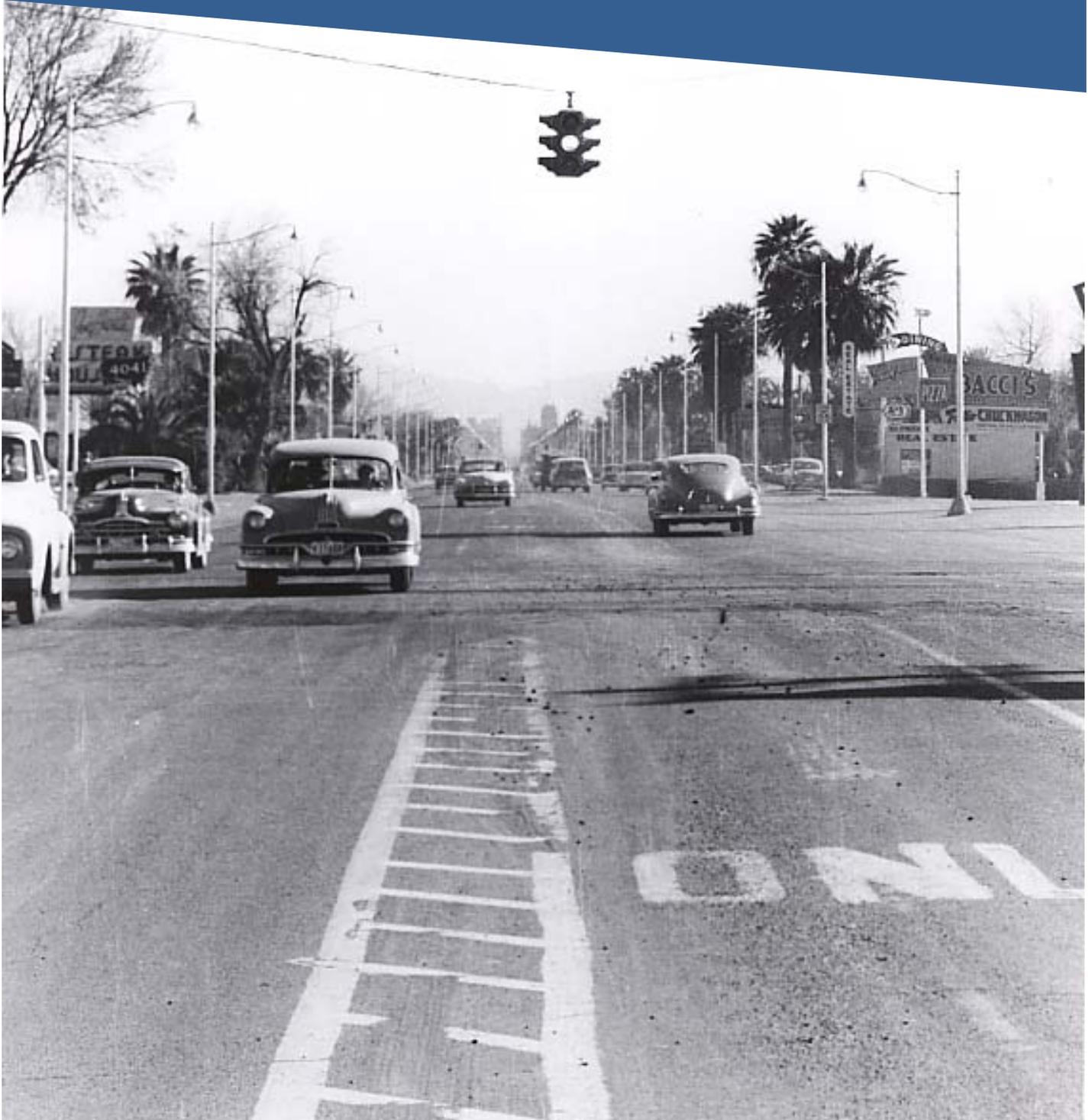


# Phoenix Streetscape Conservation Report





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## Acknowledgements

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Cover photo: **Central Avenue at Indian School Road, ca. 1952.** Courtesy of the Arizona Historical Society.



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## Introduction

From its beginning in 1870 and through the twentieth century, the City of Phoenix grew from an agricultural adobe village to one of the largest and fastest growing metropolitan areas in the country. As the city progressed, the streetscape evolved. Dirt roadways were graded, paved with gravel, concrete, and asphalt. Ditches became curb and gutter combinations and roadside paths became concrete sidewalks. Desert scrub gave way to cottonwood shade trees, which were gradually replaced by ash, olive, citrus, and palm. Adobe construction gave way to milled lumber, then fired brick, steel, and glass. However, progress had a cost and the fee was often the historic and aesthetic fabric of the city. As we begin the second decade of the twenty-first century, it has become necessary create a framework for the preservation of streetscapes by deciding which streetscapes are worthy of conservation, how we define their characteristics, and how much a streetscape can change before it loses its character and integrity.

The purpose of this report is to address these issues by identifying streetscape types, detailing mitigation measures for proposed changes to significant streetscapes, and to provide background information on how these streetscapes developed. This report is written with careful consideration of the ongoing efforts of city and state planners, and private developers and does not supersede officially adopted plans and policies or zoning ordinances established for the city, but will assist in guiding the implementation of future projects. The report consists of two parts. Part I provides a historical narrative on the evolution of streetscapes to assist in placing streetscapes within their appropriate historic context and for the compilation of comparative and thematic data for streetscape evaluation. Part II focuses on the identification of streetscape types based upon their defining characteristics to assist in evaluating their significance. It also includes recommended treatment standards and guidelines to help historic streetscapes retain their historic character, and the regulations and requirements affecting streetscape treatment.

This report, and the associated *Phoenix Streetscape Conservation Guide*, were developed pursuant to a memorandum agreement between the Arizona State Historic Preservation Office and Valley Metro as required under Section 106 of the National Preservation Act and were reviewed by the Phoenix Historic Preservation Office for concurrence with other city studies, plans, and guidelines. A forum conducted in October 2008 and attended by professionals in the fields of planning, preservation, horticulture, architecture, and landscape architecture assisted in development of typologies and lists of streetscape characteristics.



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# Part I – Historic Context of Phoenix Streetscapes

## Chapter 1 – Methodology, Organization, and Definitions

### Introduction

This portion of the conservation report utilizes research conducted at various archival facilities, reviews of topic-related literature, informational websites, and consultation with professionals, including planners, preservationists, and landscape architects. Archival collections were examined at several facilities in Central Arizona including: the Arizona Historical Foundation; Arizona Historical Society - Papago Park; Arizona State Library, Archives, and Public Records; Arizona State Parks - Arizona State Historic Preservation Office; Arizona State University - Hayden Library; Maricopa County Assessor's Office; Maricopa County Clerk of the Board of Supervisors Office; Maricopa County Recorder's Office; Phoenix City Clerk's Office; Phoenix Historic Preservation Office; Phoenix Museum of History, and Phoenix Public Library - Burton Barr Library. In addition to books, the topic-related literature reviewed included National Register of Historic Places submissions, cultural resource surveys, context studies, subdivision plat maps, city ordinances, and newspaper articles.

The remainder of this chapter defines what a streetscape is and how it developed in a broader context by detailing how components of the streetscape evolved and how they are defined. In the subsequent chapters, the report moves into a historic narrative for the evolution of Phoenix's streets and streetscapes. Although the grid system of Phoenix gives the impression of long-term planning, it actually is only a skeletal framework containing an amalgam of urban and suburban development. Even the address system, with its initial point at Central Avenue and Washington Street, evolved over time with the first efforts at standardization beginning before the end of the nineteenth century. As Phoenix grew from a pioneer agricultural village to one of the largest cities in the United States, plats were re-platted and subdivisions were re-subdivided and street names changed as did streetscape layouts. Therefore, it would be difficult to attempt to document the minutia of the history of every streetscape within the city boundaries and instead this report provides a general historical synopsis on how streetscapes developed.

Because Phoenix grew in phases related to local and national social-economic processes, this narrative has been subdivided into thematic sections, which overlap chronologically. Chapter 2 covers the city's evolution from 1870 to 1930 and includes the early changes in the infrastructure, development trends, and efforts at urban beautification. Chapter 3 covers the city's development from 1930 to the end of the twentieth century and includes issues relating to planning, zoning, the post-WWII boom, the exodus from downtown, and the impact of the interstate freeway system. This last chapter concludes the historic context with a brief description of the current state of Phoenix streetscapes based upon their typology.



**Figure 1. 28th Street south of Southern Avenue.** Photograph by Vincent Murray.

### **Defining the Streetscape**

The term “streetscape” came into use in the 1920s as an amalgamation of street and landscape. The word “street” is rooted in the Latin *stratum*, which meant “something spread” or “laid down.” “Street” evolved overtime as an elliptical version of *via stratum*, paved road, which is the common contemporary connotation. “Landscape” originated with the term *landschaft*, which in modern terms means the same in English, “inland scenery.” However, historically *landschaft* referred to the countryside and denoted a sense of place. Likewise, while streetscape refers to the view of the street, the streetscape also provides a sense of place due to the streetscape not just being the sum of the components of the street—the elements within the right-of-way—but also includes the features adjacent to the right-of-way, e.g., trees, lawns, buildings, etc. Therefore, while there are a myriad of possible contributors to the streetscape, there really is only one basic requirement; it must have a street.<sup>1</sup>

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<sup>1</sup> *Oxford English Dictionary*, online edition, <dictionary.oed.com> accessed 3 November 2007; John R. Stilgoe , *Common Landscape of America, 1580-1845* (New Haven: Yale University Press), 12, 16-17.

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By definition, all streets are roads, but not all roads are streets. A road can be any path used by people to travel between two or more different places and it is usually wide enough to admit the passage of vehicles as well as horses and people on foot. Roads have been around as long as people have traveled; paths have been around even longer since they were first created and used by animals. Roads, unlike paths, connote the idea of travel with the assistance of domesticated animals. In fact, the origin of the term “road” relates to the act of riding a horse, which certainly separates it from the meager path.<sup>2</sup>

To simplify the definition, and for the purpose of this report, a street is a road within a community, which typically has abutting properties where people work, live, or play. In most communities, streets have names containing various synonyms for “road” such as avenue, drive, lane, road, and way. While each of these terms has its own definition, within the nomenclature of the community, they are usually referring to a street. Whereas a road is between and connects places, a street is within a place.

## Layout

Streets develop along with communities and therefore are a product of the factors that influenced the community’s original form and its subsequent development. These factors include social and political organization of the citizenry, geographic nature of the location, community circulation and traffic needs, and architectural considerations such as the grouping of buildings according to aesthetic principles. There is typically a hierarchy of streets based on usage. Residential streets tend to be smaller; streets leading to public institutions tend to be larger. Commercial streets may also be larger to manage traffic needs.<sup>3</sup>

The street is a component of the community layout, of which there are typically two basic patterns: the radius and the grid. Almost all communities are laid out according to one of these types, though larger cities may have developed a modified version of one of these two themes. In the radial form, main streets radiate from one point and connect by concentric circles that have the initial point of origin as their center. Earlier civilizations, where the center of the community was the religious and/or administrative structure or complex, adopted this design. Since the radial streets led people directly to the center, the more attractive properties were those located on the radial streets and not along the concentric circles.

Beyond a certain limit, the community center would spontaneously expand until it reached its saturation point and its continued growth around the same locus produced economic and circulation problems. To avoid these problems, new satellite community centers developed

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<sup>2</sup> The *Oxford English Dictionary* places the contemporary usage as fourth in its list of definitions; the *Merriam-Websters Dictionary* places it second.

<sup>3</sup> Giorgio Cavaglieri, “Outline for a History of City Planning: From Prehistory to the Fall of the Roman Empire,” *The Journal of the Society of Architectural Historians*, Vol. 6, No. 3/4. (Jul. - Dec., 1947), 22-25.

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along the radial streets to provide services for those far away from the center. These new satellites then created their own radial form, with new radial streets converging.<sup>4</sup>

The grid, or gridiron, form has its streets running orthogonally with a regularity that requires a definite measurement of the ground. Therefore, the grid form, unlike the radial, cannot develop spontaneously; it requires specific planning. The grid usually begins its life with a hierarchy of streets, which may be the reason that so many civilizations throughout history found it favorable. While some may cite distance and monotony as disadvantages of the grid plan, careful setbacks and better traffic control provide an incentive for its use. Like the radial design, there are also geographical limitations to the grid layout. In addition to distance, the contours of the land may create high slopes and the direction of the streets may create poor wind and solar angles, all of which can affect the quality of the streetscape.<sup>5</sup>

In many early American cities, one sees the radial form developed with streets emanating from the centers of commerce, as well as overlapping concentric streets, where communities' boundaries extended into one another. As the United States expanded west of the Mississippi, especially in the American Southwest where the Spanish created settlements under the *Laws of the Indies*, the grid form of communities became dominant and continues to affect planning.<sup>6</sup>

The *Laws of the Indies* was a comprehensive guide on how to locate, layout, and populate settlements. Written in 1523 and last revised in 1573, the *Laws of the Indies* set uniform standards: elevated arable land; good water supply; appropriate orientation; plentiful timber; etc., and contained an article on the ideal settlement form. This framework included a grid of streets crossing at right angles and arranged around a rectangular central plaza of about five and one-half acres. The plaza was to be set off at one end by a church and other ecclesiastical buildings and at the other end by government structures such as a town-council house, an arsenal, and a customhouse. Uniformly built, arcaded shops and houses bordered the plaza. Beyond the shops and houses were common pastures, wooded lots, and private fields. The layout was conceived not just for the sake of planning consistency or aesthetics but also to create a defensible community core against outside influences who might attempt to foment disturbances or occupy the village. Spanish colonial planners rarely followed all of the regulations laid out in the *Laws of the Indies*, but they did use it as a general guideline, which is reflected in the older areas of American cities that were founded under Spanish rule.<sup>7</sup>

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<sup>4</sup> Ibid., 27-28.

<sup>5</sup> Ibid., 29.

<sup>6</sup> Clifford Stevens Walton, *The Civil Law in Spain and Spanish America* (Washington: W. H. Loudermilk & Co., 1900), 524.

<sup>7</sup> John W. Reps, *The Forgotten Frontier: Urban Planning in the American West Before 1890* (Columbia: University of Missouri Press, 1981), 6; Stilgoe, *Common Landscape of America*, 34-35.

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While the *Law of the Indies* created a simple grid pattern within villages and towns, another, larger grid dictated the nineteenth century settlement and twentieth century urban development of the American West: the orthogonal layout of the Public Land Survey System. Subsequent to the American Revolution, the newly created United States of America found itself with an abundance of land and a growing population and needed a mechanism to combine the two. Since early colonial settlement, properties within the English colonies had been measured using the mete and bounds system, where surveys begin at a Point of Beginning, usually a landmark such as a big rock, tree, or structure. This system was deemed inefficient for the enormous task of settling newly acquired lands. Consequently, in 1785, Congress passed the Land Ordinance Act creating the Public Land Survey System.<sup>8</sup>

To simplify and expedite settlement of the Ohio River Valley and later acquisitions, the Public Land Survey System provided for the scientific survey and subsequent division of land into six-mile square townships, which were divided into thirty-six, one-mile square sections. These sections were divided into aliquot parts and government lots, depending on law and geography. Once properly divided, settlers could apply for patents on the land if they developed it for agricultural use. Over time, in many instances, patented land became urbanized, taking on some of the rectangular traits from its initial division.<sup>9</sup> According to Urban Historian John W. Reps, “Most Western towns were planned in patterns that progressively moved towards standardization based on the undeviating grid.”<sup>10</sup>

As the United States expanded, the street layout of many agrarian-origin communities in the American West assumed the grid form due to the settlement patterns created by the Public Land Survey System. Others, influenced by Spanish settlement and, therefore, the *Laws of the Indies*, have grid-like cores, with radii forms emanating from the plaza. These in turn were modified by the advent of the Public Land Survey System, which amalgamated with the remnants of the Spanish design. Likewise, the arrival of the railroad affected development with stations and sidings creating new markets for communities and, in some cases, causing the movement of earlier established cores. Later, intra- and interstate highways also affected community cores.

In nineteenth-century western towns, the town plan was typically created by a committee of miners or surveyors employed by the town’s embryonic government. For example, both Denver and Sacramento were laid out in extensive grids that permitted substantial population growth before additions were necessary. They, like the mining camps, were established communities well before the agricultural development of the hinterlands. Both cities quickly developed an urban character similar to urban areas in long settled portions of

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<sup>8</sup> *Modernization of the Public Land Survey System* (Washington: National Academy Press, 1982), 9.

<sup>9</sup> Vincent Smith Murray, National Register of Historic Places, “The Initial Point of the Gila and Salt River Base Line and Meridian,” 2002.

<sup>10</sup> John W. Reps, *The Forgotten Frontier*, 144.

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the country. Consequently, western cities such as Sacramento, Denver, and later Phoenix, became the vanguards of settlement.<sup>11</sup>

Most western cities, such as Phoenix, were established as communities from the beginning with designs that allowed for future expansion. Hence, the cities shaped society rather than just responding to the needs of the agrarian population for markets and distribution. Depending on their location, western cities evolved as centers of trade and transportation, mining and manufacturing, art and architecture, printing and publishing, religion and recreation, education and administration, banking and politics. They share many similarities with their Eastern and Midwestern counterparts since most were founded by promoters and settled by migrants from those regions. These new settlers brought with them older urban values, expectations, and institutions which later became manifest in the characteristics and components of the city's streetscapes.<sup>12</sup>

## Streetscape Components

The features within a streetscape are the consequences of geology, geography, topography, economics, and ideology. The sources of its form are property boundaries, uses, functions, and circulation patterns. In addition to the roadway,<sup>13</sup> sidewalks, curbs, and gutters, streetscape features may include (but are not limited to) the façades of buildings, front and side yards, utility and traffic control fixtures, median and street-side plantings, parking meters and parking lots, alley accesses and driveways, ditches and wasteways, lighting fixtures, and signs painted on buildings, projecting from walls, or mounted on posts.

Early American planners designed streets primarily to provide open space to facilitate movement, since traffic was limited to pedestrians, equestrians, and the occasional merchant's cart or wagon. As the price of materials decreased and blacksmithing technology improved, vehicles became sturdier and less expensive. Spring-based suspension for wagons appeared, offering a smoother ride and iron wheel rims made for greater durability. Personal carriages became popular and, properly appointed, were a status symbol and an increasingly important post-Civil War form of recreation. Carriage display fit into the new class structure of industrial America and necessitated the improvement of streets. Soon, carriage drives—prototypes of the American boulevard—became an important promotional device in developing the more fashionable of the new postbellum suburbs.<sup>14</sup>

As both roads and streets evolved, so did some of the attributes and components that we know today. To divert water from the road and into channels, early road builders excavated ditches parallel to the road and piled the dirt in the center of the roadway, creating a crown.

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<sup>11</sup> John W. Reys, *The Forgotten Frontier*, 59, 66.

<sup>12</sup> *Ibid.*, 3.

<sup>13</sup> A roadway is the central portion of a road or street used by vehicular traffic, as opposed to the sidewalk. From the *Oxford English Dictionary*.

<sup>14</sup> Clay McShane, *Down the Asphalt Path: The Automobile and the American City* (New York: Columbia University Press, 1994), 4, 31.

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Since the roadway was higher than the surrounding elevation, the English coined the term “high way.” This channeling of water off the highways is still in use today and there is usually some form of gutter adjacent to the roadway on most urban and suburban streets.

Roadways are now typically paved with asphalt, though in some areas of Phoenix, concrete was used historically and is still extant. Asphalt came into use in the early twentieth century after decades of experiments with paving materials, including cobblestones, wood blocks, brick, and macadam. The latter material consisted of a stone foundation topped with a layer of broken stones, which, according to author William Kaszynski, “... seemed to withstand the heavy pounding of wagon wheels and horse hooves, and drained water efficiently.”<sup>15</sup>

Curbs are set at the edge of the roadway to protect adjacent property and to channel water by forming the side of a gutter. Curbs were originally made of a wood plank or stone slab and considered improvements to the appearance of the street, even if it was not paved. Curbs are sometimes used in conjunction with sidewalks, creating a safe pedestrian path outside of the roadway.<sup>16</sup>

In residential areas, the lawn is perhaps second only to the house as a focal point. In 1870, Frank J. Scott’s *The Art of Beautifying Suburban Home Grounds of Small Extent* promoted the notion that the small property owner should have a lawn just like the large property owners. This came at a time when middle class masses were beginning to move to the suburbs and the idea of a lawn in front of a suburban house was becoming popular. In his book, Scott visualized the suburban home as the focal point of a smartly framed picture and neighbors that would assist in the enforcement of compulsory lawn upkeep such as weekly mowing grass and weed removal. The lawn eventually became the symbol of the suburbs — a quasi-privately owned, community parkland. Championed by New York Central Park designer Fredrick Law Olmsted, the front yard lawn unifies the neighborhood and provides a sense of community.<sup>17</sup>

Between the lawn and the curb, there are typically three options: no sidewalk, a sidewalk adjacent to the curb, and a sidewalk set back from the street. In the latter case, the strip of property between the sidewalk and the curb has a number of regionally based names. In Connecticut, they refer to it as “the shoulder.” In Massachusetts, some refer to it as the “tree bank.” Other places in New England call it the “park way.” It is also known as the “sidewalk buffer,” “grass verge,” “green strip,” “lawn curb,” “tree lawn,” and “tree space.” In Akron,

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<sup>15</sup> William Kaszynski, *The American Highway: The History and Culture of Roads in the United States* (Jefferson: McFarland & Co., Inc, 2000), 26.

<sup>16</sup> Ira Osborn Baker, *A Treatise on Roads and Pavements* (New York: J. Wiley and Sons, 1906), 350.

<sup>17</sup> Martin J. Smith and Patrick J. Kiger, *Poplorica: A Popular History of the Fads, Mavericks, Inventions, and Lore that Shaped America* (New York: HarperCollins, 2004), 3-4; F. Herbert Bormann, Diana Balmori, Gordon T. Geballe, Lisa Vernegaard, ed., *Redesigning the American Lawn: A Search for Environmental Harmony* (New Haven: Yale University Press, 1993), 25-28.

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Ohio, the official name for this space is the “devil strip.” For this report, it will be referred to as the “planting strip.”<sup>18</sup>

The planting strip is typically public property, part of the right-of-way of the street. However, some municipal governments require that abutting private property owners maintain both the planting strip and the sidewalks, which perhaps explains Akron’s colorful moniker. Planting strips possess some advantages including aesthetics, increased safety and comfort for pedestrians, and room for trees, benches, bus shelters, traffic signs, street lights and utility poles, and other amenities.<sup>19</sup>

Trees are probably the most significant of the amenities mentioned and certainly are the most distinguishing characteristic of the streetscape. The use of trees in purposeful arrangement, bordering roadways, traces back to antiquity. The Romans valued trees for lining their main roads since they provided an easy assessment of the traveled route, provided shade, and afforded protection. During the Middle Ages, this value was not as apparent, and trees were planted only for utility within private gardens. In the Renaissance, ornamental tree planting evolved from the private garden *allée* to the walled promenade and eventually into the public realm. As cities expanded, the tree-lined rural roads from Roman times merged into streets entering the city and continuing as tree-lined streets.<sup>20</sup>

As the urban tree increased in numbers within the growing urban centers of Western Europe, their function shifted from utility to aesthetic. According to Ornamental Horticulturalist, Jason Carl Graboski, “Trees began to take a social role as persons of position used planted design forms such as *cours* and malls as symbols of power and leisure.”<sup>21</sup> Trees were also planted along the exterior walls of cities as part of bulwarks—defensive works. Once the bulwarks were obsolete, the tree-lined paths became carriageways for the affluent. The term “boulevard” is derived from a medieval Dutch or German term for “bulwark” and its modern meaning arose in seventeenth-century France, when the city walls of Paris were replaced with shady promenades. These tree-lined boulevards further evolved into pedestrian zones, creating an established, selectively used design element.<sup>22</sup>

After the late seventeenth century, the character and function of streets went through many changes. The rough, winding, dark, dirty, and narrow streets from medieval times were lighted, drained, paved, and systematically named and numbered. The new streets were also wider and straighter than their predecessors. By the beginning of the nineteenth

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<sup>18</sup> Russ Musarra, “Sherbondy Roots Run Deep In Lane-Wooster Neighborhood,” *Akron City*, May-August 2005, 13.

<sup>19</sup> *Ibid.*

<sup>20</sup> Jason Carl Grabowski, “Growth Response in Three Tree Species in Sidewalk Profiles” (PhD. dissertation, Cornell University, 1999), 3-4.

<sup>21</sup> *Ibid.*, 4.

<sup>22</sup> Henry W. Lawrence, “Origins of the Tree-Lined Boulevard,” *Geographical Review* 78:4 (October 1988), 355; Grabowski, “Growth Response in Three Tree Species in Sidewalk Profiles,” 4.

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century, street design was becoming uniform and many new features were popularized such as paving, drainage and sewers, piped water, sidewalks, and house numbering.<sup>23</sup>

Baron Georges Haussmann, Napoleon III's engineer, transformed mid-nineteenth century Paris with new tree-lined boulevards for aesthetic as well as military reasons. While Haussmann filled moats and created large public areas in grand tree-lined promenade form, his new transit plan widened, straightened, and tree-lined the major thoroughfares. These changes allowed for greater military movement, better artillery aim, and the trees protected the buildings and provided material for barricades.<sup>24</sup>

By the late nineteenth century, streets were beginning to resemble the present model with pavement, drainage, and heavy traffic expanding the transportation corridor, all of which were growing in usage as one city drew upon the successful designs of another. The British contribution to this was the development of pedestrian zones parallel to the traffic corridor in the form of paved sidewalks.<sup>25</sup> There were, however, some differences in opinion. Whereas the British were somewhat against the idea of lining the streets with trees, preferring their vegetation in public parks, the French remained consistent in their integration of trees into public designs, advancing the modern archetype of using trees and sidewalks in the same design. The eventual product, adopted by Americans, was a recognizable streetscape: a wide-crowned, paved roadway flanked by gutters, curbs, and sidewalks with, or without, a row of trees along the edge.<sup>26</sup>

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<sup>23</sup> Jason Carl Grabowski, "Growth Response in Three Tree Species in Sidewalk Profiles," 5-6; Henry W. Lawrence, "Origins of the Tree-Lined Boulevard," 369-370.

<sup>24</sup> Jason Carl Grabowski, "Growth Response in Three Tree Species in Sidewalk Profiles," 5.

<sup>25</sup> This really was not a new innovation. The use of sidewalks dates back to at least the Hellenistic Period (323-146 B.C.E.), where they have been found in archaeological sites, typically alongside paved streets. See M. W. Frederiksen, "Archaeology in South Italy and Sicily, 1973-76," *Archaeological Reports*, 23 (1976-1977), 65.

<sup>26</sup> Jason Carl Grabowski, "Growth Response in Three Tree Species in Sidewalk Profiles," 5-6; Lawrence, "Origins of the Tree-Lined Boulevard," 369-370.



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## Chapter 2 – From Townsite to City, 1870-1930

### Townsite and Incorporation

In Arizona, the Public Land Survey began in 1867 after the selection of an initial point at the junction of the Salt and Gila rivers. The initial survey was short lived, but restarted in 1868. By then, a small settlement was forming in the Salt River Valley a few miles to the east (near present day 32nd and Van Buren streets) along an irrigation canal recently dug by the Swilling Canal Company. The name selected for the settlement was Phoenix, coined after the mythical bird that arises from its ashes. Ruins of a former civilization, abandoned centuries earlier, covered the valley when pioneers began the process of reclaiming the area from the desert. Once they added water, the desert proved to be very fertile and within a short time, settlers were applying to the federal government for land under the Homestead Act. This act allowed mature, white American males to apply for ownership of a quarter section, 160 acres, of land if they were to live on and develop it. With Arizona's survey beginning in the western part of the Salt River Valley, and canals being excavated to bring irrigation, the time was ripe for settlement. Fueled by water from the irrigation company's ditch and others that were subsequently excavated, the area, which is now the Phoenix metropolis, quickly developed into a checkerboard of agricultural lots, each laid out in an almost perfect grid. By 1870, the settlers wanted a more formally planned town and hired surveyor William Hancock, to layout the "Townsite of Phoenix" (see figure 2).<sup>27</sup>

The location selected for the Phoenix townsite was ideal. It was a mile north of the Salt River, outside of the floodplain, and the gradual sloping contour of the land facilitated construction of buildings, easy maintenance of streets, and natural drainage. It also appeared free from the ruins of the previous occupants: a pre-Columbian culture called contemporaneously the Hohokam, but thought at the time to be an extension of the Aztec Empire in Mexico. These ruins, which included sizeable residential developments, spread throughout the Salt River and Gila River valleys, and archaeological evidence shows their culture covered much of central and southern Arizona.<sup>28</sup>

Hancock's design divided a half-section, 320 acres, into ninety-eight blocks, two of which were allocated for a city hall plaza and county courthouse square. The other ninety-six blocks contained twelve or more lots. Lot sizes were primarily fifty feet wide and 137.5 feet deep, except in proximity to the courthouse square and the plaza, where they were twenty-five feet wide and facing inward, with an intended use for commercial purposes. The new town had fifteen streets, running north and south, and eight streets running east and west. Centre Street (Central Avenue) was the central, north-south street and the other north-south streets were named for local tribes, and after the conquistador Cortes and the last Aztec

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<sup>27</sup> John Taber Alsap, "Resources of the Salt River Valley, 1872," *Arizona Historical Review*, 7:3 (July, 1936), 50-54. Alsap was the first mayor of the city.

<sup>28</sup> Robert Weworski, "Residential Landscape in Phoenix, Arizona: Past, Present, Future," MA thesis, Arizona State University, 1999, 18-19. It was discovered later, through archaeological studies, that the townsite also contained evidence of Hohokam settlement.

king Montezuma. The east-west streets were named for U.S. presidents, beginning with Washington.<sup>29</sup>

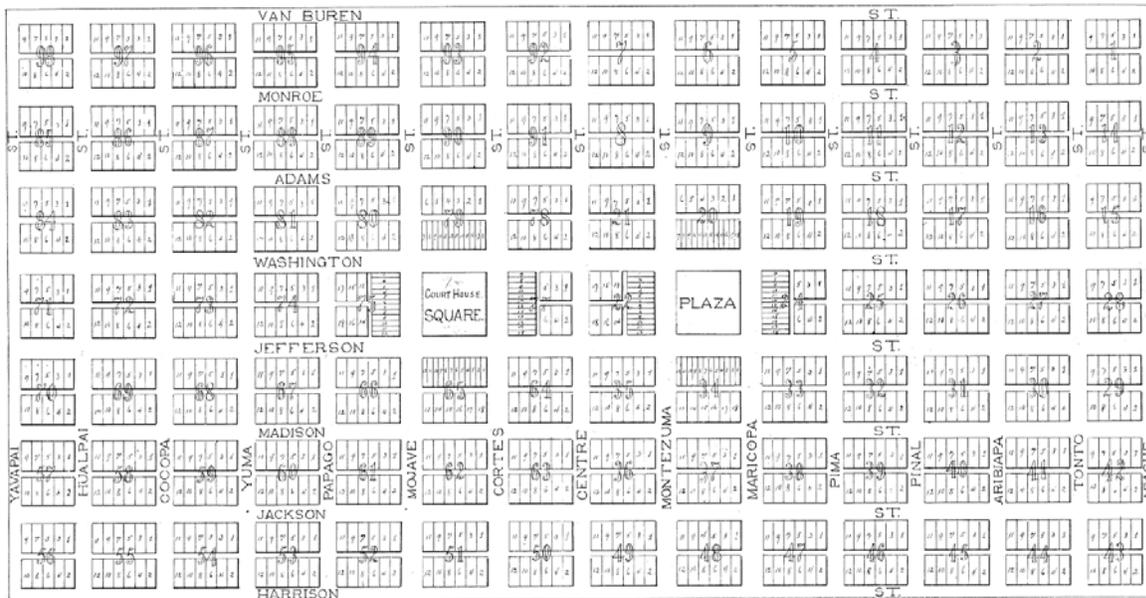


Figure 2. Map of Original Townsite. Courtesy of Maricopa County Recorder's Office.

For those streets running adjacent to the two public blocks—Washington, Jefferson, Cortes (1<sup>st</sup> Avenue), Mohave (2<sup>nd</sup> Avenue), Montezuma (1<sup>st</sup> Street), and Maricopa (2<sup>nd</sup> Street)—the street widths were 100 feet wide to allow for turning around a horse drawn wagon, while the remaining streets were and sixty to eighty feet wide. There are no records describing what Phoenix founders intended to go into the right-of-way as far as sidewalks, street lamps, or other amenities. It may be that they did not think that far ahead. In fact, the town was laid out and lots were proposed for sale before the half square mile rectangle that later became the city's downtown was taken out of the public domain.<sup>30</sup>

With the exception of the two public blocks, east-west or north-south alleys split the townsite blocks. According to historian Geoff Mawn, “The inclusion of the alleys was significant. It showed the early city planners were aware that in many contemporary urban centers the interior of city blocks remained undeveloped because interlocking buildings along the streets prevented access to the innermost area. Alleys also contributed to the uniform growth of the townsite’s central core.”<sup>31</sup>

Surrounding the townsite were large parcels of varying sizes, but the typical size was 160 acres. These were the quarter sections that were either patented under the Homestead Act

<sup>29</sup> “Map of the Town of Phoenix Maricopa County, A.T.,” *Book of Maps*, 1:5 (Phoenix: Maricopa County Recorder’s Office).

<sup>30</sup> *Ibid.*

<sup>31</sup> Geoffrey Padraic Mawn, “Phoenix, Arizona: Central City of the Southwest, 1870-1920,” (PhD., diss. Arizona State University, 1979), 60.

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or in the process of being patented by individuals who would later be referred to as Phoenix's pioneers. Shortly after the townsite survey, the same settlers petitioned the Territorial Legislature to create Maricopa County. On February 14, 1871, the "Act to Create the County of Maricopa" passed through the legislature and the Territorial Governor selected the new townsite as the county seat. The Territorial Governor also appointed three Supervisors for the county, who met and immediately, and unanimously, approved a county resolution declaring all section lines within the county to be "public highways"—public roads that could be maintained by the county. This decree meant that all of the quarter sections would have access via a right-of-way along the boundaries of their respective sections. Later, property owners could request that the county develop these "public highways," and create new ones between quarter sections, to facilitate transportation throughout the area. Utilized for the local irrigation delivery system, these right-of-ways eventually became the layout of the city's major and minor arterial street system.<sup>32</sup>



**Figure 3. Downtown Phoenix Street Scene, circa 1875.** Courtesy of the Arizona Historical Society.

Once the Phoenix townsite was officially established, there were still no guidelines or controls as to how the streets should appear. Residents took it upon themselves to excavate ditches along the streets, providing water for the lots, but the streets remained little more than wide, dirt paths, maintained with funding from the sale of town lots. The early Phoenix streetscape was rough and rugged. Buildings were made of adobe, a sun-dried mud brick, which was a reliable building material, but also the only one readily available. The rest of the

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<sup>32</sup> *Journals of the Sixth Legislative Assembly of the Territory of Arizona* (Tucson: Office of the Arizona Citizen, 1871), 270; *Maricopa County Board of Supervisors Meeting Minutes*, 1:1 (Phoenix: Clerk of the Board of Supervisors, Maricopa County).

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streetscape consisted of deciduous trees planted for shade for the buildings and yards. These included Arizona ash, mesquite, cottonwood, and palo verde. A ditch separating the lots from the street provided a source of water. Native ornamental trees appeared in the streetscape when citizens planted cottonwoods along the streets in 1871 (see figure 3).<sup>33</sup>

From 1870 to 1875, the town's affairs were run by a trio of volunteer commissioners selected by an association of local settlers who banded together to create the townsite. The association defined a general role for the commission and delegated its very limited powers, i.e., the maintenance of the town funded by the sale of town lots. By 1875, incorporation was proposed, but the town residents rejected this idea and instead created a Board of Trustees. The trustees were volunteers—just like the commission—but instead of reporting to the association, reported to the citizenry. There were no changes in funding and no money for expenses or operations except for that from the sale of lots. In a formal report filed by the trustees in 1879, they announced that they had received \$5,137 from lot sales and had spent \$4,887.50 on construction, repair, and cleaning of the streets, nine miles of ditches bordering the streets, plank flumes at street crossings, and the beautification of the city hall plaza. The trustees also had purchased three water rights to irrigate the ornamental shrubbery and trees around the town. The following year, the town was almost out of lots, and, therefore, out of income.<sup>34</sup>

As the town grew, or rather, filled in, the problems with street maintenance escalated. When the last of the lots sold, the sole source of town income dried up, and the citizens became upset since maintenance and repair of the streets ceased. Streets became choked with dust or flooded from ditches overgrown with weeds and filled with debris. The plank flumes were too narrow and poorly maintained and the cottonwood trees lining the streets and providing shade went untrimmed. In addition, the beautification ideas promoted for the city hall plaza were not being carried out.<sup>35</sup>

Incorporation was the only remedy. Once incorporated, the town could create taxation and license fees to be used to improve and maintain the infrastructure. There would no longer be experiments with unpaid county jail laborers for cleaning streets and ditches. Shade trees could be planted at municipal expense instead of private benevolence. There would be paid city employees and not volunteer commission members or trustees. The fees and the cost of maintenance would be nominal and because the lack of maintenance created expensive repairs even the additional license tax would still create a savings.<sup>36</sup>

In 1881, the Territorial Legislature incorporated the townsite into the “City of Phoenix.” According to the enabling legislation, the city’s new governing body, the Common Council, could exercise control of streets, alleys, avenues, and sidewalks. They could “widen,

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<sup>33</sup> Robert Weworski, “Residential Landscape in Phoenix, Arizona,” 22, 24; James M. Barney, “When Palm Trees Were First Planted in Phoenix,” *Sheriff Magazine*, 13:4 (September, 1954), 73.

<sup>34</sup> Geoffrey Padraic Mawn, “Phoenix, Arizona,” 60.

<sup>35</sup> *Ibid.*, 63.

<sup>36</sup> *Ibid.*, 65.

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straighten, grade, extend, clean or otherwise regulate” the streets and prevent any encroachments. The council could require the bridging of the ditches and the planting of trees on public grounds and cemeteries. They could also require property owners to keep their lots tidy.<sup>37</sup>

The mechanism for street maintenance was the “Street Tax” which required that every male inhabitant of the city provide an annual tax of either three dollars towards the upkeep of the streets, or two days labor. If the latter option was their choice, those who chose the labor option were also required to provide their own pick and shovel. The Town Marshall, who was also the ex-officio Street Commissioner, would enforce the new regulations and tax.<sup>38</sup>

Though incorporated, the City of Phoenix remained bound within the original townsite boundaries, until 1885, when an amended Territorial Act expanded the boundaries to include Neahr’s Addition, the first subdivision annexed by Phoenix (see figure 4). The amended act expanded on the regulatory controls of the Common Council, focusing on the regulation and licensing of commercial enterprises, which allowed it to reduce the Street Tax to one dollar per year or one day’s labor. The new legislation also contained language that included streets, along with public spaces and cemeteries, as places the city could, and should, plant trees.<sup>39</sup>

New canals, the Maricopa and Grand, opened more of the desert around Phoenix to agricultural development. Then, as the townsite began to sell out, property owners created subdivisions from their 160-acre quarter sections adjacent to the townsite. Neahr’s Addition, platted and registered with the Maricopa County Recorder in 1880, was created from a quarter section directly west of the Phoenix townsite and divided into “1<sup>st</sup> Class Garden Lots, 2<sup>nd</sup> Class Resident Lots, and 3<sup>rd</sup> Class Business Lots,” with a park in the center. The latter two lot classes were identical in size and form to those in the city plat, with the smaller business lots facing a central park. The resident lots filled in the blocks between Adams and Madison streets. The garden lots were located south of Madison Street and north of Adams Street. An irrigation ditch, known as the Salt River Canal or the Town Ditch, ran along the north boundary of the subdivision, just below the section line and parallel with Van Buren Street in Phoenix. Neahr’s Addition created Woodland Avenue south of the ditch to provide access to the Garden lots. Since it was not a part of the Phoenix townsite until 1885, Neahr’s Addition could also be considered Phoenix’s first suburb.<sup>40</sup>

The 1885 legislation could not have come at a better time. Just one year earlier, residents were complaining about the lack of maintenance, especially in regards to Neahr’s Addition. According to the *Phoenix Herald*, “A dead horse, a cartload or two of dead cats, dogs, and

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<sup>37</sup> Ibid.; *Acts, Resolutions and Memorials of the Eleventh Legislative Assembly of the Territory of Arizona*. Prescott: Office of the *Arizona Miner*, 1881.

<sup>38</sup> Ibid.

<sup>39</sup> *Acts, Resolutions and Memorials of the Thirteenth Legislative Assembly of the Territory of Arizona*. Prescott: Arizona Miner Steam Printing Office, 1885.

<sup>40</sup> “Map of the Neahr’s Addition to Phoenix,” *Book of Maps*, 1:33.

chickens and the like serve to make Neahr's Addition a delightful summer resort and render west Phoenix, which lies to the windward of it during the spring breezes, an odiferous section of the city."<sup>41</sup>

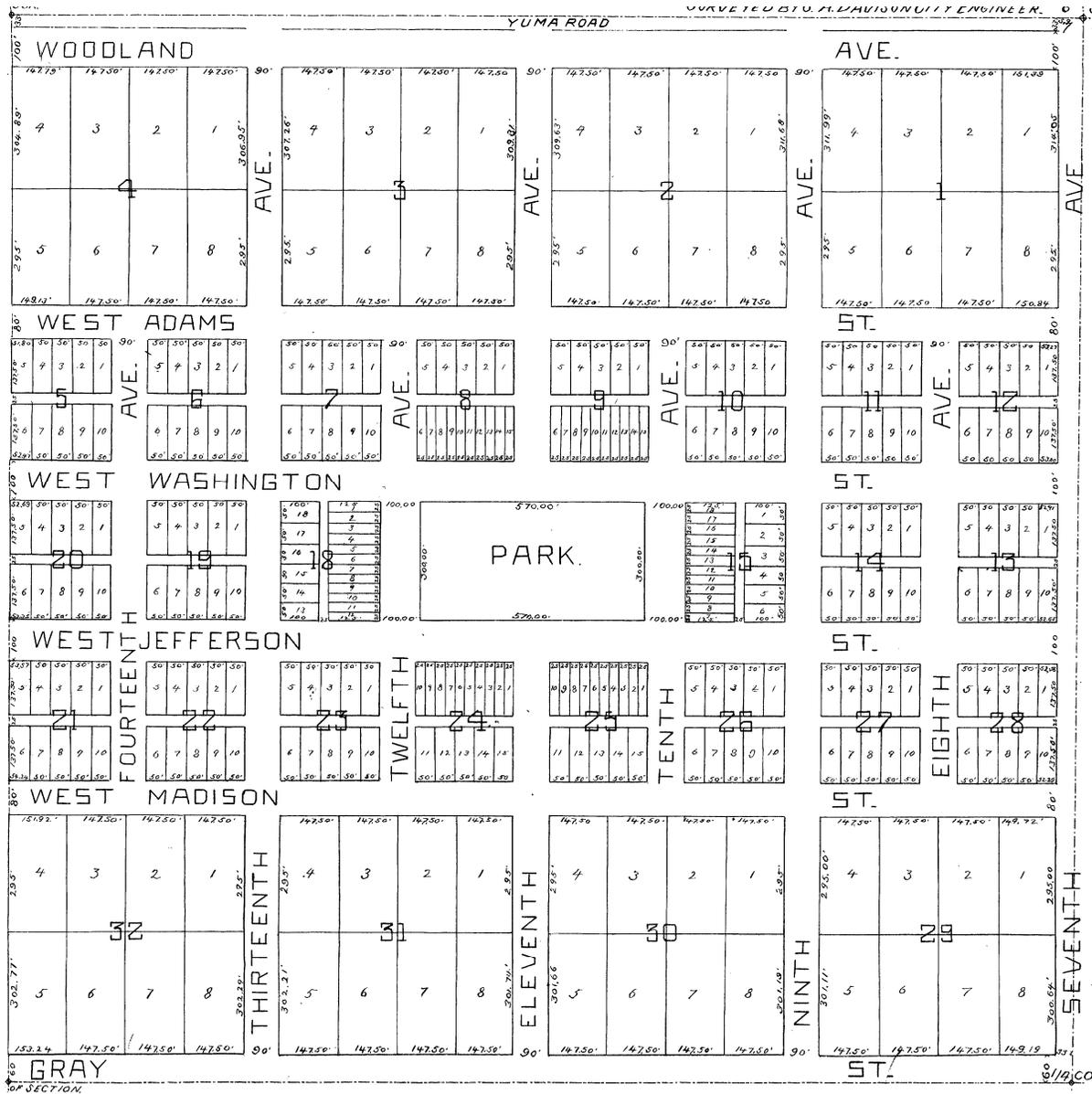


Figure 4. Neahr's Addition. Courtesy of the Maricopa County Recorder's Office.

The amendment brought forth a more positive, if not promotional note, "There is no more beautiful city, naturally, in the United States than Phoenix is today, with her long, smooth streets laved on each side with gurgling brooks and lined with the deep green of her shade trees."<sup>42</sup>

<sup>41</sup> *Phoenix Herald*, 22 April 1884.

<sup>42</sup> *Ibid.*, 19 March 1885.

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John T. Dennis, who homesteaded a quarter-section caddy corner to the northwest of the townsite in 1870, platted his appropriately called Dennis' Addition (bounded by 7<sup>th</sup>, 12<sup>th</sup>, Van Buren, and Roosevelt streets) in 1883. The new subdivision consisted of large lots, ranging from one to five acres. The following year, Hiram H. Linville subdivided a portion of his property, southwest of the townsite, and John Murphy created his addition directly east. Phoenix had just entered an early suburbanization period.<sup>43</sup>

## Transportation and Early Suburbs

Early Phoenix was a walking city; everything within the town was within two miles. As a result, housing options were limited and there was a short distance between wealthy and poor. Land usage had not been functionally specialized; residential, industrial, and commercial properties all shared the same limited space. With legislation allowing the city to annex and the introduction of the streetcar, the spatial relationship within and adjacent to the city quickly changed.<sup>44</sup>



**Figure 5. Phoenix Streetcar, inaugural day, November 5, 1887.** Courtesy of the Phoenix Museum of History.

In 1886, a group of entrepreneurs completed construction of the Arizona Canal, opening up tens of thousands of acres to agricultural development that would last for decades and lure investors and speculators to the Salt River Valley from California, the Midwest, and the East. Two eastern entrepreneurs, Marcellus E. Collins and Moses H. Sherman, created a street railway in 1887 that ran the length of Washington Street and allowed the town to expand its boundaries further east and west (see figure 5). Sherman and Collins initially had a

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<sup>43</sup> "Map of Dennis' Addition to Phoenix Arizona," *Book of Maps*, 1:8; "Map of Linville's Addition to the City of Phoenix.," *Book of Maps*, 1:10; "Map of Murphy's Addition to the City of Phoenix Arizona," *Book of Maps*, 1:16.

<sup>44</sup> Raymond A. Mohl, *The New City: Urban America in the Industrial Age, 1860-1920* (Arlington Heights: Harlan Davidson), 29.

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franchise from the Maricopa County Board of Supervisors to build a streetcar system along Washington Street from the eastern edge of Phoenix (7<sup>th</sup> Street) to 24<sup>th</sup> Street, just south of the location of the soon-to-be built Territorial Asylum. John T. Dennis, who had recently subdivided his property for development, received the franchise for the streetcar within the townsite but was unable to put a plan together. Sherman and Collins stepped in and took over the franchise. Within a short time, the two were creating subdivisions serviced by the new streetcar system.<sup>45</sup>

The introduction of the horse-drawn streetcar changed the dynamics of residential settlement nationally by becoming an intracity form of early mass transit. Though streetcars were slow, they stopped at regular intervals and moved smoothly along rails. While they came through the heart of the city, they also traveled out to peripheral areas, usually offering services to outlying hospitals, cemeteries, and parks. Housing developed along these lines and led to the construction of single-family dwellings within a five-minute walk. This supported the development of subdivisions as well as provided enough traffic to support the commuter system. The streetcar also encouraged the wealthy and middle class to abandon the central core of the city to live in neighborhoods with people of a similar class and build houses of a similar style.<sup>46</sup>

In Phoenix, the streetcar had the same effect. The affluent were already moving to Center Street (Central Avenue) above Adams Street and an additional line along Center Street started on December 30, 1889, facilitating more migration north of the business district. However, horse-drawn lines were limited in the distance they could cover. Horses required feeding and rest, and they could be stubborn or spooked; not so with electric streetcars.<sup>47</sup> As Carol A. Christensen states in *The American Garden City and the New Towns Movement*, “With the electrification of the trolley and the extension of the tracks and service into peripheral areas, late nineteenth century Americans were moving out of the city almost as fast as they were moving into it.”<sup>48</sup>

The electric streetcar replaced Phoenix’s horse cars in 1893 allowing the trolleys a wider range. The street rail allowed people to live and conduct business further out, eventually as far as Glendale. It also worked well with the plans of the builders of the Arizona Canal, who created the Arizona Improvement Company, which specialized in water and land development, and brought new farmers to the area to settle on lands watered by the canal. Part of the company’s speculation scheme also included the creation of the townsites of

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<sup>45</sup> Lawrence J. Fleming, *Ride a Mile and Smile the While: A History of the Phoenix Street Railway, 1887-1948* (Phoenix: Swaine Publications, 1977), 1-3; *The Code of Phoenix, Arizona* (Charlottesville: Michie City Publications, 1951), 7-8.

<sup>46</sup> Zane L. Miller and Patricia M. Melvin, *The Urbanization of Modern America: A Brief History* (San Diego: Harcourt Brace Jovanovich, 1987), 51; Raymond A. Mohl, *The New City*, 32, 37, 39.

<sup>47</sup> Raymond A. Mohl, *The New City*, 29; *The Code of Phoenix, Arizona*, 8; Zane L. Miller and Patricia M. Melvin, *The Urbanization of Modern America*, 51.

<sup>48</sup> Carol A. Christensen, *The American Garden City and the New Towns Movement* (Ann Arbor: UMI Research Press, 1986), 30.

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Alhambra, Glendale, and Peoria that were connected to Phoenix by a 100-foot wide diagonal road named Grand Avenue.<sup>49</sup>

The original townsite set the precedent for the design and layout of adjacent subdivisions. The town's rectangular shape was based on the Public Land Survey, with its north, east, and west boundaries located on section lines and its southern boundary and central north-south road at the quarter section lines. The streets and blocks were symmetrical, laid out on a rectilinear grid system oriented to the cardinal directions and usually created in alignment with the streets of adjacent subdivisions, reinforcing the original townsite planning concept. The prevailing street width was sixty to eighty feet, with 100-foot wide streets used as main thoroughfares. Residential lots typically had a fifty-foot frontage and were 120 to 200 feet deep. This standard remained in place between the 1890s and the 1930s. Some of the distant subdivisions were platted before there was a need for dense residential development; hence, the lots were larger and more appropriate for a rural lifestyle than those within the center of the town. Water was plentiful from the Salt River Valley, Maricopa, and Grand canals and the introduction of electric cars to the street railway allowed for the "garden lot" outside of the town. Changing its own street naming system to use avenues and streets, for the north and south streets, Phoenix also passed resolutions changing the names of the streets in subdivisions in order to assimilate to the new streets-avenues format.<sup>50</sup>

When the Territorial Legislature selected Phoenix as the capital of Arizona in 1889, Moses Sherman and partner Marcellus Collins made a convincing argument for capitol location. By donating ten acres for the capitol grounds, offering to landscape the lot, and extending the street car line, Sherman and Collins provided not only a capitol location but stood to profit from the adjacent development. Their Capitol Addition was designed to extend the east and west streets of its neighbor on the east, the Neahr's Addition and the Phoenix Townsite. Sherman, Collins, and their colleagues also introduced beautification ideas to the developing urban area, specifically the streetscape.<sup>51</sup>

In the late 1870s, tree planting along city streets was quite common, with the preferred species being the native cottonwood. Marcellus Collins designed the Collins Addition (bounded by 12<sup>th</sup>, 20<sup>th</sup>, and Van Buren streets, and the Maricopa and Phoenix Railroad right-of-way) in 1887 with over three hundred trees along both sides of the main thoroughfare, Washington Street, improving the view of the lots closest to the streetcar line. Soon after selection of the site of the new capitol complex, palms were planted along Washington Street from 7<sup>th</sup> Avenue to the Capitol grounds. The design for Moses Sherman's North Grand Avenue Addition (now the Arizona State Fair Grounds) utilized trees along its major

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<sup>49</sup> Raymond A. Mohl, *The New City*, 29; *The Code of Phoenix, Arizona*, 7-8; Bradford Luckingham, *Phoenix: The History of a Southwestern Metropolis* (Tucson: University of Arizona Press, 1989), 29.

<sup>50</sup> Robert G. Graham, National Register Nomination of Woodland Historic District, 1991; "Official Plat of the Original Townsite of Phoenix, Maricopa County, Arizona Territory," *Book of Maps*, 2:51; Common Council Resolution 128 (Phoenix: City Clerk), October 6, 1902.

<sup>51</sup> Bradford Luckingham, *Phoenix*, 35-39.

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thoroughfare, Western Avenue (18<sup>th</sup> Avenue). Charles Edward Major worked linear parks—medians—along Sherman Avenue (also 18<sup>th</sup> Avenue) into his design of the North Capitol Addition (later the Oakland subdivision). Though trees had been planted for shade and ditch stabilization in Phoenix and the Salt River Valley since initial settlement in the 1860s, the trees in the designs of these new developments were planted purely as ornamentation. Later, the cottonwood trees were removed from city streets and replaced with ash, olive, pine, and the ubiquitous palm.<sup>52</sup>

## From Main Street to Downtown

The streetscape reflects a community's settlement patterns and the prototype of the community's development is its primary thoroughfare, or Main Street, which according to cartographic historian Richard V. Francaviglia, "Viewed as a group of buildings, even the most mundane Main Street can tell very interesting stories about the drama between residential forces and commercial forces that may shape the streetscape through time."<sup>53</sup> Geographically, Main Street is the economic and social center of the community and photographic images of main streets during the early stage of city development typically show a combination of commercial and residential buildings. While the houses are set back from the street to accommodate front yards, the façades of the commercial buildings abut the sidewalk so the shopper can walk directly into the shop from the street.<sup>54</sup>

In Phoenix, the commercial district developed along Washington Street beginning with the construction of an adobe store by William Hancock, who also surveyed and laid out the townsite. Phoenix's commercial activity was not just limited to the surrounding agricultural area; it prospered from its strategic location along the road between the prosperous mining community of Wickenburg and the Camp McDowell military installation, and a connection to the southern overland trail at Maricopa Wells. Large freighting rigs came to Phoenix loaded with lumber and merchandise and departing with flour, grain, and other local agricultural products. Phoenix became the commercial hub for the military camps, mining districts, and local farms in central Arizona, but it was a community primarily consisting of adobe buildings until 1878, when the first brick kiln was constructed.

In 1880, there were only 1,700 inhabitants living in Phoenix and they were concentrated between Monroe and Jefferson streets, and Cortes (First Avenue) and Pima (Third Street) streets. Commercial institutions were clustered along Washington Street from Cortes to Pinal (Fourth Street) Street, with merchants and shop owners living at or close to their businesses. On the blocks north and south of Washington Street were support industries such as blacksmith shops, lumber yards, the flour mill and the ice factory. Much of the

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<sup>52</sup> "Collins Addition to the City of Phoenix," *Book of Maps*, 1:11; "North Grand Avenue Addition," *Book of Maps*, 1:23; "Map of the North Capitol Addition," *Book of Maps*, 2:25; *Phoenix Herald*, 25 February 1890.

<sup>53</sup> Richard V. Francaviglia, *Main Street Revisited: Time, Space, and Image Building in Small-Town America* (Iowa City, University of Iowa Press, 1996), 8

<sup>54</sup> Richard V. Francaviglia, *Main Street Revisited*, 9.

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undeveloped property within the townsite was purchased for speculative investment. The remainder was used for non-urban purposes such as vineyards and orchards.<sup>55</sup>

After incorporation, the more affluent of Phoenix society started locating near Center Street (Central Avenue) on the north side of the townsite. A second location existed for the affluent along Madison Street, but these centered on the business-residential combination of urban settlement. This latter section converted to commercial with the arrival of the railroad in 1887 and the occupants moved to “north” Phoenix, as well. Aided by the streetcar, they moved even further from the commercial district.<sup>56</sup>

Phoenix’s downtown, like that of other mid-nineteenth century walking cities, changed from warehouses, small workshops, and rudimentary financial districts to a wider range of economic activities. A combination of technological advances and increased purchasing power in a large part of the urban populace caused this conversion. Financial institutions, department stores, doctors, and lawyers as well as theaters, restaurants, and hotels emerged, filling in blank areas and replacing residents who moved into the periphery. Commerce became the chief, new function of the downtown and the area near the railroads became the warehouse district. Specialty and luxury goods and department stores opened near hotels and banks. For Phoenix, the catalyst for this transition arrived with the Maricopa and Phoenix line, its connection to the transcontinental Southern Pacific Railroad.<sup>57</sup>

In 1886, aware of the importance a rail connection would have for the town, local promoters secured the necessary funding to build the Maricopa and Phoenix Railroad, directly linking the town to the Southern Pacific line at Maricopa (see figure 6). Completed in 1887, the new rail line brought in passengers and freight much more expediently than by stage or wagon, and provided access to the markets of the southern United States and California. The station was located at 7<sup>th</sup> and Jackson streets on land that had been donated to the railroad for that express purpose. With the arrival of the railroad, industries and storage facilities moved to the area.<sup>58</sup>

Eight years later, a second connection developed connecting Phoenix to the Santa Fe railroad from the northwest. The Santa Fe, Prescott, and Phoenix Railroad entered Phoenix paralleling Grand Avenue. Its station was located at 1<sup>st</sup> Avenue and Jackson Street. Like its predecessor, this link also opened new markets but this time in the Midwest. Salt River Valley exported products to Chicago and points east, and a wide variety of products could be economically imported as well, further strengthening local commerce. The railroads stimulated the creation of new businesses and the expansion of others. Transcontinental links to the east and west also increased immigration to the area and saw the beginning of seasonal tourism traffic during the winter. After 1895, cattle feeding in the valley became

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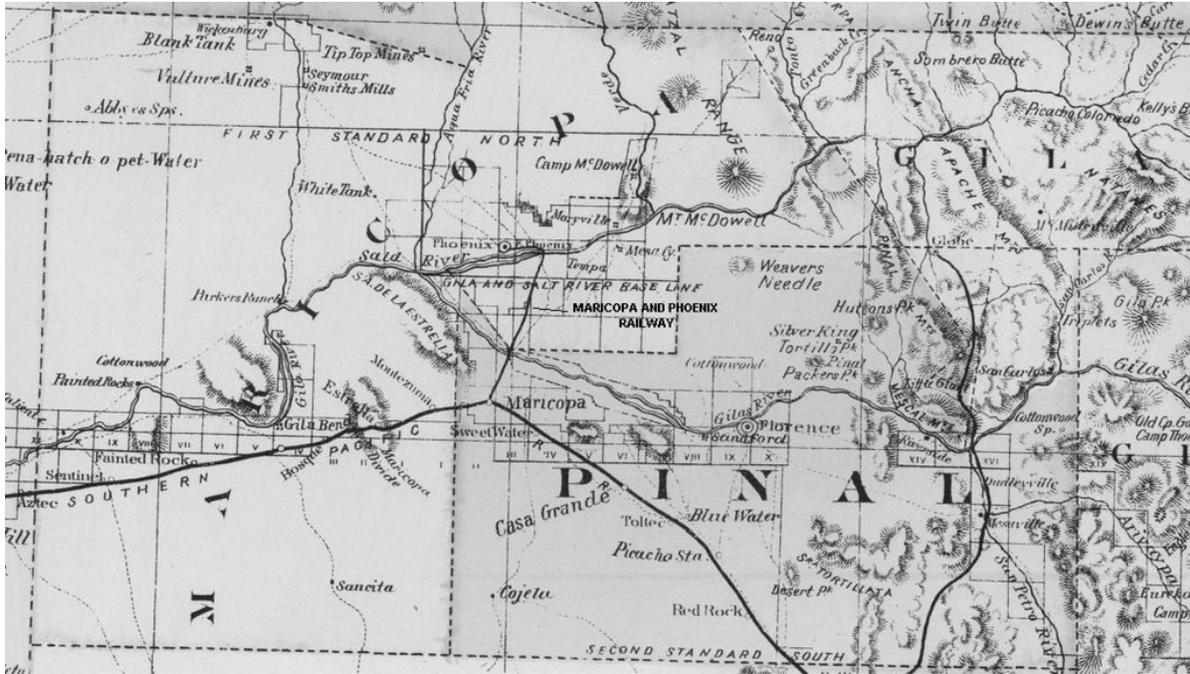
<sup>55</sup> Geoffrey Padraic Mawn, “Phoenix, Arizona,” 66.

<sup>56</sup> Geoffrey Padraic Mawn, “Phoenix, Arizona,” 67.

<sup>57</sup> Zane L. Miller and Patricia M. Melvin, *The Urbanization of Modern America*, 84-85.

<sup>58</sup> *The Union Station: Phoenix’ Portal to the Nation* (Phoenix: City of Phoenix Planning Department, 1990), 5-6; Luckingham, *Phoenix*, 29-30.

profitable due to the availability of inexpensive transportation of fattened livestock. Equally important was the importation of building materials such as lumber from California and Flagstaff, ready-made doors and windows, and complete cast iron storefronts. Industrial machinery, like those for manufacturing pressed brick, also came to Phoenix via rail.<sup>59</sup>



**Figure 6. Maricopa and Phoenix Railroad line.** Extracted from "County and Township Map of Arizona and New Mexico," *Mitchell's New General Atlas* (Philadelphia: John Y. Huber & Co., 1890).

The Santa Fe, Prescott, and Phoenix Railroad arrived in Phoenix at the end of an economic depression, sparking a building boom in the area. There was new construction in residential and business blocks, utilizing many of the most recent nineteenth-century innovations in architecture structural design. The consequential improvements created a basic pattern of spatial development that would characterize central Phoenix for decades. A new building phase remodeled the central business district. Rising land values, rental fees, and demand for office and commercial space fostered both vertical and horizontal growth. While some establishments added floors to accommodate space needs, others moved to reduce overhead expenses, expanding the commercial district. Multi-story brick commercial establishments replaced livery stables and adobe and wood structures (see figures 7 and 8). These new buildings became the norm, with most featuring iron-reinforced fronts, modern styling, and conveniences such as electricity and telephone. By 1910, three- and four-story brick storefronts stretched along Washington Street from 3<sup>rd</sup> Street to midway between 2<sup>nd</sup> and 3<sup>rd</sup> Avenue. Buildings filled entire lots and awnings and covered walkways extended almost to the curb to protect pedestrians from the heat (see figure 9). Commercial, retail, and professional office functions dominated activities in this central core and pedestrian

<sup>59</sup> *The Union Station, 7; Commerce in Phoenix, 1870-1942: A Context for Preserving Historic Properties* (Phoenix: Arizona Historic Preservation Office, 1989), 5.

access to shops and businesses was key to these functions. Streets, however, remained unpaved.<sup>60</sup>



**Figure 7. Phoenix Herald Building, 31 North Central Avenue, 1879.** Courtesy of the Library of Congress.



**Figure 8. Stroud Building, 31 North Central Avenue, 1901.** Courtesy of the Library of Congress.

<sup>60</sup> Geoffrey Padraic Mawn, "Phoenix, Arizona," 179-181; Brad and Barbara Luckingham, *Discovering Greater Phoenix: An Illustrated History* (Carlsbad, CA: Heritage Media Corp. m 1998), 25.



**Figure 9. North side of Washington Street, between 1<sup>st</sup> and 2<sup>nd</sup> streets, circa 1895.** Courtesy of the Phoenix Museum of History.

A second spatial change occurred when merchants dependent on the railroads and requiring considerable display or storage space moved outside of the core business district into the residential areas surrounding the old central business district. Livery stables moved to the periphery on east and west Washington, Adams, and Jefferson streets. Storage warehouses for import and export wholesalers located near the two depots in the southern city core. Industries such as lumberyards, freight storage facilities, fuel points, steam laundries, and iron works moved closer to the tracks. Sidings and spurs were added to increase capacity and to provide direct access to warehouses and industrial facilities. South of the tracks, residential areas for lower socio-economic groups developed.<sup>61</sup>

Buildings near the tracks changed, with warehouses developing raised platforms for loading and unloading railcars, loading docks to accommodate trucks, and separate office entrance and delivery areas. Like in the central core, structures filled entire lots sometimes expanding to cover more than one, with zero setbacks to utilize the maximum space available. The signage on buildings reflected these changes, becoming vehicular scaled and typically painted on buildings.<sup>62</sup>

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<sup>61</sup> Geoffrey Padraic Mawn, "Phoenix, Arizona," 181.

<sup>62</sup> *Historic Phoenix Commercial Properties Survey: Summary* (Phoenix: Junior League of Phoenix, Inc., 1984), 43-44.

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The Santa Fe, Prescott, and Phoenix Railroad and the Arizona Canal led to an advance of commercial establishments to the northwest of Phoenix. Small merchants set up shop at Five-Points (the intersection of Grand and 7<sup>th</sup> avenues and Van Buren Street), and along Grand Avenue to intercept rural shoppers on their way to or departing from the central business core. Corrals, livery stables, blacksmith shops, general stores, and saloons provided convenient access for farmers and shippers alike.<sup>63</sup>

## Paving Phoenix

During the same period that the city was expanding its marketplace, Phoenix was also developing municipal improvements and establishing an infrastructure of city services in the city core. The water company was a priority. Water shortages in the early 1900s revealed the inadequacy of the system. A lack of significant water during fires contributed to losses and increased insurance rates. No one knew this better than Moses Sherman, who lost a row of buildings on Washington Street when it was discovered by firefighters that no water came from the hydrants. Ironically, at the time Sherman was the owner of the water company. The sewer system was also deficient. Subsequent to a 1909 investigation conducted by the Chamber of Commerce, it was realized that cesspool and open sewage vaults were widespread and existing sewer lines were too close to the surface. The city purchased the water company in 1907 and the local sewer and company in 1911. However, the city's transportation infrastructure was in desperate need of an update.<sup>64</sup>

Since 1870, city streets had always been a point of humility. The roads were unpaved and sidewalks were practically nonexistent. During the early 1880s, if a sidewalk were to be found, it was usually built by the adjacent property owner, and could be made from a variety of materials at hand, such as wood, river rock, or in one case, empty bottles pressed into the mud. Streets were not much better; they were dry and dusty when it was warm and when it rained, slick and muddy. Ditches along the street provided water to the trees, and provided some assistance in draining properties. However, if they became clogged, which happened often, they would flow into the streets creating a marshy mess. Once the streets dried out, locals would attempt to perform repair to ruts and potholes by using an easily accessible fill, horse dung. Some believed this a preferred solution, given the implementation costs and the availability of inexpensive materials. However, on hot days the smell from the street could get quite nauseating. Crosswalks were few and improvements were limited to grading the roadway and using redwood planks to line the ditches. The remaining maintenance was the sprinkling of water on the roadway to reduce dust (see figure 10). However, sprinkling was only a temporary solution, and not an economic one.<sup>65</sup>

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<sup>63</sup> Geoffrey Padraic Mawn, "Phoenix, Arizona," 182.

<sup>64</sup> *Commerce in Phoenix, 1870-1942*, 4,8; Larissa Larsen and David Alameddin, "The Evolution of Early Phoenix: Valley Business Elite, Land Speculation, and the Emergence of Planning," *Journal of Planning History* 2007(6:87), 101.

<sup>65</sup> Bradford Luckingham, *Phoenix*, 25-26; Common Council Ordinance 57, 9 March 1887.



**Figure 10. Sprinkling cart in action. circa 1900.** Courtesy of the Phoenix Museum of History.

In 1886, the city common council passed an ordinance requiring sidewalks to conform to the grade of the streets, which were maintained using “volunteer” and inexpensive jail labor. At the time, sidewalks were the sole responsibility of the owner or lessee of the adjacent property and were made of wood, stone, brick or other pavements. This was the status quo until 1909, when the Territorial Legislature passed an act providing a mechanism for cities to make improvements to streets, sidewalks, and alleys, if petitioned by adjacent owners. The legislation required a petition of 5 percent of the owners to ask for the changes and 51 percent to approve the changes at a public meeting held for that purpose. Once approved, the property owners had ninety days to make the improvements or the city would contract the work. It also allowed contractors, hired by either the property owner or the city, to place a lien on the property fronting any improvement to make sure they received payment.<sup>66</sup>

Within a few days, the Common Council began receiving petitions for cement sidewalks from property owners throughout the city. By the end of April 1909, responding to property owners along the downtown streets, the Common Council passed seven resolutions relating to the sidewalk installations. This was just the start of the windfall of petitions for sidewalks, which soon became the majority of work performed by the council. Since each ordinance

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<sup>66</sup> Brad and Barbara Luckingham, *Discovering Greater Phoenix*, 26; Common Council Ordinance 50, 3 February 1886; “An Act Granting Cities the Privilege to Provide by Ordinance the Right to Make Improvements and by Resolution of the Common Council Order Any Street, Sidewalk or Alley Improved, Graded, Paved or Macadamized,” *Acts, Resolutions and Memorials of the Twenty-fifth Legislative Assembly of the Territory of Arizona* (Phoenix: The McNeil Co, 1909), 109-110.

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had to be typed, the number of resolutions sparked by the March act led the council clerk to create a form specifically to deal with sidewalk requests. Just as the sidewalk requests slowed down, the request for street paving began.<sup>67</sup>

Phoenix was not alone in wanting improved streets; cities around the country had been experimenting with street improvements since the first colonial settlement. Streets were paved with cobblestones, bricks, or wood, if paved at all. Efforts continued through the 1870s and 1880s to provide solutions to the paving of interurban highways in the United States. While towns and cities paved their streets, the highways were largely neglected. These endeavors produced very little in the way of improved roadway technology until the bicycle fad swept the nation.

Originating in Europe in the 1820s, some six decades later bicycle technological advancements had evolved the machine into a popular mode of transportation and recreation. A national organization, the League of Wheelmen, formed in the 1880s to lobby for better roads. While their efforts produced few improved highways, they did have a considerable effect on the knowledge infrastructure. In 1893, Harvard University began testing road material and good road boosters met in Washington DC to found the National League for Good Roads. That same year the United States Postal Department (predecessor of the Postal Service) began offering rural delivery and Congress created the Office of Road Inquiry and later the Office of Public Roads (now the Federal Highway Administration), which experimented with road building technology. While these entities focused primarily on existing rural roads, the technological innovations created from the labors of the Wheelmen proved useful for nascent infrastructural planning.<sup>68</sup>

Early twentieth century road building was a primitive, multi-step process. Improving an existing road meant clearing the shoulder area of vegetation before new fill was added to widen the roadway. For new roads, plows and other machinery were used to clear the way. The initial road was prepared by a drag, a horse drawn road scraper, which would level the roadway; bigger projects required grading crews using horses or machines. The roadbed was then rolled with heavy steel drum wheels. The sequence of the subsequent layers depended on the type of road being built. Macadam required a sublayer of clay and sand covered with a layer of broken stones. In some cases, oil was spread over the top surface as a binder for loose material. These roads required a lot of maintenance so builders turned to brick, concrete, and asphalt, using several layers of subgrade. The lifespan of the road was based on the quality of the subgrade.<sup>69</sup>

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<sup>67</sup> Common Council Resolutions 351-357, March through April and subsequent months.

<sup>68</sup> Thomas H. Peterson, "Lucius Copeland – Hitched to a Star!," presented at the Arizona History Convention, Prescott, Arizona, 24 April 2009, 3-5; I. B. Holley, Jr. "Blacktop: How Asphalt Paving came to the Urban United States," *Technology and Culture*, October 2003 (44), 715. Melissa Keane and J. Simon Bruder, *Good Roads Everywhere: A History of Road Building in Arizona* (Phoenix: Arizona Department of Transportation, 2004), 7; William Kaszynski, *The American Highway: The History and Culture of Roads in the United States* (Jefferson: McFarland & Co., Inc, 2000) 31-32.

<sup>69</sup> William Kaszynski, *The American Highway*, 32.

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In February 1911, the Common Council created specifications for the pavement of streets. It could be done with hydraulic cement, concrete base, and either an asphalt or a bitulithic wearing surface. The rules for paving projects were the same as the sidewalks, a petition from owners and majority approval. While in both instances, the option was for property owners to hire a contractor, paving the streets required more expertise than laying down a sidewalk. Empowered by council resolution, property owners signed contracts with the Barber Asphalt Paving Company, agreeing collectively to pay more than \$100,000 for nineteen blocks in the central business district.<sup>70</sup>

Azmi L. Barber founded asphalt his company in 1883. It had a concession on the asphalt lake on the island of Trinidad and, during the last twenty-five years of the nineteenth century, had laid more than twenty-four million square yards of paving on some fifteen hundred miles of streets in more than a hundred cities. The company had an advanced delivery system, with the capability of deploying asphalt laying equipment and supplies quickly via rail. The Barber Company also included a one-piece concrete curb and gutter.<sup>71</sup>

Solely using concrete was not an alternative, either. Although it was becoming the preferred medium for use as a foundation for asphalt, municipalities were reluctant to pave with concrete because of the frequency with which city streets had to be torn up to access water, gas, and sewer lines. In addition, prior to 1920, suitability for horse-drawn traffic was still an important concern. Besides, it was thought that a combination of concrete and asphalt used for roadways and curbs provided contrast and better visibility and safety for drivers.<sup>72</sup>

Barber started work before the end of 1911 and in January 1912 was finished with nineteen blocks in the commercial core of the city. The work may have been accomplished even quicker had the city not also been concurrently implementing a sewer system. At the same time, the city also installed new ornamental electroliers, with five lights each, to light the city after dark (see figure 11). Street paving continued through 1912, when the city ran into problems. On some streets, the city could not get a majority of adjacent property owners to approve paving, leaving some roads literally in the dust. The city pushed the Legislature into passing a bill that allowed Phoenix to create larger multi-street paving districts and then, when deemed of “great public importance,” required properties within said districts to pick up the paving tab so progress could continue. Since the improvements were paid for through a lien against the adjacent property and collected by the city in the same manner as a tax, a provision was placed in the improvement district bill to allow owners to pay for the pavement

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<sup>70</sup> Common Council Resolution 562 ½, 11 November 1912.

<sup>71</sup> I. B. Holley, Jr. “Blacktop: How Asphalt Paving came to the Urban United States,” 703-733, 709, 712.

<sup>72</sup> I. B. Holley, Jr. “Blacktop: How Asphalt Paving came to the Urban United States,” 725; William Kaszynski, *The American Highway: The History and Culture of Roads in the United States* (Jefferson: McFarland & Co., Inc, 2000). 114.

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over time, lightening their financial burden. This new legislation led to more petitions and within two years, the original townsite was on its way to being entirely paved.<sup>73</sup>



**Figure 11. Center Street (Central Avenue) circa 1912.** Courtesy of Mark Hughes.

By 1914, concrete was beginning to offer serious competition to asphalt as a suitable highway building material in cities. Its use dropped off sharply during the period 1917-1918, when cement was difficult to obtain because of military demands during World War I and the tight labor supply inhibited road building. By 1919, however, concrete was once again a major competitor. Asphalt still had an advantage over concrete. Properly constituted asphalt gave better footing to horses than concrete, so as long as horse-drawn vehicles remained an important part of urban transport, asphalt surfaces had an advantage. Asphalt was also easier than concrete to dig up to reach utility lines under city streets, and easier to restore. Another factor was the relatively late development of a truly effective concrete mixer. Perhaps more important than all of the above was the advantage asphalt enjoyed because it was promoted by large, well-financed national corporations, such as the Barber Asphalt Paving Company and Warren Brothers, whose volume of business justified the development of specialized, labor-saving equipment. Concrete had no such corporate advocates until years later. However, in the late 1920s, concrete was used widely in the Phoenix area's Farm-to-Market road improvements.<sup>74</sup>

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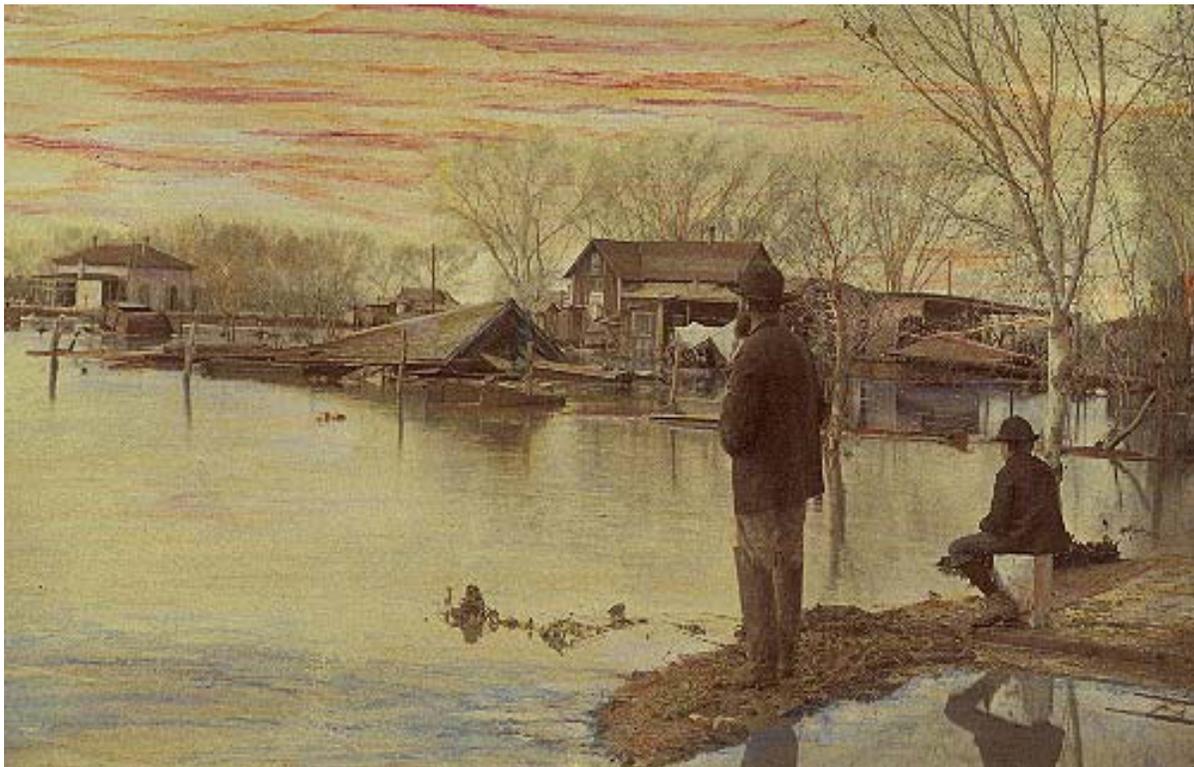
<sup>73</sup>Common Council Resolution 573, January 1913; Geoffrey Padraic Mawn, "Phoenix, Arizona: Central City of the Southwest, 1870-1920," (PhD., diss. Arizona State University, 1979), 367-371.

<sup>74</sup>I. B. Holley, Jr. "Blacktop: How Asphalt Paving came to the Urban United States," 732; Vincent Smith Murray, "North Central Avenue Streetscape Historic District.," 2006.

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## Reclamation and (Sub) Urban Expansion

In 1890 and 1891, flooding in the Salt River Valley had a devastating effect on the area's agricultural fields, and the portion of the city south of Harrison Street and the railroad tracks. Canals designed to bring water to the area brought much more than anticipated—or wanted—submerging subdivisions such as Linville's Addition (Harrison Street to Lincoln Street, Central Avenue to 7<sup>th</sup> Street) under two to three feet of water for days. These floods created an impetus for relocating to higher land north and west of the city. On the south side of the city, the proverbial “other side of the tracks,” neighborhoods filled with lower-income, minority residences. A subsequent drought later in the decade made the issue of a stabilized water system even more important. Local property owners created the Salt River Valley Water Users Association to apply for funds made available by the 1902 National Reclamation Act. Mortgaging their property, the association was able to convince the federal government to build the Roosevelt Dam upstream on the Salt River, assuring a stable supply of water.<sup>75</sup>



**Figure 12. Phoenix Flood of 1891 (colorized).** Courtesy of the Phoenix Museum of History.

While the establishment of railroad connections to Phoenix provided the framework for concentrated expansion of specialized commerce and created a second distinct locational pattern near the tracks, the railroad alignments also proved to be a significant barrier to

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<sup>75</sup> Robert Weworski, “Residential Landscape in Phoenix, Arizona: Past, Present, Future,” MA thesis, Arizona State University, 1999, 18; “Linville’s Addition,” *Book of Maps*,

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overall urban development. The east-west alignment at the southern edge of the original townsite segregated residents to the south and these residential areas became less desirable after the floods of 1890 and 1891 (see figure 12). Likewise, the rail line along Grand Avenue, in conjunction with the flooding of Cave Creek, altered expansion patterns west of the townsite.<sup>76</sup>

At the turn of the twentieth century, as a part of a development scheme, the Arizona Canal and Arizona Improvement Company consolidated the irrigation system for the Salt River Valley. Though the Arizona Improvement Company and its subsidiaries created subdivisions, it was mostly on speculation and development came slowly. Then in 1911, the completion of Roosevelt Dam stabilized the water supply for the valley, offering respite from floods and droughts. This led to a building boom where many of the large lot additions were replatted for denser residential use; multi-acre parcels were subdivided to typically 50-foot by 135-foot lots. Neahr's Addition (bounded by Van Buren and Harrison streets and 7<sup>th</sup> and 15<sup>th</sup> avenues) is an example of this restructuring. In 1893, there were only about forty buildings in the addition and land speculators had purchased most of the lots. By 1913, five newer subdivisions had been created within the addition.<sup>77</sup>

The trolley, electrified in 1893, created streetcar suburbs north of the city, with subdividers paying subsidies to the streetcar company for extending the service (see figure 13). This worked into the city's plans where once a suburb was created and connected, it could be annexed, extending the city boundaries. However, annexation was received with mixed reaction. Some wanted annexation, such as Linville's Addition south of the city, to aid in the removal of prostitutes, which were distracting to potential investors. More densely settled subdivisions north of the city, including Bennett Place (Central Avenue to 7<sup>th</sup> Avenue, Fillmore Street to Roosevelt Street), Dennis' Addition, University Addition (7<sup>th</sup> Avenue to 15<sup>th</sup> Avenue, Van Buren Street to Roosevelt Street), Simm's Addition (Central Avenue to 3<sup>rd</sup> Avenue, Roosevelt Street to between Moreland and Culver streets), Irvine's Addition (7<sup>th</sup> Avenue to 15<sup>th</sup> Avenue, Harrison Street to Buckeye Road), and Murphy's Addition (7<sup>th</sup> Street to 12<sup>th</sup> Street, Van Buren Street to Harrison Street) required court action since the inhabitants did not see the necessity, or the benefit, of such municipal amenities such as street maintenance, bridges, and drainage ditches. Instead, they saw annexation as providing a tax to retire the city's debt.<sup>78</sup>

Simm's and Dennis' additions were the first to acquiesce. Then Murphy's Addition residents allowed annexation out of fear they would become a colony for prostitution. Ironically, or perhaps out of spite, when the city annexed part of the addition, the council did not include the Tenderloin District. Murphy's and Linville's additions' concerns were shared by Bennett

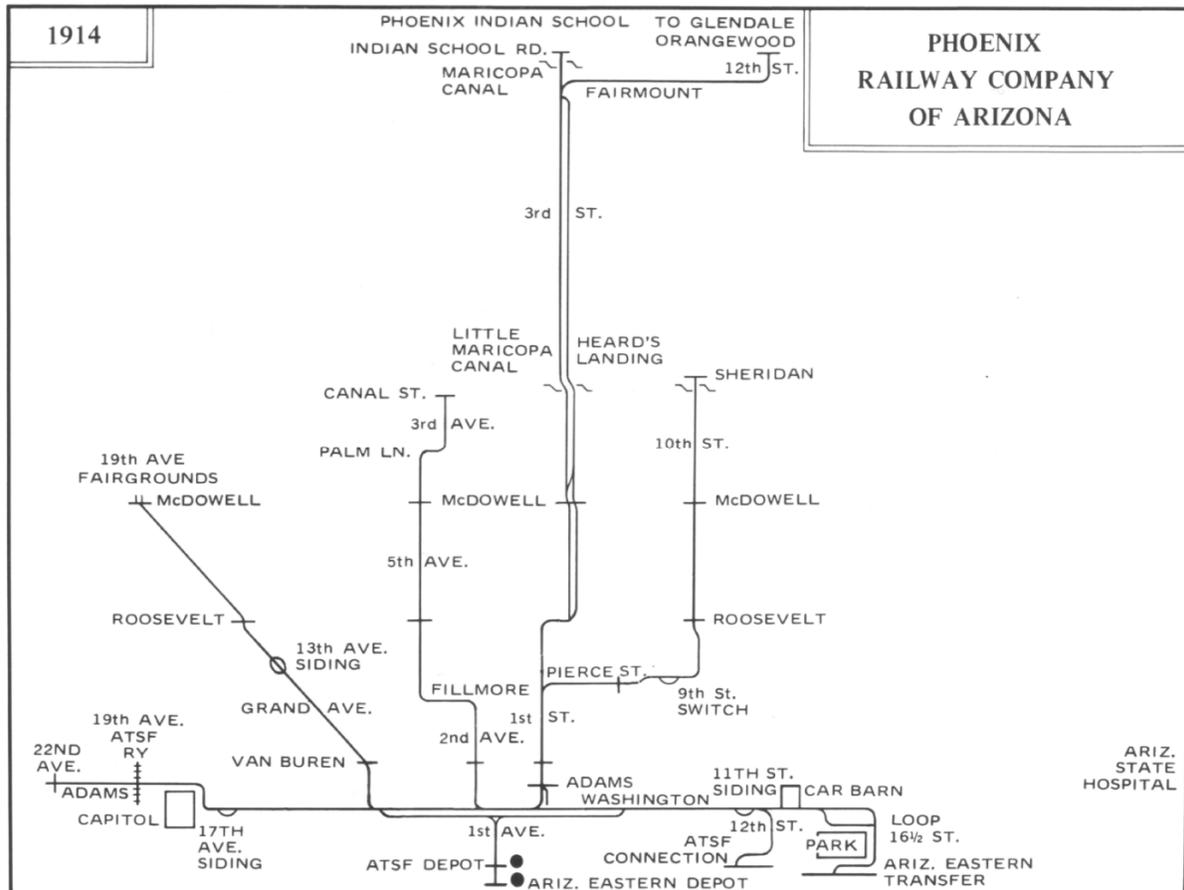
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<sup>76</sup> *Commerce in Phoenix*, 14.

<sup>77</sup> Robert G. Graham, "Woodland Historic District."

<sup>78</sup> Geoffrey Padraic Mawn, "Phoenix, Arizona," 189-191; "Grand Avenue Addition/University Addition," *Book of Roads*, 1:7; "Map of Dennis' Addition to Phoenix Arizona," *Book of Roads*, 1:8; "Map of Linville's Addition to the City of Phoenix," *Book of Maps*, 1:10; "Map of Murphy's Addition to the City of Phoenix," *Book of Maps*, 1:16; "Plan of Simm's Addition to the City of Phoenix," *Book of Maps*, 2:27; "Plat of Bennett Place," *Book of Roads*, 2:43;

Place and Irvine's Addition, which also allowed annexation by the city. After a short trial, the District Court ruled in favor of the city's annexation of the University and Capitol additions.<sup>79</sup>



**Figure 13. Phoenix Railway line, 1914.** From Lawrence J. Fleming, *Ride a Mile: Smile the While: A History of the Phoenix Street Railway, 1887-1948.*

When the automobile was introduced to Phoenix streets just after the turn of the twentieth century, those who could afford them became even more mobile and suburbs began infilling as “a result of the ease of commuting.” After the mass-production and decreased costs of the Ford Model T, more new neighborhoods were created and annexed. By 1913, the city boundaries were 23<sup>rd</sup> Avenue to 16<sup>th</sup> Street between Van Buren and Harrison streets and north to McDowell Road between Seventh Avenue and Twelfth Street and south to Yavapai Street between Seventh and Central Avenues. The post reclamation building boom continued around the city with twenty-one new subdivisions created between 1909 and 1914; by 1920, there were eighty real estate offices in Phoenix.<sup>80</sup>

Subdivision speculation was a major economic activity in early Phoenix and there was much profit to be made through the purchase, holding, resale, subdivision, and parceling out of land. Agricultural land was bought, held, and later resold as the urban area grew near. As

<sup>79</sup> Geoffrey Padraic Mawn, “Phoenix, Arizona,” 189-191.

<sup>80</sup> Brad and Barbara Luckingham, *Discovering Greater Phoenix*, 25-26.

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the hinterland became more accessible through improved transportation such as streetcars and later automobiles, the land was again subdivided for higher residential density.<sup>81</sup>

### *Early Phoenix Streetscapes*

During its first three decades, the streetscapes of Phoenix were practically identical unpaved streets, lined with ditches and cottonwood trees. Adobe had been the main construction material and residential and commercial buildings were interspersed throughout the original townsite. With the arrival of the train, new building materials were more affordable and readily available. The railroad also brought new vegetation that Phoenix citizens adopted for their residential lots. The streetcar provided mobility and people began to live away from their workplace, creating an early system of gentrification. Brick buildings became the standard in the business district after fires in 1885 and 1886.

At the turn of the twentieth century, Victorian was the popular style of residential architecture and the streetscape reflected that style. The Victorian yard was fenced and gated and contained a garden, exotic plants such as annual and perennial flowers, palms, and Bermuda grass. Ornamental plantings first made their appearance in the planting of Arizona ash, California pepper, chinaberry, and mulberry trees and fan palms, which were imported to the area via the railroad.<sup>82</sup>

The advent of the automobile and the evolution from land speculator to land developer significantly changed the patterns of land subdivision. Residential lots became somewhat standardized and slightly larger in response to the market demands of a substantial middleclass population. Housing lot designs incorporated space for automobiles, parks shifted from central plazas to recreation-oriented neighborhood parks, and local retail stores, corner markets, gas stations, and schools became integral parts of subdivision planning, as did public right-of-ways for utilities. The streetscape also reflected these changes. Close to the downtown core, sidewalks and curbs heralded the introduction of the automobile and in some neighborhoods preceded it, hence the lack of cutouts for driveways. One-piece concrete curb and gutter combinations became a standard and were used both as a barrier to keep automobiles on the street and to facilitate street drainage. Early driveways, when installed, had narrow, rectangular cutouts and planting strips were common, separating the pedestrian from the roadway, providing aesthetics and safety (see figure 14).<sup>83</sup>

In the 1900s, the bungalow became a popular style of architecture, and builders such as Home Builders, Inc. constructed houses on improved lots and offered loans on easy terms. Home Builders also built duplexes as owner occupied investment properties. The streetscape changed with Victorian homes, giving way to smaller, affordable bungalows. Electricity became a standard feature, as did water and sewer. Industry and warehouses

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<sup>81</sup> Robert G. Graham, "Woodland Historic District."

<sup>82</sup> Robert Weworski, "Residential Landscape in Phoenix, Arizona: Past, Present, Future," MA thesis, Arizona State University, 1999, 17, 23, 26.

<sup>83</sup> Robert G. Graham, National Register Nomination of Woodland Historic District, 8.3.

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moved closer to the tracks and businesses stayed close to the commercial district, which was evolving into the urban core. By the 1920s, Phoenix had skyscrapers downtown (see figure 15), warehouses and light industry near the tracks, and houses being built in new subdivisions adjacent to the city.<sup>84</sup>



**Figure 14. 2nd Street and Roosevelt, circa 1920.** Courtesy of Ron Heberlee.



**Figure 15. Central Avenue, circa 1930.** Courtesy of Mark Hughes.

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<sup>84</sup> *Historic Homes of Phoenix: An Architectural & Preservation Guide* (Phoenix: City of Phoenix, 1992) 45-47.

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## Changes in Urban and Suburban Development

While builders and boosters promoted their development schemes another urban tradition was emerging, a way in which urban land use could be determined scientifically — planning. Initially city planning seemed controversial because it contradicted the deeply held idea of private property ownership; yet, it was slowly and stealthily moving into developers' designs for their subdivisions. Since the 1880s, in an attempt to attract people of preferred socio-economic and ethnic groups, Phoenix developers had been including clauses, covenants, and deed restrictions in their subdivisions. Some of these were as simple as deeding the streets as public highways. Others were more involved, limiting the types of the vehicles allowed on the streets and delineating right-of-ways for parks and utilities. Still others restricted what could be built on specific lots, and because of the racist attitudes of the time, who could live there.<sup>85</sup>

At the turn of the century, the streetcar line expanded the city well beyond the original townsite, opening up new areas for speculation and development. Streetcars created linear urban expansion, with residential developments placing homes within walking distance of the line. The automobile changed this paradigm, and with paved roads reaching further from the city core, created early infill. Developers such as Dwight B. Heard were in the right place at the right time, creating subdivisions a short walking or driving distance to the city, and later further out. The commonality of these subdivisions was the list of amenities. Heard's Central Park Place, located just south of downtown in 1910, offered "reasonable" building restrictions, six-inch water mains, cement sidewalks, gas, electricity, and was "within easy walking distance of the city center." Likewise, fifty lots in the Capitol Addition were being developed by E. J. Bennitt and Co. and were selling for \$475 and up. Bennitt and Co. also offered amenities such as access to the streetcar line, new schools, wide streets and cement walks. A completed six-room house was priced for less than \$4,000.<sup>86</sup>

Heard was also involved in developing land north of the city. His upscale Los Olivos subdivision (located between Central Avenue and 7<sup>th</sup> Street, McDowell Road and Oak Street) was surveyed and platted in 1906. It contained thirty-two, five-acre lots and Heard lined its streets with palm and olive trees. However, like many of Phoenix's early subdivisions, limited sales created by market demands caused Heard to subdivide it numerous times between 1909 and 1919. Consequently, the area did not begin filling in until the late 1920s and early 1930s. Opposite Central Avenue, other developers went through similar stages of development and in the process also lined their streets with palms until the stately desert plants became ubiquitous assets to the early twentieth century streetscape in Phoenix.<sup>87</sup>

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<sup>85</sup> Raymond A. Mohl, *The New City*, 73; "Collins Addition," *Book of Maps*, 1:11; "North Grand Avenue Addition," *Book of Maps*, 1:23; "North Capitol Addition," *Book of Maps*, 2:25; *Encanto: The Enchanted* (n.p., n.d), 3, State Historic Preservation Office.

<sup>86</sup> *Arizona Republican*, 21 January 1912.

<sup>87</sup> *Central Phoenix/East Valley Light Rail Project: Historical, Archeological, and Traditional Cultural Resources Technical Report* (Phoenix: Regional Public Transportation Authority, 2002), 2: D-9;

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## Aesthetic Movements

As neighborhoods evolved, they were affected by various city aesthetic movements taking place nationally. The Parks Movement (1830-1920) grew from the aesthetic tradition of idealizing the rural past that transformed middle class tastes from the inner city to suburban homes on detached lots. Derived from the romantic English landscape architecture of the early nineteenth century, the movement emphasized irregular, curvilinear shapes, which supposedly imitated nature. Scenery was preferred to nature and nature was viewed as scenery. Andrew Jackson Downing, America's first landscape architect, introduced these concepts in his *Horticulturist* magazine in the 1830s and 1840s.<sup>88</sup>

The movement also promoted the creation or preservation of open space for public use. In the wilderness, this meant creating national parks such as Yellowstone and the Grand Canyon. In cities, however, it meant the development of parks within the city which would provide an antidote to the accelerated pace of urban life. Between 1865 and 1910, many supported the Parks Movement in the belief that open space and trees had therapeutic as well as aesthetic value. Consequently, parks were created that ranged in size and scope from small lots to large-scale projects such as Frederick Law Olmstead's Central Park in New York City and Horace S. W. Cleveland's Grand Rounds in Minneapolis. While the idea of planting cottonwood trees along Phoenix's streets by early city pioneers may have been more from necessity than aesthetics, the later introduction of parks into subdivisions, such as Neahr's Addition and Central Park Place (bounded by approximately Sherman Street and Buckeye Road, and Central Avenue and 3<sup>rd</sup> Street), and the introduction of palms trees to the streetscape in 1890 by early subdivision speculators, assisted in showcasing Phoenix as an oasis in the desert.<sup>89</sup>

The city made no prerequisites of parks as part of its subdivision annexation requirements and, with the exception of public plazas intended for city and county government, parks were absent within the original townsite, which became the city core. Early residential urban and suburban design was performed by subdividers and land speculators, who only considered parks as an amenity and not a requirement. Planting strips were in place on early plats such as Evergreen Place (see figure 16).<sup>90</sup>

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"Latham Addition," *Book of Maps*, 2:83; "Los Olivos," *Book of Maps*, 3:17; "Los Olivos Amended," *Book of Maps*, 4: 2; "Chalmer's Place," *Book of Maps*, 4: 5; "Las Palmas," *Book of Maps*, 4:15; "West Baltimore Heights," *Book of Maps*, 4: 31; "Thompson Place," *Book of Maps*, 4:37; "Los Olivos Subdivided," *Book of Maps*, 4:67; "Ashland Place," *Book of Maps*, 9:11.

<sup>88</sup> Carol A. Christensen, *The American Garden City and the New Towns Movement*, 31.

<sup>89</sup> *Ibid.*; Marianta J. Sokal, "From Wasteland to Oasis: Promotional Images of Arizona, 1870-1912," *Journal of Arizona History*, 34:4 (Winter, 1993), 372-373; Rutheford H. Platt, *Land Use and Society: Geography, Law, and Public Policy* (Washington: Island Press, 2004), 132; *Phoenix Herald* 25 February 1890; Clay McShane, *Down the Asphalt Path*, 31-32; "Central Park Place," *Book of Roads*, 4:41.

<sup>90</sup> James Woodward and Kathleen Palmer, *City of Phoenix Historical-Architectural Resource Survey of the Government Mall-Capitol-Longview Redevelopment Areas* (Phoenix: Janus Associates, Inc., 1987), 20; "Evergreen Place," *Book of Maps*, 3:15;

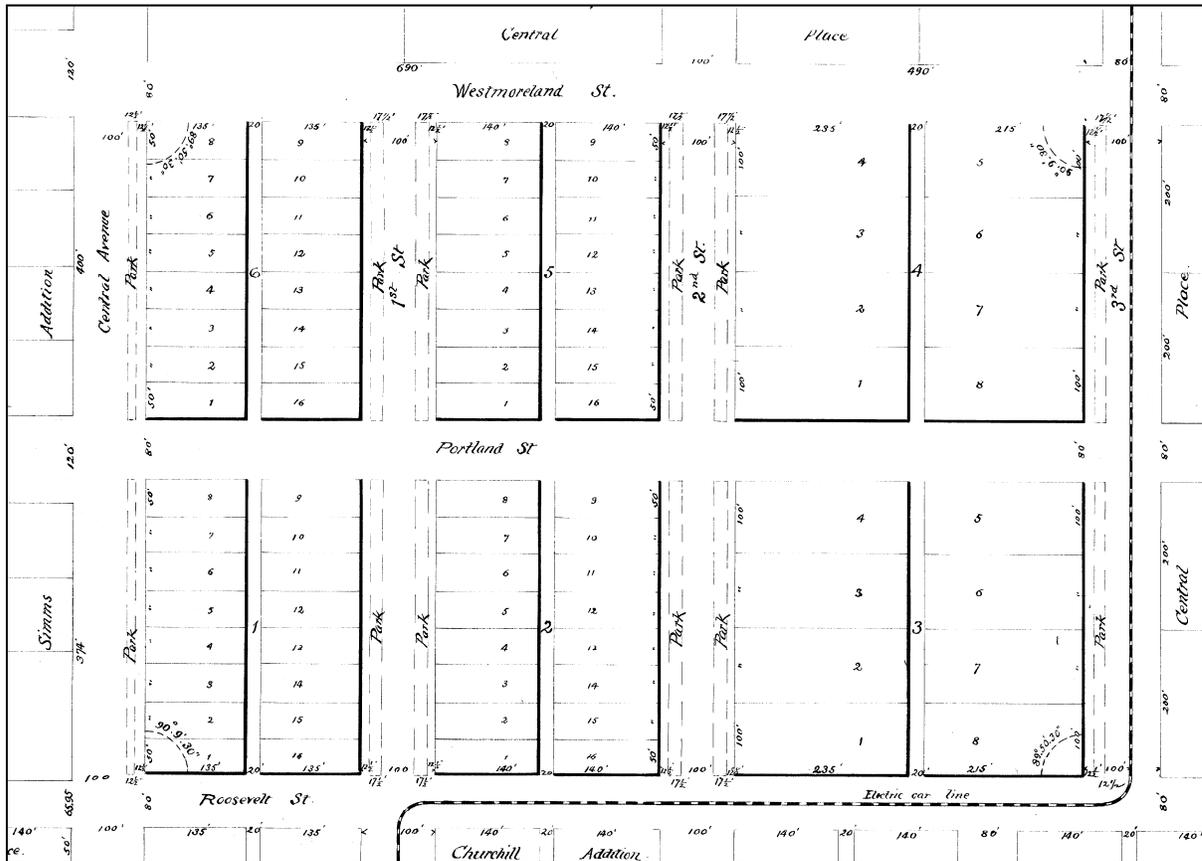


Figure 16. Evergreen Place. Courtesy of the Maricopa County Recorder's Office.

Other subdivisions were perhaps influenced by the Garden City Movement, an early twentieth century approach to urban design in which the suburban area was a planned, self-contained community, with carefully balanced residential, agricultural, and industrial areas, surrounded by a greenbelt. While no community in Phoenix evolved in precisely such a manner, early subdivisions, such as the Neahr's Addition, Orangewood, and Ingleside, contained such Garden City elements as large, multi-acre lots, tree-lined streets, and large personal gardens and orchards. In the case of Orangewood, the developer W. J. Murphy planted ash trees along Central Avenue around the turn of the twentieth century to attract wealthy buyers who would raise citrus orchards as an avocation (see figure 17). In the 1930s, federal programs promoted partial agricultural self-sufficiency in large-lot subdivisions such as the Phoenix Homesteads. In that same decade, the city became active in the planning and development of municipal parks.<sup>91</sup>

An attempt at integrating urban expansion and real estate promotion with City Beautiful principals was the planned Las Palmas subdivision. Planned by William J. Rainey and Jesse

<sup>91</sup> "Orangewood," *Book of Maps*, 2:50; "Map of Neahr's Addition to Phoenix," *Book of Maps*, 1:33; "Ingleside," *Book of Maps*, 3:51; William S. Collins, *The New Deal in Arizona* (Phoenix: Arizona State Parks Board, 1999), 339; "Phoenix Homestead Tract 1," *Book of Maps*, 29:7.

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Hoyt Smith, cousins from the Midwest, the idea for Las Palmas was based on developments back home and in California. Enlisting the assistance of Boston landscape gardener Ernest W. Bowditch, Rainey and Smith planned a residential suburb four miles north of Phoenix, in Section 22, Township 2 North 3 East (bounded by 16<sup>th</sup> and 24<sup>th</sup> streets, Indian School and Camelback roads). Their community design had wide, curved, tree-lined boulevards, a central park, and oversized lots providing room for barns, gardens, and orchards. Unfortunately, the plan never amounted to more than a design and the partnership collapsed amid lawsuits. Though some real estate projects were more successful, such as Simms' Addition and its included privately owned parks within the roadway, the real attempt at implementing City Beautiful into Phoenix came in 1921 when the city chose the firm Bennett, Parsons, and Frost to prepare a city plan for Phoenix.<sup>92</sup>



**Figure 17. Central Avenue in Orangewood, circa 1915.** Courtesy of the Arizona Historical Foundation.

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<sup>92</sup>Geoffrey Padraic Mawn, "Phoenix, Arizona," 192; *Book of Miscellaneous*, 13:274 and 15:250; "Simm's Addition", *Book of Maps*, 2:27; Bradford Luckingham, *Phoenix*, 39-40.

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## Chapter 3 – City Planning, Federal Guidelines, and Urban Expansion, 1930-2000

### The Genesis of Phoenix City Planning

In 1920, the Phoenix Chamber of Commerce's Civic Committee proposed that Phoenix create a city planning commission and provided a list of tasks so the new commission could begin the process of planning. This list included selecting the location of a new armory building, creating new parks and playgrounds, reorganizing the streetcar system, a new landing field for airplanes, a union station, and a manufacturing district. To do so, they needed an expert and Edward H. Bennett fit the role perfectly. Bennett, a graduate of the *École des Beaux-Arts* in Paris, had assisted Daniel Burnham in creating the *Chicago Plan* in 1909—the first comprehensive plan created for an American city and the basis for plans in Minneapolis, Denver, Seattle, and Kansas City. Burnham and Olmstead designed the World Exposition in Chicago in 1893, which gave form to the City Beautiful ideas of the time. The *Chicago Plan*, with its provisions for parks and parkways, tied together the suburbs and the downtown area.<sup>93</sup> According to Princeton professor M. Christine Boyer, “The architects and landscape designers laid down a system of circumferential parkways, lakeshore drives, and local community parks threaded across the plains of Illinois.”<sup>94</sup>

The elements of the 1921 *Plan of Phoenix* included an administration and a community center, a principal avenue at the city core, parks, expanded state capitol grounds, an improved street system and railroads, and a new Union Station. The plan placed the administrative and community centers north of Van Buren Street at 3<sup>rd</sup> Avenue and 3<sup>rd</sup> Street, respectively, and connected by a mall along Taylor Street (see figure 18). The mall would have gardens, lagoons, pools, and fountains. Envisioning future city expansion, the plan also suggested parks of various sizes and shapes spread throughout the area. Closer to the city core, streets would be enhanced, such as an 18<sup>th</sup> Avenue “highway” connecting the capitol to the fairgrounds, the widening of 3<sup>rd</sup> Street and 3<sup>rd</sup> Avenue to create boulevards from the business center (downtown) and 7<sup>th</sup> Street, 7<sup>th</sup> Avenue, and Jefferson Street to create main arteries through the city. City streets would be divided into two types, passenger and general, which included commercial and truck traffic. This would place the heavier truck traffic on its own system, thereby placing the wear and tear on specific roads, and limiting it on others.<sup>95</sup>

The aesthetic portions of the *Plan of Phoenix* never came to fruition. The majority of components that did were from the same recommendations the Chamber of Commerce Civic Committee made in 1920. The Union Station was built in 1923, between 4<sup>th</sup> and 5<sup>th</sup>

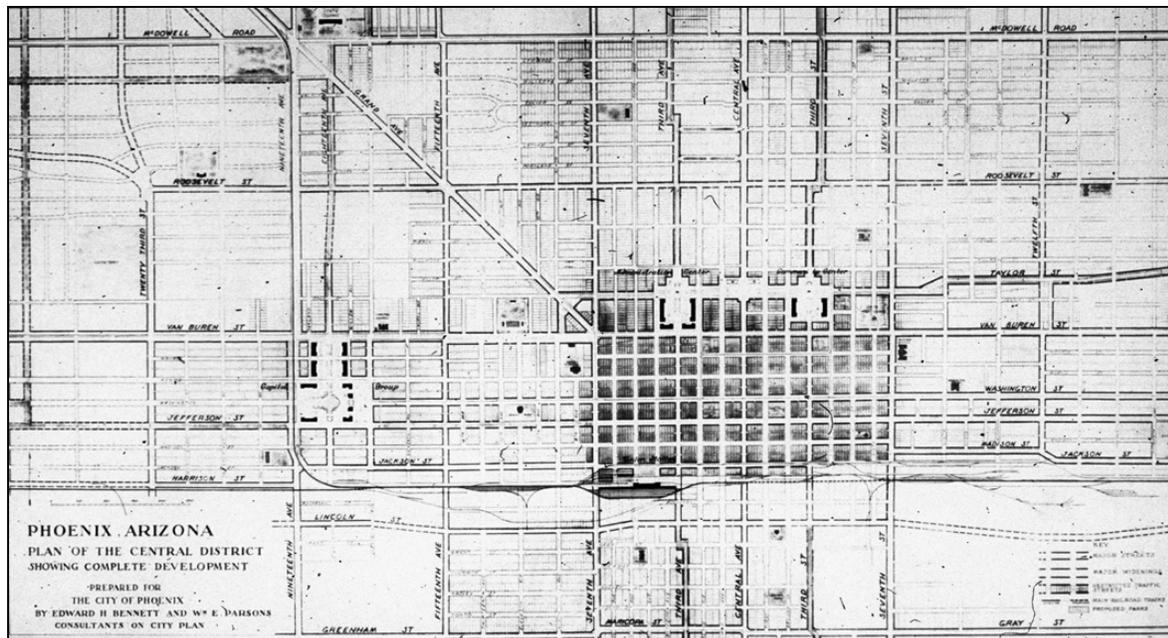
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<sup>93</sup> David J. Alameddin, “Comparing the 1909 Plan of Chicago and the 1921 Plan of Phoenix,” MEP Thesis, ASU, May 2004., 1, 9; Larissa Larsen and David Alameddin, “The Evolution of Early Phoenix,” 102-103.

<sup>94</sup> M. Christine Boyer, *Dreaming the Rational City: The Myth of American City Planning* (Cambridge: MIT Press, 1983), 40.

<sup>95</sup> David J. Alameddin, “Comparing the 1909 Plan of Chicago and the 1921 Plan of Phoenix,” 23-28; “North Capitol Addition,” *Book of Maps*, 2:25.

avenues, combining the stations of the Santa Fe and Southern Pacific railroads, though without the plan's envisioned plaza. The city and county built an administrative center in 1929, but without the community center and the opulent mall. Phoenix Sky Harbor also opened in 1929. Parks were built, but they paled in comparison to those visualized by Bennett and Parsons. What the plan offered, and the city eventually implemented, was a guide for zoning and future planning. While it did not accommodate the post WWII boom, and was not executed with success of the *Chicago Plan*, it did lay the groundwork for the city's zoning ordinances and related legislation.<sup>96</sup>



**Figure 18. The City of Phoenix Central District.** From Edward H. Bennett, *The Plan of Phoenix: A Report to the Mayor, the City Commission and the Plan Commission*, ca. 1921.

Prior to the *Plan of Phoenix*, Phoenix's earliest efforts at city planning involved limited and reactive government oversight. Fires in 1885 and 1886 led the city to pass ordinances excluding wood frame construction in the business district. Around the same time, other ordinances required the removal of livery stables and light industry to the edges of the city. However, the majority of the work performed by the Common Council, especially in the early decades of the twentieth century, related to urban expansion and infrastructure improvements. The city mandated the grade of streets and sidewalks in 1886, and gutter requirements the following year. Ordinances for sidewalk paving materials came as early as 1895, but standards did not arrive until over a decade later. For the most part, building requirements were limited to the business district, the rest being very lax, with the only requirement being a connection to the city sewer system.<sup>97</sup>

<sup>96</sup> David J. Alameddin, "Comparing the 1909 Plan of Chicago and the 1921 Plan of Phoenix," 31-33.

<sup>97</sup> *Historic Phoenix Commercial Properties Survey*, 18-19; *Common Council Ordinance 50*, 1 February 1886; *Common Council Ordinance 57*, 9 March 1887; *Common Council Ordinance 602*, 26 May 1913.

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Until the 1930s, with no public regulation of land use, urban planning was accomplished through the efforts of the real estate and home construction industry in an effort to protect property values. Land developers and builders set standards for house size as a function of construction costs, required common setbacks and stipulated the location of garages on the lot, and sometimes guided the style of house design. Deed restrictions, utility installations, housing design recommendations, amenities such as sidewalks, curbs, paved streets, and planting strips with trees and palms were all incentives offered by developers to entice potential buyers to their subdivisions. Subdividers such as Dwight B. Heard, H. I. Latham, William G. Hartranft, Gordon Tweed, James S. Griffin, and R. H. Greene evolved as developers. Heard began with his Los Olivos subdivision, which he continued to change over time, subdividing into smaller lots and creating new subdivisions. Likewise with Latham, whose Latham Place (north of Moreland Street to McDowell Road, 3<sup>rd</sup> to Central Avenues) and Latham's Addition (McDowell Road to Palm Lane, 3<sup>rd</sup> to Central Avenues) became Chelsea Place and North Chelsea, respectively, with the assistance of Hartranft and Tweed. This trio also partnered on the Kenilworth subdivision (Roosevelt Street to McDowell Road, 3<sup>rd</sup> to 7<sup>th</sup> avenues and includes Kenilworth Place and North Kenilworth Place). Griffin and Greene created Home Builders, a company which developed subdivisions such as Ashland Place, and sold real estate and built homes. Later Heard and Hartranft partnered on the Palmcroft subdivisions, deviating from the grid system with curvilinear streets. Grocery magnates Lloyd C. Lakin and George C. Peter attempted to copy and improve on Palmcroft with their adjacent Encanto subdivision, which used state-of-the-art rolled curbs allowing flexible positioning of homes on the lots. In all of these endeavors, and many others, the developers included signature trees, such as ash and olive, or palms in planting strips. The palm was so widely used, especially by Heard and Hartranft, that it became a distinguishing feature citywide (see figure 19).<sup>98</sup>

With an infrastructure in place, the new subdivisions were ripe for annexation. In the areas developed for middle and upper class, such as Kenilworth and Palmcroft, the streets were graded or paved usually with concrete since the sewer lines and were already in place. In other less affluent subdivisions, such as the Coronado neighborhood, the streets and sidewalks had yet to be installed. Hoping to improve management of the ever-expanding city, the council reorganized in 1913. Legislation passed during the years 1925 through 1927 allowed the city to create zoning overlays and to create a city planning commission. Even with the enabling legislation in and city planning commission, it was not until 1930 that the city passed an ordinance creating its first zoning regulations — districts created based on land use. Residence 'A' were single-family districts, Residence 'B' were two family or duplex districts, and Residence 'C' were general residence districts. Business 'A' were neighborhood business districts, Business 'B' were general business districts, Industrial 'A' were light manufacturing districts and restricted industrial districts, and Industrial 'B' were

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<sup>98</sup> James Woodward, National Register of Historic Places, "Willo Historic District," 1990; "Los Olivos," *Book of Maps*, 3:17 and 4:2; "Latham Place," *Book of Maps*, 3:18; "Las Palmas," *Book of Maps*, 4:15; "Kenilworth Place," *Book of Maps*, 4:43 and 4:48; "Chelsea Place," *Book of Maps*, 5:24; "North Kenilworth Place," *Book of Maps*, 5:37 and 6:10; "Latham Addition," *Book of Maps*, 8:2; "Kenilworth," *Book of Maps*, 8:39; "North Chelsea," *Book of Maps*, 9:29; *Book of Articles of Incorporation*, 59:348-350 and 90:273-275.

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general industrial districts. Zoning was supported by the local real estate industry since it provided stability to property values.<sup>99</sup>



**Figure 19. Palm Lane at 7th Street in the Los Olivos subdivision, circa 1930.** Courtesy of Mark Hughes.

In 1935, the council introduced citywide building codes, with classifications for buildings, a building inspector's office, permitting process, and other rules and regulations for construction or alteration of buildings and structures within the city. Two years later, the city enacted a traffic ordinance, based on the new statewide universal traffic ordinance model, defining Phoenix's through streets (Central and 7<sup>th</sup> avenues, 7<sup>th</sup>, Van Buren, Jefferson, and Roosevelt streets, and McDowell Road) and providing for traffic lights and street lanes. The new ordinance also provided for the operation and maintenance of vehicles, pedestrian rights, and introduced one-way streets (Moreland and Portland streets, north and south of the islands, and west on Jackson between 7<sup>th</sup> and 18<sup>th</sup> avenues). In 1941, the zoning ordinances were amended to allow commercial development and apartment houses along major thoroughfares. With these three ordinances in place, the city of Phoenix gained control of city planning and the future development of the streetscape.<sup>100</sup>

### Federal Influence

Urban expansion boomed in Phoenix, until the 1930s when the city began to feel the effects of the Great Depression, especially between 1931 and 1935, when development all but ceased in the Phoenix area. From 1933 through 1941, Arizona was able to acquire huge expenditures of public funds from New Deal federal agencies such as the Emergency Relief Agency (ERA), the Civil Works Agency (CWA), and particularly the Works Progress Administration/Works Projects Administration (WPA). These funds sponsored construction of schools, parks, playgrounds, government buildings, as well as highways and bridges. During the years 1934-1935 the CWA and the ERA widened Buckeye Road (US 80).

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<sup>99</sup> Ordinance 1564, 25 June 1930.

<sup>100</sup> Ordinance 6205, 13 July 1935; Ordinance 2570, 21 December 1937; James Woodward, "Willo Historic District."

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Between 1935 and 1940, the Works Progress Administration had an extensive program of widening, surfacing, and otherwise improving 1,000 blocks of city streets such as: repaving Washington Street from 5<sup>th</sup> Street to 16<sup>th</sup> Avenue; widening and repaving McDowell Road in the vicinity of Central Avenue; widening and surfacing five miles of Central Avenue from the Salt River Bridge to South Mountain Park; widening and installing sidewalks, curbs, and gutters to Van Buren Street between 16<sup>th</sup> Street and the Tempe Bridge; and surfacing roadways from Camelback Road to the Salt River. They also excavated twenty-eight miles of ditches along roadways; installed eighty miles of sidewalks, fifty-eight miles of curbs, five miles of gutters, and 262 miles of roadside “landscaping and beautification;” and removed over a thousand trees and stumps from streetscapes primarily in the areas between Phoenix and Glendale and Phoenix and Tempe. The WPA also planted hundreds of trees and plants along Van Buren Street between Phoenix and the Tempe bridge including 380 palms and a like number of orange trees, as well as 1,800 privets planted as a hedge in front of the state hospital.<sup>101</sup>

By 1935, the federal government was the largest employer in Maricopa County and, within two years, was putting over \$10 million annually into the local economy. The economic effect of the New Deal programs eventually spurred new activity in residential development, which was further enhanced by the Federal Housing Administration (FHA). Created by the National Housing Act of 1934, the FHA insured loans offered federal mortgage insurance to developers and builders and long-term, low-interest loans to potential homebuyers. This led to what historical architect Jim Woodward referred to as “sweeping changes in house design, construction standards, subdivision planning, and the overall character of Phoenix’s twentieth century urban environment.”<sup>102</sup>

In the FHA philosophy, subdivisions planned as neighborhoods were more profitable to developers, provided better economic security for investors, and were more desirable to homeowners. A perfect example of this is the first large-scale subdivision to incorporate fully FHA concepts in Phoenix: Womack Heights, a subdivision of forty-eight lots. The homes were built on speculation, FHA approved, and successfully sold out within a year and a half of completion.<sup>103</sup>

The FHA standards that affected Phoenix neighborhood streetscapes included: the widths of the public right-of-way and the paved roadway within it; driveway apron flairs and width and thickness of sidewalks (which were optional depending on the street size and traffic); planting strips and street trees. There were regulations for the installation of utilities and size of blocks, lots, and setbacks; and sometimes the style of residential architecture and

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<sup>101</sup> James Woodward, “Willo Historic District; *Summary of Inventory of Physical Accomplishments by the Works Projects Administration: from July 1 1935 to January 1, 1940* (Phoenix; Federal Works Agency, 1940), 21-22; *Report, Work Division Activities: April 1, 1934 to July 1, 1935 / Emergency Relief Administration* (Phoenix: Emergency Relief Administration of Arizona, Work Division, 1935), 7-8; *Outstanding Projects of Arizona, C.W.A, E.R.A.* (Phoenix: Emergency Relief Administration of Arizona, 1935), 1:6; *Works Progress in Arizona*, 1 (1936) 6.

<sup>102</sup> James Woodward, “Willo Historic District; William S. Collins, *The New Deal in Arizona*, 362-363.”

<sup>103</sup> Robert Weworski, “Residential Landscape in Phoenix, Arizona,” 54; “Womack Heights,” *Book of Maps*, 26:17.

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placement of street trees. The guidelines also promoted the idea that street grade and drainage be dealt with during the planning stage of development.<sup>104</sup>

FHA planners advised developers to locate their projects next to established neighborhoods, which would insure neighborhood stability by assuring access to public transportation, schools, shopping, and recreational areas. They differentiated between platted subdivisions and neighborhoods, with the latter including shopping, churches, schools, and parks. According to landscape architects Cynthia L. Girling and Kenneth I. Helphand:

The importance of distinctive neighborhood qualities lies not only in the initial appeal which is so vital a factor in marketing the development, nor in the increased security which derives from the safeguards created by careful planning, but also in the psychological reaction of the people who adopt the area for their home. Where a neighborhood can be identified and comprehended as such, the feeling of pride and responsibility, which the owner has in his own parcel, tends to be extended to the neighborhood as a whole.<sup>105</sup>

The FHA provided security to both borrowers and lenders by: lowering mortgage financing to make homeownership more affordable; standardizing appraisal methods to develop the mortgage market from a mix of local markets to an integrated national market; and providing the federal government with a flexible way of intervening in the housing market. Financing programs created by the FHA, and later the Veterans Administration (VA), in combination with increased visibility paid to new home construction by popular magazines, architects, and manufacturers fueled an immense increase in American home building. The federal government adopted design and construction standards as part of its plan to reduce costs and standardize construction practices. It also created mortgages to be affordable to as many Americans as possible. In order for the programs to work, developers needed to design houses that were simple, efficient, easy to build in large numbers, and suited to automobile-oriented suburbs.<sup>106</sup>

The final component was the in the regulatory environment, where zoning laws and subdivision ordinances provided the perfect legal mechanism. Zoning of previously developed lands typically reinforced existing land use patterns, protecting the property values of residential areas by preventing nonconforming uses such as industry, high-density housing, and commerce. Zoning of soon-to-be developed lands designated great sectors of the urban fringe landscape for future uses, predominantly single-family housing. Commercial zoning would typically line roadways, blossoming at major intersections to provide sites for

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<sup>104</sup> William S. Collins, *The New Deal in Arizona*, 362-363; *Land Planning Bulletin 3-03: Neighborhood Standards for Arizona* (Washington: Federal Housing Authority, 1958), 60-A, 60-B, 60-C.

<sup>105</sup> Cynthia L. Girling and Kenneth I. Helphand, *Yard, Street, Park: The Design of Suburban Open Space* (New York: John Wiley and Sons, Inc., 1994), 86.

<sup>106</sup> William S. Collins, *The New Deal in Arizona*, 365; Grady Gammage, Jr., *Phoenix in Perspective: Reflections on Developing the Desert* (Tempe: Herberger Center for Design Excellence, College of Architecture and Environmental Design, Arizona State University, 1999), 42.

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shopping centers, whereas industry would be located on less attractive sites near freeways and railroads.<sup>107</sup>

By demanding that housing to meet certain specifications, the FHA altered the materials and design of individual houses. When home design became geared towards mass marketing and manufacturing, the FHA looked toward influencing neighborhood planning, moving away from influencing individual designs into the broader concept of a house's relationship to others within the neighborhood. Likewise, the streetscape needed to present the appearance of uniformity and design continuity to preserve property values.<sup>108</sup> According to real estate attorney Grady Gammage, Jr.:

This planning concept was a continuation of the efforts of the FHA to standardize building practices and to reduce costs. It was also indicative of the shift that occurred in the role of the developer from land subdivider to community builder. In order to maintain support for a development, (Phoenix) builders began to construct standardized homes that adhered to the construction and livability requirements of the FHA and incorporated covenants to ensure neighborhood consistency and uniformity.<sup>109</sup>

The FHA Minimum Property Standards were often more detailed and sometimes more restrictive than local ordinances. Their guidelines promoted a streetscape style, either a continuous curvilinear, which was a modified gridiron, or loops and cul-de-sacs. The net result during the 1950s and 1960s was that the model for subdivision design was generally adhered to, with adjustments for local conditions such as wider streets, reduction or elimination of parks and open space, or the removal of sidewalks. A direct comparison of the design principles transmitted in FHA manuals with typical subdivisions of the early 1950s and 1960s, such as *Planning Neighborhoods for Small Houses* and *Planning Profitable Neighborhoods*, shows that the ideal suburban neighborhood that the FHA promoted had a significant impact on subdivision designs. Both books contained principles, diagrams, plans, and photographs of both good and bad community design.<sup>110</sup>

After 1938, developers requested prequalification of their subdivisions to appease buyers that the homes would be FHA approved. In response, FHA planners offered free advice on improving subdivision plans according to their model. For Phoenix streetscapes, comprehensive instructions were included in the FHA's *Land Planning Bulletin 3-03: Neighborhood Standards for Arizona*. With adherence to this advice and FHA building codes, the developers could receive a conditional commitment, which then assisted in financing projects. Collectively, the efforts of the FHA influenced all levels of the American housing market, from affecting the design of the individual house to creating significant changes in large-scale residential development designs, which therefore directed city

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<sup>107</sup> Cynthia L. Girling and Kenneth I. Helphand, *Yard, Street, Park*, 83-84.

<sup>108</sup> William S. Collins, *The New Deal in Arizona*, 365.

<sup>109</sup> Grady Gammage, Jr., *Phoenix in Perspective*, 44.

<sup>110</sup> Cynthia L. Girling and Kenneth I. Helphand, *Yard, Street, Park*, 85.

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expansion and established the patterns of subdivision development that would characterize post-World War II Phoenix's urban sprawl.<sup>111</sup>

## Suburban Growth

The greatest boom to occur in Phoenix building was immediately after World War II when returning soldiers, tourists, and industrial workers decided to make Phoenix their home. The huge influx of newcomers caused a housing shortage that also stimulated changes in land development practices and permanently altered Phoenix's housing strategy. The new standard was to mass-produce homes to accommodate the high demand. Prior to World War II, developers were generally not builders; instead, they sold lots directly to private citizens for home sites or to house builders who served both the speculative market and homeowners. Some developers installed services and streets, while others sold only raw lots.

Following the Depression and World War II, the demand for new housing was huge, creating a market for a new class of developers and builders. With the assistance of federal insured mortgages, many developers and builders had an opportunity to both subdivide and build whole subdivisions, while the larger and more established developers took on the development of entire communities. Community developers became commonplace and created huge developments by accumulating parcels of land, subdividing the land for sale to homeowners or builders, installing the infrastructure, landscaping parks and right-of-ways, dedicating school sites, and building shopping centers. As an added service, many offered to finance homes or to assist potential buyers in securing financing.<sup>112</sup>

By 1950, it was apparent that the preferred solution to urban issues was to attract young families to suburban areas. Federal housing, urban renewal, and highway-building programs worked together to replace substandard housing in central city areas with new housing in the urban periphery. Developers, builders, and buyers considered the federal mortgage insurance program as mutually beneficial. By choice, developers and builders could comply with federal standards and qualify their homes for assistance. Prospective buyers then received quality assurance in both homes and neighborhoods in addition to the opportunity to obtain low-interest loans. Also aided by the promise of low-interest federal loans, builders rapidly erected single-family detached houses in new subdivisions, with homes selling as quickly as they were built.<sup>113</sup>

While parks were encouraged as community assets, the concept of public open space as a community network was consistently overlooked. FHA approved "parks" were most often isolated parcels or leftover corners and while guidelines mentioned the Radburn Plan (safety and community vitality through a spine of interconnecting parkland), the traffic system was deemed more important. This led developers to believe that federal goals for open space

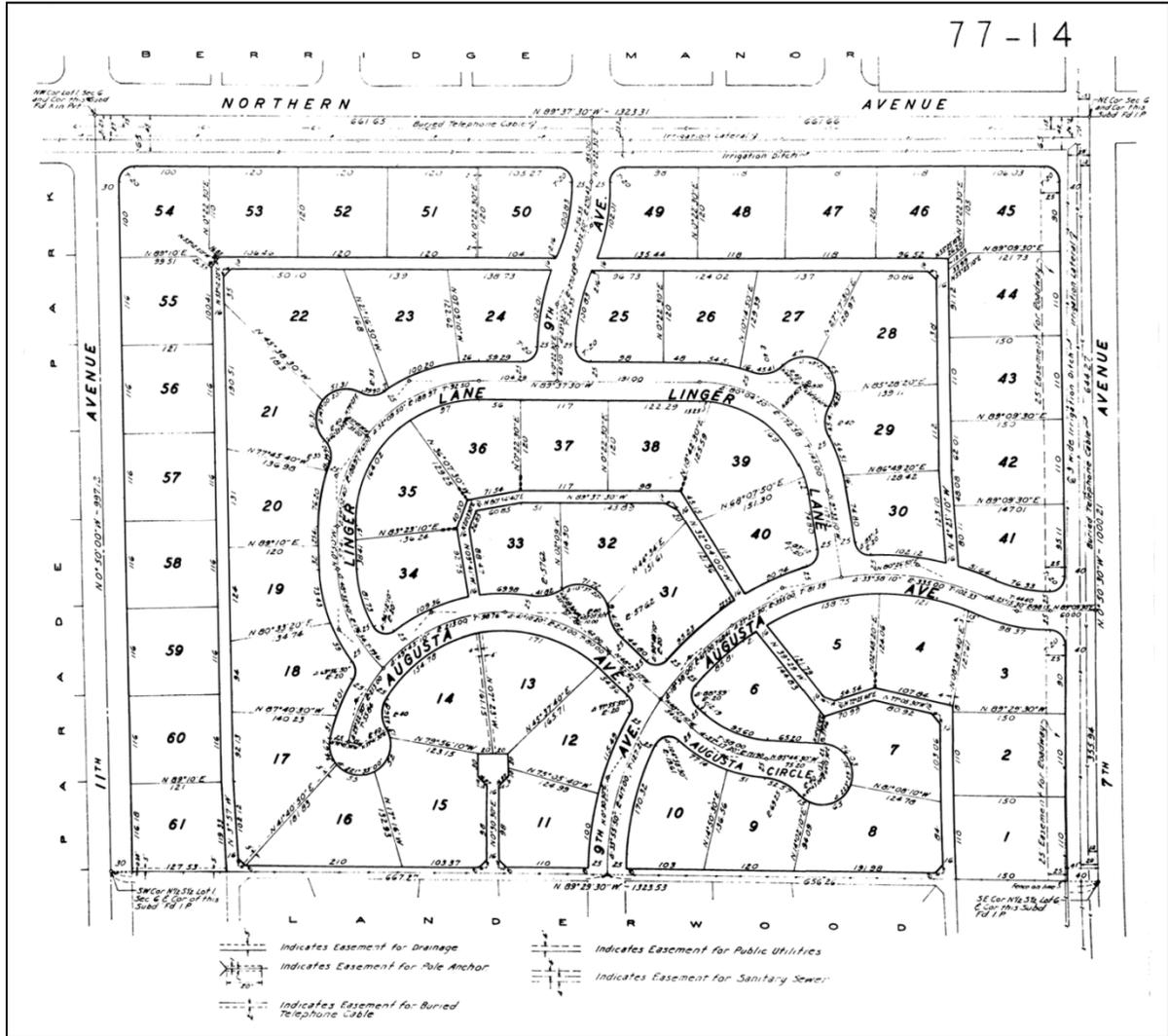
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<sup>111</sup> Ibid.

<sup>112</sup> Robert Weworski, "Residential Landscape in Phoenix, Arizona," 56; Cynthia L. Girling and Kenneth I. Helphand, *Yard, Street, Park*, 83.

<sup>113</sup> Cynthia L. Girling and Kenneth I. Helphand, *Yard, Street, Park*, 83-84.

could be achieved by the spacious design of streets and yards without dedicating extensive lands to public agencies. A park was a community asset, but streets with cul-de-sacs and extra-long blocks provided cost savings and safety. Parks, school sites, and shopping areas were considered by many in the development community as recommended extras rather than as requirements. Local governments, particularly county governments covering large unincorporated suburbs, supported this approach.<sup>114</sup>



**Figure 20. North Vista subdivision.** Platted 1958 and almost completely built out by 1959, this development had laterals and ditches separating the residential lots from traffic on 7th and Northern avenues. These irrigation features were later filled and replaced with a landscaped traffic separation strip. Courtesy of the Maricopa County Recorder’s Office.

In all residential streetscape styles—single family, multi-family, and “country home” suburban—the FHA recommended, “The street improvements should extend continuously from the existing improved street system to provide suitable vehicular and pedestrian access

<sup>114</sup> Ibid., 89.

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to each lot upon which a dwelling is built, to permit adequate connections to existing and future streets at the boundaries of the development and to provide convenient circulation for vehicles.”<sup>115</sup> Planners, local and federal, worried first about the infrastructure, second about residential subdivision zoning, and third about neighborhood amenities and as long as the project was approved by the FHA.<sup>116</sup>

The emphasis of federal guidelines was for residential street layouts to be sensitive to site character and contour and place homes along strictly residential streets. Curving alignments contributed to neighborhood character, unlike gridiron plans, which were criticized as monotonous, costly, and dangerous. The cul-de-sac was given special attention, because it both reduced the size of paved area per lot and the traffic volume, and could service lots on inaccessible parcels (see figure 20). Street right-of-ways were sixty feet for collector streets, fifty feet for minor streets, and forty feet for short culs-de-sac and marginal streets. Blocks size was 600 to 1300 feet long, and 200 to 300 feet wide, with lots fifty to sixty feet wide by 100 to 150 feet deep. Sidewalks were considered important on heavily traveled streets—four feet wide for single family areas, five feet wide in multifamily projects—however, small residential streets could exist without curbs or sidewalks. Developers were also encouraged to provide easily accessible sites for schools, churches, and shopping areas, which were centrally located and linked via neighborhood collector streets. There was also a basic assumption that the ownership of automobiles by most suburban families removed the critical need for certain retail services. Along with most suburban planners and developers, the FHA assumed that highway-related regional shopping centers would adequately serve suburban dwellers; they were right.<sup>117</sup>

## Urban Exodus

The shopping center became an integral part of suburban development. The number of shopping centers in the United States grew exponentially, from 100 in 1950 to 3,700 a decade later. Uptown Plaza on Central Avenue at Camelback Road was one of the first of such complexes in Phoenix, and when it opened in 1955 was billed as the largest single shopping center between Dallas and Los Angeles. Many would soon follow, as Phoenix was ideal for this type of business and retail decentralization. The city’s flat topography and one-mile grid created a simple recipe for urbanization. The intersections of two arterial roads provided perfect locations for dispersed retail shopping centers, gas stations, and other conveniences. A development pattern soon emerged where a residential developer would acquire a quarter section or more of land and subdivide it for houses, withholding a ten-acre parcel on the corner for a shopping center. Once the development filled in, a commercial developer, often with an anchor tenant already committed, would build the shopping center.<sup>118</sup>

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<sup>115</sup> *Land Planning Bulletin 3-03: Neighborhood Standards for Arizona*, 60-A, 60-B, 60-C.

<sup>116</sup> Cynthia L. Girling and Kenneth I. Helphand, *Yard, Street, Park*, 89.

<sup>117</sup> *Ibid.*, 86-88; *Land Planning Bulletin 3-03*, 60-A, 60-B, 60-C.

<sup>118</sup> Grady Gammage, Jr., *Phoenix in Perspective*, 41.

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While the vast majority of postwar residential construction in Phoenix was single-family homes, builders also constructed multi-family dwellings. Beginning in the 1890s, Phoenix had downtown tenements where workers rented small apartments. Small hotels, such as the Steinegger Lodging House and the West End Hotel, offered extended stay arrangements and by the turn of the century, owner occupied duplexes and multiplexes of three or four apartments appeared. Most were one story in a single structure or small complex, but there were a few two-story buildings. The Palmcroft subdivision was possibly the first to allocate an area for commercial and multi-family homes and McDowell Road between Central and Grand/19<sup>th</sup> avenues became an important corridor for small multi-family housing units before and during the Second World War. After the war, large apartment complexes with hundreds of apartments became common. In the 1950s, high-rise luxury projects sprouted up on Central Avenue, offering the well-heeled a convenient way to enjoy central city amenities. Condominiums, which shared many of the architectural features of apartment complexes but were individually owned, also appeared. By the 1960s, townhouses, which offered individual ownership, amenities such as garages, common areas with pools and tennis courts, and landscape maintenance, rounded off the offerings available to meet the residential demand of Phoenix citizens.<sup>119</sup>

While developers were creating attractive and affordable subdivisions, the city was paying close attention to improvement, expansion, and efficiency of city services, which contributed to the city's overall success. Adequate funds from property and sales tax revenues, bonds, and federal funds, in combination with effective management made these improvements possible. During the 1950s, the city built, extended, and paved hundreds of miles of streets and, through a contract with Central Arizona Light & Power (now Arizona Public Service), installed nearly 15,000 street lamps (see figure 21). It negotiated water agreements with Salt River Project, built a filtration plant, and bought out private water companies supplying well water. As it moved into the hinterlands, it also expanded the sewer system and reduced the number of cesspools."<sup>120</sup>

Large-scale industrial operations began moving to the fringes of the city after the war and the city worked closely with the county, who approved subdivisions unincorporated areas the city would soon annex. Phoenix was very interested in attracting industry to the city and for businesses wanting an assured infrastructure for factories and workers, jurisdictional inclusion was sometimes a prerequisite. Developer Andrew Tell saw the potential of converting farmland near the rail and freeway transportation corridors into industrial parks. He created the Central Industrial District at Roosevelt Street and 19<sup>th</sup> Avenue, and the Tell Industrial District at 15<sup>th</sup> Avenue south of Durango Street. Ralph Eaton also entered the industrial park development business, taking advantage of opportunity created when technology firms moved to the valley. He created the Deer Valley Industrial Park, McDowell Industrial District, West Phoenix Industrial Center, and the Airhaven Industrial District, within

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<sup>119</sup> William S. Collins, *The Emerging Metropolis: Phoenix, 1944-1973* (Phoenix: Arizona State Parks Board, 2005), 298-299, 302-303.

<sup>120</sup> Philip VanderMeer, *Phoenix Rising: The Making of a Desert Metropolis*, (Carlsbad, CA: Heritage Media Corporation, 2002), 40; *Ordinance G-6*, 21 August 1951.

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close proximity to Sperry Flight Systems, Motorola, and AiResearch. Residential developers also built near potential workplaces, in areas located on the periphery of the city. All of these developments received services from the county until annexation, which led to broader regional planning and adaptation.<sup>121</sup>



**Figure 21. Central Avenue at Indian School Road, circa 1955.** The streetlamps are “gumball” pendants on an upsweep arm, at the time a Central Arizona Light & Power standard. Courtesy of the Arizona Historical Society.

While providing an expanded tax base, peripheral commercial development was affecting Phoenix’s urban core. At the end of the war, the trend was for new business to locate outside of downtown. Some businesses bucked the trend opening, remodeling, or expanding their downtown establishments, such as Montgomery Ward and Hanny’s department store, while others moved north along Central Avenue. Attempting to bring more

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<sup>121</sup> Richard Walker and Robert Lewis, “Beyond the Crabgrass Frontier: Industry and the Spread of North American Cities, 1850-1950,” *Manufacturing Suburbs: Building Work and Home on the Metropolitan Fringe*, Robert Lewis, ed. (Philadelphia: Temple University Press, 2004), 19; City Council Resolution 10591, 25 October 1960; Zane L. Miller and Patricia M. Melvin, *The Urbanization of Modern America*, 146-147; William S. Collins, *The Emerging Metropolis*, 197-198; “Tell Industrial District,” *Book of Maps*, 55:48.

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business downtown by providing parking, some investors built parking garages downtown. The Park Central shopping center opened in 1956 and longtime downtown retail businesses, including Goldwater's and Diamonds, moved into the new mall (see figure 22). This exodus had a ripple effect, with other businesses, such as insurance companies and theaters, pulling out. Other suburban malls opened, such as Tower Plaza, Thomas Mall, and Chris-Town, further deteriorating the business climate downtown. These new malls were more economically viable, located in the midst of new developments filled with patrons that neither needed to travel downtown nor preferred to pay for parking. By the end of 1960s, it was evident that the role of Phoenix's central core had changed. According to historian William S. Collins:

The diversity of residential, commercial, and industrial uses that had concentrated around the city center in its first few decades was now giving way to decentralization across a broad expanse of the Valley. The increasing dominance of private cars, coupled with the declining efficiency of the public transit system, doomed the multi-functional downtown economy before the era of large-scale freeway construction. The future that planners eventually mapped for downtown was a specialized economy based on regional cultural facilities like the civic auditorium, the precursor to the later sports facilities and museums that grew in the late eighties and nineties, and professional offices for banks, corporations, legal services, and other firms, especially those benefitting from close proximity to courts and government offices.<sup>122</sup>



Figure 12. Park Central, circa 1960. Courtesy of Mark Hughes.

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<sup>122</sup> William S. Collins, *The Emerging Metropolis*, 203-204.

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## Infrastructure Update

With the conversion from agricultural to developed land, the irrigation system was quickly becoming obsolete. In the 1950s, Salt River Project adapted by “tiling” the ditches (replacing the open ditch with a concrete pipe) and developing a system known as “ground irrigation” to irrigate residential properties with water once intended for agriculture. The property owner was responsible for connecting to the system by installing a ditch, channel, or concrete pipe to their yard, and setting up berms to contain the water. To receive ground irrigation water, a schedule board was set up for the application of allotment and information about the scheduled delivery. The water was then delivered via the canal and lateral system to a neighborhood distribution point (usually the highest point in the quarter section where the customers are located). The responsibility of the final delivery was left to the customer, who would have to open a “turn out” or valve to release the water into their yard for an allotted time. This was done, and still is, on the honor system, which meant the mistakes of one user could affect others within the system. However, the system worked well and remains in use in some areas.<sup>123</sup>

Infrastructure improvement efforts were ongoing within the city boundaries, as well. In 1957, Phoenix voters approved a \$70 million bond that included \$6 million to “be used to build badly-needed streets.” By 1960, the city realized the funds were inadequate. Citizens were still participating in street improvement districts, a system the city had implemented in 1912 for paving and other improvements. To address the shortcomings of the 1957 bond election, the city adopted a comprehensive plan, which laid out the updates necessary on many arterial streets. Hundreds of miles of streets needed paving. The city needed to eliminate the process of petitioning improvement districts that had been in place for almost half a century and provide the city with the authority to make all decisions and attach the expense to the property, after the fact. Instead of a majority of property owners requesting street upgrades, a majority of the owners would have to protest it. This new provision set forth by the city council made the city responsible for upgrading the roadways, curbs, and replacement sidewalks for major arterials with the adjacent property owner paying for any new sidewalks. For local and collector streets, the property owner would be responsible for the entirety of the costs.<sup>124</sup>

The city also developed a maintenance policy for existing streets based on a street typology. Type A streets were paved with or without curb and gutter. Type B streets had a bituminous surface treatment, with or without curb and gutter. Type C streets were oiled and type D streets were graded. The Type A streets were either paved with a bituminous surface over an adequate base or a Portland cement surface that was originally constructed to county or city specifications. Type B streets had one or more applications of asphalt and rock chips over an acceptable base course. Type C streets were oil over dirt and Type D streets were just dirt. While waiting for city’s pavement crews, the Type C and D street property owners

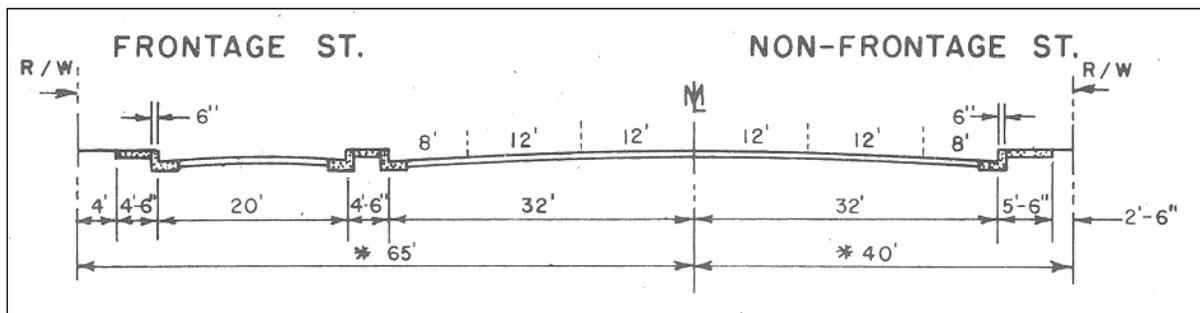
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<sup>123</sup> “News Release” (Phoenix: Salt River Project, 1965).

<sup>124</sup> *Arizona Republic*, 11 and 25 Oct 1960; City Council Resolution 10592, 25 October 1960.

were encouraged to form local street improvement districts to expedite the inevitable, but in the meantime they could oil the streets themselves if they obtained a city permit.<sup>125</sup>

Two years later, the city defined the types of “parkways” in the city and who would be responsible for maintenance: Type A were lands adjacent to the street and lying between the roadway and the private property line, or as referred to in this report as planting strips; Type B were dedicated open areas between major thoroughfares and frontage roads, and traffic separation strips (see figure 23); and Type C were medians and islands. The adjacent property owner was responsible for the general planting, development, and maintenance of the parkways; however, in all three types regardless of the street type, the city would take on the responsibility of trimming the palms. There was some flexibility, however, with developments that were part of city-financed major arterial improvements and beautification projects.<sup>126</sup>



**Figure 23. Frontage Street with Traffic Separation Strip.** From *Inventory and Appraisal of Street Deficiencies*.

Phoenix needed to expand its tax base to offset its growing services. Since the 1950s, its efforts at annexation had been quite aggressive. By the 1970s, though, the city was becoming limited in the direction it could expand. Avondale, Goodyear, and Glendale were blocking Phoenix in on the west and Scottsdale and Tempe blocked Phoenix to the east. To the south, the city was competing with Chandler and Tempe and would eventually be stopped at the boundary of the Gila River Indian Community. Absorbing the unincorporated area adjacent to the city was envisioned as a means of survival. An annexation study conducted by then Deputy City Director Norman Cravens noted that Phoenix was in a better economic position than other cities its size, specifically due to annexation. In an interview with the *Arizona Republic*, then-Mayor Margaret Hance noted, “... without annexation, there would have been dozens of cities in this metropolitan area,” and acquiring a consensus on regional issues, such as sewage, would be more difficult. She also lauded annexation as a method of controlling growth:

If fringe areas are annexed to other cities, decisions on urban form and growth will be made for us by others ... Basically, the annexation program

<sup>125</sup> City Council Resolution 10594, 25 October 1960.

<sup>126</sup> City Council Resolution 11493, 30 July 1963.

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was a protection against a proliferation of incorporated cities or annexations by another city that could have ringed in Phoenix, restricted our future options, restricted our tax base and made government of the metropolitan area increasingly difficult.<sup>127</sup>

## The Interstate and Its Impact

Phoenix was a principal junction in the transportation structure of the southwest. While the city's paving progressed from seven miles in 1915 to twenty-five in 1920 to approximately ninety in 1930, highways into and out of the city were also being improved. Van Buren Street and Grand Avenue, main highways through the valley, were improved in 1925 and Washington Street was extended and paved, and thus connecting to Tempe. Then a highway was opened to the twin towns of Miami-Globe connecting eastern Arizona mining towns and a paved highway reached San Diego via the towns of Buckeye, Gila Bend, and Yuma. Senator Carl Hayden was successful in acquiring funds for Arizona's nascent highway system when the federal acts were passed in 1916 and 1921. This allowed Phoenix to become an automobile hub in the 1920s and, by 1940, four major federal routes (US 60, 70, 80, and 89) came through Phoenix (see figure 24).<sup>128</sup>

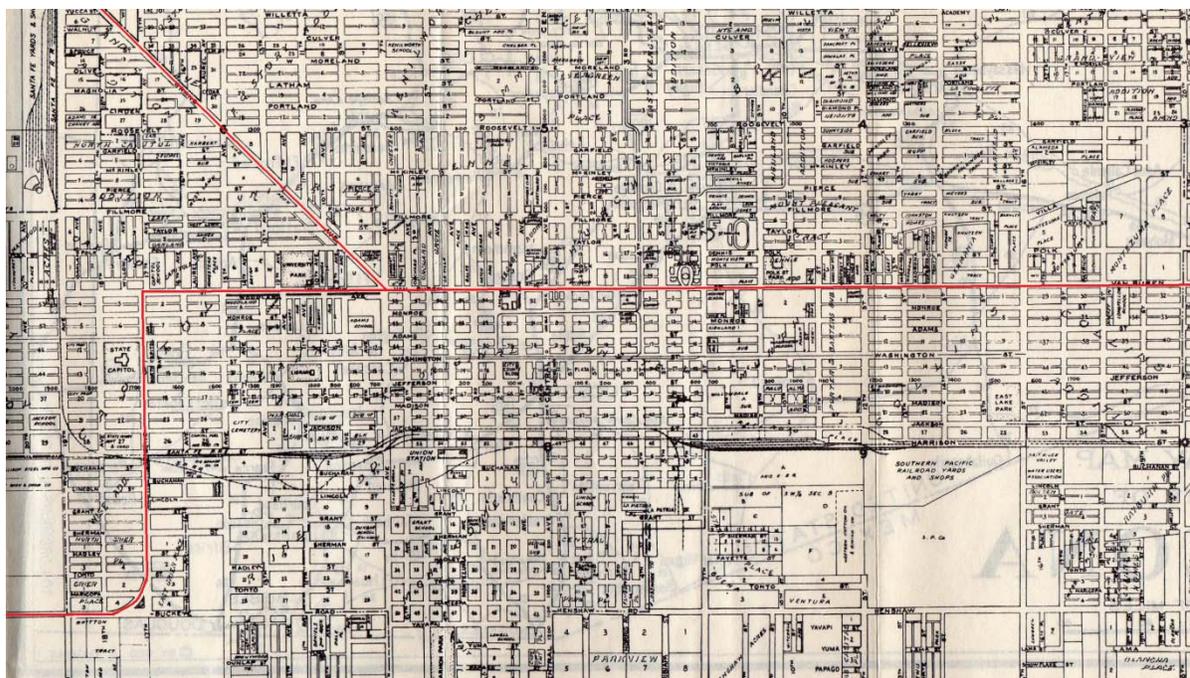
Rapid urban growth made it difficult to keep up with the need for new streets and highways. The postwar boom in residential subdivision development taxed the existing transportation infrastructure by creating neighborhoods outside of the reach of public transportation. An automobile was required to get to and from work and downtown stores. As the number of cars increased, it only exasperated the issue of narrow and unpaved streets. The city, by tradition, was inclined to make automobile transportation more efficient, with little effort placed towards public transit improvements. Federal funds became available after WWII for freeways but Phoenix leadership was hesitant to take advantage of the federal aid. Local interests argued over routes especially after passage of the 1956 Interstate Highway Act, which was to fund 40,000 miles of the nation's freeways. This act promoted the building of a national freeway system to connect the nation and provide for national defense. Although federal highway funding could cover as much as 90 percent of the expenses, Arizona would still struggle to come up with its 10 percent and that meant no funds for a Phoenix interurban freeway. By 1960, Phoenix lagged behind other major cities in moving forward with its freeway plans. That year, a plan by the San Francisco firm Wilbur Smith and Associates called for the improvement of existing streets and 140 miles of freeway by 1980. The price tag was \$532 million and local officials and business leaders balked, delaying freeway planning and implementation.<sup>129</sup>

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<sup>127</sup> *Arizona Republic*, 23 May 1978.

<sup>128</sup> William S. Collins, *The Emerging Metropolis*, 5, 82, 112.

<sup>129</sup> William S. Collins, *The Emerging Metropolis*, 109,164; Owen D. Gutfreund, *20<sup>th</sup> Century Sprawl-Highways and the Reshaping of the American Landscape* (New York: Oxford University Press, 2005), 196-198; G. Wesley Johnson, *Phoenix in the Twentieth Century: Essays in Community History* (Norman: University of Oklahoma Press, 1993), 196-214.



**Figure 24. Federal Highways through Phoenix circa 1940.** Highway US 80 traveled through Phoenix using Van Buren Street, 17<sup>th</sup> Avenue, and Buckeye Road. US 60, 70, and 89 used Van Buren Street and Grand Avenue. From *Maricopa County Map*. Courtesy of the Arizona State Library, Archives, and Public Records. Edited by Vincent Murray.

Prior to 1946, the state provided 30 percent of petroleum tax receipts to counties for road improvements, with the remainder invested in state highways. After years of failing to convince the legislature to provide a percentage of these funds to cities and towns, the American Municipal League succeeded through ballot initiative to provide a third of the county's gasoline funds to incorporated communities. This funding allowed Phoenix to undertake more improvement projects, but the city was still dependent on the county for streets outside of the city boundaries. City planning officials then turned to state legislators in 1960 to increase the existing tax and failed. However, they were able to convince the federal government to declare the Papago freeway a state highway (with an alignment near Roosevelt Street), which would allow it to receive 78 percent federal funding in 1962, but the struggle to build the freeway continued.<sup>130</sup>

Since the second decade of the twentieth century, the federal government provided funds for highways linking the states. Most of the responsibility for building these highways lay with the state highway departments. During World War II, the Arizona Highway Department made plans for three freeways. In the north and south of the state, Interstate 40 and Interstate 10, respectively, would carry traffic between New Mexico and California. These two superhighways were to be linked by a north-south freeway (I-17) that would include fourteen miles of urban freeway in Phoenix. The Black Canyon Highway (US69), predecessor of the new freeway, had moved over time from a 7<sup>th</sup> Avenue alignment to one

<sup>130</sup> William S. Collins, *The Emerging Metropolis*, 110-112; *1961 Street Needs Study* (Phoenix: City of Phoenix, 1961), 4-10, 39.

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generally along 23<sup>rd</sup> Avenue. The highway initially reached Grand Avenue where automobile traffic would continue to downtown and truck traffic was diverted to streets south of downtown, reducing traffic through downtown while providing access to the warehouse district before connecting to the highway to Tucson. South of the central core, efforts had been progressing for a truck route along Buckeye Road or Grant and Lincoln streets, but the adjacent property owners were against it. Eventually, planners relocated the truck route to Durango Street and then east and across the Salt River at 24<sup>th</sup> Street. This became the path for the interstate highway through Phoenix, built between 1959 and 1963, and the only portion of the freeway built in Phoenix during the three decades after the World War II. However, it did not resolve any of the interurban problems facing the city.<sup>131</sup>

The Papago Freeway (I-10) received its name because of an early design that would have placed its alignment through Papago Park. It was the first interurban freeway considered for construction in Phoenix mainly because of its potential to breathe life into the downtown area. The controversy delaying the freeway completion revolved around the location of I-10. The initial proposal of an alignment along Moreland Street did not deviate much from an earlier proposal of widening Roosevelt Street as part of a citywide transportation loop. However, the expense, and the fact that it would bring noise in proximity to the downtown area, created controversy and resistance.<sup>132</sup>

Early in the planning process, an alignment for I-10 west of downtown connecting to I-17 at the Durango Curve was considered but the local hospitality industry was concerned that this route would also bypass the city and their businesses. Given its closer proximity to downtown, the Papago route along the Moreland Street corridor won out. It was enthusiastically endorsed when a report titled a *Transportation Plan for Downtown* was released in 1963. The report noted a consistent increase in traffic flow into the downtown Phoenix area and showed a growing need to alleviate future and current traffic problems by prioritizing the construction of the Papago Freeway. Three designs were considered: an elevated freeway, which would run twenty feet or more above the ground; a depressed freeway, which would run twenty feet or more below ground; and a variable grade freeway, which might go up or down depending on the conditions encountered. The study took into account traffic flow and records in order to best place on and off ramps and improve the flow of traffic.<sup>133</sup>

The first proposed design began at the already elevated stack interchange, west of 19<sup>th</sup> Avenue. This construction remained raised until it reached grade at McDowell Road between the Buttes. The average height of the freeway as designed was approximately twenty-five feet, however, the design increased to approximately 100 feet over the downtown area in order to frame large buildings and not divide the skyline. Huge helicoils—curved ramps—were planned for the exits near downtown to allow interchanges without stopping. The area under the freeway would be converted to multiuse and, as part of a

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<sup>131</sup> William S. Collins, *The Emerging Metropolis*, 111, 113-115.

<sup>132</sup> G. Wesley Johnson, *Phoenix in the Twentieth Century*, 196,214.

<sup>133</sup> *Ibid.*, 199; *Public Hearing on East Papago Freeway and Squaw Peak Freeway Connection* (Phoenix: Arizona Highway Department, 1969), 23-26.

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beautification project, include parks. The benefits of this design were: less expense; noise and pollution above the city; new parks; less right-of-way; decreased damage to power and phone lines; better views of the city; and a built in gravitational system of runoff.<sup>134</sup>

The second suggested design began at the same stack interchange and then descended just east of 17<sup>th</sup> Avenue until it went underground at 11<sup>th</sup> Avenue. It remained underground until it reached Papago Park where it sloped up to match grade with McDowell Road. It ranged from twenty-five to forty feet below ground to avoid utilities. Included in this design was an earth covered concrete structure between 3<sup>rd</sup> Avenue and 3<sup>rd</sup> Street creating a park. While the obvious advantage of this design was its concealment, there was a concern that drivers would become disoriented and unaware of their location. It also had drainage issues.<sup>135</sup>

The third design considered was elevated from the stack to 10<sup>th</sup> Street and underground from that point to 30<sup>th</sup> Street. It was also the first design eliminated since it had poor access, potential noise problems, and would interfere with future utility lines. All designs were approximately \$125 to \$130 million, which included the right-of-way acquisition, construction and materials, demolition, and utilities. The elevated design was chosen since it was the most inventive and seemingly had the greatest public support. However, public support quickly soured and within a few years, the residents and business owners were against the design. The reasons provided against the project were: the helicoils used for ingress and egress to the freeway were enormous and when built might be the largest structures in the city; the park under the freeway would divide the city in half; there was inadequate access; and there was no contingency for upkeep of the proposed park.<sup>136</sup>

A national move towards environmentalism also delayed the freeway. In 1970, President Richard Nixon Administration signed the National Environmental Protection Act, which required environmental impact studies on federal projects such as the Papago Freeway. When a mandatory study on the Papago Freeway was completed, the new federal Environmental Protection Agency deemed it was not comprehensive regarding Papago Park. This eventually led to a change in the proposed alignment. There were also proponents of mass transit as an alternative as well as a group pushing the Phoenix Grid Plan—a proposal to widen major streets instead of building the freeway.<sup>137</sup>

The *Arizona Republic* was the most vocal against the freeway, referring to it as a “Chinese Wall across the city” and printing a continuous barrage of anti-freeway articles. After repeated council and public votes and failed attempts at alternative support, the Arizona Senate’s transportation committee stepped in and approved the freeway, but only the

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<sup>134</sup> *Public Hearing on East Papago Freeway and Squaw Peak Freeway Connection*, 23-26.

<sup>135</sup> *Ibid.*

<sup>136</sup> *Public Hearing on East Papago Freeway and Squaw Peak Freeway Connection*, 29-30, 75-77, 93.

<sup>137</sup> G. Wesley Johnson, *Phoenix in the Twentieth Century*, 204, 209; *Citizen Challenge to the Final Environmental Impact Statement* (Phoenix: Citizens for Mass Transit against Freeways, 1973), 4-5.; Earl Zarbin, *The First 100 Years of The Arizona Republic* ( Phoenix: Phoenix Newspapers, Inc., 1990), 305-309.

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underground design. The *Arizona Republic* ceased its campaign and the citizens approved Proposition 201, which reinstated the Interstate 10 route through Phoenix in 1975, finally allowing the Papago Freeway to be constructed. The 1961 Wilbur Smith and Associates report proposed a system with loops around the city connecting Glendale, Peoria, Tempe, Scottsdale, and Mesa, with two north-south routes, Interstate 17, and another in the vicinity of 16<sup>th</sup> and 20<sup>th</sup> streets to connect Paradise Valley. With the exception of the Paradise Freeway, which would traverse the city along a Camelback Road-Bethany Home Road corridor, the freeway system recommended by the Wilbur Smith and Associates report in 1961 was finally implemented decades later.<sup>138</sup>

Of the freeway construction in Phoenix, Interstate 17 south of Phoenix had the least impact. While the land in its path included some residential uses, it was mostly agricultural lands. After I-17 was completed, much of the nearby agricultural lands converted to industrial uses, though some of the established neighborhoods remained. Planning for its installation, newer subdivisions created along its path north of the city, provided an open right-of-way for the freeway to traverse. The path of Interstate 10 was a different story. Its beginning was relatively harmless since to the west of I-17, most of the land was agricultural. There were a few subdivisions from the 1940s and 1950s limiting the loss in residential areas to a few dozen homes. Between I-17 and Grand Avenue, the land was industrial except for a small number of homes. This was part of the Grand Avenue Addition, and the few homes dated to the 1920s. After the freeway came through, this area also became predominantly industrial.<sup>139</sup>

Unlike west of I-17, the Papago Freeway's path east of Grand Avenue was very destructive, wiping out whole blocks in the F. Q. Story Addition and with them dozens of 1920s and 1930s homes on tree-lined streets. The Kenilworth subdivision, like F. Q. Story, was split in half. Half of the Blount Addition was made into a park, as was half of Simm's Addition, with its City Beautiful parkways. Center Place, the Evergreen additions, the Brill Addition, and nine other early subdivisions were carved up by the freeway corridor before it reached 20<sup>th</sup> Street. Most of these neighborhoods had houses dating from the 1910s to the 1950s and hundreds fell to the bulldozers. At this point, the freeway headed south to connect with I-17. Homes in this area were primarily postwar construction mixed in with industrial areas and airport expansion. Later, more postwar homes would fall for the sake of progress when the Red Mountain 202 and Squaw Peak Parkway (State Route 51/Piestewa Parkway) connected the northeast valley in the 1990s.<sup>140</sup>

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<sup>138</sup> *Arizona Republic* 16 June and 5 November 1975; Earl Zarbin, *The First 100 Years of The Arizona Republic*, 305-309; William S. Collins, *The Emerging Metropolis*, 113-115.

<sup>139</sup> "Winona Park 1," *Book of Maps*, 79:38; "Winona Park 2," *Book of Maps*, 83:32; "Franmar Manor," *Book of Maps*, 85:38; "West Phoenix," *Book of Maps*, 30:30; "Westview Manor 2," *Book of Maps*, 61:26; "Westview Manor," *Book of Maps*, 60:02; "Westcroft Place," *Book of Maps*, 31:13; "Westcroft Place 2," *Book of Maps*, 34:11; "Grand Avenue Addition," *Book of Maps*, 1:9 (MCRO).

<sup>140</sup> "FQ Story Addition Plat A, B, C, D, and E," *Book of Maps*, 9:13, 9:15, 15:41, 15:45, 16:48 respectively; "Kenilworth," *Book of Maps*, 8:39; "Blount Addition," *Book of Maps*, 10:02; "A Replat of a Portion of the Simm's Addition," *Book of Maps*, 503:7; "East Evergreen," *Book of Maps*, 3:55;

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## The Boulevards

While plans were in progress for creating an interurban freeway north of the urban core, other plans were being developed to create Phoenix's version of the "boulevard." Phoenix' original Main Street, Washington Street was originally the center of commercial activity in the city. When the city was selected as the Arizona Capital, the capitol grounds were located at the western terminus of the street. For decades afterwards, ideas circulated on how best to improve the image of the city's main route from downtown to the capitol grounds. In the early 1950s, Washington and Jefferson streets were converted to one-way streets to facilitate traffic. In 1957, Architect Kemper Goodwin and the firm Weaver and Drover created the initial plan for a government mall, within the block wide strip between these streets, and from 7<sup>th</sup> Avenue to the capitol grounds. Beginning in 1960, the city planning department prepared preliminary plans designating a six-block area bounded by 1<sup>st</sup> and 4<sup>th</sup> avenues and Washington and Madison streets for city and county buildings and creating an "anchor" for the southwest area of downtown. The following year, the city contracted for a new municipal building and the Maricopa County Supervisors adopted a plan for a City-County center, which was completed in December 1964. With the building of the City-County complex, it was envisioned that the Government Mall would extend to 1<sup>st</sup> Avenue.<sup>141</sup>

A 1969 report on beautification of the Government Mall revolved around the fact that Phoenix was, and still is, an "automobile city," so the intent was that the mall would be "primarily vehicular, and secondarily pedestrian." Since Washington and Jefferson streets would carry the most traffic through the area, they needed to be "fine boulevards" using heavy landscaping and setbacks for new buildings. It was intended that the landscape treatment would continue westward from the State Capitol to the Black Canyon Freeway. Unification of the mall would be accomplished through the use of similar forms, textures, colors and signs. Historically, the mall area was mixed-use, that is mostly commercial between 7<sup>th</sup> Avenue and the Carnegie Library at 11<sup>th</sup> Avenue and a mixture of commercial, residential, and government between the library and the capitol complex. While palms and trees had been planted historically in planting strips along Washington Street, the major concentration of palms was on the streets around the library. The remaining tree lines along Washington and Jefferson Streets were sporadic and did not translate into a boulevard streetscape. Around 1970, this changed and palms were planted along Washington and Jefferson streets creating the boulevard streetscape we recognize today.<sup>142</sup>

Traveling along the mall was to be "like driving through a park." The plan was for the state, county, and city to acquire all of the land in the mall corridor and that the respective properties would eventually grow together. Major buildings would be located north of Washington and south of Jefferson streets, with the majority of the land in between open space, surrounding a few well designed, low profile public buildings. Jefferson Street would divert to Madison Street between 4<sup>th</sup> and 6<sup>th</sup> avenues and would realign between 4<sup>th</sup> and 6<sup>th</sup>

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"Evergreen Heights," *Book of Maps*, 4:55; "Evergreen Place," *Book of Maps*, 3:15; "Central Place," *Book of Maps*, 3:45.

<sup>141</sup> *The Government Mall* (Phoenix: City of Phoenix Planning Commission, 1969). 2-3.

<sup>142</sup> *The Government Mall* (Phoenix: City of Phoenix Planning Commission, 1969), 14.

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streets. This would offer a potential focal point on Jefferson Street at 5<sup>th</sup> Avenue comparable to the view of the Capitol from Washington Street at 15<sup>th</sup> Avenue. It would also allow for the creation of a pedestrian plaza by superblocking between the city and county buildings. This was all part of a thirty-year plan that never came to fruition.<sup>143</sup>

At the same time plans for the Government Mall were being considered, another 1969 report, the *Central Phoenix Plan*, put forth an idea to build on the prestige of Central Avenue as a “great boulevard.” Originally a divider between east and west Phoenix, Central Avenue went through a number of changes. Its beginning as Centre/Center Street in 1870 and the metamorphosis to the grand Central Avenue three decades later seem almost unrelated. It became the home of mansions and skyscrapers and replaced Washington Street as the Main Street of Phoenix. At its northern end is a historic streetscape, possessing an open lateral, a bridle path, and rows of olive and ash trees, planted in the early decades of the twentieth century. At its southern end, it is the gateway to the largest urban park in the United States, South Mountain Park. In the 1890s, from McDowell Road north, it was a toll road, using the fees for maintenance until becoming a public highway in 1911. Shortly thereafter, Dwight Heard planted a double row of palms on his side of the street, stretching from McDowell Road to Oak Street and initiating the palm as a permanent fixture in the Central Avenue streetscape (see figure 25).<sup>144</sup>



**Figure 25. Central Avenue north from McDowell Road, ca. 1935.** Courtesy of Mark Hughes.

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<sup>143</sup> Ibid., 14-17; *Downtown Phoenix: A Vision of the Valley Center* (Phoenix: City of Phoenix, 1980), 13,33.

<sup>144</sup> *Central Phoenix Plan: Phoenix, Arizona* (Phoenix: Planning Commission, 1969), 7; William S. Collins, *The Emerging Metropolis*, 110; *Central Phoenix/East Valley Light Rail Project: Historical, Archeological, and Traditional Cultural Resources Technical*, 2: D-11.

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North Central Avenue was paved to the Arizona Canal in 1927 as part of the Farm-to-Market program. Near the end of 1946, the county undertook the widening of the street to sixty feet to Camelback Road and forty feet to Dunlap Avenue, which led a local equestrian group to dedicate a two-mile bridle path adjacent to the street from Bethany Home Road to Northern Avenue in honor of nineteenth century land speculator, W. J. Murphy. By the 1960s, infrastructural changes had drastically affected its northern end. Signature ash trees were removed and replaced by Aleppo pines, only to be replaced by ash trees a decade later.<sup>145</sup>

To create the boulevard concept, the *Central Phoenix Plan* envisioned a combination of zoning and incentives for developers. The zoning would cover issues such as setbacks, landscaping, and sign control. The incentives might take the form of height concessions in Floor Area Ratios or height restrictions.<sup>146</sup> A 1980 report promoting the area between McDowell Road and Lincoln Street as “The Valley Center,” predicted Central Avenue would one day become “one of the great boulevards of the country.”

It stated:

Central Avenue has this special meaning for Phoenix. It has all the essential attributes to become a great boulevard, a corridor stretching across the City from mountain range to mountain range, and flanked by the most impressive concentration of major structures and cultural facilities to be found anywhere in the state. The opportunity is here to make this major thoroughfare even more prestigious through development of a unifying streetscape program, which includes planting, street furniture, paving treatment, development of open spaces, sign controls, and the like.<sup>147</sup>

In both the Government Mall and Central Avenue plans, palms were to be the signature species. This had been the status quo since the turn of the twentieth century when, following the lead of city builders in California, city boosters planted palms along city streets creating the feel of an urban oasis. They were low water use, lacked branches that obscured the line of sight, added a quasi-Mediterranean look and feel to neighborhood streets, and enhanced the visual appeal on long straight major streets like Central Avenue that terminated in views of the mountains and Washington Street, with its view of the State Capitol west of the downtown core. According to Historian William Collins:

In a city lacking true boulevards, palms could enhance the beauty of a thoroughfare, especially when they were set in planters (planting strips) separating sidewalks from the road, with buildings set back so as not to dominate the street scene.

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<sup>145</sup> Vincent Smith Murray, “North Central Avenue Streetscape Historic District.,” 2006.

<sup>146</sup> *Central Phoenix Plan*, 7, 30, 38.

<sup>147</sup> *Downtown Phoenix: A Vision of the Valley Center* 1980 18

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By the outbreak of World War II, the palm had replaced the cottonwood as Phoenix's signature tree. Unfortunately, municipal progress replaced the ubiquitous palm tree. After the war, the need to accommodate more vehicles by widening streets had a detrimental effect on the palms as well as open irrigation laterals. Early in 1947, the city uprooted old trees along Roosevelt Street east of Central Avenue as well as most of the trees along 7<sup>th</sup> Avenue and 7<sup>th</sup> Street. Other streets were impacted by widening as well. Collins states, "The result of this removal could be seen particularly well along 1<sup>st</sup> Street where scores of palms were removed in 1955 to accommodate widening."<sup>148</sup>

Ironically, though the city found it necessary to remove palms to accommodate traffic, in the case of Central Avenue and the Government Mall, Phoenix planted and replanted palms to enhance the streetscape. Washington Street historically had palms, though in places they were very thin. Jefferson Street fared even worse. On both streets, the majority of palms were planted around the Carnegie Library park. Central Avenue's palms were also clustered primarily on Central Avenue, between McDowell Road and Palm Lane on the west side, and on the east side to Oak Street. More palms were planted as part of the Central Avenue Beautification Project in the 1990s, albeit sporadically up to Camelback Road. South of the urban core—from Hadley Street to South Mountain Park—Central Avenue was a narrow street until improvements were made in the late 1960s and early 1970s. These improvements included palms planted along both sides of the street south to Interstate 17. It was around this time that palms were also planted along Washington and Jefferson streets.<sup>149</sup>

## The Streetscape Today

The City of Phoenix's historic streetscapes today contain elements of their original development and, in many cases, more modern accoutrements. For classification purposes, this report has identified four types of streetscapes, which are distinguishable by their characteristics: rural, neighborhood, commercial, and boulevard. These streetscapes, their characteristics, and recommended treatments are covered both in Part II of this report and in the associated *Phoenix Streetscape Conservation Guide*.

Rural roads are no longer dirt tracks, they are city streets that may contain elements exemplifying the agricultural origins and early modern settlement patterns of the Salt River Valley. Beginning with the Farm-to-Market program of the 1920s, previously dirt and gravel roadways were paved, adapting the rural streetscape to the twentieth century and the use of motorized vehicles. Throughout the decades, subdivision and annexation of previously unincorporated agricultural areas brought improvements in infrastructure, such as buried water and sewer lines, utility poles, streetlights, traffic signs, sidewalks, wider streets, and asphalt pavement. These developments improved the quality of life for residents but proved detrimental to the integrity of the rural streetscape. Increased densities led to the widening

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<sup>148</sup> William S. Collins, *The Emerging Metropolis*, 32.

<sup>149</sup> This information is based on a study of aerial photographs from 1930, 1949, 1959, 1969, and 1979. Courtesy of the Flood Control District of Maricopa County.

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of roadways and the subsequent removal of trees and other mature vegetation, the piping of irrigation laterals and wasteways, and the addition of curbs, sidewalks, and gutters.

Annexation and infrastructure improvements continued and, by the end of the twentieth century, the rural streetscape in Phoenix was quite rare. Now, the rural streetscape is typically found in outlying areas such as Laveen and near the foothills of South Mountain that still reflect the valley's agricultural origins. However, in some cases, urbanization has surrounded rural enclaves, placing the rural streetscape well within the boundaries of contemporary development (see figure 26). A significant rural streetscape retains a majority of the recognizable characteristics that establish its association with its rural past, such as open irrigation ditches, narrow roadways, unpaved shoulders, mature trees, open fences, and agricultural land uses.



**Figure 26. Rural Streetscape at 20th Street and Bethany Home Road.** On the left is a citrus orchard and on the right is an open irrigation lateral and row of trees planted as a windbreak. Photograph by Vincent Murray.

The neighborhood streetscape in Phoenix provides a glimpse at the city's residential evolution since individual neighborhoods, through their unique characteristics, embody various phases in the chronology of Phoenix's community planning and development. They illustrate the effects that the economy, environment, technology, national trends, and personal preferences play in subdivision design. Neighborhood streetscapes may possess a variety of attributes related to their development ranging from natural desert landscaping to ground irrigated lawns to tree-lined streets with or without sidewalks, or they may possess high artistic values or aesthetics based on federal guidelines. Neighborhood streetscapes

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are characterized by their style and form of landscaping, setbacks, densities, and uniform lot sizes and shapes, which cumulatively create a sense of place (see figure 27). Modifications to these features, such as the removal of signature trees and palms, alterations to roadway, curb, gutter, and sidewalk patterns, changes in landscape palettes and streetscape materials, and the introduction of higher densities and/or new architectural styles is detrimental to the conservation of the neighborhood streetscape. A significant neighborhood streetscape will have a cohesive, original design and retain multiple recognizable characteristics resulting from its period of development, such as the arrangement of streets, division of blocks into lots, types of landscape, and methods of construction.



**Figure 27. Portland Street between 3rd and 5th avenues.** This streetscape has original features such as high curbs, grassy planting strips with mature palms, period light fixtures, and standard setbacks and architectural styles. Photograph by Vincent Murray.

The history of Phoenix’s commercial development is embodied by the commercial streetscape and its three subtypes based on land use: Urban Core, located in downtown Phoenix with retail, offices, and hospitality establishments as well as some government, entertainment, religious, and educational institutions; Warehouse/Industrial, located near the railroad tracks south of the Urban Core; and Retail Strip, found throughout the city, typically on arterial streets outside of the Urban Core. After decades of decline from the mass departure of retail establishments to suburban malls, in the 1980s, Phoenix began to attract new businesses to the Urban Core with projects like the Mercado and the Arizona Center. In 1992, work was completed on the America West Arena (now US Airways Center) and the

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following year, the city created the “City of Phoenix Downtown Streetscape Improvement District” dedicating \$4.75 million for street improvements such as pedestrian-scale, street furniture, and tree installation on Monroe Street from 3<sup>rd</sup> Avenue to 7<sup>th</sup> Street (see figure 28), Adams Street from 2<sup>nd</sup> Avenue to 2<sup>nd</sup> Street, and 2<sup>nd</sup> Street from Jefferson Street to Van Buren Street, and 3<sup>rd</sup> Street from Monroe Street to Van Buren Street.<sup>150</sup> Bank One Ballpark (now Chase Field) followed, opening its gates in 1998 and brought attention to the warehouse/industrial area south of the Urban Core (see figure 29). The 1990s also saw beautification efforts made to retail strips around the city, such as Central Avenue north of the Arizona Canal, ), McDowell Road east of 16<sup>th</sup> Street, and Grand Avenue northwest of five-points (the intersection of Van Buren street, 7<sup>th</sup>, and Grand avenues (see figure 30). Significant commercial streetscapes must possess identifiable characteristics that reflect the streetscape’s origin and purpose: Urban Core Commercial Streetscapes have features that are more pedestrian oriented, such as building-to-lot sidewalks, awnings and overhangs, and pedestrian-scale lighting; Retail Strip Commercial Streetscapes often have driveways, building setbacks that allow for off-street parking, and landscape features such as trees, hedges, fences, or walls separating the parking lot from the street; and Warehouse/Industrial Commercial Streetscapes have features that are more vehicle and railroad oriented, such as raised loading docks, multiple frontages, and signage painted on the building.



**Figure 28. Central Avenue and Monroe Street.** Street improvements include trees, pedestrian scale lighting, and curb extensions. Photograph by Vincent Murray.

Very few Phoenix streets possess the elements required to be considered a boulevard – that is a wide, multilane street with an above-average quality of landscaping and scenery and that sometimes has a median. Therefore, not only are Phoenix’s boulevards significant, they are also exceptional. While palms are ever-present in many Phoenix neighborhoods, they provide a skyline effect when used to line broad avenues such as Washington and Jefferson streets and Central Avenue. These boulevards possess a recognizable street pattern and rhythm that is very uniform and visually dominant with vertical elements such as the palm and street light fixtures, which create a clear definition of width and height. They offer viewpoints such as the Phoenix Mountains to the north, South Mountain to the south, the city’s downtown skyscrapers, and the State Capitol. While many of the features on Central Avenue, Washington Street and Jefferson Street result from mid-century city

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<sup>150</sup> City Ordinance S21871, 8 December 1993.

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beautification efforts, their characteristics must never-the-less be retained because they contribute to the identity of the streetscape and its representation as a significant and distinguishable entity.



**Figure 29. 3<sup>rd</sup> and Buchanan Streets.** Warehouses on both sides of the street have been purchased in anticipation of the Jackson Street Entertainment District two blocks to the north. Photograph by Vincent Murray.



**Figure 30. Grand and 10<sup>th</sup> avenues.** This longtime retail strip is evolving into one of the city's newest arts districts.

The key portion of the streetscape, the street, evolved from a circulation corridor that accommodated pedestrians, horses, carriages, wagons, bicycles, automobiles, trucks, and every other ground-based mode of individual travel to a creation predominantly perceived from the windshield of an automobile. The street provides identification through intersections and addresses which signify a position on the street and sometimes within society itself. Within the city, directions to a location are typically given in street terms. The street is public but also owned by those who reside along it. Streets have personalities and according to landscape architects Cynthia L. Girling and Kenneth I. Helphand, "... form the primary web that physically structures and binds a community."<sup>151</sup>

During the twentieth century, due to the automobile's ascendancy, the streetscape has expanded in scale and assumed a multiplicity of functions. It became a complex corridor of

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<sup>151</sup> Cynthia L. Girling and Kenneth I. Helphand, *Yard, Street, Park*, 34.

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space, with an infrastructure of sewers, ditches, catch basins, manholes, hydrants, utility poles, and traffic signs. Each streetscape typically possesses a centerline at the crown of the roadway creating an approximate symmetry for traffic lanes, parking, gutters, curbs, planting strips, sidewalks, yard, and buildings. However, the streetscape is much more than that; it reflects the history of the community, through the changes in its use and its modifications over time.



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## Part II – Preservation of Phoenix Streetscapes

### Chapter 4 – Identification and Evaluation of Historic Streetscapes

#### Identification

As mentioned in Part I of this report, a forum conducted in October 2008 and attended by professionals in the fields of planning, preservation, horticulture, architecture, and landscape architecture assisted in development of typologies and lists of streetscape characteristics within the city. Four basic streetscape types were identified. Rural streetscapes represent Phoenix's agricultural origins and its early modern settlement patterns. While rare, the rural streetscape type can be found in outlying areas and in rural enclaves within the central city. The neighborhood streetscape is much more prolific and much more variable. Because the neighborhood streetscape evolved over time, individual neighborhoods have become characterized by their style, landscaping, setbacks, densities, uniform lot sizes and shapes, and spatial organization. Commercial streetscapes represent Phoenix's commercial evolution with three subtypes based on current land use. Downtown is the location of the urban core subtype, with retail, offices, and hospitality establishments as well as some government, entertainment, religious, and educational institutions. To the south of downtown, and located near the railroad tracks, is the warehouse/industrial subtype. The retail strip subtype, corresponding with the postwar building boom and the city's expansion, is found throughout the city. A boulevard streetscape has a recognizable street pattern and rhythm that is very uniform and visually dominant with vertical elements such as trees and street light fixtures creating a definition of width and height. In all streetscape types, there are examples that by association, design or other considerations are worthy of conservation. Each of the types, and subtypes of streetscapes in Phoenix can be identified by their characteristics, which are:<sup>152</sup>

#### *Rural Streetscape Characteristics*

##### Spatial Organization

- informally designed streetscape extending one-eighth mile or more in length
- an established rhythm with utility poles, landscaping, windbreaks, and fence posts
- generally straight, narrow roadways with wide, unpaved shoulders following survey or property lines
- varied and larger than usual residential lots, generally one or more acres
- varied and deep building setbacks, from twenty-five to seventy-five feet
- multiuse trails parallel to roadway (in some cases)
- irrigation delivery systems, linear windbreaks, or fences parallel or perpendicular to roadway (in some cases)

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<sup>152</sup> These characteristics are also covered in the *Phoenix Streetscape Conservation Guide*, which is associated with this report. The *Phoenix Streetscape Conservation Guide* includes section and plan drawings and historic and contemporary photographs of each of the streetscape types. A historical context narrating the evolution of these streetscape types is included in Part II of this report.



**Figure 31. Elliot Road at 51st Avenue, facing east.** A rural streetscape. Photograph by Vincent Murray.

### Setting and Environment

- informal, varied landscaping
- very low density development, generally zoned at one dwelling per acre
- single family residential functions in support of agricultural uses
- some agricultural properties without residential buildings
- narrow roadways with wide, unpaved shoulders and no curbs or gutters
- open fencing
- utility poles
- viewshed includes agricultural fields, open sky, or mountains (in some cases)
- few modern intrusions such as contemporary suburban and retail development
- seasonal crop plantings on large parcels

### Boundary Demarcations

- streets and intersections
- property lines

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- open irrigation or drainage ditches along streets or between lots
  - windbreaks, fence lines, and utility lines

### Circulation

- typically narrow, two-lane, minor arterial streets following grid street pattern or irrigation canal or lateral
- typically no sidewalk, curb, or engineered drainage features such as gutters
- right-of-way travel improvements limited to paved roadways with dirt or gravel shoulders used by pedestrians and sometimes equestrians

### Buildings, Structures, and Objects

- varied building placements set back from street
- low-scale building blocks
- sometimes open irrigation and drainage ditches
- telephone and electrical utility poles
- stop signs and few traffic signals
- absent or limited street lighting
- driveways, mailboxes, and ornamental driveway features
- sometimes open-style fencing
- absence of curbs, gutters, and sidewalks

### Clusters

- agricultural buildings

### Vegetation and Materials

- fields, orchards, and pastures
- trees planted for canal or ditch stabilization and erosion control
- dirt, gravel, or asphalt roadways and driveways
- dirt or gravel shoulders
- concrete-lined and unlined open irrigation laterals
- wood or metal post-and-rail, barbed wire, and welded mesh fencing
- wooden utility poles

### ***Neighborhood Streetscape Characteristics***

#### Spatial Organization

- a formal planned rhythm or layout with a consistent combination of residential streetscape elements influenced by historic origins
- consistent landscape palette in right-of-way varies based on its original design
- roadway widths generally from twenty feet (local street) to thirty-five feet (collector street)

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- streetscape length of one block or more
  - uniform pattern of twenty-five- to fifty-foot or more front building setbacks
  - open space typical in front setback
  - rhythm established with uniform presence or absence of pattern of tree plantings, planting strips, street lights, curbs, and driveways



**Figure 32. Mariposa Street at 1<sup>st</sup> Street, facing east.** A neighborhood streetscape. Photograph by Vincent Murray.

### Setting and Environment

- predominantly residential land use with small-scale commercial on periphery and within older areas
- consistent patterns of massing, size, scale, and setback of residential buildings
- typical density range of two to twelve units per acre
- character influences range from urban to suburban to rural to desert, depending on original design intent
- few front yard fences or low, open-style fences that are representative of original, or early to neighborhood

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### Boundary Demarcations

- lot lines
- sidewalks, curbs, and gutters
- hedges
- ground irrigation berms
- streets, intersections, and blocks
- fences

### Circulation

- two-lane roadway, generally on rectilinear axis, although can be curvilinear or include original cul-de-sacs
- pedestrian paths vary from shared roadway, attached sidewalks, or detached sidewalks

### Buildings, Structures, and Objects

- generally single family homes with some multifamily and retail structures in older areas
- absence of sidewalks, curbs, gutters, and driveways or consistent pattern and design of such features
- irrigation ditches, turnouts, and driveway bridges in more rural designed neighborhoods
- telephone and electrical utility poles consistently placed, absent, or in alleys
- subdivision monuments, mail boxes, and street lights consistent
- fire hydrants, grates, and storm drains
- street and traffic signs
- driveway cuts with similar shapes and patterns, such as narrow rectangular or flared

### Clusters

- period housing styles
- multifamily residential and small street front retail sometimes found within neighborhoods

### Vegetation and Materials

- consistent pattern of trees, shrubs, and turf in planting strips and adjacent to roadways
- roadway pavement is asphalt or concrete
- roadway edges may be dirt or turf shoulder; squared-off, rolled, or ribbon curb; planting strips; and/or concrete sidewalks
- consistent presence or absence of metal or wooden utility and light poles

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## Commercial Streetscape Characteristics<sup>153</sup>

### Spatial Organization

- consistent pattern of building orientation relative to street
- street layout follows grid, except for Grand Avenue
- lot sizes typically fifty feet wide and 125 to 150 feet deep, although some lots are consolidated to allow for larger buildings
- consistent rhythm of block, lot, and building sizes (widths, depths, and heights)
- consistent pattern of building types and uses

### Urban Core Subtype

- zero lot line setbacks common
- buildings often have shade structures over the sidewalk, sidewalk seating areas, and a rhythm of articulated and demarcated entries
- roadway width typically forty-five to sixty-five feet
- parking on street or in parking garage



**Figure 33. Van Buren Street at 5<sup>th</sup> Street, facing west.** An urban core subtype commercial streetscape. Photograph by Vincent Murray.

### Retail Strip Subtype

- buildings often have shade structures over the sidewalk, sidewalk seating areas, and a rhythm of articulated and demarcated entries

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<sup>153</sup> There are three subtypes of Commercial Streetscape: Urban Core, Retail Strip, and Warehouse/Industrial. These subtypes are also described in the *Phoenix Streetscape Conservation Guide*.

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- roadway width typically fifty-five feet
  - projecting signage
  - parking on street or in parking lot
  - fences and walls around parking sometimes seen

#### Warehouse/Industrial Subtype

- zero lot line setbacks common
- buildings often have separate office entrance and delivery areas
- buildings adjacent to or fronting railroad tracks, with power poles, smoke stacks, and other industrial elements
- roadway width typically fifty feet
- no projecting signage—typically painted on front or side of building
- parking on street—automobiles near office portion of buildings, trucks near delivery areas



**Figure 34. McDowell Road at and 16th Street, facing east.** A retail strip sub type commercial streetscape. Photograph by Vincent Murray.

#### Setting and Environment

##### Urban Core Subtype

- settings include hospitality, professional, retail, and multifamily residential intermingled

##### Retail Strip Subtype

- retail setting

##### Warehouse/Industrial Subtype

- 
- industrial setting
  - streetscape may include railroad tracks

### Boundary Demarcations

- streets, intersections, and blocks

### Urban Core Subtype

- lot lines
- building façades
- alleys
- sidewalks, curbs, and gutter

### Retail Strip Subtype

- sidewalks, curbs, and gutter

### Warehouse/Industrial Subtype

- lot lines
- building façades
- alleys



**Figure 35. Lincoln Street at 9th Avenue, facing east.** A warehouse/industrial subtype commercial streetscape. Photograph by Vincent Murray.

### Circulation

- linear roadways
- uniform sidewalk type, pattern, configuration, and width

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### Urban Core Subtype

- wide sidewalk extending from building to curb
- more pedestrian oriented
- parking generally parallel and metered or on-site (garage)

### Retail Strip Subtype

- on-street parallel parking or on-site parking lot

### Warehouse/Industrial Subtype

- more vehicle oriented for trains, trucks, and cars
- parking generally not structured, striped, or metered

### Buildings, Structures, and Objects

- uniform or consistent sidewalk type, pattern, configuration, and width

### Urban Core Subtype

- Buildings may have awnings and overhangs and small-scale elements such as street furniture (bike racks, bus stops, benches, and parking meters) and signage
- driveways may enter garages
- sidewalk may extend from building to curb
- pedestrian scale signage, typically projecting or on awnings or windows

### Retail Strip Subtype

- driveways may enter parking lots
- utility poles
- signage is typically at a more vehicular scale, projecting or mounted on building

### Warehouse/Industrial Subtype

- typically curb-less loading areas, stairs, and raised truck or rail level loading docks
- multiple building frontages with different requirements for treatment: main frontage on the street with an office entry; frontage on side street(s) with railroad or truck loading docks; and frontage on alley, which can be unpaved and accommodate loading docks
- properties may have curb cuts to move trucks and equipment in and out of building
- utility poles
- signage at vehicular scale, typically painted on buildings

### Clusters

- 
- buildings and uses of similar type and function often found together

#### Urban Core Subtype

- retail street frontage common

#### Retail Strip Subtype

- retail street frontage often located near intersections

#### Warehouse/Industrial Subtype

- often located adjacent to or near railroad tracks

#### Vegetation and Materials

- asphalt roadways

#### Urban Core Subtype

- little to no landscaping, but when present, definitive pattern of planting types and locations
- concrete sidewalks, curbs, and gutters

#### Retail Strip Subtype

- concrete sidewalks, curbs, and gutters
- asphalt parking lots

#### Warehouse/Industrial Subtype

- little to no landscaping, but when present, definitive pattern of planting types and locations
- concrete entry steps and loading docks
- sometimes concrete sidewalks, curbs, and gutters

### ***Boulevard Streetscape Characteristics***

#### Spatial Organization

- long (one-half mile or more), straight, wide urban street with planned continuous landscape features such as a line of spaced tree plantings, median strip of trees, etc.
- varied building setbacks from zero to fifty feet or more
- often median or street-side planting area is very broad and can be geometric in shape

#### Setting and Environment

- formal design often featuring a focal point or viewscape

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- automobile-dominated travel environment
  - adjacent land uses may contribute to a continuity of the street pattern
  - utilities typically absent or obscured

#### Boundary Demarcations

- rows of plantings adjacent to roadway or sidewalk
- intersections and blocks
- streets
- sidewalks



**Figure 36. Central Avenue at Mohave Street, facing north. A Boulevard Streetscape.** Photograph by Vincent Murray.

#### Circulation

- usually a straight, wide, multilane, urban street
- detached sidewalks typical

#### Buildings, Structures, Objects

- detached sidewalks separated from roadways by planting strip
- sometimes median planting strips
- vertical curbs

- 
- gutters and below grade drainage features
  - small-scale elements such as light fixtures and bus stop furniture

### Clusters

- buildings of similar use, both public and private

### Vegetation and Materials

- planned continuous landscape features with strong repetitive plantings in median and/or adjacent to roadway
- concrete sidewalks, curbs, and gutters
- asphalt roadways

## **Evaluation**

### *Introduction*

Evaluation of the historic streetscape requires determining significance, assessing historic integrity, and selecting boundaries. Ultimately, the evaluation process verifies whether a streetscape meets the National Register of Historic Places criteria for designation; is eligible for City, State, or National Register listing; and/or is worthy of conservation. A written statement of historic context containing information about the local patterns of community development and transportation design makes it possible to determine the extent to which a streetscape reflects local, regional, and national patterns and is associated with important events, activities, persons, or designs that contributed in important ways to the growth and development of the city of Phoenix. A reconnaissance survey provides additional comparative information about the condition of historic streetscapes, enabling the elimination of those that have lost their historic integrity.<sup>154</sup>

Decisions about significance and integrity of the historic streetscape depend on the historical record as well as the presence of physical features. Aspects of design, such as spatial organization present in the general plan of development, the layout of the roadway and pedestrian paths, and the arrangement of, and ingress and egress to, residential, commercial, and industrial lots, may be as important indicators of historic patterns of development as the styles or design of buildings and landscape. Its relationship to transportation corridors, cohesive and recognizable planning principles, socioeconomic conditions, real estate development trends, and architectural character may convey distinctive characteristics that distinguish the historic streetscape from other streetscapes nearby. Knowledge of these factors is important in making comparisons among

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<sup>154</sup> David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places* (Washington: U.S. Department of Interior, National Park Service, 2002), [www.nps.gov/history/NR/publications/bulletins/suburbs](http://www.nps.gov/history/NR/publications/bulletins/suburbs).

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streetscapes of similar age, placing them in their appropriate historic context, and in identifying historic streetscapes worthy of conservation.<sup>155</sup>

The identification of the type, or subtype, of historic streetscapes will assist in identifying areas of significance as well as character-defining features that may be present. Knowledge of the dates when a subdivision was created and when its infrastructure was installed will provide a foundation for understanding its physical layout and the design and its relationship to important stages of local history and development, and its association with important local events.<sup>156</sup>



**Figure 37. A historically significant streetscape, Central Avenue and Glenn Drive. Part of the North Central Avenue Streetscape Historic District on the National Register of Historic Places. Photograph by Vincent Murray.**

### ***Determining Significance***

Determining the significance of a streetscape depends on a systematic investigation of its history, purpose, social significance, qualities, associations, and physical characteristics. It requires an analysis of information about the development and design of a particular streetscape type and an understanding of local, regional, and national trends in community planning and development. Using this information will establish if the streetscape is an exemplary representative of one of the types listed above. A typical streetscape investigation should accomplish the following: acquire information about the specific example of streetscape and its planning and/or design through documentation of its history and collection of available plans and photographs; compare the streetscape's characteristics to the characteristic features of its type to determine if it is a good representative and if it possesses integrity (those characteristics are mentioned at the beginning of this chapter and

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<sup>155</sup> Ibid.

<sup>156</sup> Ibid.

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in the *Phoenix Streetscape Conservation Guide*); assess the integrity of each streetscape characteristic and list the features that the streetscape should retain to possess integrity; and determine if any aspect of the streetscape's history or present condition might place it in a category of properties worthy of conservation.<sup>157</sup>

### Information Acquisition

An evaluation should begin with compiling a general description and history of the streetscape including: dates of development; information on original owner, landscape architects, or designers; identification of construction techniques, methods, and plant materials; landscape style; existing and previous uses with dates identified; and existing boundaries of the original streetscape and any subsequent alterations. Site visits will assist in identifying the historic characteristics of the design intent of the streetscape.

Research should determine the original design intent of the streetscape based on original subdivision plats, plans, photographs, etc., as well as any alterations to the original design and the dates such alterations occurred. Additional information may be important to assessing the physical changes to the streetscape over time, including the introduction of plant materials; the innovative use of new construction materials or techniques; and the relationship between this streetscape and others nearby.

Information should not be limited to design and physical appearance, but should also include the historic function of the streetscape and any individuals or groups associated with its ownership, design, and use. The present characteristics of the historic streetscape should be identified and ideally delineated on a plan drawing and a section drawing. The streetscape features include:

- spatial organization
- setting and environment
- boundary demarcations
- circulation
- buildings, structures, and objects
- clusters
- vegetations and materials

Individual characteristics may contribute greatly to the overall identity of the streetscape and should be considered in terms of their relationship to its entirety.

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<sup>157</sup> J. Timothy Keller and Genevieve P. Keller, *National Register Bulletin 18: How to Evaluate and Nominate Designed Historic Landscapes* (Washington: U.S. Department of Interior, National Parks Service, n.d.) [www.nps.gov/history/nr/publications/bulletins/nrb18](http://www.nps.gov/history/nr/publications/bulletins/nrb18).

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Identify the appropriate streetscape type within which a streetscape should be evaluated, i.e., rural, neighborhood, commercial, or boulevard. Then identify important events and trends that influenced the development of the streetscape during the period of the streetscape's design or during any major alterations. It may be helpful to check with the City Historic Preservation Office, State Historic Preservation Office, or other historical, preservation, and landscape professionals and organizations that may have already evaluated the significance of the streetscape or identified the streetscape type that it represents. They may also be able to recommend important resources and materials to assist in identifying the physical features necessary to represent a particular type, period, or method of construction or planting.

### Characteristic Analysis

Evaluate the significance of the streetscape using an analysis of information about the development and design of a particular historic streetscape and an understanding of local and national trends of settlement, urbanization, and suburbanization. Decisions about the significance of streetscapes can only be made with knowledge of the historic and comparative context for the streetscape evaluated. Consequently, determining the relationship between an individual streetscape and its larger development context is an essential factor in determining significance. All historic streetscapes are not significant, and those that are must be determined from their connection to historical themes represented and in relationship to a group of similarly associated streetscapes. All the information required to demonstrate the significance of a historic streetscape will vary according to whether it is significant on a local, regional, or national level. If a streetscape is important at all three geographic levels, it should be discussed within the context of all three with significant contributions noted for each level. Part I of this report may assist nomination preparers with the compilation of comparative and thematic data for the evaluation of a streetscape. A historically significant streetscape may meet the requirements for listing on the National Register of Historic Places if it meets one or more of the following National Register criteria:<sup>158</sup>

#### *Criterion A: Association with Important Events and Persons*

Historic streetscapes typically reflect the growth and development of communities. For this reason, streetscapes are frequently evaluated under Criterion A for their association with important events or patterns in community history or with groups of residents (not specific individuals) who collectively made important contributions to the area's prosperity or identity as a place of industry, government, education, or social reform. Some examples of Criterion A significant streetscapes are:

- Streetscapes that reflect an important historic trend in the rural, urban, or neighborhood development and growth of the city of Phoenix.

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<sup>158</sup> Ibid.

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- Streetscapes that represent an important event or pattern, such as rural residential settlement, early community planning, post-World War II expansion, etc.
  - Streetscapes that introduced principles of community planning important in the history of urbanization and suburbanization, such as zoning, deed restrictions, or subdivision regulations.

*Criterion B: Association with Important Individuals*

Criterion B applies to streetscapes directly associated with one or more individuals who made important contributions to history. Such individuals must have exerted important influence on the streetscape's development or historic identity and they must have gained considerable recognition beyond the streetscape. This criterion also applies to streetscapes that are associated with important developers and best represent their contributions to significant local or metropolitan patterns of community development. Streetscapes representing the work of prominent site planners, architects, or landscape architects should be evaluated under Criterion C, unless they also represent an outstanding aspect of an important period of their career.

*Criterion C: Distinctive Design Characteristics*

Historic streetscapes often reflect popular national trends in urban design, such as the tree-lined boulevards or landscaped traffic separation strips. Such streetscapes are evaluated under Criterion C to determine if they embody the distinctive characteristics of a type, period, style, or method of construction or landscape architecture; or represent the work of a master architect, landscape architect, or community planner.

Under Criterion C, qualifying physical characteristics for that streetscape type should be present in the overall plan, land uses, and the streetscape landscape design. A representative example should exemplify the character-defining features of that streetscape type. Significance under this criterion requires that the elements that make the streetscape distinctive remain intact and recognizable.

Spatial organization of the streetscape is an important factor in ascribing significance in community planning and landscape architecture. Spatial organization is defined by the relationship between the streetscape design and natural and built topography, the relationship of the street to the abutting lots, the arrangement and type of buildings and landscape features, and the provision of infrastructural spaces, such as sidewalks, curbs, planting strips, and irrigation laterals.

Uniformity or diversity of streetscape types may be an important planning characteristic and an important indicator of overall design intent and period of development. Some examples of Criterion C streetscape types are:

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- Streetscapes that possess a representative collection of character-defining features for that streetscape type relative to other examples.
  - Streetscapes that reflect principles of design important in the history of community planning and landscape architecture, or is the work of a master landscape architect, site planner, or design firm.

*Criterion D: Ability to Yield Important Information*

Criterion D is typically applied to the evaluation of pre-modern settlement (before 1870) sites, which may contain remnants that predate modern land subdivision and remain intact within or adjacent to the public right-of-way. Such sites may provide information important to historic contexts other than urbanization and suburbanization. Streetscapes are not likely to be significant under Criterion D, although significant remnants of historic structures such as old rail lines and irrigation laterals underneath the pavement may be worthy of documentation.<sup>159</sup>

Integrity Assessment

The National Register of Historic Places criteria recognize seven aspects, or qualities, which, in various combinations, define integrity. These aspects (location, design, setting, materials, workmanship, feeling, and association) must be considered in determining whether a streetscape retains enough of its important features to convey its historically significant appearance or associations.

- *Location* is the place where significant activities that shaped the streetscape took place. This aspect requires that the boundaries that historically defined the streetscape remain intact and that the size and shape of the streetscape has remained constant.
- *Design* is the collection of elements comprising the form, plan, and spatial organization of a historic streetscape. This may include the spatial relationship between the street and structures on the abutting lots or the placement of specific vegetation within planting strips. Design may have resulted from conscious planning decisions to widen roadways or it may be the result of the personal tastes and individual efforts to shape the domestic environment. Small-scale additions, such as the installation of traffic signs, do not detract in a major way from the historic character of a streetscape. Large-scale modifications, however, that substantially change the mass of a historic streetscape, or alter, remove, or add substantial features to the streetscape can threaten integrity of design.

The most apparent assessment of integrity is based on the presence of identifiable components from the streetscape's original design. To evaluate the historic integrity of a streetscape, it is useful to compare its present and historic appearance and function. The relationship between the intended and current function may also affect the integrity

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<sup>159</sup> David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs*.

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of a historic streetscape. A neighborhood streetscape designed with a two-lane roadway will have suffered a significant loss of integrity if the street has been converted to a four-lane minor arterial. On the other hand, a minor arterial may receive traffic calming features, such as “speed cushions” or striping, without loss of integrity if its original design qualities remain dominant. Conversions of streetscapes from agricultural use to arterial use may also seriously affect historic integrity, even though the existing landscape remains scenic.

Vegetation is one of the most important features in most streetscapes, and the least stable. It is always changing, by seasons, maturation, pruning, removal, neglect, and other forces. If it is determined that the more stable elements of the streetscape are sufficiently intact to represent the original design intent, then it can be determined whether the existing vegetation taken as a whole reinforces or supports the original design intent. A bare planting strip that once had palms, for example, usually would be considered ineligible. Less dramatic changes in vegetation might not disqualify a streetscape on the question of integrity.

- *Setting* is the physical environment within and surrounding a historic streetscape. Integrity of setting requires that a strong sense of historical setting be maintained along the street, which relies on the retention of land use patterns along the street as well as the spatial relationship between the roadway and the adjacent land uses. Small-scale elements such as walls, gateposts, and fences can detract from the integrity of setting unless they date to the period of significance. The setting of many historic streetscapes will have changed substantially since the period of significance. A rural streetscape with new subdivisions, curbs, and driveways would represent a significant integrity loss. Many streetscapes have portions missing due to arterial corridors being widened and adapted to serve modern automobile traffic.
- *Materials* include the construction materials of the roadways, sidewalks, curbing, gutters, and other structures, as well as vegetation planted as lawns, shrubs, trees, and gardens. The presence of a particular palette of building materials such as a concrete roadway or a planting strip landscaped with grass and palms may be an important character-defining features of that streetscape type. The addition of new materials is acceptable if smaller in quantity and compatible. Wholesale loss of material such as asphaltting a concrete roadway or removal of palms from a planting strip can seriously impair integrity.

A streetscape should retain the key materials dating from its period of significance. If the streetscape has been rehabilitated, the historic materials and character-defining features must have been preserved. The streetscape must also be an actual historic resource, not a reconstruction, to be eligible to the National Register of Historic Places. Likewise, a streetscape whose historic features and materials have been lost and then reconstructed is usually not eligible. (See the section on Determination of Condition below for the conditions under which a reconstructed streetscape might be eligible.)

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- *Workmanship* is evident in the ways materials have been fashioned for functional and decorative purposes to create streetscape structures and/or landscape features. This includes the planting and maintenance of vegetation, as well as the construction methods of infrastructural features such as curbs and gutters. Integrity of workmanship requires that architectural features in the streetscape exhibit the artistry or craftsmanship of their builders and that the vegetation historically planted for decorative and aesthetic purposes is maintained in an appropriate fashion and replaced in kind when damaged or destroyed.
  - *Feeling* is a streetscape's expression of the aesthetic or historic sense of a particular period of time and, although intangible, is evoked by the presence of physical characteristics that convey that sense—physical features that, taken together, convey the streetscape's historic character. Integrity of feeling results from the cumulative effect of setting, design, materials, and workmanship.
  - *Association* is the direct link between a historic streetscape and the important events that shaped it. Like feeling, association requires the presence of physical features that convey a streetscape's historic character. Continued land use and community traditions, as well as the renewal of design covenants, deed restrictions, and zoning overlays, help maintain a streetscape's integrity of association. Additions and alterations that introduce new land uses and erase the historic principles of design threaten integrity. Integrity of association requires that a historic streetscape convey the period when it achieved importance and that, despite changing patterns of ownership, it continues to reflect the design principles and historic associations that shaped it during the historic period.<sup>160</sup>

Streetscapes have unique attributes that often complicate the evaluation of integrity, but the degree to which the overall streetscape and its significant features are present today must be evaluated. In general, the following questions should be asked when evaluating a streetscape's integrity:

- a. To what degree does the streetscape convey its historic character?
- b. To what degree has the streetscape's original fabric been retained?
- c. Do changes that have occurred over the years minimize or detract from the historic character of the streetscape? If so, are the changes irrevocable or can they be corrected so that the streetscape retains integrity?<sup>161</sup>

Condition plays a considerable role in evaluating streetscape integrity. Descriptive categories, such as excellent, good, fair, deteriorated, and severely deteriorated, applied to individual characteristics may assist in making a decisive judgment about the overall condition, and thus the integrity, of the streetscape. For example, plant materials that are

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<sup>160</sup> Ibid; Rebecca H. Shrimpton, ed., *How to Apply the National Register Criteria for Evaluation* (Washington: U.S. Department of Interior, National Parks Service, Phoenix, 2002) [www.nps.gov/history/nr/publications/bulletins/nrb15](http://www.nps.gov/history/nr/publications/bulletins/nrb15).

<sup>161</sup> J. Timothy Keller and Genevieve P. Keller, *National Register Bulletin 18*.

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diseased or have been subjected to improper treatment, as well as areas where there have been major modifications to curbs and sidewalks, may diminish a streetscape's integrity. This condition is usually reversible, and in many instances it may be possible to enhance the streetscape's integrity through a process of proper maintenance, replanting missing or unhealthy vegetation, or other restoration or reconstruction procedures.

In all instances, the current boundaries of the recognizable streetscape will define the limits of the geographic area being evaluated. Adjacent offsite conditions can be considered in the evaluation of integrity especially if they have an impact on the original design intent. Major adjacent encroachment, such as highways, parking lots, and new buildings, may violate the original design intent and intrude upon the streetscape. Viewscapes from the streetscape, for example, that were intended to be pastoral but that are now industrial, or boulevard views that were established along sight lines to buildings, monuments, or other features that have been destroyed, may be detrimental to the integrity of a historic streetscape.<sup>162</sup>

The final decision about integrity is based on the condition of the overall streetscape and its ability to convey its significance. Weighing overall integrity requires knowledge of both the physical evolution of the streetscape and the condition of its component elements. Those making evaluations should take into consideration the extent to which historic streetscape characteristics remain intact or have been altered. They should also be prepared to assess the cumulative effect that multiple changes and alterations may have on a streetscape's historic integrity.

#### Determination of Condition

Reconstructed historic streetscapes, and those which have achieved significance within the past fifty years, may qualify as National Register eligible if they are integral parts of historic districts that are already considered National Register eligible or if they fall within one or both of the following categories:

- a. A reconstructed streetscape when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other streetscape with the same association has survived.
- b. A streetscape achieving significance within the past fifty years if it is of exceptional importance.

A streetscape that lost pivotal physical characteristics and which is later reconstructed based on documentary or physical evidence may be eligible if it is significant for its original design, if it is the sole surviving of its type, or if it is the only survivor associated with a significant figure in landscape architecture. However, it will require special justification.

To be eligible for the National Register of Historic Places, a historic streetscape that is less than fifty years old must be exceptionally significant. A streetscape that has achieved

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<sup>162</sup> Ibid.

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significance within the last fifty years can be evaluated only when sufficient historical perspective exists to determine that the streetscape is extraordinarily important and will continue to retain that distinction in the future. Scholarly recognition is usually required to establish exceptional significance because only that type of analysis can convincingly demonstrate that despite its age, sufficient historical perspective exists to evaluate the particular streetscape.

A streetscape must be compared with others of its type that have similar associations and qualities to establish exceptional significance. The reasons for which it is considered exceptionally significant must be explained along with a discussion of the qualities and characteristics that distinguish the streetscape as exceptional. The National Register Bulletin: *How To Evaluate and Nominate Potential National Register Properties That Have Achieved Significance Within the Past Fifty Years* provides a more detailed discussion of the evaluation process for properties that are less than fifty years old.<sup>163</sup>

### **Selecting Areas of Significance**

To be eligible for listing on the National Register of Historic Places, a streetscape will be significant under a category of history or area of significance. The area of significance is that aspect of history in which a historic streetscape through design, use, physical characteristics, or association influenced the history and identity of a neighborhood, local area, region, state, or the nation. Most commonly, a historic streetscape will fall under the category of “transportation,” “community planning and development,” “engineering,” or “landscape architecture.”<sup>164</sup>

### **Defining Period of Significance**

The period of significance is the timeframe in which the streetscape achieved the qualities that make it eligible for the National Register. The period of significance defined for a historic streetscape is used to classify contributing and noncontributing resources. Streetscapes significant under Criterion A often have historic periods spanning many years to correspond with important historic associations and events in the community. The historic period for streetscapes associated with an important person under Criterion B is based on the years when the person resided in the community or was actively involved in community affairs. The period of significance for streetscapes qualifying under Criterion C generally corresponds to the actual years when the design was executed and construction took place, which will vary depending on the type of streetscape and the circumstances under which it took form.

Plats and maps are useful for gaining an understanding of how a streetscape evolved and for determining the corresponding period of significance. Generally, the period of significance for a historic streetscape important under Criterion C begins with the date when the street was laid out on the ground and extends to the date when the street plan was fully realized or the construction of the street substantially completed. The date of a historic plat

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<sup>163</sup> J. Timothy Keller and Genevieve P. Keller, *National Register Bulletin 18*.

<sup>164</sup> David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs*.

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may be used as the beginning date only when site improvements were begun shortly afterwards.

National trends of suburbanization as well as local economic factors, including the impact of major worldwide events such as the Great Depression and World War II, influenced the span of time in which urbanization and suburbanization occurred and the extent to which earlier plans were carried out or modified. Such factors need to be considered when defining an appropriate period of significance. When development was interrupted for lengthy periods, it may be appropriate to define several periods of significance.

Where various aspects of streetscape construction occurred over the course of many years, the period of significance may be extended to include more recent construction than fifty years provided it is in keeping with the street's historic design and evolution and satisfies the National Register's fifty-year guideline.

To determine an appropriate closing date for the period of significance, there are several considerations:

- What factors defined the streetscape's physical character during its early development and how long did these factors continue to influence the character of the streetscape?
- Are more recently constructed features on the original streetscape development, consistent with the streetscape's historic plan (including location, size, scale, and style) and supportive of the overall character of the streetscape?
- To what extent do the features contribute to the historic character of the streetscape?
- To what extent do the streetscape's characteristics reflect later patterns of development or community history?
- To what extent are these patterns important?
- If changes or additions to the streetscape occurred within the last fifty years, do they reflect trends or events of exceptional importance?<sup>165</sup>

### ***Determining Level of Significance***

Streetscapes related to the same historic context are compared to identify those eligible for listing in the City, State, or National Register and to determine the level—local, state, or national—at which the streetscape is significant. Most streetscapes will be eligible at the local level for their illustration of important aspects of community growth and development and their reflection of the broad trends that shaped urbanization and suburbanization in the city of Phoenix.

State level of importance is generally attributed to streetscapes that: established a precedent or influenced subsequent development within a metropolitan area or larger region

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<sup>165</sup> Ibid.

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within one or several adjoining states; possess outstanding characteristics of community design or landscape architecture within the context of design statewide; or represent the work of one or more master planners, landscape architects, or engineers, whose work in city planning or subdivision design gained professional recognition in that particular state.

National level of importance is attributed to streetscapes whose plan or landscape design introduced important innovations that strongly influenced the design of streetscapes nationwide. It also applies to examples possessing outstanding artistic distinction or representing pivotal examples of the work of master designers who received national or international acclaim for their contributions to streetscape design.<sup>166</sup>

### ***Classifying Resources***

Characteristics within a historic streetscape are classified as "contributing" if they were present during the period of significance and possess historic integrity for that period. Those resources built or substantially altered after the period of significance are classified as "noncontributing" unless they have individual significance that qualifies them for National Register listing. When a streetscape's period of significance extends to a date within the past fifty years, resources less-than-fifty-years of age are classified as contributing if they were constructed or achieved significance within the defined period of significance, and by function, historic associations, and design, reflect important aspects of the streetscape's history and physical evolution.

Alterations subsequent to the period of significance affect a streetscape's significance. When evaluating the extent of changes to the character of the streetscape, it is important to consider the size, scale, and design of the addition as well as its location within the streetscape. Information such as original setback requirements, historic design guidelines, and deed restrictions may also be useful in assessing the effect of additions on historic integrity.<sup>167</sup>

### ***Boundaries***

Selection of boundaries is a judgment based on the nature of the streetscape's significance, integrity, and physical setting, and are typically defined by the visible extent of the historic streetscape, especially when significance is based on design. Boundaries should be an early consideration during the field and archival research to take into account all of the factors that should be considered in boundary determination. After significance has been evaluated, a reassessment of the boundaries should ensure the appropriate correspondence between the character-defining features and the physical extent of the streetscape. If sections of a streetscape have lost historic integrity, it can then be determined whether those sections can be excluded from the boundaries of the streetscape and whether the remaining unaltered area is substantial enough to convey significance. If such areas are small and surrounded by eligible resources, and cannot be excluded, they can be included as noncontributing resources of the streetscape. Lines drawn on historic

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<sup>166</sup> Ibid.

<sup>167</sup> Ibid.

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plats, legal boundaries, rights-of-way, and changes in the nature of development or spatial organization can be used to define the edges of a historic streetscape. If possible, the boundaries should be drawn along historic lot lines or boundary streets.<sup>168</sup>

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<sup>168</sup> Ibid., Donna J. Siefert, *Defining Boundaries for National Register Properties* (Washington: U.S. Department of Interior, National Parks Service, 1997)  
[www.nps.gov/history/nr/publications/bulletins/boundaries](http://www.nps.gov/history/nr/publications/bulletins/boundaries).

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## Chapter 5 – Appropriate Streetscape Treatments

### Introduction

These guidelines are based upon the *Secretary of Interior's Standards and Guidelines for Preservation* and are recommendations made to be built upon and integrated to create a unique public environment in conformance with existing city standards. There are four approaches to treatment of historically significant streetscapes: *preservation*, which is the retention of all historic fabric, including the streetscape's historic form, features, and details, through conservation, maintenance, and repair while being respectful of changes and alterations that have been made over time; *rehabilitation*, which acknowledges the need to alter or add to a streetscape to meet continuing or new uses, while emphasizing the retention and repair of historic features to retain the streetscape's historic character; *restoration*, which allows for the depiction of a landscape at a particular time in its history by focusing on the retention of materials from the streetscape's period of significance and removing all others; and *reconstruction*, which establishes a framework for re-creating a vanished or non-surviving streetscape using new materials. Choosing the appropriate treatment requires that a number of practical and philosophical variables be taken into account: whether the streetscape is a significant resource based upon the criteria for evaluation; the extent of historical documentation; the integrity of the streetscape; its relationship to its surroundings; its proposed use and adaptability; the cost of improvements and maintenance; and mandated city, state, and federal regulations and requirements.<sup>169</sup>

### Preservation Standards for Streetscapes

Preservation requires applying the necessary measures to sustain the existing form, integrity, and materials of the historic streetscape. Work, including preliminary activities to protect and stabilize the streetscape, generally focuses on the ongoing maintenance and repair of the streetscape rather than extensive replacement and new construction. While modern changes are not within the scope of this treatment, the limited and sensitive upgrading of the infrastructure and multi-modal systems and other code-required work to make, and keep, the streetscape functional is appropriate within a preservation project.<sup>170</sup>

Preservation treatments may be as simple as basic maintenance of existing materials and features, such as the upkeep of a pedestrian path with decomposed granite. In all cases, the

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<sup>169</sup> Charles A. Birnbaum, *Secretary of the Interior's Standards for the Treatment of Historic Properties and the Guidelines for the Treatment of Cultural Landscapes* (Washington: U.S. Department of Interior, National Parks Service, n.d.) [www.nps.gov/history/hps/hli/landscape\\_guidelines](http://www.nps.gov/history/hps/hli/landscape_guidelines); Kay D. Weeks, *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* (Washington: U.S. Department of Interior, National Parks Service, 2001) <http://www.nps.gov/history/hps/tps/standguide>

<sup>170</sup> Kay D. Weeks, *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

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emphasis in on protection, maintenance, and repair, while replacement is minimized.<sup>171</sup> Standards for preservation include:

1. The streetscape will be used as it is currently or given a new use that maximizes the retention and preservation of distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a streetscape will be retained and preserved. Replacement of intact, undamaged, or repairable materials, or alterations of characteristics, spaces, and spatial relationships will be avoided.
3. Work needed to stabilize, consolidate, and conserve character-defining features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a streetscape that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship and engineering that characterize the streetscape will be preserved.
6. The existing condition of the streetscape will be evaluated to determine, if necessary, the appropriate level of intervention needed. If the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material or vegetation will closely match the original.
7. Any treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, proper mitigation measures will be undertaken.<sup>172</sup>

## Preservation Guidelines for Streetscapes

### *Introduction*

In preservation treatments, the options for replacement are limited. It is generally understood from the beginning that character-defining features of the streetscape are essentially intact, that the streetscape's historic fabric has remained unchanged over time. The treatments involved in preservation are identification, retention, and preservation, preliminary stabilization and protection, maintenance, repair; and replacement.

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<sup>171</sup> Charles A. Birnbaum, *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

<sup>172</sup> Kay D. Weeks, *Secretary of the Interior's Standards for the Treatment of Historic Properties*; Charles A. Birnbaum, *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

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### ***Identification, Retention, and Preservation***

The guidance for the preservation treatment begins with recommendations to identify the form and detailing of the features and materials important to the streetscape's historic character and which must be retained in order to preserve that character. Therefore, guidance on identifying, retaining, and preserving character-defining features is always provided first. The characteristics of a streetscape are its spatial organization, setting and environment, boundary demarcations, circulation, buildings, structures, and object, clusters, and vegetation and materials. Information on the specific characteristics for each streetscape type is located at the beginning of this chapter.

### ***Preliminary Stabilization and Protection***

Features within a streetscape may need stabilization or protection through preliminary measures until additional work can be undertaken. Stabilization may include structural reinforcement, weatherization, or correcting unsafe conditions, and should always be carried out in such a manner that it detracts as little as possible from the streetscape's appearance. Although it may not be necessary in every preservation project, stabilization is nonetheless an integral part of the preservation treatment process. It is also equally applicable, if circumstances warrant, for the other treatments. Protection generally involves the least degree of intervention and is preliminary to performing other work.

### ***Maintenance of Historic Features and Materials***

After identifying, stabilizing, and protecting character-defining features and materials, maintenance becomes important. As a foundation for making maintenance decisions, an overall evaluation of the streetscape's existing conditions should always begin at this level.

### ***Repair of Historic Features and Materials***

Repair is recommended when the existing conditions of character-defining features and materials requires additional work. This preservation treatment strives to retain the maximum amount of existing materials and features while utilizing as little new material as possible. Consequently, guidance for repairing a historic feature begins with the least degree of intervention and in all cases, work should be non-destructive, physically and visually compatible, and documented for future research.

### ***Replacement In Kind of Historic Features***

If repair of a historic feature or materials proves impossible, the next level of intervention involves the limited replacement in kind of portions of historic features when there are surviving prototypes. The replacement material should match the historic both physically and visually. In all cases, substitute materials are not appropriate in the preservation treatment, with the exception of hidden or innocuous infrastructural improvements. In these cases, it is important that all new material be non-destructive, identified, and properly

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documented for future research. Generally, in any preservation treatment, substitute materials should be avoided unless in-kind replacement is not possible.<sup>173</sup>

## Rehabilitation Standards for Streetscapes

Rehabilitation is the process of creating a new compatible use for a streetscape through repair, alterations, and additions, while preserving those portions or features, which convey its historical, cultural, or architectural values. Of the four treatments, rehabilitation is the one that includes an opportunity to create an efficient contemporary use through alterations and additions.<sup>174</sup> Standards for rehabilitation include:

1. The streetscape will be used as it was historically or given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a streetscape will be retained and preserved. Replacement of intact, undamaged, or repairable materials, or alterations of characteristics, spaces, and spatial relationships will be avoided.
3. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic periods, will not be undertaken.
4. Changes to a streetscape that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship and engineering that characterize a streetscape will be preserved.
6. The existing condition of the streetscape will be evaluated to determine, if necessary, the appropriate level of intervention needed. If the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material or vegetation will closely match the original. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Any treatments that cause damage to historic materials will not be used.
8. New additions or related new construction will not destroy historic materials, features, and spatial relationships that characterize the streetscape. The new work will be differentiated from the original and will be compatible with the historic character-defining features to protect the integrity of the streetscape and its setting.

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<sup>173</sup> Charles A. Birnbaum, *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

<sup>174</sup> Kay D. Weeks, *Secretary of the Interior's Standards for the Treatment of Historic Properties*; Charles A. Birnbaum, *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

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9. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic streetscape and its environment would be unimpaired.<sup>175</sup>
  10. Archeological resources will be protected and preserved in place. If such resources must be disturbed, proper mitigation measures will be undertaken.

## **Rehabilitation Guidelines for Streetscapes**

### ***Introduction***

In rehabilitation treatment, a streetscape's character-defining features and materials are protected and maintained just as they are in the preservation treatment. However, a determination is made, prior to work, that a greater amount of existing historic fabric has become damaged or deteriorated over time, and as a result, more repair and replacement is required. In this case, the replacement of extensively deteriorated, damaged, or missing features using either traditional or substitute materials is allowed.

### ***Identification, Retention, and Preservation***

Like the preservation treatment, guidance for rehabilitation treatment begins with recommendations to identify those streetscape features and materials that must be retained. Therefore, guidance on identifying, retaining, and preserving character-defining features is always provided first. An overall evaluation of existing conditions should always begin at this level. The characteristics of a streetscape are its spatial organization, setting and environment, boundary demarcations, circulation, buildings, structures, and objects, clusters, and vegetation and materials.

### ***Protection and Maintenance of Historic Features and Materials***

Protection and maintenance are addressed subsequent to identifying the materials and features that are important and must be retained in the process of rehabilitation work. Protection generally involves the least degree of intervention, is preparatory to other work, and it may be accomplished through permanent or temporary measures. Maintenance includes daily, seasonal, and cyclical tasks, and the techniques, methods, and materials used to implement them, such as tree trimming.

### ***Repair of Historic Features and Materials***

When the conditions of character-defining features, or portions of features, warrant extensive work, repair is recommended. Rehabilitation treatment for the repair of historic character-defining features begins with the least degree of intervention possible and includes the limited replacement in kind of extensively deteriorated features, or replacement in kind of materials or parts of features lost. Using materials that match the historic design,

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<sup>175</sup> Ibid.

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color, and texture is always the preferred option in performing repair. However, substitute material is acceptable in a repair if it conveys the same visual appearance as the historic period.

### ***Replacement of Deteriorated Historic Materials and Features***

Following repair in the hierarchy, rehabilitation guidance is provided for replacing an entire character-defining feature with new material because the level of deterioration or damage precludes repair. Like the guidance for repair, the preferred option is always replacement in kind (i.e., replacing deteriorated concrete streetlight with a new, matching concrete streetlight). The use of compatible substitute materials may be considered if this approach is found to be technically, economically, or environmentally unfeasible. Whatever level of replacement takes place, the historic features and materials should serve as a guide to the work. While the replacement of an entire feature that is extensively deteriorated or damaged is recommended, removal and replacement with new material, if repair is possible, is not.

### ***Design for the Replacement of Missing Features***

When an entire feature is missing, the streetscape's historic character is diminished. Although accepting the loss is one possibility, where an important feature is missing, its replacement is always recommended as the first or preferred, course of action. Thus, if adequate historical, pictorial, and physical documentation exists so that the feature may be accurately reproduced, and if it is desirable to re-establish the feature as part of the streetscape's historical appearance, then planning, designing and installing a new feature based on such information is appropriate.

A second course of action for the replacement feature is a new design that is compatible with the remaining character-defining features of the historic landscape. The new design should always take into account the existing features of the streetscape and should be clearly differentiated so a false historical representation is not created.

### ***Alterations and Additions for a New Use***

When alterations to a streetscape are needed to assure its continued use, it is crucial that such alterations do not radically change, obscure, or destroy character-defining features. Alterations may include extending acceleration and deceleration lanes on parkways, or, adding new planting to screen a contemporary use or facility. Such work may also include the selective removal of features that detract from the overall historic character of the streetscape.

The installation of additions to a streetscape may seem to be essential for a new or expanded use, but it needs to be emphasized that such new additions should be avoided, if possible, and considered only after it is determined that those needs cannot be met without altering character-defining features. If, after a thorough evaluation of alternative solutions, a new addition is judged the only viable alternative, it should be planned, designed, and

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sensitively installed to be clearly differentiated from the character-defining features so that historic features are not visually overwhelmed, radically changed, obscured, damaged, or destroyed.<sup>176</sup>

## Restoration Standards for Streetscapes

Restoration is the process of accurately depicting the form, features, and character of a streetscape as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of the infrastructure and other code-required work to make streetscapes functional is appropriate within a restoration project. Restoration may be considered as a treatment when: the streetscape's design, architectural, or historical significance during a particular period of time outweighs the potential loss of extant features that characterize other historical periods; there is substantial physical and documentary evidence for the work; and contemporary alterations and additions are not planned. Prior to undertaking restoration work, a particular period of time, i.e., the restoration period, should be selected and justified, and a documentation plan for restoration developed.<sup>177</sup> Standards for restoration include:

1. A streetscape will be used as it was historically or be given a new use that reflects the streetscape's restoration period.
2. Surviving materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.
3. Work needed to stabilize, consolidate, and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Materials, features, spaces, and finishes that were added after the restoration period will be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship and engineering that characterize the restoration period will be preserved.
6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the original.
7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by

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<sup>176</sup> Ibid.

<sup>177</sup> Ibid.

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adding conjectural features, features from other properties, or by combining features that never existed together historically.

8. Any treatments that cause damage to historic materials will not be used.
9. Designs that were never executed historically will not be constructed.
10. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, proper mitigation measures will be undertaken.

## **Restoration Guidelines for Streetscapes**

### ***Introduction***

Rather than maintaining and preserving a landscape as it has evolved over time, this treatment restores the streetscape so it appears as it did at its most significant time in its history. First, thorough historical research is used to identify materials and features from the restoration period. Next, features from the restoration period are maintained, protected, repaired, and replaced, if necessary. As opposed to other treatments, the scope of work in restoration allows for the removal of features from other periods. Missing features from the restoration period may be replaced with traditional materials or compatible substitute materials. Only those streetscape designs that can be documented as having been built should be slated for a restoration project. A restoration project is probably not realistic for the majority of streetscapes since most streets have been modified over time to accommodate modern needs and cannot easily be returned to their original condition.

### ***Identification, Retention, and Preservation***

The guidance for the restoration treatment begins with recommendations to identify the form and detailing of those existing materials and features that are significant to the restoration period as established by historical research and documentation. Thus, guidance on identifying, retaining, and preserving features from the restoration period is always given first. An overall evaluation of existing conditions should always begin at this level. The characteristics of a streetscape are its spatial organization, setting and environment, boundary demarcations, circulation, buildings, structures, and objects, clusters, and vegetation and materials. This step must include archival research, survey of existing conditions and the development of period plans.

### ***Protection and Maintenance of Historic Features and Materials***

Protection and maintenance is addressed subsequent to identification of existing materials and features from the restoration period that must be retained in the process of restoration work. Protection generally involves the least degree of intervention, is preparatory to other work, and is accomplished through permanent or temporary measures. Maintenance includes daily, seasonal, and cyclical tasks, and the techniques, methods, and materials used to implement them. Once a restoration has been undertaken, an increased

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commitment to sustain the restoration period appearance will be necessary. Because of the dynamic nature of some features, particularly vegetation, a streetscape will exhibit cyclical changes of growth and reproduction. As a result, in some cases, maintenance efforts may need to be more elaborate than normal.

### ***Repair of Historic Features and Materials***

Repair is recommended when the physical condition of character-defining features, or portions of features, from the restoration period require additional work. Restoration focuses on repairing those features and materials that are significant to the restoration period using the least degree of intervention possible. In restoration treatment, repairing may also include the limited replacement in-kind of extensively deteriorated materials or parts of features, and using surviving prototypes as a model. New materials need to match the original to convey the same visual appearance as the restoration period.

### ***Replacement of Deteriorated Historic Materials***

In restoration treatment, replacing an entire feature from the restoration period that is too deteriorated to repair may be appropriate. Together with documentary evidence, any remaining physical fabric of the historic feature should be used as a model for the replacement. Using the same kind of material is preferred, however, compatible substitute material may be considered. When possible, any new work should be unobtrusively dated to guide future research and treatment. If documentary and physical evidence are not available to provide an accurate re-creation of missing features, rehabilitation treatment might be a better overall approach to project work.

### ***Removal of Existing Features from Other Periods***

All streetscapes represent a continuum over time, but in a restoration treatment, the goal is to depict the streetscape as it appeared during a particular time in its history. Therefore, work is included to remove or alter existing historic features that predate or postdate the restoration period. Prior to removing or altering features that characterize other periods, these features should be documented to guide future research and treatment.

### ***Recreating Missing Features***

Most restoration projects involve re-creating features that were significant to the streetscape at a particular time, but are now missing. Each missing feature should be substantiated by documentation and physical evidence. Without sufficient documentation for a re-creation, an accurate depiction cannot be achieved. Combining features that never existed together historically can also create a false sense of history. Using traditional materials to depict lost features is always the preferred approach; however, using compatible substitute material is an acceptable alternative in restoration treatment because, as emphasized, the goal of this treatment is to replicate the “appearance” of the streetscape at a particular time, not to retain and preserve all historic materials as they have evolved over time. However, if

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documentation and physical evidence are not available to provide an accurate re-creation of missing features, the rehabilitation treatment may be a better overall approach for project work.<sup>178</sup>

## Reconstruction Standards for Streetscapes

When a contemporary depiction is required to understand and interpret a streetscape's historic value; when no other streetscape with the same associative value has survived; and when sufficient historical documentation exists to ensure an accurate reproduction, reconstruction may be considered as a treatment. Reconstruction is the process of depicting, by means of new construction, the form, features, and detailing of a non-surviving streetscape for the purpose of replicating its appearance in its historic location at a specific period of time. Prior to undertaking work, a documentation plan for reconstruction should be developed. Standards for reconstruction are:

1. Reconstruction will be used to depict vanished or non-surviving portions of a streetscape when documentation and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the streetscape.
2. Reconstruction of a streetscape in its historic location will be preceded by a thorough archeological investigation to identify and evaluate the features and artifacts that are essential to an accurate reconstruction. If such resources must be disturbed, proper mitigation measures will be undertaken.
3. Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.
4. Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentation or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed streetscape will re-create the appearance of the non-surviving streetscape in character-defining features.
5. A reconstruction will be clearly identified as a contemporary re-creation.
6. Designs that were never executed historically will not be constructed.<sup>179</sup>

## Reconstruction Guidelines for Streetscapes

### *Introduction*

Whereas the restoration treatment provides guidance on restoring or re-creating some streetscape features, these guidelines address those aspects of treatment necessary to re-

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<sup>178</sup> Ibid.

<sup>179</sup> Ibid.

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create an entire non-surviving streetscape utilizing new material. Much like restoration, the goal is to make the streetscape appear as it did at its most significant time in history. The difference is that in reconstruction, there is far less, if any, extant historic material prior to treatment and, in some cases, there may be nothing visible. Because of the potential for historical error in the absence of sound physical evidence, this treatment can be justified only rarely and, thus, is the least frequently undertaken treatment. For this reason, the various steps to be undertaken in reconstruction treatment, from research to new construction, are outlined, without providing the in depth information offered for the other three treatments. Similarly, because few total streetscape reconstructions meet the Standards, illustrations are also limited.

Documentation requirements prior to and following work are very stringent. Measures should be taken to preserve extant historic surface and subsurface material. Finally, the reconstructed streetscape must be clearly identified as a contemporary re-creation.

### ***Research and Documentation of Historical Significance***

Guidance for reconstruction treatment begins with researching and documenting the streetscape's historical significance to ascertain that its re-creation is essential to the public's understanding. Often, another extant historic streetscape on, or near the streetscape, can adequately explain the streetscape, together with other interpretive aids. Justifying a reconstruction requires detailed physical and documentary evidence to minimize or eliminate conjecture and ensure that the reconstruction is as accurate as possible. Only one period of significance is generally identified; a streetscape, as evolved, is rarely re-created. During this important fact-finding stage, if research does not provide adequate documentation for an accurate reconstruction, other interpretive methods should be considered, such as an explanatory marker.

### ***Investigate Archeological Resources***

Investigation of archeological resources is the next area of guidance in the reconstruction treatment. The goal of physical research is to identify features of the streetscape which are essential to an accurate re-creation and must be reconstructed, while leaving those archeological resources that are not essential, undisturbed. Resources that are not relevant to the project should be preserved in place for future research. The archaeological findings and archival materials are then used to document the reconstruction period and recreate the plan of the streetscape.

### ***Identification, Protection, and Preservation of Extant Features***

Closely aligned with archeological research, it is important to identify, protect, and preserve extant features of the historic streetscape. It is never appropriate to base reconstruction upon hypothetical plans or designs, or the availability of different features from other streetscapes. Consequently, any remaining historic features and materials, such as remnants of a roadway, sidewalk, or curb, should be retained when practical and

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incorporated into the reconstruction. Original and new material should be carefully documented to guide future research and treatment. Such documentation could include photographs, measured drawings, and work specifications.

### ***Reconstructing Non-Surviving Landscapes***

The reconstruction work begins after the research and documentation phases. Features are addressed in general, always emphasizing the need for an accurate depiction of the streetscape. In the absence of extant historic materials, the objective in reconstruction is to re-create the appearance of the historic streetscape for interpretive purposes. Hence, while the use of traditional materials and vegetation is always preferred, in some, instances, substitute materials may be used if they convey the same visual appearance. Where non-visible features of the streetscape are concerned, such as hidden infrastructural systems, it is expected that contemporary materials and technology will be employed. Re-creating the streetscape layout should be an integral aspect of project work. The initial archeological inventory of subsurface and aboveground remains is used as documentation to reconstruct streetscape features such as sidewalks, curbs, laterals, and roadways.

### ***Interpreting the Reconstructed Landscape***

An integral component of reconstruction is to make clear to the public that the streetscape is not authentic, but instead it is a portrayal of the past for interpretive purposes. This can be accomplished through signs, markers, or other interpretive tools. Often, a brochure explaining a streetscape's history will note its disappearance over time and subsequent reconstruction. Interpretive tours also offer background so that visitors can understand what they are viewing.<sup>180</sup>

## **Treatment Recommendations Based on Streetscape Type**

The following streetscape treatment recommendations are based on streetscape types addressed earlier in this report. This information is also available in the *Phoenix Streetscape Conservation Guide* that accompanies this report.

### ***Rural Streetscape Treatment Recommendations***

- maintain narrow roadway widths
- avoid installation of sidewalk, curbs, and gutters
- use ribbon curb where curbs are required
- minimize driveway cuts and new intersections
- design multiuse paths to be minimal, set back from pavement edge five or more feet (ten feet preferred), and constructed with dirt or gravel

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<sup>180</sup> Ibid.

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- maintain open irrigation ditches
  - retain rural feeling and existing topography adjacent to street when introducing retention basins or storm drain systems
  - match existing vegetation palette and pattern
  - maintain deep setbacks
  - ensure lot sizes conform to prevailing historic pattern
  - new fencing should be open
  - preserve and maintain viewsheds and focal points
  - avoid higher density land uses such as apartments and condominiums
  - cluster new development away from public streetscape to minimize impact to rural character

#### ***Neighborhood Streetscape Treatment Recommendations***

- maintain characteristic neighborhood configuration and design including roadway, curb, gutter, driveway, and sidewalk patterns
- keep driveway width at nine to twelve feet or compatible with historic width and rhythm on the street
- keep front setbacks and street-facing side building setbacks consistent with historic pattern and design
- maintain building and landscape types and densities consistent with neighborhood patterns
- minimize use of fencing in front yard open space; use open design less than three feet in height if needed
- maintain characteristic landscape palette and streetscape materials
- use ample planting material to supply 60 to 80 percent of surface coverage as currently exists
- avoid introduction of xeriscape in older neighborhoods characterized by verdant landscapes
- avoid new or expanded cul-de-sacs when not originally present
- avoid flared curbs at corners; use criss-cross pattern in areas with no flared curb or shifted sidewalk

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- avoid recessed retention basins or humped yards and follow historic pattern of retention and drainage, such as flood irrigation, perimeter berms, curbs, gutters, and storm drainage system

### ***Commercial Streetscape Treatment Recommendations***<sup>181</sup>

#### General

- retain prevailing rhythm of block
- maintain simple sidewalk, curb, and gutter materials and avoid introduction of new ornamental designs
- ensure light rail tracks and stations do not encroach beyond the curb line; use minimal station designs, particularly in tightly developed commercial areas
- add trees as accents at grade, in planters, or in curb extensions that do not block building or pedestrian walking areas
- maintain existing on-street parking
- keep street lighting in background, functional, unobtrusive, and not overly done; use lighting that is thematic for different areas, pedestrian in scale, and compatible with area character
- use permanent shade structures, such as awnings, that are functional and consistent in design
- ensure new utilities adhere to traditional pattern

#### Urban Core

- retain open alleys and avoid superblocking (merging city blocks to create larger blocks)
- maintain zero building setbacks
- use curb extensions if design is minimal and does not eliminate on-street parking
- planting strips are acceptable

#### Retail Strip

- use curb extensions if design is minimal and does not eliminate on-street parking
- planting strips are acceptable

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<sup>181</sup> There are three subtypes of Commercial Streetscape: Urban Core, Retail Strip, and Warehouse/Industrial. These subtypes are also described in the *Phoenix Streetscape Conservation Guide*.

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### Warehouse/Industrial

- retain open alleys and avoid superblocking (merging city blocks to create larger blocks)
- maintain zero building setbacks
- avoid removal of historic railroad features to retain context for associated buildings
- introduction of rolled curbs acceptable when no curbs currently present

### ***Boulevard Streetscape Treatment Recommendations***

- maintain parkway landscape rhythm with established vertical elements such as trees and light fixtures for extended length to facilitate the visual framing
- minimize disruption of existing landscape rhythm established by plantings, curbs, light fixtures, and other features
- ensure newly introduced elements do not interfere with important viewsheds
- maintain vertical curbs and detached sidewalks
- maintain curbside planters or planting strips to provide vertical plant material beds and establish a visible frame
- replace defining trees with similar size of same species when possible
- introduce shade trees that conform to overall rhythm of streetscape and do not visually dominate other important landscape features
- maintain varied building setbacks and heights
- discourage on-street parking to maintain efficient street circulation add medians to scale down large buildings, provided the medians are not detrimental to the focal point or viewscape

### **Special Considerations**

These preservation guidelines address streetscape accessibility requirements, health and safety codes, environmental requirements, or limited retrofitting measures to improve energy efficiency. Although this work is quite often an important aspect of preservation projects, it is usually not part of the overall process of protecting, stabilizing, conserving, or repairing character-defining features; rather, such work is assessed for its potential negative impact on the streetscape's character. For this reason, particular care must be taken not to obscure, damage, or destroy character-defining features in the process of undertaking work to meet code and energy requirements.

## Accessibility Considerations

It is often necessary to make modifications to streetscapes to stay in compliance with current accessibility code requirements. Accessibility to public streetscapes is required by three specific federal laws: the *Architectural Barriers Act of 1968*, Section 504 of the *Rehabilitation Act of 1973*, and the *Americans With Disabilities Act of 1990*. Federal rules, regulations, and standards have been developed which provide guidance on how to accomplish access to historic areas for people with disabilities. Work must be carefully planned and undertaken so that it does not result in the loss of character-defining features. Alterations and new construction needed to meet accessibility requirements under the *Americans with Disabilities Act* should be designed to minimize material loss and visual change to a historic streetscape. The objective is to provide the highest level of access to the streetscape with the lowest level of impact to the streetscape’s integrity.<sup>182</sup>

Accessibility Considerations	
Recommended	Not Recommended
<p>Identifying the streetscape’s character-defining features so accessibility code-required work does not result in their damage or loss.</p> <p>Complying with barrier-free access requirements, in such a way that character-defining features, materials, and finishes are preserved.</p> <p>Working with local accessibility and preservation specialists to determine the most appropriate solution to accessibility problems, which will have the least impact on character-defining features.</p> <p>Providing barrier-free access that promotes independence for the disabled person to the highest degree practicable, while preserving significant character-defining streetscape features. For example, using crisscross sidewalk ramps at intersections where ramps are being installed, leaving the main runs of historic sidewalks in place.</p>	<p>Undertaking code-required alterations before identifying the streetscape’s character-defining features.</p> <p>Damaging or destroying character-defining features in an attempt to comply with accessibility requirements.</p> <p>Altering character-defining features without consulting with local accessibility and preservation specialists.</p> <p>Making access modifications that do not provide a reasonable balance between independent, safe access and preservation of character-defining features.</p> <p>Making modifications for accessibility without considering the impact on the historic streetscape. For example, introducing flared sidewalks ramps at intersections.</p> <p>For reconstruction treatment, obscuring or damaging the appearance of the reconstructed landscape in the process of providing barrier-free access.</p>

<sup>182</sup> For more information, see *ADA Accessibility Guidelines for Buildings and Facilities* extracted from *Code of Federal Regulations* (Washington: Department of Justice, 1994) [www.ada.gov/reg3a.html](http://www.ada.gov/reg3a.html).

Accessibility Considerations	
Recommended	Not Recommended
For reconstruction treatment, taking accessibility requirements into consideration early in the planning stage so that barrier-free access can be provided in a way that is compatible with the reconstruction.	

**Health, Safety, and Utility Upgrade Considerations**

In undertaking work on streetscapes, it is necessary to consider the impact that meeting current health and safety codes, public health, life safety, fire safety, electrical, seismic, structural, and building codes, will have on character-defining features. For example, upgrading utility service, storm or sewer drainage systems requires trenching which can disturb the pavement, landscape, and archeological resources. Coordination with the responsible code officials at the state, county, or municipal level is recommended. Securing required permits and licenses is best accomplished early in project planning work. It may be necessary to look beyond the “letter” of code requirements to their underlying purpose; most modern codes allow for alternative approaches and reasonable variance to achieve compliance.

Health, Safety, and Utility Upgrade Considerations	
Recommended	Not Recommended
Identifying the streetscape’s character-defining features so that work does not result in their damage or loss.	Undertaking alterations before identifying the streetscape’s character-defining features, which must be preserved.
Complying with health and safety code requirements, in such a manner that the streetscape’s character-defining features are preserved.	Altering, damaging, or removing character-defining features while making modifications to a streetscape to comply with safety codes.
Removing toxic materials only after thorough testing has been conducted and only after less invasive abatement methods have been shown to be inadequate.	Damaging or destroying character-defining features without careful testing and without considering less invasive abatement methods.
Working with local code officials to identify alternative methods, systems, or devices of equivalent or superior effectiveness so that unnecessary alterations can be avoided.	Removing unhealthful materials without regard to personal and environmental safety. Making changes to the streetscape without first exploring equivalent health and safety systems, methods, or devices that may be less damaging to character-defining features.

Health, Safety, and Utility Upgrade Considerations	
Recommended	Not Recommended
<p>Maintaining all character-defining features while implementing improvements.</p> <p>For reconstruction treatment, considering requirements and equipment early in the planning stage of the project so that work is compatible with the reconstruction.</p> <p>Adding new equipment such as traffic control, utility boxes, etc. in the least intrusive manner and location possible.</p>	<p>Damaging or obscuring character-defining features or adjacent areas in the process of doing work to meet code requirements.</p> <p>Covering the character-defining features with fire resistant sheathing which results in altering their visual appearance.</p> <p>Using materials intended to provide additional protection, such as fire-retardant coatings, if they damage or obscure character-defining features.</p> <p>Radically changing, damaging or destroying character-defining features when adding new code-required features.</p> <p>For reconstruction treatment, meeting requirements and adding modern equipment without considering their visual impact on the reconstruction.</p> <p>Installing new equipment without any consideration to minimize direct impact to character-defining features.</p>

### ***Environmental Protection Requirement Considerations***

Streetscapes can be affected by requirements that address environmental issues. Legislation at the federal, state and municipal level have established rules and regulations for dealing with a variety of natural resources—including water, air, soil and wildlife. Work predicated on such legislation must be carefully planned and undertaken so that it does not result in the loss of a streetscape’s character-defining historic features. Securing required permits and licenses should be considered early in project work, and efforts should be made to coordinate with public agencies responsible for overseeing specific environmental concerns.

Environmental Protection Requirement Considerations	
Recommended	Not recommended
Identifying the streetscape’s character-defining features so environmental protection-required	Undertaking environmental protection required work before identifying character-

Environmental Protection Requirement Considerations	
Recommended	Not recommended
<p>work will not result in their damage or loss.</p> <p>Complying with environmental protection regulations in such a manner that character-defining features are preserved. For example, protecting historic vegetation in which rare and endangered species nest.</p> <p>Working with environmental protection officials to investigate systems, methods, devices or technologies of equivalent or superior effectiveness to those prescribed by regulation so that unnecessary alterations can be avoided.</p> <p>Reclaiming or re-establishing natural resources in a manner that promotes the highest degree of environmental protection, while preserving significant historic features, materials and finishes.</p> <p>For reconstruction, taking environmental protection requirements into consideration early in the planning stage so that desirable environmental conditions can be provided in a way that is compatible with the reconstruction.</p>	<p>defining features which should be preserved.</p> <p>Altering damaging or destroying character-defining features while making modifications to a streetscape to comply with environmental protection regulations.</p> <p>Making changes to streetscapes without first exploring equivalent environmental protection systems, methods, devices or technologies that may be less damaging to historic features, materials and finishes.</p> <p>Making environmental protection related modifications that do not provide a reasonable balance between improved environmental conditions and the preservation of historic features, materials and finishes.</p> <p>For reconstruction, obscuring or damaging the appearance of the reconstructed landscape in the process of providing environmental protection.</p>

**Energy Efficiency Considerations**

Some features of a streetscape, such as buildings, structures, lighting fixtures, vegetation and furnishings, can play an energy-conserving role. Therefore, prior to undertaking project work to achieve greater energy efficiency, the first step should always be to identify and evaluate existing historic features to assess their inherent energy conserving potential. If it is determined that such work is appropriate, then it needs to be carried out with particular care to insure that the landscape’s historic character is retained.”

Energy Efficiency Considerations	
Recommended	Not Recommended
<p>Retaining and maintaining those historic energy efficient features or parts of the</p>	<p>Removing or altering those historic features or parts of features which play an energy conserving role. For example, removing a</p>

Energy Efficiency Considerations	
Recommended	Not Recommended
<p>streetscape.</p> <p>Improving energy efficiency of existing features through non-destructive means.</p> <p>For reconstruction, considering energy efficiency requirements, such as passive solar functions or water conservation methods, early in the planning stage of the project so that work is incorporated into the reconstruction.</p>	<p>historic windbreak or row of shade trees.</p> <p>Replacing energy inefficient features rather than improving their energy conservation potential. For example, replacing an entire historic light standard rather than retrofitting the fixture to be more efficient.</p> <p>For reconstruction, obscuring or damaging the appearance of the reconstructed landscape in the process of providing energy efficiency.<sup>183</sup></p>

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<sup>183</sup> Charles A. Birnbaum, *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

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## Chapter 6 - Regulations and Requirements Affecting Streetscape Treatment

### Introduction

The appropriate treatment for historic streetscapes is affected by requirements and recommendations from city, state, and federal authorities as well as other universal guidelines.

### Visibility Triangle

In order to avoid collisions, pedestrians and motorists passing through traffic intersections must have the ability to see clearly around corners. This ability can be impaired by the growth of trees, plants, vehicle parking, and fence installations. Visibility triangle rules require that certain areas of the private property and the abutting city right-of-way be maintained clear of visibility obstructions. Phoenix Ordinance Sec. 31-13 details the requirements of a visibility triangle at intersections. It states:

At public street intersections in residential areas, there shall be no fence or wall or edge higher than three (3) feet, nor any obstruction to vision other than a post or column or tree not exceeding one (1) foot in diameter between a height of three (3) feet and ten (10) feet inside the triangular area formed by the lot lines at the following distances from the point of their intersection.

According to this ordinance, clear triangles are required as follows:

- Where all streets (as defined by the City of Phoenix Street Classification Map) intersect, except for the intersection of local and arterial streets, a triangle with thirty-three (33) foot sides starting at the corner where two curbs lines intersect and extending out away from this corner intersection.
- At intersections of local and arterial streets, a triangle with fifteen (15) foot local side and a thirty-three (33) foot arterial sides starting at the corner where two curbs lines intersect and extending out away from this corner intersection.

In non-residential areas, the above provisions for unobstructed sight triangles on private property apply only to landscaping.

### Phoenix Street Landscape Standards

In 2006, Phoenix created a street landscape standards manual for use by the city's Parks and Recreation, Street Transportation, and Development Services departments. The information contained in the manual that is pertinent to this report is in the following areas: plant material, safety considerations, ADA requirements, safety considerations, and street tree retrofit.

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## ***Plant Material***

The plant species selection in street landscape areas takes into account design aesthetics, pedestrian and employee safety, the long-term maintainability of the area. The approved list for tree and shrub selection is designed to be broad enough to allow landscape architects and customers to select plant material that will achieve their design objectives while providing a low maintenance streetscape with long-term sustainability. The city places a priority on tree selection because of the signature the tree provides for the area. Shrub and groundcover selection is also important since they can add dimension, seasonal color, and soften hardscapes in street medians. The following is a list of tree, shrub, and accent species for City of Phoenix Parks and Recreation Maintained Streetscapes.

### Trees

- Acacia species - acacias
- Caesalpinia species – mexican birds, yellow, cascolate
- Chilopsis linearis – desert willow
- Chitalpa tashkentensis - chitalpa
- Dalbergia sisso – indian rosewood
- Ebenopsis species – tex/mex ebonies
- Fraxinus greggii – little leaf ash
- Leucaena retusa – golden leadball
- Lysiloma species – desert fern
- Olneya tesota - Ironwood
- Pine species – pines
- Parkinsonia species – Palo Verdes
- Prosopis species - mesquites
- Pistacia species - pistache
- Quercus species - oak
- Sophora species – mountain laurel
- Ulmus species - elm

### Palms (limited use)

- Phoenix dactylifera - date
- Washingtonia species - fan
- Brahea species – mex. blue

### Shrubs

- Ambrosia deltoidea - bursage
- Ambrosia dumosa - white bursage
- Asclepias subulata – desert milkweed
- Caesalpinia species – Mexican birds assorted species
- Calliandra species – fairy duster

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- Cordia species – little leaf, big leaf cordia
  - Convolvulus species – morning glory bush
  - Dalea species - dalea
  - Dodonea species - hopseed
  - Encelia species – brittle bush
  - Ephedra species – mormon tea
  - Eremophila species – valentine bush
  - Ericameria species – terpetine bush
  - Hyptis emoryi – desert lavender
  - Justicia species – desert honeysuckle
  - Lantana species - lantana
  - Larrea tridentata - creosote
  - Leucophyllum species - sage
  - Lycium pallidum - wolfberry
  - Ruellia species - ruellia
  - Simmondsia chinensis - jojoba
  - Sophora arizonica – mountain laurel
  - Tecoma species – yellow bells
  - Vauquelinia species – Arizona rosewood
  - Ziziphus obtusifolia - greythorn

#### Ground Covers

- Lantana species - lantana
- Verbena species - verbena
- Rosmarinus prostrates – rosemary trailing
- Zauschneria species – California fuschia

#### Accent Plants

- Agave species - agave
- Yucca species - yucca
- Ocotillo - ocotillo
- Dasilyrion species – desert spoon

#### Cacti

- Sahuaro
- Barrel species
- Hedgehog species
- Opuntia species – lots of different types, paddle, cholla, etc.<sup>184</sup>

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<sup>184</sup> *Street Landscape Standards* (Phoenix: City of Phoenix, Parks and Recreation Department, 2006), 2-4.

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## ***Safety Considerations***

This section addresses the issue of providing adequate width and space for planting strips and street medians to ensure public safety and promote safe working conditions while providing a low maintenance and high performing landscape consistent with local neighborhood and appropriate for the climate. The landscaping should be designed in keeping with the character of the street and/or neighborhood and its environment, providing for aesthetics, storm water drainage, noise abatement, and erosion control. The landscaping needs to be arranged to permit a sufficiently wide, clear and safe pedestrian walkway. It should consider individuals with disabilities, bicyclists, and pedestrians. It should also be developed to serve traveling motorist with considerations to ensure sight distances and clearance to obstructions.

## ***Urban Trails***

Urban trails are located throughout the city. Some of these trails are components of streetscapes. There are two types of urban trail: multi-use and shared-use. Multi-use trails are decomposed granite trails intended to serve equestrians, pedestrians, and cyclists and are ADA accessible. They are generally ten feet wide though there are some exceptions in older developments and/or in newer developments where space is limited. The trails are generally located within a thirty-foot multi-use trail easement on privately owned land. Therefore, maintenance is usually the responsibility of the landowners. City maintained trails of this type are generally located along canal banks and in some instances along major arterials, such as on Baseline Road between 40<sup>th</sup> Street and 24<sup>th</sup> Street. The most well know multi-use trail is the Murphy Bridle Path that parallels Central Avenue between Bethany Home Road and the Arizona Canal (see figure 38). A key feature of the Central Avenue Streetscape Historic District, the first streetscape in Arizona to be placed on the National Register for Historic Places, the Murphy Bridle Path has been an important recreation feature in North Central Phoenix since the 1940s.

Shared-Use Paths are eight- to ten-foot wide concrete paths intended for pedestrians, bicyclists and are also ADA accessible. They are usually located within a public sidewalk easement on privately owned land. Many arterial streets throughout the city have eight-foot or wider sidewalks and this expanded width, by definition, makes them shared-use paths. The path parallel to Arcadia Drive between the Arizona Canal and Lafayette Boulevard is a public path on an easement provided by the Arcadia Estates Homeowners Association (see figure 38).<sup>185</sup>

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<sup>185</sup> Ibid., 37-39.



**Figure 38. Murphy Bridle Path (left) and Arcadia Drive Path (right).** Photographs by Vincent Murray.

### ***Street Landscape Tree Replacement Program***

The City of Phoenix has a streetscape tree replacement program to develop a sustainable tree management plan. Trees require replacement due to various reasons including storm damage, vehicular accidents, disease, old age, and criminal damage. As part of a streetscape sustainability initiative, trees would require replacement within a reasonable timeframe depending on the time of year and weather conditions, usually during the spring and fall.<sup>186</sup>

### **Arizona Department of Water Resources**

In 1980, the Arizona Department of Water Resources was created by the Groundwater Code with a mission to administer state laws, explore methods of augmenting the state's water supplies to meet future demands, and to develop public policies which promote the efficient use and equitable allocation of available water supplies. As such, the department oversees surface and groundwater in the state. The Groundwater Code also created active management areas where the competition for groundwater is most severe. Phoenix is part of an active management area.

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<sup>186</sup> Ibid., 71.

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Within the Third Management Plan (the present management plan for the AMA) it dictates that landscaping planted after December 31, 1986 in the publicly owned right-of-way and watered with groundwater may only be planted with plants from the Low Water Use Drought Tolerant Plant List, a list that was shortened by the City of Phoenix in its Phoenix Street Landscape Standards (see above). However, Section 5-112 A3 of the management plan states “This requirement does not apply to any portion of a residential lot that extends into a publicly owned right-of-way.” This latter stipulation provides for the retention and reestablishment of landscape features within historic residential streetscapes.<sup>187</sup>

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<sup>187</sup> *Third Management Plan for Phoenix Active Management Area* (Phoenix: Arizona Department of Water Resources, 1999), 5-25, 5-63.

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