridges (or did not bother to object because the Railroad Commission could have required it), but the railway balked at contributing to the construction cost.⁷¹ John Prince of the city's Streets Division recommended a paved width of 46 feet, consisting of four lanes with a sidewalk on the south side (and no sidewalk north of the roadway, next to the trolley line). His counterparts in the county thought that an extravagance, and in any case the special assessments that the county would use for the construction would only cover a 30-foot-wide road.⁷²

Many of the same difficulties encountered in merging the priorities of public officials with the desires of private business that afflicted Whittier Boulevard also arose in the planning for Ramona. The East Side Organization, an alliance of improvement associations, urged that the city council "do all in your power to expedite the construction of the improvements on what will be Ramona Boulevard," but warned against assessing nearby property owners for any costs.⁷³ Like the Whittier boosters, the East Side Organization called for extending Ramona across the Los Angeles River, an ambitious vision that the city engineers dismissed because the bridge at the projected crossing, Aliso Street, could not handle the traffic. One of the bridge bond issues had included a crossing at Aliso, but the engineers had plundered those bond proceeds to pay some of the spiraling costs for Sixth Street Bridge. Nor did the engineers relish the prospect of negotiating another costly easement with the Union Pacific, whose tracks ran along the east bank of the river.⁷⁴ If hectoring from boosters could stir up the city council and

oblige Prince and his staff to write mollifying letters and redundant reports, the East Side Organization was nonetheless driven by enthusiasm rather than criticism of the project.

An entirely different set of problems arose when individual property owners refused to sell their land or homes for the highway right-of-way, or contested the appraisals when the city initiated condemnation. Delays and cost increases were compounded by design changes requested by the state Division of Highways after it agreed to take part in the project in 1933, when the city and county requested that Ramona Boulevard be designated a state highway and thus become eligible for direct gas-tax subsidy. Ramona lay between two existing state routes. To the south, Route 2 followed Whittier Boulevard before turning north on Pleasant Street, then east on First to cross the Los Angeles River. The state highway from Pomona to the Los Angeles area followed Holt and Garvey avenues eastward to a point near Alhambra, where it turned north to join Foothill and Colorado boulevards. In the newly instituted spirit of cooperation with local jurisdictions, and the chance to solve some of the traffic problems caused by the flawed planning of Whittier Boulevard, the proposal passed quickly through the stages of approval from Cortelyou to the state director of public works to the state Highway Commission.⁷⁵ Cortelyou could not abide the 30-foot width or even the 46 feet proposed by the city, which required the city to redraw the “taking lines” at numerous locations, initiating new proceedings for the added land and throwing the ongoing proceedings back to the beginning because the boundaries had changed.⁷⁶

When Aldrich took over the engineering bureau in August 1933, a few short stretches of Ramona had been graded and paved to the 46-foot width, but the project as a

whole was in abeyance due to unresolved right-of-way issues. The impact of his bolder approach and the New Deal was immediately evident. He revived the idea of continuing Ramona all the way to Mission Road, on the east bank of the river, and proposed to gain added width along the entire corridor, without condemning more homes, by moving the Pacific Electric tracks to the north, which would require cutting back the Brooklyn Heights ridge. He also combined the boulevard project with another long-delayed infrastructure issue by proposing to build the Aliso storm drain alongside the roadway -- a concrete-lined channel that would be the main outlet for runoff from all of northeast Los Angeles. The increases in scope were only feasible through the use of federal public works assistance, and Aldrich included Ramona Boulevard in the city's first application for PWA funds, along with Macy Street-Union Station, the Glendale-Sunset Bridge, and the streets around the harbor.⁷⁷ The design inflation touched off a series of leapfrogging agreements between Aldrich and the Division of Highways. The state promised to fund the entire local share from its own highway funds plus the reallocation of "quarter-cent funds" if necessary, in return for the city promising to collect all the pending right-of-way proceedings into one Superior Court lawsuit. The state agreed to supervise the construction in return for the city engineers providing the detailed designs and specifications.⁷⁸

The design of the roadway continued to change even after construction began in late 1933, and Ramona Boulevard acquired some of the characteristics of a freeway on a piecemeal basis. No legal mechanism yet existed for the city or state to prohibit access to the roadway from abutting properties on a comprehensive basis (which is the defining

legal characteristic of a freeway), nor did any of the participants express the goal of creating a limited-access corridor for the entire length of the boulevard. The city engineers considered access to the roadway one property at a time. Where they deemed it necessary to prohibit driveways, the city compensated the property owners for the lack of access through condemnation proceedings.⁷⁹ As for grade separation, one of the functional characteristics of a freeway, despite Cortelyou's claim that the entire route through the city had no intersections, there were at least six locations in the city where a perpendicular street opened onto the boulevard when the project began. The city closed two of them as part of the original design, two more after construction was underway, and two would continue to meet the boulevard at grade.⁸⁰ Another of the defining features of a freeway -- the separation of opposing traffic -- was only retrofitted onto the boulevard in 1938, when Aldrich announced the installation of a "hub height flexible steel dividing barrier in the middle of Ramona Boulevard."⁸¹

The incremental scaling-up of Ramona Boulevard and the unsystematic accumulation of structural and functional characteristics caused harmful consequences for the roadway and the people who lived near it. The planning of the roadway did not consider how people living south of the boulevard would be able to walk to the Pacific Electric stations that stood at the tracks north of the boulevard, Echandia Junction at Echandia Street and Valley Junction at Pomeroy Street. As construction made the problem apparent in early 1935, neighborhood residents complained to the city traffic engineer, Ralph Dorsey, whose office was lodged with the Police Commission, not the city engineer. Only after Dorsey reported the issue to the city council did Aldrich move

to remedy the situation. It was not a small problem, as the city councilman for the east side informed his colleagues: “Better than 1,000 schoolchildren and passengers take the Pacific Electric cars” at Echandia Junction.⁸² Dorsey reported further to Aldrich: “An even greater hazard exists at the intersection of Pomeroy Street and Ramona Boulevard, where approximately three times as many pedestrians cross the boulevard to reach Valley Junction of the Pacific Electric Railway as cross at Echandia Junction.”⁸³ The boulevard was nearing completion when this predicament came to light, and the options were limited. Aldrich reopened negotiations with the Pacific Electric for an easement to bridge the tracks, then prevailed on Cortelyou to pay for the pedestrian bridges with state highway funds.⁸⁴ This technological momentum illustrates in a small way how path dependency worked in the elaboration of the road network: once resources were committed to a major artery like Ramona Boulevard, Aldrich and the other sponsors absorbed unanticipated costs in order to preserve the utility of the original investment.

That process unfolded in a large way where the boulevard construction involved cutting back Brooklyn Heights, just north of Macy Street. In October 1935, six months after the entire boulevard opened to traffic, the *Herald* reported: “On the brink of destruction, a group of houses perch atop a 100 foot high cliff along Ramona Boulevard. . . . The cliffs are man-made. They were left behind when workmen cut through the new right-of-way for the boulevard. It is feared the winter rains will hasten the action.”⁸⁵ The homeowners appealed to the city council for aid, but a year later the danger had only increased: “Spectators now gather daily at the spot to watch the gradual carving away of the fine sandstone formation, leaving an overhanging cliff several feet deep.”⁸⁶ Aldrich

requested the money to purchase the homes from the Division of Highways, but another year passed without any action, until a crisis loomed: “For months a 100-foot side hill on Ramona Boulevard just north of Macy Street has been sliding and sloughing off, sending a shower of rocks and dirt onto the street. . . . An avalanche of several thousand tons is liable to crash onto the highway.”⁸⁷ The city council voted to buy the houses, while Aldrich and Cortelyou conferred on grading the embankment to create a stable slope, a task that, remarkably, had been omitted in the original design process. Out of those discussions emerged the plan to rebuild the boulevard as a “six-lane, divided express highway,” using the Pacific Electric tracks as the median divider. Constructed at a cost of over \$2 million, the boulevard had only been open to traffic for three years, and now the engineers responsible for it wanted to scrap it and reconstruct the entire corridor.⁸⁸ If the new freeway was not exactly accidental, neither was it planned when the development of the Ramona corridor was put in place, and this latest instance of design inflation was enabled, at least in part, by the bungling of the original plans.

Arroyo Seco and Cahuenga Pass Parkways

Arroyo Seco and Cahuenga Pass were both celebrated locations in the lore and geography of Los Angeles. One was the incubator of the early 20th-century “arroyo culture,” exemplified by Charles Fletcher Lummis, who built his home, El Alisal, overlooking the dry creek bed that gave the area its name. As the route between Los Angeles and Pasadena, the Arroyo Seco Parkway also gained fame as the pathway to Pasadena’s Tournament of Roses, the annual rite of regional promotion that projected the

climate and customs of southern California to an international audience. The Rose Queen of 1938 wielded the shovel at the parkway's groundbreaking, and two years later, at the ribbon-cutting, another Rose Queen did the honors with a scissors.⁸⁹ Cahuenga Pass was associated with the movie business, which elevated promotion and publicity to an art form all its own, an art form that frequently used the pass to ground its stories unmistakably in Hollywood: when Errol Flynn was absent from the set of *Robin Hood*, a gossip columnist suggested that Flynn was "Out with a bow and arrow, probably, sniping at cars in Cahuenga Pass."⁹⁰ The pass was also the site of the Hollywood Bowl, the outdoor venue that attracted up to 20,000 concertgoers and for many Angelenos represented the distinctive attraction of their growing city -- uplifting culture in salubrious climate. The fame of Arroyo Seco and Cahuenga Pass rubbed off on the highways that ran through them, unlike Ramona Boulevard, which passed through multiethnic workingclass neighborhoods and the industrial district on the east bank of the Los Angeles River. Other than that, the two more renowned highways had much in common with Ramona. All three were shaped by conflict despite the consensus asserted by their builders and promoters. They all resulted from intricately brokered deals among businesses, local residents, federal public works agencies, railroads, street railways, city and state engineers, elected officeholders, and officials of other public agencies. All acquired their physical form through design inflation, the in-process accretion of features and functional capabilities. They all exhibited grave deficiencies at the moment of completion. And all three were retroactively absorbed into the region's projected freeway network after they were already built. The last three factors are the significant

ones for my purpose of capturing the improvisation that characterized the origins of the Los Angeles freeway network.

The tortuous history of the proceedings that led to the construction of the Arroyo Seco Parkway need not be recounted in detail because they have been expertly chronicled by H. Marshall Goodwin, Jr., and by the directors of the Historic American Engineering Record recording project of the parkway, Philip Gruen and Portia Lee.⁹¹ The Arroyo Seco represented a transition between eastern parkway practice based on scenic drives linking recreational areas and the subsequent era of utilitarian facilities designed for maximum traffic flow. Its hybrid design reflected the contested origins of the thoroughfare. The right-of-way within Los Angeles and South Pasadena had originally been acquired by the respective cities, starting in 1911, with the intention of creating a park drive along the arroyo. In the negotiations during the 1930s that preceded the parkway's construction, homeowners in South Pasadena agitated for the retention of the arroyo's parklike character rather than the "big ditch" and the "eyesore" they feared.⁹² The engineering justification for the project depended on its traffic capacity, and after considerable debate, including several attempts to legislate the design in Sacramento, all the parties reached a minutely worked-out agreement and in 1936 the state Highway Commission sanctioned the route.⁹³

The completed highway did not resemble the agreed-upon design. The idea of complete grade separation along the route was not part of the agreement but only emerged during the drawing of construction specifications undertaken by the city and state engineers under Aldrich and Cortelyou.⁹⁴ The original plans called for a landscaped

median dividing two lanes of traffic in either direction, but in 1939, at Aldrich's behest, the Division of Highways enlarged the capacity, adding another lane on each side by narrowing the divider and taking the 10-foot-wide shoulder for another traffic lane.⁹⁵ The most momentous change during the design process was the full limitation of access from abutting properties, so that traffic would enter and exit the roadway by means of what Aldrich started to call "on ramps" and "off ramps."⁹⁶ The original project ended on the north side of the Los Angeles River, where the southbound parkway traffic would continue onto the two-lane Figueroa Street, which had recently been extended across the river on a concrete viaduct.⁹⁷ Amid predictions of "traffic agony" at that location, while the original six-mile section was nearing completion the Division of Highways reallocated \$2 million from other projects across the state to build the 2-mile-long "Southerly Extension," which included another bridge across the river, carried the parkway through Elysian Park, and ended at Adobe Street, a half-mile north of downtown Los Angeles.⁹⁸

The implications of the in-process redesign unfolded after the parkway opened. Once again the city's traffic engineer, Ralph Dorsey, had not been consulted on the plans, but he monitored the construction and the traffic movements after the parkway opened and provided detailed recommendations to Aldrich and the city council to correct many traffic conflicts and inconveniences to residents. The off-ramps at Solano Avenue, reported Dorsey, "Create a very dangerous traffic condition forcing a criss-cross of cars entering and leaving the parkway." Phoenix and Spruce streets were both "terminated" at the parkway, and Dorsey proposed to "connect these two streets in a loop" rather than

dead-ending them. Another on-ramp was required at Bernard Street to prevent parkway bound traffic from having to cross a 3-way intersection.⁹⁹ Aldrich and Cortelyou sparred over whether to pay for the fixes from the state highway account or the city's quarter-cent funds before reaching a compromise and completing the work in late 1945.¹⁰⁰

The accumulation of freeway features on the Arroyo Seco Parkway took place during the opening years of discourse concerning a regional network of limited-access highways. The legal mechanism for establishing a freeway -- a roadway "free" from access via abutting properties -- was enacted in 1939 as the California Freeway and Expressway Act. In 1941 the city and state executed the contract that legally declared Arroyo Seco to be a freeway.¹⁰¹ Yet it was an isolated one, carrying traffic between Adobe Street in Los Angeles and Glenarm Street in Pasadena. At both ends, the high-capacity roadway dumped vehicles onto city streets. Aldrich, Cortelyou and everyone else involved understood that the realization of their networked vision required that such roadways connect with each other, but they could not make those connections until the rights-of-way for the entire network had been established.

The limited-access highway through Cahuenga Pass resulted from a series of PWA-funded city projects, without any agreement between the city and the state as to the overall character of the roadway, even one that was honored in the breach like the painstakingly won authorization that initiated the construction of the Arroyo Seco. In 1938, Aldrich announced the widening of the Cahuenga Pass Road from Barham Avenue in Universal City, southerly past the Hollywood Bowl, to the southern outlet of the pass, at Highland Avenue. A year later, the limited-access quality of Aldrich's plans for the

thoroughfare began to emerge on a piecemeal basis, when the city let a contract for a bridge to carry Mulholland Highway over the pass (the bridge that had been omitted from the original Mulholland construction in 1924). Aldrich was not coy about his intentions, stating that the bridge would be “another step in the development of the Cahuenga Pass roadways on an express highway basis.”¹⁰² At the same time, he negotiated with the Pacific Electric to relocate the tracks through the pass, from its eastern edge to the center of the roadway, where they would serve as a median divider between the two directions of travel. At the complicated intersection of Highland and Cahuenga, the new highway would enter a tunnel to pass beneath the tracks.¹⁰³ Throughout 1940 and into the middle of 1941, a mile of limited-access highway was completed from the tunnel at Highland to a new grade separation at Barham, with intermediate bridges at Mulholland and Pilgrimage Road.¹⁰⁴

At the precise time when Aldrich was leading the efforts to develop a comprehensive plan for a regional network of limited-access highways, he pushed ahead with this project that might or might not be included in such a network. In early 1940, speaking about the Cahuenga improvements at a real estate conference, he pronounced his preference for “construction of express highways and other traffic aids step by step rather than adoption of a major plan covering an entire system.”¹⁰⁵ The reason for this seemingly paradoxical inclination on the part of the city official responsible for drawing the comprehensive plans was that the state highway establishment did not want to build a limited-access highway through Cahuenga Pass. The Division of Highways was hardly opposed to freeways “adjacent to and leading into the major metropolitan areas,” as the

division's director of survey of planning, Fred Grumm, reported in 1940. Cahuenga Pass was certainly a troublesome intra-city artery, but the state engineers charged with providing highways between centers of settlement preferred a north-south route through Los Angeles to follow the Los Angeles River, curve around Griffith Park, and enter the San Fernando Valley at Burbank (the eventual path of the Golden State Freeway, or Interstate 5). The state Highway Commission had already approved this route, for planning purposes, as the extension of the Santa Ana Freeway, the new name for the state highway that followed Whittier Boulevard into the city. Grumm and his colleagues did not uphold any high-minded principle against bulldozing urban fabric: the Santa Ana would pass through east Los Angeles, and they were perfectly happy to see Arroyo Seco Parkway "further extended as a freeway into the heart of Los Angeles."¹⁰⁶ Cahuenga Pass simply presented too many problems.

The problems began to surface while the Cahuenga parkway was being built. When Ralph Dorsey asked for access across the limited-access right-of-way for students attending Valley View School, Aldrich added a pedestrian tunnel at Barham.¹⁰⁷ Threats to the cherished experience of attending the Hollywood Bowl also arose during construction. The Hollywood Chamber of Commerce, aghast at the realization that parking would not be allowed on the parkway, complained to the Police Commission in May 1940. An ordinance to permit parking on the service roads to either side of the parkway was rushed through the city council and enacted in July, before the concert season was completed.¹⁰⁸ Concertgoers also deluged the county supervisors (the Bowl was a county facility) with complaints that the improved roadway "would depreciate the

present acoustical properties of the Bowl.” They engaged an “expert scientist” from UCLA, who provided detailed recommendations for sound barriers and plantings, which were gradually put in place over the coming years.¹⁰⁹ During the summer of 1940, homeowners near the route filed numerous claims for damages “caused by heavy blasting on Cahuenga Pass Freeway Improvement.”¹¹⁰ They were the lucky ones -- they still had their homes. That was not the case for dozens of residents of Whitley Heights, near the southern outlet of the pass, whose lawsuits and damage claims persisted for at least three years after the opening of the mile-long route.¹¹¹ The likelihood of such costs and obstacles in securing the right-of-way was a main reason for the state engineers’ reluctance to endorse a freeway through the pass, but they could not ignore the mile-long project once it was completed, and the Highway Commission accepted the route as a state freeway in 1943.¹¹² They were right to worry. The next section of the freeway, which the city engineers began laying out in 1941, extended about a half-mile north from Barham to Lankershim Boulevard and required the condemnation of 71 residential and commercial properties. Sixty-two of the owners sued to prevent the taking and the process was not concluded until 1948.¹¹³

To the engineers concerned with roadway construction, in the city engineering office as well as the Division of Highways, such oppositional behavior was a wholly common experience, as much a part of their daily routines as sharpening their drafting pencils. It suffused their thinking about transportation development. For the most part they refrained from expressing any frustration or indignation they might have felt, but it can be perceived in their alacrity to capitalize on the fleeting opportunities to put in place

the key structures of the freeway network, without fully considering the implications of their work. Awareness of the opposition to broad-scaled road schemes was also the motivation behind the production of the many regional freeway plans in the late 1930s and early 1940s. The plans and the publicity surrounding them were tools to affect public opinion and build political support, but that was a different job than building freeways.

Plans and Parkways

Ernest East, the engineer for the Auto Club, produced the first plan of limited-access highways for greater Los Angeles under the innocuous name, *Traffic Survey: Los Angeles Metropolitan Area*. Issued in December 1937, it incorporated a year of field research on traffic movements and a wide-ranging review of the financial, political and technological strategies employed to address automobile congestion in the United States and abroad. In October 1936, before embarking on the study, East met and corresponded with the real estate writer for the *Los Angeles Times* to soften the ground for the recommendations he planned to make. “I expect to emphasize the inability to obtain cooperation between the forty-five political subdivisions of the county, the need for giving legal status to a selected group of city-county major thoroughfares, and allocating a definite part of the motor vehicle and gasoline tax revenue to the various units of this plan.” Similar goals animated all the subsequent plans as well: meaningful political authority over transportation, privileged legal status to ease the acquisition of highway rights-of-way, and dedicated funding for the most important arteries.¹¹⁴

The report documented for the first time the major patterns of traffic in the Los Angeles basin, with detailed tables summarizing the traffic counts and distribution maps of automobile movements at different times of day. The chief recommendation to ease congestion was a 400-mile network of 360-foot-wide “motorways” featuring full grade separation, “cloverleaf interchanges,” and no access except by ramps “at convenient intervals.” Not surprisingly for the Auto Club, East also recommended “Remov[ing] all street railways from both commercial and residential streets and state highways,” in favor of “an adequate metropolitan motor bus transportation system with off-street terminal facilities.” For the central business district, East proposed “ramp buildings” that would not have looked out of place in Fritz Lang’s *Metropolis*: elevated motorways passing through downtown office buildings at second-story level. His administrative suggestion was a single sentence calling for a “metropolitan motorway authority,” and because the financing should be agreed upon by the citizens who would be called upon to provide it, “no financing plan is included.” The routes of the motorways were shown on a 10-by-13-inch map depicting an area roughly 40 miles from north to south and 50 miles from east to west. Each alignment was depicted by a thick line that could only suggest a general route.¹¹⁵

“Enthusiastic, unanimous approval” greeted the study when the Auto Club presented it in February 1938 to a specially convened meeting of elected officeholders and officials from the city, county and state transportation agencies. Mayor Bowron appointed the Transportation Engineering Board (TEB) to develop the recommendations further. Chaired by Aldrich, the TEB also included K. Charles Bean, general manager of

the city's Public Utilities Commission, and representatives from two of the engineering firms that had worked for Robert Moses to design the New York parkway plan.¹¹⁶ Their plan, *A Transit Program for the Los Angeles Metropolitan Area*, came out in December 1939; it was under preparation at the same time that the city engineering bureau was designing Ramona, Arroyo Seco, and Cahuenga Pass parkways.

Aldrich's *Transit Program* featured far more detailed consideration of freeway-design characteristics, including curve elevation, lane widths, interchange design, ramp geometry, and landscaping, with renderings furnished by the engineering consultants. The finance plan was just as vague as the Auto Club's, consisting of a call for "a special economic study" so that "unnecessary delay in financing [may be] thereby avoided." Aldrich accorded some attention to practical politics by convening the Citizens Transportation Survey Committee, with representatives from adjoining cities and the downtown business community. However, the recommendations for operating control of transportation development were limited to "inviting neighboring municipalities to conferences with a view to developing what, if any, joint or independent action should be taken," and "thereafter, the City, with such other municipalities as care to join with it, proceed promptly to organize a negotiating committee to commence work."¹¹⁷

The TEB report included genuine consideration of "actual rapid transit through undertaking of express bus service on high speed, inter-district, stop-free highways." Unlike its facile recommendation for a highway authority, the plan carefully delineated the structure and funding of a "Coordinated Authority" to govern transit operations. While acknowledging that "the high cost of most approved rail arrangements tends to

defer into the indefinite future the time when they can be financed,” the TEB report nonetheless recommended “rail rapid transit” among downtown, Hollywood, the San Fernando Valley, and Venice.¹¹⁸ Charles Bean of the Public Utilities Commission must have contributed the bulk of these sections of the report, but Aldrich did not equate his enthusiasm for highways with antagonism to mass transit. In 1937 he had set up the Rapid Transit Division within the engineering bureau to assess the feasibility of “elevated structures, subways, new bridges and viaducts, and tunnels” that would be coordinated with “major traffic construction.”¹¹⁹ Limited-access highways were not intended by their creators to replace the street railways; both modes were intended to work in tandem to alleviate the traffic congestion decried by all.

In the preface of *A Transit Program*, Aldrich divulged his conviction that the report primarily served a public relations function, along with his preference for the physical alteration of the city rather than abstract planning exercises: “Tangible progress toward the curing of the transportation ills of the district will best be signaled not so much by the adoption of a master plan as by the breaking of ground for the first construction project under the plan.”¹²⁰ That signal project would be the Hollywood Parkway. From Highland Avenue, it would cut across Hollywood Boulevard, follow Beverly to the mid-city district, then veer south to arrive downtown at the vicinity of Eighth and Figueroa streets. The next priority in the TEB report was a freeway between downtown and the harbor, though the report offered far less detail on that. Other than the plans for the Hollywood Parkway, the TEB report offered no more information on precise routing of highways than did the Auto Club plan. The metropolitan area was depicted on

a similarly sized map, with the highways represented as speculative lines. The map did not even show the Los Angeles River, though five routes would have to cross it if the plan were to be built.¹²¹

Everyone in Los Angeles agreed that traffic congestion had reached horrendous proportions, and the Auto Club and TEB reports accomplished the goal of channeling discussion toward solutions. An orgy of report publication ensued. In 1942 the City Planning Commission weighed in with its *Mass Transit Facilities and Master Plan of Parkways*, followed a year later by the county Regional Planning Commission's *Freeways for the Region*. The Central Business District Association issued *The Los Angeles Parkway and Transit System* in 1946. In response to demands from this same constituency, Mayor Bowron assembled the Rapid Transit Action Group, which after two years of studies and meetings produced its own recommendations.¹²² All these reports lacked specificity with respect to actual routing, construction authority, and funding sources. The state Highway Commission and the Division of Highways, the only agencies with the actual authority to build any of the roadways called for in all these reports, did not feel compelled to produce any master plans. Spencer Cortelyou had shepherded two limited-access routes, Arroyo Seco and Ramona, through the Highway Commission approval process, and he thought that six more were "badly needed." He estimated the cost "in the neighborhood of \$800 million," the only realistic estimate among all the discussion about freeways.¹²³

Historians and other transportation scholars have placed a disproportionate emphasis on the many freeway plans of the 1930s and 1940s.¹²⁴ They have tended to

mistake a promotional and political agenda for a construction plan, much as the *Major Traffic Street Plan* of 1924 has been interpreted as a turning point in the city's street system, when in fact it represented a turning point only in the discussion about streets. The difference matters. Assessing the coming of freeways merely from the documents that were produced to facilitate them produces the false impression that this enormous transition in the metropolitan landscape proceeded on a consensus basis. Place-specific interests almost always opposed freeways, and the assertion of a broader public good, which was the premise of all the reports, was a means to blunt such resistance. Aldrich himself articulated this position in an uncharacteristically unguarded moment with a newspaper reporter in 1940: "Los Angeles will derive great benefit from the development of a modern freeway providing a safe and fast route for travel . . . and any slight inconvenience to the local district will be far outweighed by this citywide benefit."¹²⁵ Discourse intended to overcome opposition can hardly be expected to have highlighted that opposition, or even to have mentioned it, which makes the indefinite routing plans in all the promotional documents seem less provisional than intentional. Without the knowledge of exactly which blocks would be destroyed, there was no cause around which opposition could coalesce.

The situation on the ground bore scant relationship to the programs promulgated in the transportation reports. As the 1930s drew to a close, small stretches of freeway pointed toward a convergence near downtown Los Angeles, but they remained on the outskirts. Ramona Parkway approached from the northeast, Arroyo Seco Parkway from the north, and, to the northwest, the Cahuenga Pass Parkway peeked out at the basin as

the first suggestion of the Hollywood Parkway. None came closer than a half mile from downtown. The Division of Highways was eager to build the Santa Ana Parkway into Los Angeles from the southeast, and Aldrich championed the freeway to run south from downtown to the harbor. None of the existing routes could be completed or new ones begun until difficult locational matters could be resolved within the densely built-up area of downtown and the industrial and warehouse districts in the river corridor. No one knew exactly if, or where, the Arroyo Seco Parkway, the Hollywood Parkway and the harbor route would meet, or how that junction would work. Not even Aldrich dared to predict the site for a freeway to cross the Los Angeles River, where any plan would have to contend with the railroads whose tracks ran along both sides of the river. Though unexpected by Aldrich, Cortelyou or any other participant in these events, it was the consolidation of track operations that set in motion the process of bridging the Los Angeles River with a freeway, and in turn the actual routing of the freeway network.

THE LAST NEW DEAL PROJECT: ALISO VIADUCT

Early in his tenure, as part of the reconstruction of the street network around the site of Union Station, Aldrich applied to the PWA for assistance in replacing the Aliso Street bridge over the Los Angeles River. The PWA rejected the proposal because of deficiencies in the design of the eastern approach, where the roadway from the bridge would slope down sharply and cross the Union Pacific tracks at grade. The work on Union Station proceeded slowly and Aldrich deferred work on a new design to take up

more urgent tasks. His office submitted the new application in 1938, when the opening of Union Station was a year away. The PWA had by then begun to wind down its operations and was unable to begin a major new project, forcing Aldrich to report that “negotiations with the PWA were unsuccessful.”¹²⁶ He then approached the WPA, in September 1939, and the extraordinary relationship Aldrich had forged with the agency produced a remarkable offer. Not only would the WPA fund the bridge based on the existing, defective design, but he received a “request from the WPA authorities to immediately open construction.” The federal agency needed help from one of its most reliable sources of jobs: “The local WPA office is urgently in need of additional projects in the Central Zone in order to provide employment for the heavy relief load carried on its rolls in this location. . . . A delay in starting construction will greatly hinder the WPA efforts to provide employment in the central portion of the city.” Without an approved design, Aldrich could not inform the council how much money the city would have to contribute as the sponsor’s share. He asked that he be instructed “to proceed with the construction at the Aliso Viaduct as a WPA project and to report back at a later date” regarding final specifications and budget.¹²⁷

From October 1939 through November 1940, Aldrich conducted the most intricate negotiations of his career, with the most far-reaching consequences for the city. The urgent re-engineering of the viaduct and associated structures was accompanied by the equally urgent leveraging of funding sources, which produced further requests for additional function or capacity for the viaduct, creating a spiraling effect of design inflation and cost increases. The process began when Merrill Butler made his

recommendation for correcting the steeply sloped eastern approach to the bridge: instead of returning to grade on the east bank, the approach should carry across the Union Pacific tracks and Mission Road. The railroad would benefit from bridging its tracks because trains would not have to cross street traffic, which allowed Aldrich to secure a cost share from the Union Pacific for the eastern approach. The same argument won an increased contribution from the Pacific Electric, which ran across the Aliso Bridge, and would also gain an operational advantage if its trolleys did not have to cross the Union Pacific tracks or Mission Road on the east bank. In designing the elevated approach span, Butler could not find sufficient area to provide footings, because the storm drain that was built as part of the Ramona Boulevard project emptied into the river immediately north of Aliso Street. The storm drain, a concrete-lined channel, 12-feet-wide and 10-feet deep, would have to be rebuilt as an enclosed culvert with sufficient structural capacity to support a substantial roadway. The county had already pledged all of its otherwise uncommitted money from its share of the gas tax, the city's "quarter-cent" funds were encumbered by the Arroyo Seco and Cahuenga Pass contracts, and the rail companies had committed to the maximum. The only untapped pot of money was the gas tax proceeds that Cortelyou spent on state highways. To persuade Cortelyou to pay for the enclosed drain, Aldrich inflated the design again by offering to extend the viaduct approach another 1,200 feet to the east, to connect with Ramona Parkway (then under construction), if Cortelyou would agree to make the viaduct and Aliso Street a state highway. That would allow the limited-access Ramona Parkway to cross the Los Angeles River at Aliso, which thus became the first freeway crossing and provided an unexpected solution to the

fundamental locational problem of the freeway network. Cortelyou did not spurn the unexpected opportunity to run a freeway across the river. Moreover, unsure that any other freeway bridge would ever be approved, he also suggested that the Santa Ana Parkway cross the river at Aliso. That meant pulling the Santa Ana about 200 feet west from its planned route along Pleasant Street in order to meet the viaduct approach where it joined Ramona Parkway. The city had already begun demolishing the old Aliso bridge and driving pilings for the new viaduct but still had no final agreement for the project. Aldrich was compelled to support the Santa Ana Freeway using the Aliso viaduct, and the city council approved in April 1940.¹²⁸

In a few short months, out of sight of the public and with no attention from any of the city's newspapers, the Aliso Bridge had grown from a limited project intended to relieve traffic in the vicinity of Union Station to more than twice its originally planned size and almost three times its original cost. The junction connecting the Aliso approach, Ramona Parkway, and Santa Ana Parkway was larger than the bridge across the river. It was also the first three-way interchange for limited-access highways ever built (today it is known as the "San Bernardino Split"). Aldrich consented to Cortelyou's request that the city engineering staff design the interchange and in the various funding agreements accepted a series of requirements that proved impossible to fulfill. The Division of Highways specified that the interchange allow transition from any one of six directions of travel (both directions on all three roadways) to all of the other ones, and the Pacific Electric funding agreement required a dedicated ramp to conduct the street railway across the bridge from its right-of-way adjacent to Ramona Parkway. The city engineers

devised an asymmetrical tangle of ramps and tunnels that sprawled over 25 acres, but still could not fit in a ramp to conduct westbound traffic on the Ramona onto the southbound Santa Ana.¹²⁹

Construction of the viaduct and interchange was nine-tenths complete in January 1943 when President Roosevelt ordered all WPA projects to be suspended because of the wartime emergency. The city continued work by borrowing from other accounts and appealed to the White House on the basis of the site's strategic importance in the staging efforts for the Pacific theater of operations. Thousands of troops passed through Union Station every month, and the mainline railroads served as critical freight links in the production and distribution of war materiel. The appeal was granted and the last of the monumental public works to receive money from the WPA opened to traffic in August 1944.¹³⁰

The consequences of the improvised design process that produced the final version of the project unfolded over the decade following the end of the war, as construction proceeded on the Santa Ana Freeway and the Ramona Parkway became the six-lane Ramona Freeway (and later the San Bernardino Freeway). The hasty realignment of the Santa Ana through the middle of the blocks to the west of Pleasant Street caused the extensive loss of housing and the dead-ending of the streets perpendicular to Pleasant. Access ramps spread the impact further out from the freeway itself, creating isolated pockets of houses surrounded by looming walls of concrete. Aldrich requested that some of the crossing streets be bridged instead of dead-ended and that every other ramp be eliminated, and the state complied with about half of the

changes.¹³¹ Whether an enlarged Pleasant Street would have been less intrusive than cutting through the interiors of blocks can only be a subject for speculation, but its contemporaries that did follow existing rights-of-way, the Ramona and the Arroyo Seco, did cause less damage to their surrounding communities. Funneling both the Ramona and the Santa Ana across the Aliso Viaduct caused traffic to exceed the viaduct's capacity as soon as the Santa Ana opened in 1946. Cortelyou's successors added more lanes to the bridge and interchange in 1955, but still urged motorists to seek alternative routes because of the perpetual jam at Aliso.¹³²

West of the river, Aldrich and Cortelyou had little choice about the route of the Hollywood Parkway once the Aliso Viaduct set the location of the river crossing. They could tinker here and there with the alignment connecting the viaduct with Cahuenga Pass, but the basic route was determined once the river crossing was established. That route was far to the north of Eighth and Figueroa, the intersection which Aldrich had recommended for the terminus of the Hollywood Parkway in the Transportation Engineering Board report that came out in December 1939, just weeks before the negotiations with Cortelyou that established the actual route. In the mid-city area, the parkway ran about a half-mile north of First Street, stranding the massive First Street-Beverly Boulevard viaduct without its intended connections. It still stands there today, an isolated piece of freeway technology, grotesquely out of scale with its surroundings, awaiting the linkages that never came.

The Hollywood Parkway alignment intersected the projected route of the Arroyo Seco Parkway at the northwest corner of downtown, and during the war years the state

structural engineers designed the interchange for that location. Taking advantage of Hollywood Freeway contracts with the city that were as vague as those for the Santa Ana, the state engineers dictated that the routes would meet at right angles, thus avoiding the tortuous configuration of the Aliso interchange. To minimize the cost of land taking, they stacked the transition ramps on top of each other rather than extending them outward in cloverleaf fashion. The result was a symmetrically elegant structure, the “Four-level” interchange, which the state engineers would use repeatedly as the emblem of the Los Angeles freeways.¹³³

The fixing of the Hollywood Freeway alignment between Aliso and Cahuenga helps explain the desperation evident in the work of the state highway engineers to complete the freeway between 1945 and 1954: they had little choice but to make it work or the entire network would be endangered. Like the Santa Ana, the route sliced through the middle of blocks, but the residents of those neighborhoods had resources and political connections unavailable to the residents of the east side. Many of those in the path of the Hollywood Freeway opposed the demolition and construction with petitions, lawsuits, and appeals to city officials. Freeway evictions on the east side produced no official response, but when the Hollywood Freeway began displacing residents the protests quickly reached Mayor Fletcher Bowron, who duly expressed alarm about the city’s housing shortage and appointed an investigative committee that blamed the state for imperious behavior. Asked to report to the legislature, the Division of Highways found its scapegoats among the city officials whose precipitous decisions regarding Cahuenga Pass and Aliso Viaduct left few options available to the state freeway builders.¹³⁴

The uproar over Hollywood Freeway had a paradoxical effect in Sacramento. The joint standing committee on transportation invoked it to substantiate the call for an increase in the gas tax, with most of the increment reserved for urban right-of-way acquisition. The Collier-Burns Act, signed into law in 1947, provided the resources for the Division of Highways to wrest from Aldrich the leadership in the freeway program. The Four-level interchange received one of the first appropriations from the new pool of money, and Cortelyou rushed to finish it before his retirement. Completed in 1949, it stood isolated in its geometric splendor for four years before the freeways were connected to it. In that brief historical moment, the Four-level interchange was no different in its (lack of) function from the stranded viaduct at First and Beverly, but the state engineers applied their considerable resources to make sure it had a different future.

By the time of Cortelyou's retirement in 1949, the cooperative spirit that had grown between city and state engineers in the 1930s had given way to rivalry and recrimination. Prodded by the city council and the findings of traffic engineer Ralph Dorsey, Aldrich had reopened negotiations over the Santa Ana Freeway plans and forced the state to eliminate half the planned exits and entrances and about half the dead-ended streets.¹³⁵ After the war, the start of construction on the Hollywood Freeway from Cahuenga Pass to downtown was delayed for five years, until 1950, because of a series of protests and lawsuits over the destruction of Franklin Avenue near its intersection with Highland. Aldrich held out for an underground solution rather than the flyover ramp that that state pushed through, and in the process became disaffected with the state's approach. In 1952, when the state legislature was again considering raising the gas tax to

speed urban freeway construction, Aldrich chastised the state engineers in his testimony before the Joint Fact-Finding Committee on Highways. The Division of Highways engineers practiced “false economy” in their insistence on drawing rights-of-way as the shortest distance between two points. The state was building “rural freeways . . . in Los Angeles,” said Aldrich. His willingness to offer public criticism only signified that his ability to influence the program had waned.¹³⁶

The Collier-Burns funding offers only a partial explanation for the ability of the state Division of Highways to wrest the direction of the freeway network from the city engineering bureau. Starting with the passage of the California Freeway and Expressway Act of 1939, the attorneys at the Division of Highways had carefully selected which freeway protests to challenge in court. Their legal victories in small rural communities such as Redding established a body of case law to support the authority of the Highway Commission to determine freeway locations, even in the more diverse, complex, and contested landscape of Los Angeles. By 1952, the head state highway engineer was so confident in his legal position that he could scoff at the threat of a lawsuit over the route of the Ramona Freeway through El Monte: “Risks? Do you know how many lawsuits I have on my hands now?”¹³⁷ The Division of Highways also applied some of the newly lavish transportation funding to expand its engineering staff and technical capabilities, and no longer depended on city engineers for design services. In the late 1940s the state structural engineers developed a reinforced box girder (the “California Box Girder”) that introduced standard structural modules into the highly site-specific nature of freeway engineering, thus speeding up design and construction.¹³⁸

Besides the Collier-Burns money, the legal framework, and its growing technical expertise, the Division of Highways solidified its position through a public relations offensive that touted the virtues of freeways and the heroic accomplishments of state engineers. Division of Highways press agents made the Four-level Interchange the centerpiece of a national news campaign, allowed filmmakers to use it as a modernistic stage set, and trotted out a model of the Four-level when protest erupted at other locations. Following the negative publicity over the Hollywood Freeway at Franklin Avenue, the campaign utilized imagery of modernity, efficiency and progress to cast freeways in a more positive light. The swooping Four-level interchange particularly appealed to the engineers' sense of beauty, with its symmetrical ramps weaving upwards around a cluster of slender columns, and they avidly promoted it as an example of their work. The three-way interchange east of Aliso Viaduct was a more technically challenging accomplishment, but its ungainly tangle of transition roads reflected the compromises and half-measures that attended its creation, it occupied far less eminent real estate than the four-level's location at the northwest corner of downtown, and it came off the drawing boards of the city engineering department, not the state agency that was mounting the public relations campaign. The east-side interchange was ignored, while the Four-level was touted in glossy photos and paeans to engineering skill issued to the media near and far. It was featured in *National Geographic*, *Business Week*, *Fortune*, and *The New York Times*, and in

1956 the Four-level made the cover of *Newsweek*, to proclaim once again the unique and futuristic qualities of the southern California metropolis.¹³⁹

Conclusion

The Aliso Viaduct and Interchange did not merely establish the location of the Four-level Interchange, but also made it necessary in the first place. Fundamentally constitutive of the Los Angeles freeway network, its absence from the publicity mounted in favor of freeways was a purposeful omission that aptly symbolized the last conflict in Lloyd Aldrich's career as a highway builder. He had forged productive relationships with the state highway establishment on a site-by-site basis, aided considerably by his ability to win federal support for ambitious infrastructure programs. But his funding leverage waned with the closing of the New Deal public works programs, and local concerns lost out to the ascendant Division of Highways in the contestation over different visions for urban freeways. A monument to expediency, the fact that it was built at all was a tribute to Aldrich's tenacity and his negotiating skills. Intrusive to its surroundings, gangly and awkward in appearance, and operationally problematic, the interchange that Aldrich built as the price for constructing the viaduct also manifests the destructive capacity of public works when feasibility is the highest virtue in their creation.

Aliso Viaduct and Interchange is a fitting memorial to Lloyd Aldrich, John Prince, Henry Osborne, and all the other roadbuilding engineers of the city of Los Angeles. From the dawn of the automotive era, their work was conditioned by the

opposition that managed to halt a majority of the schemes to construct major road projects in the city. On a case-by-case basis, the city engineers pried open narrow niches for approval by creative financing and administrative arrangements. This bureaucratic entrepreneurialism reached a new level of sophistication under Aldrich. Once Aldrich and his colleagues managed to open one of those niches of approval, they clung tenaciously to the opportunity, readily incorporating changes to accord with shifts in the political or technical contexts. This process contributed to the improvisational quality of the freeway network in its formative stages. Irrationality and uncertainty characterized the work, and the in-process inflation of designs and costs was inherent from the first stirrings of freeway construction in the city. Despite the looming dominance of freeways in the urban landscape, their initial creation was shaped by contingencies that the engineers could not control, and the contradictions they encountered were built into the infrastructure they produced.

NOTES TO CHAPTER SIX

- ¹ City Engineer, "Annual Report," 1935-36, typescript, chapter 1, 11.
- ² City Engineer, "Annual Report," 1935-36, typescript, chapter 1, 2.
- ³ Robert A. Caro, *The Power Broker: Robert Moses and the Fall of New York* (NY: Knopf, 1974), esp. chap. 2.
- ⁴ Tom Sitton, *Los Angeles Transformed: Fletcher Bowron's Urban Reform Revival, 1938-53* (Albuquerque: University of New Mexico Press, 2005), covers many of the encounters between Bowron and Aldrich; see 35-37, 48-49, 60, 72, 127-33, 139-46, 179-83.
- ⁵ Photos of Aldrich in *Los Angeles Evening Herald and Express*, August 31, 1933; *Los Angeles Times*, April 7, 1949; *El Pueblo*, September 1955, 7-8, 41 (city- employee newspaper); Sitton, *Los Angeles Transformed*, 129.
- ⁶ Principal sources on Aldrich's life are: "Lloyd Aldrich: A Biography," typescript, May 10, 1949; Hearst Clipping Collection, University of Southern California Regional History Center, filed with Aldrich clippings; *El Pueblo*, September 1955, 7-8, 41; *Los Angeles Times*, April 7, 1949; and his obituary in *Los Angeles Times*, July 22, 1967.
- ⁷ "Lloyd Aldrich: A Biography," 13.
- ⁸ *Los Angeles Times*, August 3, 1933.
- ⁹ "Lloyd Aldrich: A Biography," 8.
- ¹⁰ Tom Sitton, "Another Generation of Urban Reformers: Los Angeles in the 1930s," *Western Historical Quarterly* 18(3), 315-32; Fred W. Viehe, "The Recall of Mayor Frank L. Shaw: A Revision," *California History* 59(4), 290-305.
- ¹¹ Sitton, *Los Angeles Transformed*, 35.
- ¹² *Los Angeles Times*, April 4, 1937.
- ¹³ *Los Angeles Times*, November 3, 1938.
- ¹⁴ Sitton, *Los Angeles Transformed*, 60-61.
- ¹⁵ *Los Angeles Times*, August 24, 1939, December 12, 1939, November 28, 1941, January 16, 1942, December 4, 1945.
- ¹⁶ *Los Angeles Times*, April 7, 1949, April 8, 1949, April 27, 1949, May 5, 1949, May 13, 1949, October 24, 1950; Sitton, *Los Angeles Transformed*, 127-33, 139-46, 178-83, quotation on 132.
- ¹⁷ *Los Angeles Evening Herald*, September 23, 1954, September 25, 1954, September 27, 1954, September 29, 1954.

¹⁸ Sitton, *Los Angeles Transformed*, 199.

¹⁹ Mark I. Gelfand, *A Nation of Cities: The Federal Government and Urban America, 1933-1965* (New York: Oxford University Press, 1975), 26-37, 43, 46, 65; William H. Mullins, *The Depression and the Urban West Coast, 1929-1933* (Bloomington: Indiana University Press, 1991), 21-23, 29-30, 120-26.

²⁰ Walter I. Trattner, *From Poor Law to Welfare State: A History of Social Welfare in America* (6th edition, New York: Free Press, 1999) and Michael B. Katz, *In the Shadow of the Poorhouse: A Social History of Welfare in America* (New York: Basic Books, 1986), the two comprehensive treatments of welfare history, have a fundamental disagreement regarding the motivations of social welfare policies and practices. Katz leans more toward the "social control" thesis, which holds that welfare consistently was aimed at containing discontent so it would not threaten the state. Trattner finds evidence of genuine concern for the poor in much welfare activity, not just the self-interest of the powerful. Both sides of this argument, however, agree that welfare policy almost always involved a distinction between the deserving and the undeserving poor.

²¹ Mullins, *The Depression and the Urban West Coast*, 55, 65, 95, traces the growing prominence of anti-tax opinion in Los Angeles as part of the resistance to increased public works spending during the Hoover years.

²² Marches of the unemployed occurred with growing frequency in Los Angeles between 1929 and 1933, and the some 1,000 Angelenos joined the Bonus March on Washington, DC, in 1932. See Mullins, *The Depression and the Urban West Coast*, 90-94; Municipal League of Los Angeles, *Bulletin* February 20, 1932; Roger Daniels, *The Bonus March: An Episode of the Great Depression* (Westport, CT: Greenwood, 1971), 70-72.

²³ Stimson's insistence on his credentials as an irritant to the powerful and a friend to the oppressed appears repeatedly in the correspondence from his later years. See, for example, Stimson to Freda Kirchway, May 23, 1944, and Stimson to Eleanor Roosevelt, August 5, 1949, folder N, Stimson Papers, Huntington Library.

²⁴ The New Deal as updated Progressivism is best exemplified by Morton Keller, *Regulating a New Economy: Public Policy and Social Change in America, 1900-1933* (Cambridge: Harvard University Press, 1990) and Keller, *Regulating a New Society: Public Policy and Social Change in America, 1900-1933* (Cambridge: Harvard University Press, 1994). The portrayal of the New Deal as a broadly consensualist phenomenon is evident in William E. Leuchtenberg, *Franklin D. Roosevelt and the New Deal, 1932-1940* (New York: Harper & Row, 1963) and Richard Hofstadter, *The Age of Reform: From Bryan to FDR* (New York: Vintage, 1955). For the New Left critique of the liberal historians, see Barton J. Bernstein, "The New Deal: The Conservative Achievements of Liberal Reform," in *Towards a New Past: Dissenting Essays in American History*, ed. Barton J. Bernstein (London: Chatto and Windus, 1970), 263-88, and Howard Zinn, ed., *New Deal Thought* (Indianapolis: Bobbs-Merrill, 1966). Elizabeth Cohen, *Making a New Deal: Industrial Workers in Chicago, 1919-1939* (New York: Cambridge University Press, 1990), portrays a series of workingclass communities in the contexts of local politics and the cultural changes in immigrant households and communities that attended the coming of age of the second generation of immigrant families. In its richly drawn localized interpretations, this book also provides a ground-up view of the New Deal that emphasizes family-based and community-based motivations behind the political support for the New Deal, and thus critiques the view of the liberal historians like Leuchtenberg and Hofstadter.

- ²⁵ *Los Angeles Evening Herald*, November 18, 1928, December 10, 1928, December 17, 1928; report of Public Works Committee, City Council, June 6, 1929, CF #4434, City Archives.
- ²⁶ Mayor's veto message, July 17, 1930 and Report of Board of Public Works, July 21, 1930, both in CF #4434, City Archives; *Los Angeles Evening Herald*, July 23, 1930 and July 31, 1930; Mullins, *The Depression and the Urban West Coast*, 65-66.
- ²⁷ Letter from city clerk to mayor, July 30, 1930, CF #4434, City Archives.
- ²⁸ Letter from Ernest East to Board of Public Works, June 16, 1930, CF #4434, City Archives.
- ²⁹ *Los Angeles Evening Herald*, January 27, 1929, December 15, 1929, January 7, 1930, January 22, 1930, March 4, 1930, January 14, 1931; City Engineer, Photographic Record of Construction, vol. 34, plates 3260-3289 (1930-31), City Archives; City Engineer, *Annual Report*, 1930-31, chapter 6, 3-4.
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- ⁵¹ Smith, *Building New Deal Liberalism*, 29-36.
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- ⁵⁶ Lewis Meriam, *Relief and Social Security* (Washington, D.C.: The Brookings Institution, 1946), 98, 546.
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- ⁶¹ City Engineer, "Annual Report," 1936-37, chapter 5, 2.

- ⁶² Council Minutes, 212:656 (December 18, 1929).
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- ⁶⁵ Quotation in Council Minutes, 281:424 (November 10, 1939); Council Minutes, 282:128-29 (December 13, 1939); *Los Angeles Times*, May 1, 1939. The plans for an upgraded First Street included grade separation at Grand Avenue and a tunnel under Bixel Street as well as widening along the entire length.
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- ⁶⁸ Untitled map showing alignment and assessment district of proposed Ramona Boulevard, City Council File #10357, 1928.
- ⁶⁹ Report of the City Engineer to the City Council, December 18, 1928, Council File #10357.
- ⁷⁰ Report of the Street Opening and Widening Committee to the City Council, May 28, 1929, Council File #6234.
- ⁷¹ Report of the City Engineer to the City Council, January 18, 1934, Council File #8454.
- ⁷² Report of the City Engineer to the Public Works Committee, October 26, 1932, Council File #4517.
- ⁷³ Letter from Klyde Young, Executive Secretary, East Side Organization, to City Council, May 21, 1929, Council File #4469; Report of John Prince to the Street Opening and Widening Committee, June 6, 1929, Council File #4470.
- ⁷⁴ Letter from Gordon Hubbard, Executive Secretary, East Side Organization, to City Council, January 22, 1932; Report of City Engineer to the Streets Opening and Widening Committee, February 8, 1933; both in Council File #375.
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- ⁷⁶ Council File #8206 (1931), Council File #2411 (1932) and Council File# 2345 (1933) contain the correspondence, appraisals, condemnation notices, and other records of the extensive legal proceedings in securing the right-of-way.
- ⁷⁷ Report of the City Engineer to the City Council, November 7, 1933, Council File #5531.
- ⁷⁸ Report of the City Engineer to the City Council, November 3, 1933, Council File #375.
- ⁷⁹ Letter from City Attorney to City Council, November 17, 1938, Council File #5531.

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- ⁸¹ *Los Angeles Evening Herald*, June 11, 1938.
- ⁸² Letter from George Baker, Ninth District, to Tunnels, Bridges and Viaducts Committee, February 12, 1935, Council File #304.
- ⁸³ Report of the City Engineer to the Board of Public Works, December 30, 1935, Council File #304.
- ⁸⁴ Letter from Lloyd Aldrich to the City Council, November 4, 1937, Council File #4538.
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- ⁹⁶ Report of the City Engineer to the City Council, March 6, 1944, Council File #7599.
- ⁹⁷ City Engineer, "Annual Report," 1936-37, typescript, chapter 8, 3.
- ⁹⁸ A.D. Griffin, "Proposed Arroyo Seco Parkway Extension to Los Angeles Business Center Through Elysian Park," *California Highways and Public Works* 18 (October 1940): 6; quotation in *Los Angeles Times*, December 6, 1942.
- ⁹⁹ Report of the City Engineer to the City Council, March 6, 1944; Report of the City Engineer to the City Council, May 2, 1944; both in Council File #7599.

- ¹⁰⁰ Letter from City Clerk to City Engineer, January 8, 1946.
- ¹⁰¹ City of Los Angeles Contract #12397, June 24, 1941.
- ¹⁰² *Los Angeles Times*, September 25, 1939.
- ¹⁰³ Letter from E. C. Johnson, Pacific Electric Railway Co., to Merrill Butler and Lloyd Aldrich, November 28, 1939; report of the City Engineer to the City Council, December 7, 1939, and accompanying map; both in Council File #4326.
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- ¹⁰⁵ *Los Angeles Times*, March 7, 1940.
- ¹⁰⁶ California Division of Highways, *Biennial Report* (Sacramento: State Printing Office, 1940), 35-38.
- ¹⁰⁷ Letter from Harry Thompson, Crossing Guard Supervisor, Hollywood Division, Los Angeles Police Department, to A. H. Cantin, Traffic Safety Control Officer, LAPD, September 12, 1942, Council File #12969.
- ¹⁰⁸ Letter from Carl Bush, executive secretary, Hollywood Chamber of Commerce, to Board of Police Commissioners, May 13, 1940; letter from City Clerk to Board of Police Commissioners, July 16, 1940; both in Council File #2507.
- ¹⁰⁹ Letter from Spencer Cortelyou to Board of Supervisors, December 18, 1945, Council File #17035.
- ¹¹⁰ Letters from City Attorney to City Council, August 19, 1940 and August 21, 1940, Council File #3332.
- ¹¹¹ Letter from Lloyd Aldrich to City Council, June 6, 1941; letter from R. F. Witter, City Real Estate Agent, to City Council, February 15, 1944; both in Council File #7643.
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- ¹¹⁷ Transportation Engineering Board, *A Transit Program for the Los Angeles Metropolitan Area* (Los Angeles: by the board, 1939), 41.
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¹²⁰ *A Transit Program*, vi.

¹²¹ *A Transit Program*, 27-34.

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¹²³ Spencer V. Cortelyou, "Congestion of Traffic Big Problem," *California Highways and Public Works*, December 1938, 1-5.

¹²⁴ Bottles, *Los Angeles and the Automobile*, 216-225; David W. Jones, Jr., "California's Freeway Network in Historical Perspective," typescript, Institute of Transportation Studies, University of California, Berkeley, 1989, 167-180; David Brodsky, *LA Freeway: An Appreciative Essay* (Berkeley: University of California Press, 1981), 98-109.

¹²⁵ *Los Angeles Evening Herald*, April 3, 1940.

¹²⁶ This admission came three years after the fact, when Aldrich recounted the history of the project to the city council, in Report of the City Engineer to the State and County Affairs Committee, March 20, 1942, Council File #899.

¹²⁷ Report of the City Engineer to the City Council, October 30, 1939, Council File #3657.

¹²⁸ Letter from Lloyd Aldrich to County Board of Supervisors, December 14, 1939, Council File #3657; report of the City Engineer to the City Council, December 18, 1939, Council File #3657; report of the Finance Committee to the City Council, January 4, 1939, Council File #3657; letter from City Clerk to Atchison, Topeka and Santa Fe Railroad Co., Union Pacific Railroad Co., and Pacific Electric Railway Co., January 5, 1940; Council File #3657; report of the City Engineer to the Board of Public Works, March 6, 1940, Council File #899; report of the Board of Public Works to the City Council, April 2, 1940, Council File #899; A. N. George, "Easterly Gateway Structure to Los Angeles Involves Structure for Freeways," *California Highways and Public Works*, February 1941, 13-16.

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¹³⁰ *Aliso Viaduct and Ramona Parkway*, dedication program, 1944; Arthur C. Verge, *Paradise Transformed: Los Angeles during the Second World War* (Dubuque: Kendall-Hunt, 1993), 97-102.

¹³¹ Report of the City Engineer to the City Council, March 28, 1944, Council File #9675; *Los Angeles Evening Herald*, July 26, 1942.

¹³² *Los Angeles Evening Herald and Express*, January 15, 1954, July 13, 1955; *California Highways and Public Works*, March-April 1955, 31-36.

¹³³ *California Highways and Public Works*, May-June 1944, 8-9, 17; November-December 1946, 12-17.

¹³⁴ *Los Angeles Evening Herald and Express*, September 12, 1947, September 13, 1947, September 19, 1947, September 24, 1947, October 17, 1947; George T. McCoy and Ralph C. Balfour, *Report of Department of Public Works, Division of Highways, Relating to Freeway Evictions*, California Senate Document P2200, 1948, 17-30; H. Marshall Goodwin, Jr., "Right-of-Way Controversies in Recent California Highway-Freeway Construction," *Southern California Quarterly* 51 (Spring 1974): 61-105.

¹³⁵ Letter from City Clerk to Lloyd Aldrich, December 5, 1941; letter from Merrill Butler to Lloyd Aldrich, March 28, 1944; Report of the City Engineer to the City Council, May 23, 1944; all in Council File #9675.

¹³⁶ "Statement Concerning the Freeway Needs of the City of Los Angeles," in Joint Fact-Finding Committee on Highways, Streets and Bridges, *Digest of Testimony and Reports* (Sacramento: by the committee, 1953), 246-48.

¹³⁷ Frank Durkee, "Freeway Law," *California Highways and Public Works*, July-August 1950, 1, 30-33; quotation in *Los Angeles Times*, March 11, 1952.

¹³⁸ Stephen Mikesell, *Historic Highway Bridges of California* (Sacramento: California Department of Transportation, 1990), 17.

¹³⁹ *Newsweek*, May 14, 1956; Arthur Krim, "The Four-Level 'Stack' as Los Angeles Icon," paper presented at Society for Commercial Archaeology, Los Angeles, 1995; Arthur Krim, "Los Angeles and the Anti-Tradition of the Suburban City," *Journal of Historical Geography* 18 (1992): 121-38.

CONCLUSION

The scale of freeways misleads about their origins. Their enormity creates problems of perception and interpretation that can undermine efforts to understand the institutional contexts of their production and the relationships among freeways and the communities through which they passed. The social resources involved are vast, and the temptation is to look for a comparably scaled alignment of political, social, economic and cultural factors to explain how these giant structures came to be. Such giant footprints on the landscape seem to proclaim the power of their creators, rather than the desperation that emerges from the discussions and arguments during the process of building these structures. In the formative period of the Los Angeles freeways, every instance of approval was an extremely close call, and many proposals did not receive approval at all. Even the enormity of the structures themselves was a rapidly shifting matter, a seminal instance of the in-process design inflation that later brought an end to the era of freeway construction. To a considerable degree, the freeways were improvised -- not spontaneous, but certainly not the orderly fulfillment of rational plans.

The main threads of this story are the constant tension between road schemes and their opponents, and the decisive role of the municipal engineer serving as a broker among diverse interests in order to overcome that opposition. Freeways did create landscapes of dominance, but their location and design also reflected the opposition they encountered, and the agency of diverse individuals and groups. Even the lack of effective opposition on the part of workingclass residents and racialized groups, particularly in

East Los Angeles, acquires fuller dimension in light of the institutional struggles between city and state highway engineers. Since the 1920s, when the different agendas of state and local government and the contention among powerful but diverse private interests thwarted highway construction through the east side, East Los Angeles had been the laboratory for the politics of route determination and the development of designs for through highways. The state Division of Highways broke the stalemate of the 1920s by inflicting the social cost of transportation onto the residents of the east side. Aliso Viaduct later solidified the social construction of the east side as the place where dangerous and intrusive public functions would be consigned, but those methods did not move west with the freeways. The objections of middleclass homeowners against the Hollywood Freeway precipitated a crisis in relations between city and state government, which configured the next period of freeway development, from 1947 until the onset of federal interstate financing in 1956.

This view of the onset of freeway construction in Los Angeles diverges substantially from prior accounts, which have tended to emphasize policy discussions and planning visions conducted at some considerable remove from the decisions about where to pour concrete. But it was the making of the road network and the carry-over of that process into freeway construction that configured the city's automotive infrastructure more completely than any other factor. The plans for roads and freeways do not correspond to the built environment of transportation. The plans served as promotional mechanisms to build support for road and freeway development, and their main result

was the creation of lasting images of the city rather than thoroughfares on which people traveled.

Opposition to roads and freeways during the period of this study was almost always a local concern, specific to the impacts on particular properties, neighborhoods and people. The many transportation plans for Los Angeles were intended to impose a different way of thinking about the automotive infrastructure, in terms of a broader common good rather than in terms of the interests of a few property owners. Along with the efforts of state and federal highway officials to quantify the economic impact of traffic, the totalization of highway needs did have a profound impact on deliberations in the state legislature that effectively unleashed freeway construction on the city. This mode of discourse remains current in the early 21st century, typically framed as “NIMBY,” or not-in-my-backyard, the pejorative applied to those opponents of progress who would halt major infrastructure development to serve their own narrow ends.

Localized highway opposition was hardly ever pre-emptive. It only surfaced in response to specific projects and the threats they represented, which automatically created an imbalance of small, local interests fighting against the plans of those charged with serving the city as a whole. Those local interests never mobilized as an interest group with its own view of the city that was as wide-ranging as the plans of their opponents. Highway opposition was omnipresent but inchoate, and the lack of a comprehensively articulated position has caused that opposition to fade from our historical picture of Los Angeles. The lack of a unified, alternative vision was also what allowed opponents to be branded with the “NIMBY” description. The use of the term implies a centralized

position on the part of those who would invoke it to describe others; to accuse others of “NIMBYism” is to arrogate to oneself the responsibility of determining what is best for all. However, the fact that anyone would object to a freeway coming through their neighborhood indicates widespread sentiment against building freeways, even if that agreement did not form the basis of a mobilized interest group aimed at the entire construction program. There was no consensus regarding how people would travel around Los Angeles, but the opposition to roads and freeways, if predictable, was also site-specific. Only by comprehending the moments and the sites of opposition in the aggregate do they seem to represent some counterbalance to those who would build more and larger highways.

Perceiving this buried past of opposition also has meaning for the present. It is difficult to find statements of praise and contentment for the highway and freeway networks of Los Angeles. Anecdotal evidence from the newspaper and the water-cooler has been found to represent broad public opinion in studies of commuter attitudes undertaken by the state transportation agency.¹ If we try to follow this dissatisfaction back toward some time when consensus might have flowered, it is conceivable that a disjunction occurred, that recent discontent represents a swing of the pendulum from acceptance to rejection. But the evidence of highly contested infrastructure development and roadbuilding that did not accord with systemic planning suggests that the roads and freeways of Los Angeles were born in contradiction. To look back from the vantage point of the present and ask “What went wrong?” is to inhibit understanding of how Los Angeles got the roads and freeways it has.

NOTES TO CONCLUSION

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