

# THE GARAGE: ITS HISTORY AND PRESERVATION

by

JONATHAN E. SAGER

(Under the direction of MARK REINBERGER, Ph.D.)

## ABSTRACT

A great deal has been written about the history of the automobile and its impact on the built environment, but there is little available information regarding auto storage and maintenance at the home. Over the course of the twentieth century, the presence of the car radically altered the landscape of much of the United States, and no aspect of this change is more representative of the automobile's influence than how individuals have related to the car at their residences.

Part one of this work is a history of the garage in America from 1890 to 1952, focusing on technological and social trends that influenced its evolution. Part two addresses issues effecting the preservation of garages and includes the results of a 2002 survey of historic garages in Athens, Georgia. The study identified local preservation issues and rates and documented regional forms, methods of construction, and types of exterior cladding.

INDEX WORDS: Historic preservation, History, Automobile, Garage, Carport, Athens, Georgia, Building types

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JONATHAN E. SAGER

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JONATHAN E. SAGER

Approved:

Major Professor: Mark Reinberger

Committee: Bruce Lonnee  
Henry Parker  
John C. Waters

Electronic Version Approved:

Gordhan L. Patel  
Dean of the Graduate School  
The University of Georgia  
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## INTRODUCTION

A great deal has been written about the history of the automobile and its impact on the built environment, but there is little available information regarding auto storage and maintenance at the home. Over the course of the twentieth century, the presence of the car radically altered the landscape of much of the United States, and no aspect of this change is more representative of the automobile's influence than how individuals have related to the car at their residences.

Despite the importance of the garage as an artifact, economic and cultural pressures have resulted in the obsolescence of many of the historic structures, making them extremely fragile resources. The study of this building type's history and preservation has great potential to increase our knowledge of the influence of the car on residential construction and to provide insight into America's evolving relationship with the automobile.



## **PART ONE: HISTORY – 1890 TO 1952**

### **I. Overview**

Throughout the twentieth century a wide variety of structures have been used to house and service the automobile. Originally a modified room in an agricultural building or machine shop, the garage evolved into an array of detached and attached structures ranging from multiple-story townhouse-type buildings to rooms fully integrated into house plans. From the beginning of the type, the form and construction of most garages has been determined by location and type of user, making classification and study of change over time difficult. Despite this, there are a number of trends that hold true throughout the twentieth century for all garages, and it is by observing these that the evolution of the form can be studied.

Over the past 100 years garages have been increasingly incorporated into the house. This is most clearly evident in the move from detached to attached car storage, but is also true in the way that the attached garage shifted from a tangential service wing to an integral part of the plan. Increasing recognition of the automobile as the chief means of arriving at a home gradually modified the most popular location of vehicle storage within the plan and the way that the area relates to other parts of the house. Later, designers realized the possibility of the room to serve an aesthetic function, first to create a rambling look or balance a porch in elevation and then to express the house as a tool for living a life in which the automobile played an important role.

The earliest intentionally styled garages were designed with a conscious effort to hide their function. This was done with multiple paneled and partitioned doors, rarely facing toward a public street, and by using the garage as a feature in a greater landscape. Over the twentieth century the garage has been increasingly accepted as a functional part of the house and efforts to hide it have decreased.

Beginning with idealistic suburban planning during the 1920s, city and neighborhood design has taken place with an increased focus on accommodating both the movement and housing of the automobile. After World War II, the car was frequently given first consideration and other forms of transportation and living space second.

## II. The Early Automobile and American Life

The final decade of the nineteenth century saw the rise of commercially available motor vehicles. Both in Europe and in the United States, these earliest cars were used as leisure vehicles for the wealthy, not for commercial activities or as a practical means of transportation. The first automobiles in this country were imported from Europe or were built at home by experimenters who rarely intended to commercially produce autos. One of the first records of this experimentation in America is William Morison's 1890 car, which he built in Des Moines, Iowa. The vehicle could operate for 13 consecutive hours at 14 miles-per-hour. Like many early vehicles, Morison's lacked the durability needed to travel the country's rough roads or the power needed to negotiate steep grades. None of these first cars could be used to travel long distances because there were no public facilities where fuel could be acquired, roads were ill suited for the new machines, and breakdowns were frequent.

The first successful gasoline automobile to be constructed in America was built by Springfield, Massachusetts' brothers Charles E. and J. Frank Duryea in 1893.<sup>1</sup> That same year saw increased interest in self-propelled vehicles resulting from the display of six motor vehicles at the Chicago Columbian Exposition. In 1897 the Duryea brothers incorporated their auto-manufacturing concern in Peoria, Illinois. In 1898 Elwood Haynes and the Apperson brothers, his mechanic partners, started the Haynes-Apperson company in Kokomo, Indiana. Many others would follow. By the turn of the century, a number of small American companies had been incorporated to manufacture automobiles marketed among the wealthy.

In 1899 thirty American automobile manufacturers produced an estimated 2,500 vehicles.<sup>2</sup> Among these were the predecessors of the modern gasoline auto, but also common at the time were electric and steam powered machines. The turn of the century marked an important turning point for the automobile industry. Constantly improving technology made the auto more practical, and an increasing middle class began to emerge as a possible market. The first car manufactured to meet this opportunity was probably the 1901 "curved-dash" Olds. The model was popular and sales increased exponentially. The first year the \$650 model was offered for sale, Olds Motor Works constructed 425 of the vehicles. The following year, in 1902, the firm sold 750 in New York City alone.<sup>3</sup> To the middle class these cars were not only vehicles for recreation, but also reliable and convenient transportation for work. The auto seems to have been particularly popular among doctors (who frequently visited patients at their homes and were required to travel

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<sup>1</sup> Flink, 1

<sup>2</sup> Ibid, 16

<sup>3</sup> Ibid, 22

unexpectedly at all hours of the day and night) and other traveling professionals such as salesmen and ministers.

By 1905 the high-end market for automobiles was nearly saturated. Many wealthy families owned multiple cars for varying situations. The electric car, with its low speed and relative safety, was seen as especially appropriate for women, but the high purchase and operating expense of this type (which would remain fairly common through the early 1920s) would not meet all of the family's motoring needs.<sup>4</sup> A household might also have a gasoline-powered auto designed to negotiate poor country roads for weekend drives and another more suited to city driving. As sales to the wealthy decreased, more manufacturers turned their attention toward middle and lower income customers. By the end of the first decade of the twentieth century, automobile owners could be found in most parts of America among both the wealthy and working middle-income groups.

In this growing market for more affordable cars, the Ford Motor Company, which had been incorporated in 1903, grew to quick prominence. The Ford Model N was sold in 1906 and 1907 for approximately \$600, and the company produced its famous Model T for nearly twenty years beginning in 1908.<sup>5</sup> While the initial cost of a Model T was \$850, Ford's use of efficient production techniques allowed the price to fall steadily to \$290 in the early 1920s.<sup>6</sup> Lower prices and the introduction of purchase on installment allowed a wider section of the population to own an auto. Sales continued to grow among town-dwelling professionals and began to increase rapidly among all people in rural areas.

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<sup>4</sup> Jackson, 18; Flink, 45

<sup>5</sup> Flink, 24

<sup>6</sup> Berger, 57

The car was growing more attractive to the American public not only because of decreased cost, but also because of technological improvements that made it a more reliable means of work and travel. By 1907 distance "runs" were being sponsored by automobile manufacturers to prove fuel efficiency rather than their original function of proving that the machine could go a distance without breaking down (Figure 1.1).<sup>7</sup> One advertisement for Saxon brand cars boasted, "On May 16, 100 regular stock Saxon cars, in as many towns all over the country, made non-stop runs of 200 miles each, averaging 34.53 miles per gallon of gasoline - less than half a cent a mile for fuel."<sup>8</sup>

Figure 1.1

**SAXON \$395**

**Judge the SAXON by What It Is Doing**

The picture above represents the Saxon in a new dress, with a new color scheme—elegant, dark blue body, and black running gear, with running boards, headlights in front, gasoline filler cap extending through cowl, hinged bonnet, and 38 other detail refinements.

**ON** July 4 the Saxon car finally demonstrated its independence of all road conditions. For on that famous day a Saxon car reached San Francisco, having traveled 3,389 miles overland from New York, in 30 days, across the Lincoln Highway—the first automobile to make a continuous trip from New York to San Francisco over the Highway and the first car of its size and price to make the journey from coast to coast.

Over the Alleghenies, over the Rockies, over the Sierras, over the Saxon with-out tiring. Through mud, through sand, over the great plains, across the

Great American Desert, the Saxon held its schedule, and averaged 30 miles to the gallon of gasoline all the way.

**3,389 Miles in 40 Days**

The same car, from April 8 to May 8, ran 115 miles a day for 30 consecutive days—4,050 miles—averaging 30 miles to the gallon of gasoline and 150 miles per quart of oil, covering the entire distance on the original set of tires. In 40 days this transcontinental car has covered almost 4,000 miles—so far as the average owner drives in two years.

On May 16, 100 regular stock Saxon cars, in as many towns all over the country, made non-stop runs of 200 miles each, averaging 34.53 miles per gallon of gasoline—less than half a cent a mile for fuel, less than 3 cent a mile per passenger.

**Order Your Saxon Now**

With this evidence before you there is no reason for hesitating to buy your Saxon now. Why not get the benefits of the mounting season, now at its height—in a Saxon? The demand for these cars is great, so we urge you to act quickly. Call on the nearest Saxon dealer and place your order immediately for the earliest possible delivery.

Circle and dealer's name on request. Address Dept. F.

**SAXON MOTOR COMPANY, Detroit**

1914 advertisement for Saxon brand automobiles.

By 1910 the size and depth of the American auto market made it evident that the machine was not just a fad for the rich. In that year, auto manufacturing was as important to the national economy as the traditional carriage industry, and the country had 458,500 registered motor vehicles, more than any other country.<sup>9</sup>

<sup>7</sup> Flink, 24

<sup>8</sup> Saxon, 88

<sup>9</sup> Flink, 18

### III. Earliest Garages

Unlike modern automobiles, the first commercially produced vehicles had many specific storage and service requirements that could not be met by existing buildings and maintenance facilities. Each variety of car had unique needs, and a wide range of storage and service solutions were found to be appropriate for each type of vehicle, geographic location, and social class of owner. Unlike those for gasoline-powered machines, storage facilities for electric vehicles were considered relatively safe to attach to a house or outbuilding without excessive fear of fire. Like gasoline autos, “electrics” did need a heated facility because early batteries could freeze easily. Maintenance of the cars frequently required a separate "battery room" for the care of the primitive cells.<sup>10</sup>

Heat was considered a necessity for all garages. A 1913 article warned that cars subjected to cold weather might suffer frozen radiators, warped doors, bowed fenders, flaking paint, and cracked frames.<sup>11</sup>

Most early garages fell to one extreme or the other on a continuum of intentional design and permanence. Many of the earliest garages were either makeshift structures, modified from a barn, shed, or mechanic's workshop, or they were large multi-use facilities constructed by the wealthy to house multiple cars. The multi-use garage, often within, attached to, or modeled after traditional stable buildings, typically included all the pre-service station necessities for auto maintenance as well as facilities for chauffeurs and mechanics. Many of these detached structures included hoists, workbenches, repair pits,

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<sup>10</sup> Way, 86

<sup>11</sup> Wahlberg, 61

storage cabinets, washbasins, pumps, gas-tanks, turntables to eliminate backing up, and overhead hoses suspended from the ceiling for washing cars.<sup>12</sup>

During the first two decades of the twentieth century, it was common for garages on rural estates to be built as additions or extensions to stables when there were already existing buildings, but to include the auto-storage area in or near the dwelling when a new house was being constructed.<sup>13</sup> These combination garage-stable buildings met with limited success. Horses and cars had to be kept entirely separate because ammonia from animal waste could tarnish the metalwork of cars and the fumes and noise of automobiles disturbed the animals. A well planned building of this type usually kept the two types of transportation in separate wings.<sup>14</sup>

A small percentage of the earliest garages were attached to the home as a wing and had doors that opened directly into service areas of the house. McKim, Mead, and White's 1902 Patterson house in Washington, District of Columbia was an early example of this.

In a May 1917 article for Country Life magazine, John Boyd argued that since the garage had none of the sanitary problems of the stable, there was no reason not to attach it to a new home. Boyd emphasized the convenience of caring for a car in a facility that had easy access to the same heat and water supply as the house. Boyd also believed that social reasons made it more reasonable for the garage, than the stable, to be attached to the house. He wrote, "Chauffeurs, as we all know, rank infinitely higher than grooms in the social classification of the household, and they may naturally expect quarters near the

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<sup>12</sup> Cotton, 332

<sup>13</sup> Winslow, 92

<sup>14</sup> White, 84

other servants."<sup>15</sup> The perception of the chauffeur as a skilled, professional individual and of the automobile as a more genteel form of transportation is important to the evolution of the garage not only because it made early automobile owners more comfortable attaching the garage, but also because many of the early detached garages were essentially houses for the chauffeur with a garage below or alongside. The belief that it is acceptable for the domestic servant to live adjacent to the garage probably made it more acceptable for other working class individuals, who were increasingly purchasing their own cars, to live in structures that included a garage as part of the plan.

The Boyd article also demonstrates that different types of garages were considered appropriate for different users. He wrote, "I know of a large country house where one car is kept in the basement ready for the owner's personal use, and the main garage is located some distance away."<sup>16</sup> Boyd continued to outline what he believed would make the ideal garage. When attached, he recommended that the garage be in the basement or a wing of the house, always attached to a service-area or servant's quarters, not the living area of the home.

While attaching the garage was typically seen as having aesthetic drawbacks, some architects and critics beginning in the 1910s thought that it was appropriate for houses built in the Colonial Revival style, because of its ability to create the effect of a rambling New England farmhouse and its ability to symmetrically balance the popular side-porch or sunroom.<sup>17</sup> Boyd described this effect, "Thus it is that the entry of the car into the home may be no detriment, but instead may aid in forcing a return to the old idea

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<sup>15</sup> Boyd, 56

<sup>16</sup> Boyd, 56

<sup>17</sup> Cotton, 334



of a house as a grouping of all the various shelters used by the family."<sup>18</sup> The author suggested that each parking bay be at least 10 by 20 feet and recommended that those wanting workspace build a three-car garage for the extra room. He also offered some technical advice, suggesting that floors for parking areas be reinforced with steel or be constructed of a bed of cinders at least 12 inches deep. Attachment as a simple, side-gabled wing as Boyd advocated, often without direct entrance into the house, continued to be the most common form of attached garage through the 1930s.<sup>19</sup>

Boyd also addressed the domestic landscape and changes it must undergo to accommodate the car. The early auto might require a turning radius of 50 feet, and many entrances and turns that had been designed for horse-drawn vehicles had become obsolete.<sup>20</sup> The author suggested correcting this problem by constructing a court area in front of the house entrance that could be used for turning the automobile and accommodating visiting cars.

On the opposite end of the spectrum from the expensive garages Mr. Boyd discussed, early middle-class auto owners (typically farmers, doctors, and salesmen) adopted more economical forms. The most common of these were small portable garages, often made of sheet metal or prefabricated wooden sections with seams covered by vertical battens. Portable garages were typically only large enough to accommodate a car, frequently 12 by 18 feet (Figure 1.2). At the height of this type's popularity around 1910, they could cost as little as \$100 or \$150, and be as small as nine feet wide, 15 feet long, and little over nine feet tall.<sup>21</sup> The often pre-fabricated and portable structure was

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<sup>18</sup> Boyd, 67

<sup>19</sup> Wahlburg, 64

<sup>20</sup> Boyd, 56

<sup>21</sup> Cotton, 330; Winslow, 93

usually placed in a rear service yard and typically approached through an alley or by a drive along the side of a house. Portable garages were usually sold by mail order and were thought to be a good solution for renters, who could move their garage with them when they switched houses, or those who moved to a vacation home for part of the year.<sup>22</sup>

Figure 1.2



Early portable garage.

Figure 1.3



1914 advertisement for turntable.

Because of difficulty reversing early cars, it was advantageous to have a garage and drive configuration that allowed for easy turning or to have a garage with doors on each side that allowed passing through in forward gears. When this was not possible, a mechanical turntable was sometimes utilized (Figure 1.3). One 1911 article boasted a manually operated turntable that could be moved so easily as to be rotated by a child.<sup>23</sup> This type of turning mechanism was predictably difficult to maintain and operate, especially when placed outside, where it would be nearly useless in a colder climate.

For a time there was great enthusiasm about the turntable not only for its ability to eliminate operating in reverse, but for its ability to decrease the maneuvering space

<sup>22</sup> Wahlberg, 61

<sup>23</sup> White, 86

needed inside garages. It was not until about 1915 that it became normative to have a door for each parking space. One 1911 article said, "Much of the new apparatus for garages is very useful, but none more so than a turntable, the installation of which makes it possible to utilize every inch of space in the building no matter what shape it is. One doorway for cars is all that is necessary when there is a turntable, as each car can be run on to the turntable, turned, and run off in any direction to its location on the floor."<sup>24</sup> It was not long however, before the single door plan (Figure 1.5) for the garage was abandoned and automotive technology advanced, making the turntable obsolete.

Besides the simple mass-produced garages and the costly multi-use garages, a third form was briefly popular early in the twentieth century. In urban areas, where few people owned their own stable and the proprietors of public livery stables were often reluctant to accept autos, a lack of storage was a significant barrier to automobile ownership. This led to the establishment of automobile clubs and member owned semi-public garages. An example of this type was the Massachusetts Automobile Club, opened in Boston during January of 1902. The ground floor of the large, commercial appearing, structure had space to store 25 vehicles and included inspection pits and washing facilities. The basement contained storage and a connection to the outside underground gas tank. The third floor, reached by an 8 by 12 foot hydraulic lift, was occupied by a full repair facility.<sup>25</sup>

Clubs like the Massachusetts Automobile Club were formed in most major cities. The Automobile Club of America was founded in New York City in June of 1899. After several years of meeting in rented space, it was decided that the group needed a

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<sup>24</sup> White, 90

<sup>25</sup> American, 218

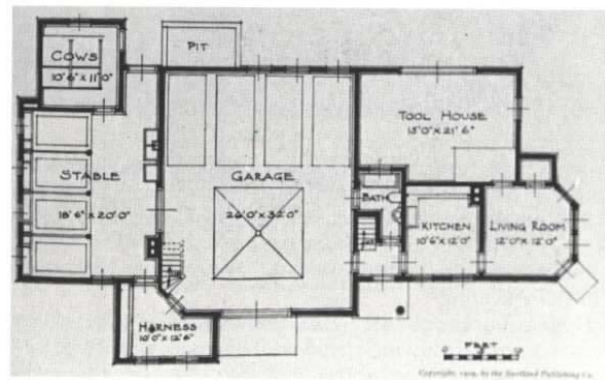
permanent home that could provide garage space for members. In 1907 the organization's eight-story clubhouse was completed (Figure 1.6). The building had first floor garage space, with storage, repair, and meeting rooms above.

Figure 1.4



1911 advertisement for prefabricated garage.

Figure 1.5

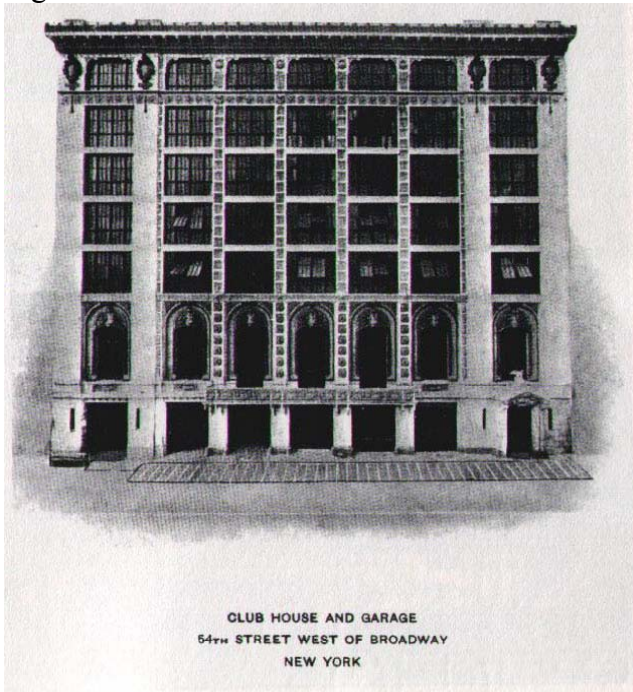


Multiple bay garage with single auto door.

Aside from the club owned garages, some entrepreneurs in urban areas opened public garages modeled after traditional liverys. These businesses rented parking spaces for approximately \$15 or \$20 per month.<sup>26</sup> While public and semi-public garages solved the storage problem in highly urban areas, many realized early on that having the car stored as close to home as possible was desirable. In a 1907 Harper's Weekly article, Marius C. Krarup argued against public storage saying, "If it represented the ideal method for keeping the pleasure-automobile, garages ten to twenty stories high would shoot up to reap the profits from immense storage capacity on a limited ground area. But, no; the evolution is taking a different course. The fire risk in a many-storied building has

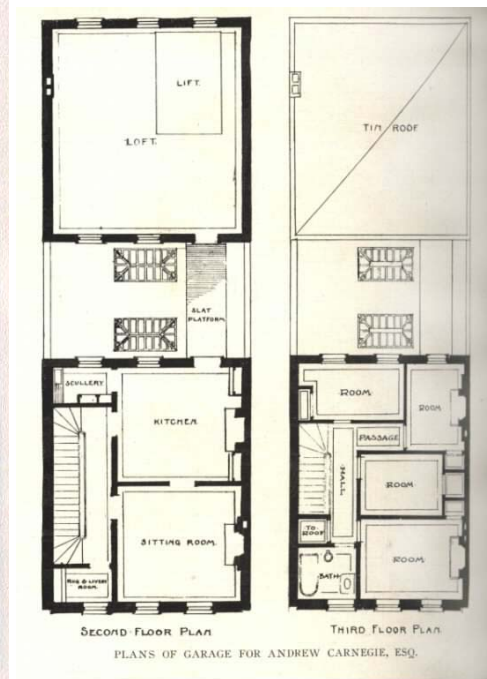
something to do with it, but the public's preference for private housing is probably more decisive." The author continued, offering what would prove to be a very insightful prediction about the future of automobile storage, "Rows after rows of the old-fashioned brownstone homes of narrow frontage have been remodeled or rebuilt in recent years, and the owners or tenants of these houses are also owners of the majority of automobiles which are now crowding the public garages... Yet in all the remodeling and rebuilding but a faint shadow is cast before the event here pictured as coming - the domestication of the automobile in houses of this class."<sup>27</sup>

Figure 1.6



Automobile Club of America building.

Figure 1.7



Carnegie Garage, Whitfield and King, architects.

Krupp's thinking was advanced not only in his understanding that auto owners would insist on having their cars close at hand, but also in his suggestion of how the

<sup>26</sup> Cotton, 329

<sup>27</sup> Krarup, 1600-1601

garage would be related to the house. While most designers building private urban garages were looking to the rural barn for a solution to the auto-storage problem, the author suggested building upon the precedent of an urban French townhouse form dating to the sixteenth century. In this historic form, the house was built above a ground floor stable, a situation generally undesirable for hygienic reasons, but Krarup pointed out that when applied to the automobile and properly fireproofed, this form had many advantages and few of the disadvantages of other storage solutions. Additionally, improved auto steering technology was allowing for garage doors as narrow as six feet wide. This smaller opening would allow for design where "one portal serves for both machine and owner without inconvenience or architectural disfigurement,"<sup>28</sup> an important aesthetic requirement of a middle class not yet used to viewing the large, flat plane of a garage door.

A prominent structure, similar in form to Krarup's proposal, was constructed in New York shortly before the article was written. The urban-townhouse form can be seen in a 1906 plan for a garage for Andrew Carnegie. Designed by the New York architects Whitfeld & King, the building was intended to be a home for Carnegie's chauffer, over a garage (Figure 1.7). The structure was planned to fit in a standard, narrow New York lot and to be three stories tall, making it compatible with its town-house neighbors. The building included parking and repair space and a lift to a second floor storage loft. The plan for the structure included a two-floor, six-room apartment for a chauffer.<sup>29</sup> This substantial dwelling reflected the driver's relatively high social standing among domestic servants. The most radical aspect of Krarup's proposal was not the design scheme he

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<sup>28</sup> Krarup, 1601

<sup>29</sup> Carnegie, 180

proposed but the concept that automobile owners, not just servants and chauffeurs, adopt the combined house-garage structure.

#### IV. Pre-World War One and Traditional Designs of the 1920s and 1930s

Improvements in automobile design and construction quickly made large garages with repair areas and special machinery unnecessary. By 1920 there were adequate service stations in most parts of the country to provide repairs, maintenance, and fuel for drivers. Throughout the decade, the construction of detached rather than attached garages was encouraged by zoning regulations and building codes, but parking solutions, like automobile ownership, varied greatly by geographic region.<sup>30</sup> Because of California's early dependence on the automobile and rapid population growth during the 1920s, many new houses were constructed there at this time and many of their owners required auto storage facilities. The hilly terrain of California cities like Los Angeles was ideal for placing the garage in a basement. By the end of the 1920's, an entrance auto-court was normative for middle and upper class California homebuilders no matter what style of house they were building.<sup>31</sup>

At the beginning of the second decade of the twentieth century, garages most often related to the home in one of three ways: they were detached and completely separated from the house; they were semi-attached and tied to the main building visually by a trellis or walk but not physically joined; or they were large multi-use buildings that included not only parking and service areas but other facilities under one roof. In urban areas, the tradition of the communal, public, garage continued, but was considered less

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<sup>30</sup> Kihlstedt, 561

desirable than having auto-storage on the same lot as the house. In 1919, one author wrote, "While the public garage has its good points, the private one certainly makes for convenience all around."<sup>32</sup> This author suggested that garages be incorporated into the basement of houses so that the ceiling of the garage served as the kitchen floor, allowing for economy of fireproofing materials.

Before the 1920s, fireproofing was considered essential and was sometimes legally required if the garage was attached or in close proximity to the house. Early cars not only used petroleum products that presented a danger, but some early headlamps were powered by extremely flammable acetylene gas.<sup>33</sup> Many different systems for constructing a fire-safe building or modifying a pre-existing structure were developed. Concrete blocks or poured concrete buildings were especially common for detached structures.<sup>34</sup> Terra-cotta, sheet metal in thin sections resembling ceiling panels, plaster, tin, and glazed tile were also used.<sup>35</sup> These different methods of construction experienced different popularities in geographic regions where each material was more widely available or fashionable. Many companies marketed a variety of fireproof systems for small garages including the "Hy-Rib" system of structural wire lath covered with stucco, the Van Guilder Hollow Wall system, and a wide variety of designs developed and published by the Atlas Portland Cement Company.<sup>36</sup>

A 1920 article in Country Life magazine indicated that there were financial as well as safety reasons for adequate fireproofing. The author noted, "In the district around New York it may be said that the insurance rate on the house is not raised by

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<sup>31</sup> Gebhard, 114

<sup>32</sup> Way, 86

<sup>33</sup> Goat, footnote 7

<sup>34</sup> White, 87



incorporating the garage in the house, provided specifications of the underwriters are complied with."<sup>37</sup> The author, a frequent commentator on the garage and its relationship to the house, outlined proper fireproofing by element:

Walls – To be brick, reinforced concrete, stone, or hollow terra-cotta tile. Thickness to be not less than eight inches for brick or tile, six inches for reinforced concrete, twelve inches for stone. Walls used for support of other than the roof of the garage section shall be not less than twelve inches. Roof or Ceiling – To be of brick, reinforced concrete, or hollow terra-cotta tile. Thickness to be not less than six inches. Iron or steel beams to be fireproofed by four inches of tile or brick or two inches of gravel concrete; the lower soffits may be protected by one inch of concrete. Floor – To be earth, concrete, brick, tile or stone, with no space beneath. Finish – No combustible finish. Windows and Outside Doors – If under, or exposing (within fifteen feet) any combustible part of the building, windows to be of wired glass in hollow metal frame and sash, and doors to be Kalamein pattern, glazing to be of one fourth inch wired glass. Windows to be automatic closing and to bear label of Underwriters' Laboratories, Inc. Communications – None, or (but with a communication charge) between garage and other sections, one doorway to be protected by three-inch tin-clad, automatic or self closing single fire door, bearing label of Underwriters' Laboratories, Inc., hung on garage side of wall. Door frame to be in accord with standards of the National Board of Fire Underwriters. Hardware to bear label of Underwriters' Laboratories, Inc. No vertical communication allowed. Vents – Shall not be provided except in wall near floor and at a point farthest away from main section of building. Lighting – Electricity, When acetylene gas is used for automobile lamps it shall be contained in an air-tight metal tank or generator, and not more than twenty-five (25) pounds of calcium carbide shall be kept in the within described building, its additions or connections, the same to be contained in water-tight metal receptacles. Heating – Steam or hot water by direct radiation. Boiler not to be in garage room. Gasoline – Tank to be buried at least two feet below level of basement floor. Filling and ventilating pipes to be outside of building and so laid as to drain toward the tank. Pump to be of type approved by Underwriters' Laboratories, Inc., with measuring chamber not in excess of one gallon.

A 1910 House and Garden article by C. M. Winslow outlined six points that the designer of a garage should be aware of to lower fire-insurance rates and increase safety:

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<sup>35</sup> Cotton, 331

<sup>36</sup> Goat, 67

<sup>37</sup> Boyd, 69

1. Floors should be concrete. 2. Walls should be brick, concrete, or tile and plaster. 3. The ceiling should be covered with metal or be constructed of concrete, especially if there is an apartment above the parking area. 4. The garage should be heated by steam or hot-water radiators. If the heat is not brought from a separate building, then the room containing the furnace and boiler should be completely separate from the auto service and storage rooms. 5. Only incandescent electric lighting should be used. 6. Gas tanks should be stored underground, outside, and at least 10 feet from all walls.<sup>38</sup>

Until after World War Two, the garage was most likely to be a detached building. With the use of masonry and metal fireproofing, however, the basement garage was considered an acceptable solution to house the auto on lots where topography could conveniently accommodate it. An early example of this can be seen in the T.S. Estabrook house, built in Oak Park, Illinois in 1908 and designed by the progressive architects Tallmadge and Watson (Figure 1.8).<sup>39</sup> Early car owners found the basement an acceptable place for the car before the main floor of the house because it obscured the aesthetically troubling garage door and placed auto storage and maintenance in a traditionally service, not living, part of the house.

The second decade of the twentieth century saw increasing auto ownership among the middle class and the increased construction of buildings designed specifically to house their cars. This trend did not occur in all parts of the country at the same time. It has been said that possibly as early as 1910 and definitely by 1920 the car was not just a leisure vehicle, but a part of every day life in Los Angeles.<sup>40</sup> Throughout the country,

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<sup>38</sup> Winslow, 94

<sup>39</sup> Kihlstedt, 561

<sup>40</sup> Jackson, 26

auto ownership grew rapidly during this period. In 1917 there was one car for every 22 people in the country. By 1919 that ratio had decreased to one for every 16 people.<sup>41</sup>

Figure 1.8



1908 Estabrook House, Tallmadge and Watson, architects.

Many of the practical buildings used to store this new group of practical cars were ready-made, mail order structures.<sup>42</sup> During the 1910s and 1920s the portable-type garage was replaced in popularity by prefabricated systems made by well known national and regional companies that produced all types of ready-made, mail-order buildings (Figure 1.4). These garages were inexpensive like their predecessors, but more permanent. The buildings were also quite small and simple and were often erected without foundations. As early as 1910, architectural literature suggested that whenever possible a garage should be constructed to accommodate at least two cars, if not for the owner, then for their guests.<sup>43</sup> It was common for a multiple car garage to be formed by simply repeating the design for a single-bay garage produced by a pre-fabricator or in a pattern book. During the period 1910 to 1930, most small garages were either ordered from a prefabricator or based on plans published in pattern books.<sup>44</sup> These mass

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<sup>41</sup> Wachs, 91

<sup>42</sup> Buckley, 126

<sup>43</sup> Winslow, 93

<sup>44</sup> Cotton, 330

produced structures often had simple stylistic elements reflecting the fashions of their day, but not necessarily related to the houses they served. Particularly popular among the mail-order models were designs that disguised or decorated the garage. Both the Aladdin Company and Sears and Roebuck produced fashionable kits intended to make the garage resemble a pergola, with a trellis framework across the roof and on the sides that could be covered with plantings.

A 1911 House Beautiful article by Charles E. White recommended this type of treatment for the detached garage. The article did not mention the possibility of a garage being attached to the home, but did show a semi-attached building connected to the house by a pergola. The author recommended prefabricated structures because they were inexpensive, convenient, and attractive, and the article emphasized that regardless of the type of garage constructed, it should be styled and placed in a way that is consistent with the style of the house and landscape.<sup>45</sup>

Besides the common pergola format, there were many other designs that attempted to use the garage as part of a greater ornamental landscape. Some garages were built with imitation thatch roofs or were covered with cobblestones to resemble gardener's cottages.<sup>46</sup> During the 1910s, garages on steep California lots had to be placed at the bottom of the slope, near the road. This distance was sometimes used to a landscape designing advantage by giving the small structure the picturesque appearance of a gatekeeper's cottage.<sup>47</sup> In most places, however, the location of small detached garages was usually off an alley at the rear of the house. This area was traditionally a

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<sup>45</sup> White, 84

<sup>46</sup> Wahlberg, 62

<sup>47</sup> Gebhard, 115

service area and placement in the backyard maintained a pedestrian-only zone between the house and the street, hiding the functional garage from public view.

Extreme examples of the garage as a garden feature can be seen in journal articles of the late 1910s and early 1920s (Figure 1.9). These schemes typically involved facing the garage front away from the house and toward an alley or rear-street to obscure the large, flat garage doors. One article shows a detached garage with a large, “U”-shaped pergola constructed on the house side, facing a formal garden. The caption reads, “The family use the garden side of the garage as a cozy place to serve tea in the afternoon. There is a tiny room just behind the central door, where refreshments are prepared.”<sup>48</sup> A 1917 article in Ladies’ Home Journal included a number of extravagant uses for the small detached garage including constructing it into the side of a hill so that a gazebo or summer house can be built on the roof, rooftop pergolas connecting to the house, decoration with flowing vines, and even an example of a colonial home converted to a garage.<sup>49</sup>

While they were much less common at this time, attached garages were designed and constructed. A 1916 article in Ladies’ Home Journal praised a front-facing, attached garage on the main façade of an English vernacular styled home saying, “The connected garage here gives an aspect of greater length to the house.”<sup>50</sup> The same article showed a house where the addition of an el-wing attached garage displaced the living room area to the second floor of the building.

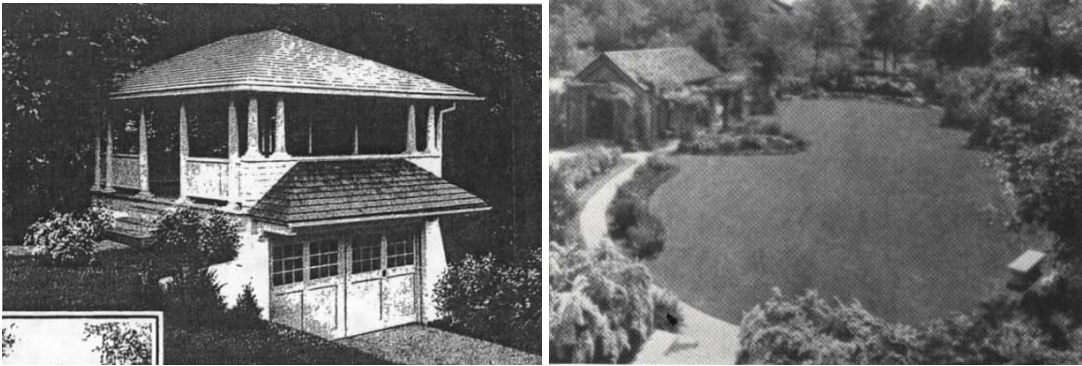
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<sup>48</sup> Edmunds, 52

<sup>49</sup> Need, 33

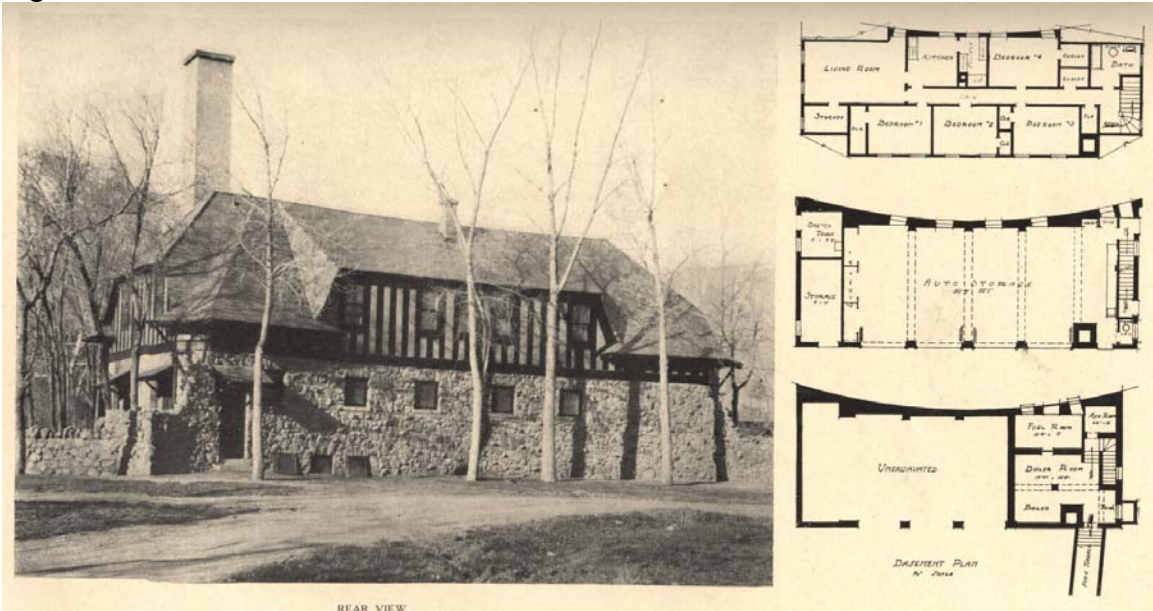
<sup>50</sup> Keeping, 5

Figure 1.9



Garages used as garden features.

Figure 1.10



1924 boiler house and garage, MacLaren and Hetherington, architects.

In the building boom that followed World War One, the popularity of the car continued to grow. In 1925 Americans spent \$3 billion on new cars and \$5 billion in the operation and maintenance of cars.<sup>51</sup> In 1921 there was one car per 10.1 people in the United States, in 1925 one car per seven people, and by 1929 there was one per every 4.5

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<sup>51</sup> Corn, 30

people.<sup>52</sup> By the end of the decade, in 1929, there were 26.7 million registered cars in the United States, and the government spent \$2.24 billion annually on road improvements. 1927 was the first year that purchases of replacement autos surpassed first-time and additional car purchases.

The years 1910 to 1929 coincide with what historians refer to as the Country Place Era. This movement of wealthy urban dwellers to country estates was only possible because of the car and resulted in what has been called the “golden era” of the garage. While the country houses of the wealthy frequently had an attached garage for the convenient use of the owner, most estates also contained large, detached garage structures that were constructed to meet multiple needs. The most common additional use of this type was as housing for domestic staff, but they were constructed to serve all types of purposes. Many of these large buildings included a central heating plant serving the garage, the house, and any other outbuildings.<sup>53</sup>

Two typical examples of the multi-use garage can be seen in the February 23, 1910 edition of The American Architect. “Garage for F. Babson, Esq.” shows a two-bay garage attached to a two-story stable and apartment structure (Figure 1.11).<sup>54</sup> The auto area included parking for two cars, a pit area, and ample storage for parts. The traditional stable portion included an area for heating coal, four animal stalls, and restroom facilities on the first floor, with hay storage and a small apartment on the second floor. “Garage for Mr. M.D. Knapp” also showed a two bay freestanding garage (Figure 1.13). In this plan, a partial basement provided coal storage and services, the first floor contained space for two autos including a designated “wash rack,” with hot and cold water, and a wood

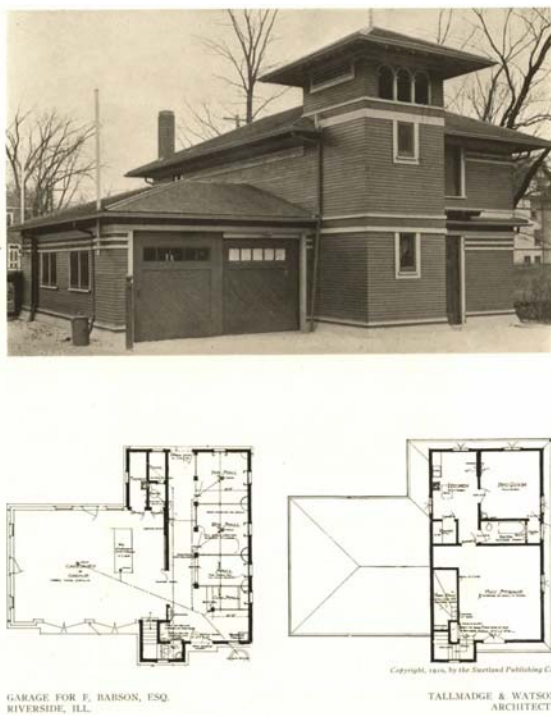
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<sup>52</sup> Buckley, 131; Riley, 39

<sup>53</sup> Rogers, 72

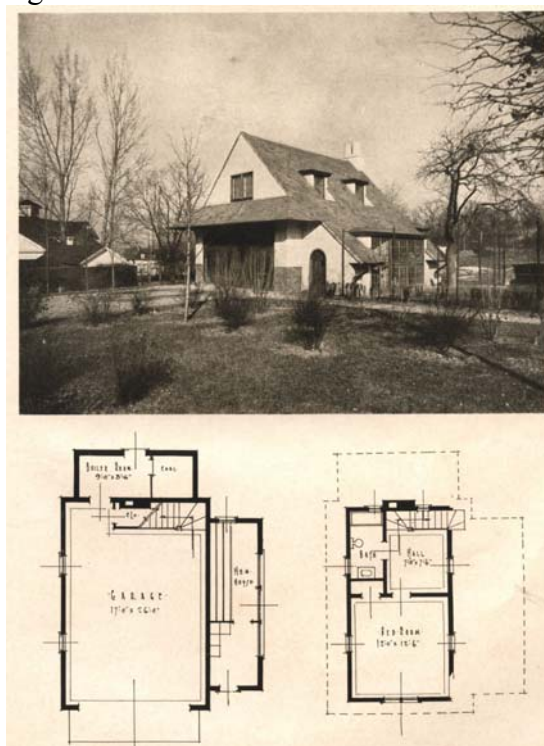
floored work area. The second floor consisted of a two-bedroom apartment with full kitchen and bath facilities.

Figure 1.11



1910 Babson garage, Tallmadge and Watson, architects.

Figure 1.12



1923 garage and chicken house, Frank J. Forster, architect.

Some of these structures were very large. A 1919 American Architect article showed a possible configuration for a five-car garage,<sup>55</sup> and a 1910 article described the ideal “country” garage as being able to house four or five cars. The second article listed among the necessary items for a proper garage: a workshop; blacksmith shop; battery room; service pit; hot and cold running water; shelving; sloping floor with drains; electric lights; closets and storage areas; attic storage area with elevator or lift; and a grease pit

<sup>54</sup> Babson, n. 1783

<sup>55</sup> Taylor, 781



with an “escape” door to the outside of the building.<sup>56</sup> Other designers of the time included in their plans wash racks, hoisting tackles, turntables, various mechanisms for opening doors, and living or work-break space for domestic staff and chauffeurs.

Figure 1.13



1910 Knapp garage, James R. Tyler, architect.

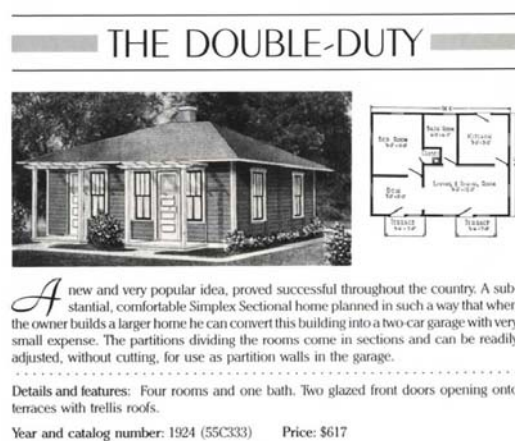
Through the 1920s, the construction of large multi-use garages continued. These structures often combined the new garage with any other facility that might be needed on a large estate, frequently a boiler house for heating, but sometimes more unusual combinations. A 1919 issue of American Architect showed a semi-attached garage and squash-court combination designed by the architectural firm Coolidge and Carlson (Figure 1.15).<sup>57</sup> This garage was not truly attached, but the designers created an illusion that it was by constructing a connected garden wall that mimicked a third bay of the

<sup>56</sup> Winslow, 93

<sup>57</sup> Squash, 379

garage. Another example can be seen in the combination boiler-house and garage designed by MacLaren & Hetherington, constructed in Colorado Springs, Colorado, and featured in the May 1924 issue of American Architect (Figure 1.10). The main floor of the building was a large four-car garage with storage areas for gardening and other equipment. The basement contained a boiler-room with a tunnel connecting it to the house. The second floor of the garage contained a four-bedroom apartment.<sup>58</sup> The living spaces of these garages were large and complete enough that more than one author suggested that homebuilders have their garage built first so that they could live in it while their house was constructed.<sup>59</sup> Even when they were not intended to be lived in, at least one 1920s author thought that country garages, especially at homes that were frequently used for entertaining, should have facilities to shelter chauffeurs from the weather and provide restroom facilities.<sup>60</sup>

Figure 1.14



Mail order Sears and Roebuck kit for house convertible to garage.

Figure 1.15



1919 Garage and squash court combination, Coolidge and Carlson, architects.

<sup>58</sup> Boiler, n. 2446

<sup>59</sup> Wahlburg, 62

<sup>60</sup> Rogers, 72

By the mid-1920s, it was clear to architects and critics that the car was to be an important part of all future residential building, and most agreed that this should be considered when planning construction. P.M. Riley pointed out in a 1925 article for Garden Magazine that people were most likely to arrive at a house by auto, and “This fact entitles the motor entrance to share the importance and distinction of the front door.”<sup>61</sup> There were two schools of thought as to how this should be done. Traditional architects attempted to adapt ideas of the Victorian porte-cochere. More radical designers believed that the auto-entrance should be the main, and sometimes only, entrance to the home.

The popular move toward attachment could be seen as early as 1920 when John Taylor Boyd wrote, “the automobile is bringing about a distinct change in the design of the American house. It is coming to be the custom to park the motor car right in the house.”<sup>62</sup> During the 1920s, there was a flurry of writing advocating the construction of attached garages. In 1922 one author in House Beautiful wrote, “I wonder if there could not be an Amendment to the Constitution against unattached garages, an absolute and enforceable prohibition against the ugly little outhouses we’ve been putting up without rhyme or reason.”<sup>63</sup> Connecting the garage had a number of advantages other than simplified access to the automobile. It made the area easier to heat with the same source as the house, it preserved the backyard as an outdoor living space, and it required a smaller percentage of the lot to be consumed by pavement.

Builders were also realizing that automobiles had become safer and that the elaborate safeguards of the past were not completely justified. P.M. Riley wrote in his Garden Magazine case for the attached garage that the fear of fire hazard was “greatly

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<sup>61</sup> Riley, 42

<sup>62</sup> Boyd, 67

over-estimated” and that the convenience and attractiveness of a garage was of more immediate concern than its safety.

While detached garages remained most popular, some architects saw the possibility of using a garage to “improve building lines” and create a sense of horizontality. Architects saw the attached garage and the carport as a way to lengthen a small house, making it appear more fashionably horizontal. One author wrote that the garage could be used to create a “picturesque appearance of a long, low house which hugs the ground rather than rises high in air.”<sup>64</sup> More conservative architects continued to believe that the garage should be connected as a shed-addition or wing of the house that did not affect the home’s living spaces. One of these more reserved critics wrote, “In considering the attached type, getting the garage into the picture does not necessarily mean getting it into the house; an automobile in the house is not pleasant company unless completely subordinated.”<sup>65</sup>

With the increasing popularity of the auto and suburban living after World War One, architects and planners began to pay increased attention to the needs of the automobile in terms of moving dimensions and turning radius. The second decade of the twentieth century was also the first time that architects, planners, and landscape architects began to study in-depth the needs created by the car in landscape and street layout.

In a 1919 American Architect article, landscape architect and town planner A.D. Taylor identified four different forms of driveways: straight drives with turntables; oval; Y-turns; and combinations of Y and oval shapes.<sup>66</sup> Each of these designs was considered

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<sup>63</sup> Baer, 189

<sup>64</sup> Riley, 39

<sup>65</sup> Rowe, 367

<sup>66</sup> Taylor, 700 - 704

the most appropriate response for certain circumstances. The author indicated that the overall goal of choosing a form should be to find the configuration that would minimize the amount of drive needed and the amount of driving in reverse that would be necessary to enter and exit the area. Taylor also emphasized the importance of having a short-term parking area near the door that people could use to enter and exit a building.

The article's guidelines for driveway design asserted that a "Y-turn" design was usually more desirable in appearance than the oval, but they also indicated that the oval layout was more practical and listed several guidelines for the construction of one. According to the article, a normal oval drive should be 32 to 50 feet in diameter. To accommodate large cars a drive may need to be as wide as 67 feet in diameter. Taylor indicated that 52 feet was an average diameter for a turn-around used by horse-drawn vehicles. The article also suggested that oval drives should be banked rather than "crowned" as roads are. This banking should be to a degree that would allow a driver to be comfortable making the turn at eight miles-per-hour. The area in front of the home entrance should be flat enough for a car to park and wide enough for another vehicle to pass.

Taylor emphasized that landscape planning was important and that plantings were necessary to "soften" the visual effects of a driveway on the landscape. Another author of the time wrote, "Driveways cannot be considered as an ornament to the property, hence should be made as inconspicuous as compatible with their utilitarian purpose."<sup>67</sup> The article also recommended that turntables be used only in situations where space does not allow another solution and that in northern climates they could only be used inside a garage.

For a 1920 article in Architectural Forum, the staff of the magazine undertook a survey of automobile manufacturers to study the dimensions, wheelbase, and turning radius of nearly 80 cars and trucks being manufactured at the time.<sup>68</sup> The five-part series began with a note on the general effect of transportation on building patterns and emphasized new challenges in planning and construction that resulted from increased automobile ownership. The author proposed that it should be simple to establish building standards for auto related projects because of the relative uniformity of vehicles being produced at the time:

Few cars exceed 8 feet in height, and yet practically all enclosed cars require at least 6 ½ feet or more clearance. The greatest variations in automobiles come in their weight and in their turning ability; but even here the extremes only vary about 100 per cent, and the minimum figures have little effect on the design of roads or garages.<sup>69</sup>

The series included practical information, diagrams, and formulas to help the architect and landscape architect accommodate the car in their plans. Part two included tables showing the results of a survey of vehicle manufacturers and referenced similar research being done by others on the topic. The concluding paper discussed the planning of auto-courts, parking areas, and garage positioning. The author separated service courts into three types: 1. those adjacent to the service part of residence and used for deliveries; 2. those near the garage and use primarily for turning vehicles; 3. those that combine the two functions. This final installment also discussed heating, drainage, gasoline storage, and turntables and encouraged further studies that would be useful to designers.

The second decade of the twentieth century marked the beginning of a conflict between traditional and progressive designers over where the garage should be located in

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<sup>67</sup> Campbell, 47

<sup>68</sup> Rogers, 173

relation to the house. While an attached garage is the most common form constructed today, up until the mid-1930's it was fairly rare. It would not be until after the Second World War that the attached garage would become the standard. The slow move from a position at the rear of the house to an attached, front facing position was due less to progressive architectural ideas calling for the functional house than it was to pre-World War Two social conditions. As many authors have noted, following the first world war to some degree, and very much after the second, the front of the house became less important and the focus of social and leisure activities shifted from the front porch and formal front rooms to a more casual and private lifestyle where family members were most likely to meet in the kitchen or family room and the backyard became a leisure area. In their famous sociological study of Muncie, Indiana, Middletown in Transition; a Study in Cultural Conflicts, Robert and Helen Lynd noted the increasing permeation of the automobile into everyday life and referred to the car as a "parlor on wheels." The car had such a significant impact on daily life that fears of its effect on the family and society resulted in backlash. A belief that the Sunday drive habit was detrimental to traditional family time resulted in attempts to prohibit filling stations from being open on Sunday in Atlanta, Birmingham, New Orleans, Nashville, and other cities across the country.<sup>70</sup> As the backyard transitioned from a service to a living space, it became less appropriate to store a car there, and at the same time it became more reasonable to display the automobile in front of the house rather than hide it.<sup>71</sup> By moving auto storage to the front of the house and attaching it, architects could save yard space for other activities and remove what was considered to be an unsightly outbuilding.

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<sup>69</sup> Rogers, 113

<sup>70</sup> Berger, 60

Until after World War Two, more conservative architects and critics tried to attract attention away from the garage door and soften its large, flat space. One of these designers wrote in a 1939 article for House Beautiful that the door must be brought “into scale” with the other openings of the house and suggested planting vines around the door or putting a balcony above. The author of the article also suggested using small double doors, setting doors back under overhanging eaves, and avoiding having two large garage doors on the façade of the house. He wrote, “Double garage doors tend to make the front door insignificant and will be better screened with a splayed pergola effect.”<sup>72</sup>

#### V. Innovative Ideas of the 1910s, 1920s and 1930s

From the second decade of the twentieth century to the Second World War, the design of the attached garage was a struggle between traditionalists who tried to make it blend into the house or disappear into the basement and modernists who wished to clearly show the garage’s function. This function is most evident in the large, untraditional door needed to accommodate an automobile. While many architects advocated that auto storage be separated from the house for safety reasons and that all measures possible be taken to disguise the structure as a garden ornament or a traditional rural outbuilding, more progressive designers accepted the garage on the main level. Frank Lloyd Wright, who had included a basement garage in his 1904 Edwin H. Cheney house in Oak Park, Illinois moved a step further toward the modern-incorporated garage in his 1909 Robie house in Chicago (Figures 1.15 - 1.18).<sup>73</sup> The Robie garage is not fully attached to the

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<sup>71</sup> Buckley, 129

<sup>72</sup> Geerlings, 39

<sup>73</sup> Kihlstedt, 561



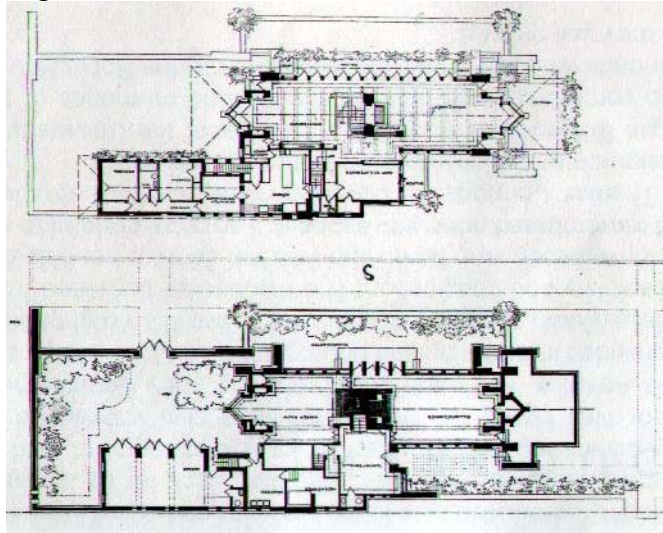
house, but is connected by an open passage and visually very much part of the main building.

Figure 1.16



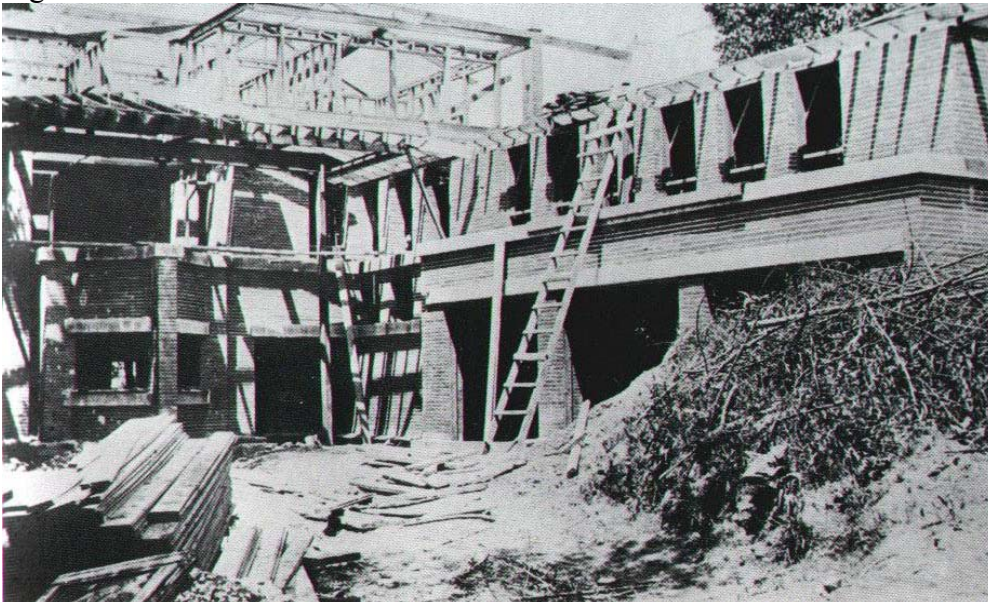
Property entrance and garage at the Robie House.

Figure 1.17



Robie House plan with entrance court and garage on the left, Frank Lloyd Wright, architect.

Figure 1.18



Robie House garage wing during construction.

Fredrick C. Robie was typical of both Wright's early clients and early automobile owners. He was a member of the growing upper middle-class who had an interest in technology and industrial age innovation. From 1901 to 1909 Robie had worked for his father's Excelsior Supply Company, which distributed among other things automobile supplies. Before Robie had decided to construct his own house, he had already designed and built an early engine-driven "runabout" automobile.<sup>74</sup> Wright's plan for the Robie house garage is progressive not only for its inclusion of a multi-bay garage at ground level and tied to the house by a walkway, but because of the structure's prominence. The garage and all of the first floor of the house was obscured from the street by a high brick wall. The only entrance to the Robie property was through an auto-gate that leads from the street into a service court. Once inside the gate, the garage and its distinctive features dominate a visitor's first view of the house.<sup>75</sup> Like many early garages, Robie's contained a full array of devices to care for the auto including an interior overhead hose for washing cars.<sup>76</sup>

With the exception of a few radical homes like the Robie House, detached or attached, but subordinated, garages would remain dominant for the next three decades. In 1927 Henry W. Rowe wrote in an article for Garden and Home Builder that the prominent display of the garage should be avoided, but that when it is necessary, the door should somehow be "softened" visually. In opposition to these ideas, Le Corbusier's 1927 Villa Stein was constructed with the garage door intentionally prominent at the front of the building and at eye-level (Figure 1.19).<sup>77</sup> This type of plan was consistent

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<sup>74</sup> Connors, 5

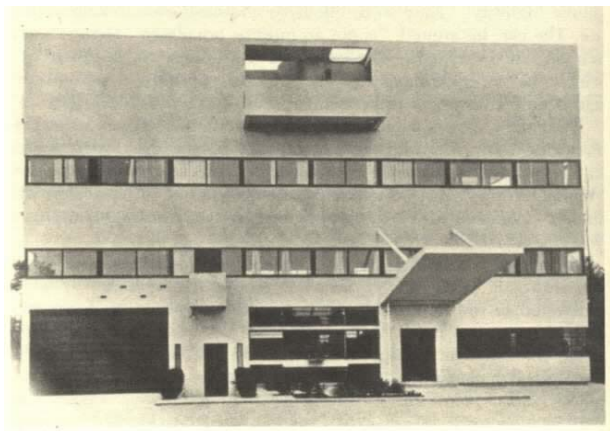
<sup>75</sup> Kihlstedt, 566

<sup>76</sup> Connors, footnote 5

<sup>77</sup> Kihlstedt, 564

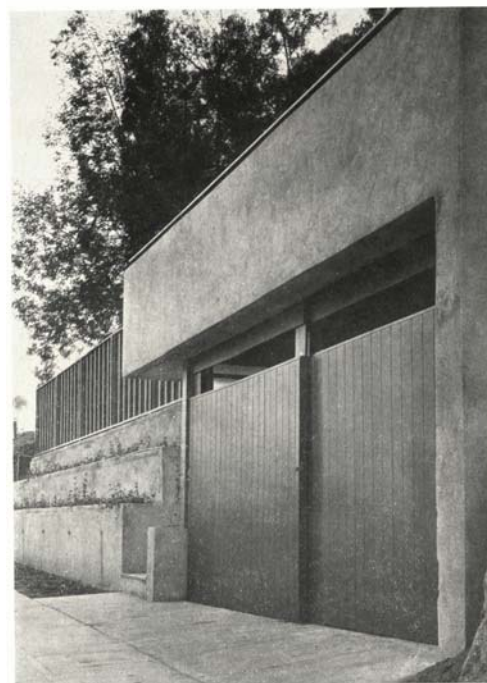
with his search for a "machine for living," modernizing the house to be as functional and rational as other new inventions. In the Villa Stein design, the entry door to the house is subservient to the car entry, clearly expressing the main method of arrival. This building and other Corbusier designs greatly influenced modern architects like Richard Neutra and Rudolf Schindler who would popularize these ideas in America (Figure 1.20).<sup>78</sup>

Figure 1.19



1927 Villa Stein, Le Corbusier, architect.

Figure 1.20



Buff Studio, Richard Neutra, architect.

By the end of the 1920s progressive architects influenced by the ideas of Le Corbusier and other modernists began to look for ways to reinvent the house. In a 1929 article, Howard T. Fisher pointed out that in a time of quickly changing technology the house was the last aspect of life to be modernized. Fisher wrote that garages should be attached in such a way as to allow access to both service areas and the main entrance of the home. He logically defended his idea, without concern about the aesthetic impact of

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<sup>78</sup> Ibid

a large blank garage door, "where members of the family drive the car, there seems to be no reason to make them go through the kitchen every time they want to go in or out. For the greatest convenience the garage should be located either near the front door or in such a way as to connect directly with the front hall."<sup>79</sup> He continued, "There is no way of predicting what the future requirements for privately owned airplanes will be, but for automobiles it will seldom be advisable to build a garage that will hold less than two cars and most larger houses will require space for three or more."<sup>80</sup>

The 1920s also saw the invention of many conveniences for the garage. By the middle of the decade, push-button electric door openers were on the market, and by 1930 there were radio devices that could be used to open and shut the door from the car.<sup>81</sup> In a 1928 article, Marc Goodnow recommended that a new garage be constructed to take advantage of a number of modern technologies and ideas. The author suggested electric switches be installed that would allow the door to be operated by hitting a button, or to be triggered by a car passing over the driveway.<sup>82</sup> In the early 1930s, the Barber Coleman Company of Rockford, Illinois marketed a remote control system consisting of a transmitter installed in the car and a receiver installed in the garage. The radio signal used was adjustable so only the correct car and frequency could open the door. The remote control was operated by pulling a knob on the dashboard, which would signal to the garage, opening the door and turning on the lights. Wall-mounted switches in the garage or house could also operate the system. The automatic door included a safety

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<sup>79</sup> Fisher, 399-400

<sup>80</sup> Ibid, 400

<sup>81</sup> Gebhard, 117

<sup>82</sup> Goodnow, 124

feature that would stop the door if it encountered an obstruction. The entire system sold for between \$315 and \$480, a considerable amount of money at the time.<sup>83</sup>

Goodnow also promoted positioning an attached garage so that the roof could be used as a deck or balcony, an idea applied to both modern and traditional house styles.

The author also considered purely aesthetic issues. He wrote:

If the house has any pretense toward architectural design, the garage should quite naturally carry out the scheme, whether it be detached or an integral part of the house, for good architecture pre-supposes the relation of the parts to the whole... In truth, this structure, formerly regarded as just an outbuilding, has undergone a remarkable transformation in public estimation. It is no longer just a shed of cracker-box appearance, with pitch black caverns through which one explores in search of a monkey wrench or tire patch... The garage has evolved in just a few years from a 'necessary evil' into the distinctive sphere of an integral part of either the house itself or of the grounds surrounding the house.<sup>84</sup>

Goodnow saw the garage as a way of protecting a major investment costing between \$500 and \$5,000 from "the elements and from marauders" a task that "calls for substantial, water-tight, weather proof construction of materials equivalent in quality to those in the house itself."<sup>85</sup>

The ideas of a few designers can pre-date popular sentiment by decades. In 1932 it was still necessary for Burton Ashford Bugbee to make the same argument that Marius C. Krarup had made in 1907 and Fisher a few years before. Bugbee believed that the garage should be attached, but he went a step further in insisting that the garage should not only be of equal importance to the traditional pedestrian entrance but be recognized as the most important formal and informal point of arrival. He believed that garages were being built as detached structures "by sheer weight of custom," a practice completely

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<sup>83</sup> Remote, 480

<sup>84</sup> Goodnow, 88

<sup>85</sup> Ibid

unnecessary because “the mechanical perfection and cleanliness of the modern motor car have made it far less obnoxious as a neighbor than the kitchen, and we are now able to give the garage its proper place in the house machine in accordance with the dictates of efficiency.”<sup>86</sup> The author not only advocated attachment, but insisted that the garage take the place of the traditional pedestrian approach as the formal entrance to the house, “the garage in simple terms, is not merely a storage place for cars – it is the motor entrance to the house.”<sup>87</sup> Bugbee advocated a direct connection from the garage parking area to the main entrance or stair hall and advised that a “long trek through kitchen and service area to reach the living-rooms” should be avoided.<sup>88</sup> Another author of the same time agreed, “The housing facilities of the private automobile should not be one of the least, but rather one of the most, important considerations in realizing a balanced relationship among the features of our home environment.”<sup>89</sup> The same author said that now that the kitchen was recognized as a place of both beauty and utility, the garage too could be finished in a way to provide favorable aesthetics in a service area.

General trends in architecture during the 1920s and 30s contributed to the evolution of the garage. The increasing openness and flexibility of the house plan and a more fluid interpretation of the uses of rooms encouraged the attachment of the garage. Just as the multiple-use living room took the place of the formal front parlor, the attached garage was viewed not only as a place for automobile storage but an ideal location for a home workshop, an indoor play area, and a place to accommodate new home technology such as the washing machine. In 1928, Marc Goodnow wrote an endorsement of

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<sup>86</sup> Bugbee, 134

<sup>87</sup> Ibid, 136

<sup>88</sup> Ibid

<sup>89</sup> Olney, V

multiple-bay attached garages saying, "The family with two cars is not at all uncommon nowadays," and stating that when not in use the extra space from additional bays could be used as a play area for children or as a place of adult leisure.<sup>90</sup>

The 1930s were a time of experimentation with what changes could be made to the form of the garage and how it might be used to positively affect the house plan in buildings of both traditional and modern styles. A creative example of this can be seen in a 1936 house in Daytona Beach, Florida by the architect A.H. Pierce (Figure 1.21). The front of the house was dominated by a large auto-court in front of the main entrance hall. The garage was two separated bays, one connected to the house, separated by a covered driveway and attached by a second floor space serving as servant's quarters and storage.<sup>91</sup> The garage provided a connection to service parts of the house, but unlike most older, connected, garages it also provided easy and direct access into the entrance hall of the building, showing an acceptance of the auto as the standard way of arriving at the house.

These innovative plans of the late 1920s and 1930s resulted in entirely new forms for the house including what came to be popularly called bi- and tri-level homes. In 1931 Dorothy and Julian Olney described a new idea, "Kitchen, living, and dining rooms may constitute one level, then one goes up a few steps to a bedroom on a second level, beneath which is placed a garage that will only be set a few feet below the surface of the ground. Then above the rooms on the first level other bedrooms may be arranged."<sup>92</sup> Another way the car affected the house was by displacing the traditional location of the front door. By 1935 it was not uncommon for a garage door or carport to be placed on

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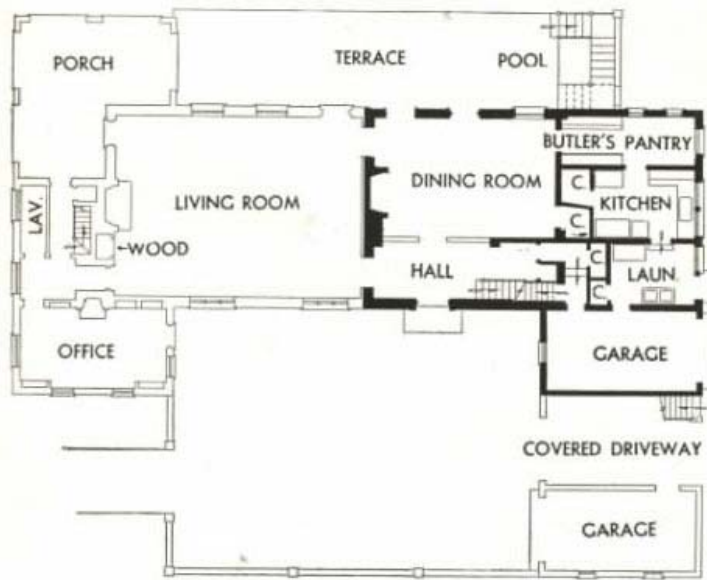
<sup>90</sup> Goodnow, 124

<sup>91</sup> Continued, 56 - 57

<sup>92</sup> Olney, 30

the front of the house, facing the street; this design displaced the traditional front door located on central axis and resulted in a less formal facade.

Figure 1.21



1936 Daytona Beach, Florida House, A.H. Pierce, architect.

Figure 1.22



1930 "House for the Motor Age."

By the middle of the 1930s, architects were designing houses for all types of clients with fully integrated garages that made no attempt to disguise or conceal. A 1934 issue of Pencil Points showed a design for the "Motorcentric House" by architect M.R. Dobberman and landscape architect E.H. Lovelace. The prominent garage door is the only first floor opening in the façade and the entrance through which one must enter the building. While the design includes a separate "entrance court" for foot traffic, this approach enters into the same hall as the garage. This plan is an extreme example of a



trend that began with the mass-production of the automobile for the middle-class and would become most pronounced after World War Two, increasing focus on the backyard and decreased concern with the relationship of the front of the house to the street.

In a similarly progressive design made a few years earlier in 1930, an architect's "house for the motor age" was believed to be an improvement on the floor plans used for the Radburn development by making the garage more easily accessible from the living areas of the house (Figure 1.22). The article points out that as early as 1930 the front door was rarely used, "It is obvious that when guests are not to be considered, the kitchen doorway will in reality, be the place of entrance."<sup>93</sup> In the plan, the garage is attached as a shed-roofed addition to the house. The house side of the garage forms a walkway with a pedestrian door at either end, and off this path is the only entrance to the main house, into a small foyer with equal access to the living room and kitchen. The only way to enter the house is through one of the three garage doors.

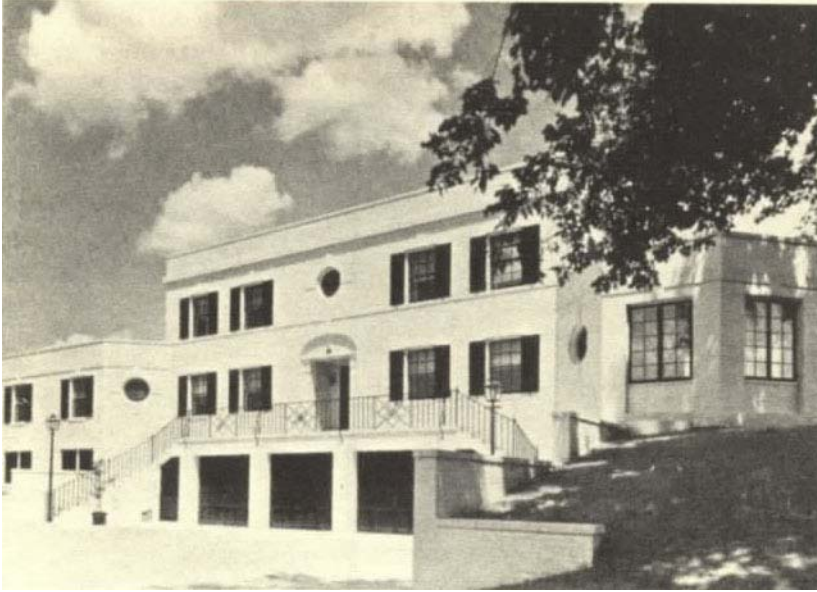
There were many compromises between these radical auto-centered designs and the more traditional ones. It was not uncommon during the twenties and thirties to attach a garage without providing direct access from it into the house. A good example of this form can be seen connected to the "modern" house shown in a 1935 issue of Good Housekeeping. The design by architect H. Roy Kelley contained a 472 square foot, three-bay, garage attached as an el to the house. There were two approaches to the front porch, one by a set of stairs rising from the "motor court" and the other under a short, sheltered walkway from the house side of the garage.<sup>94</sup>

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<sup>93</sup> Technical, 197

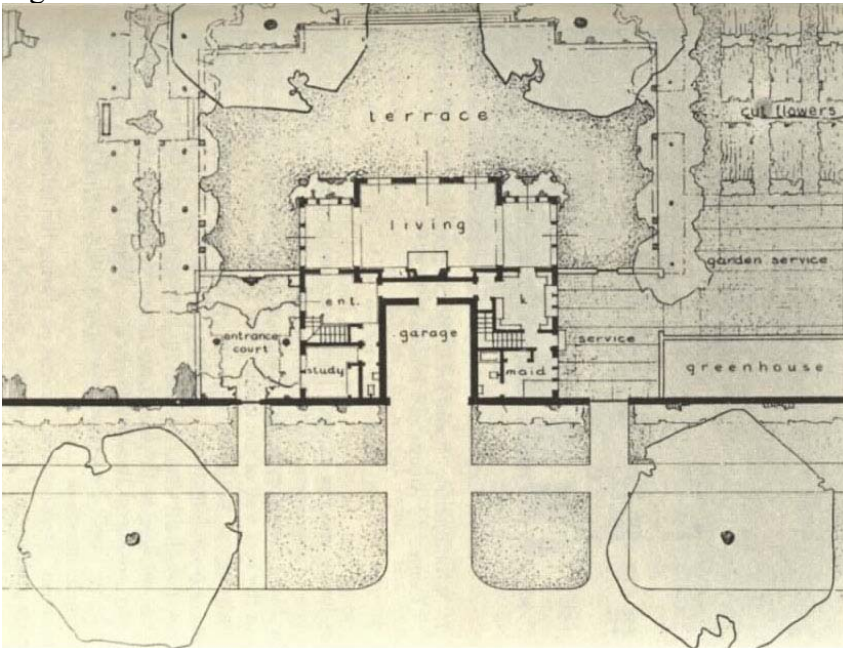
<sup>94</sup> Modern, 72

Figure 1.23



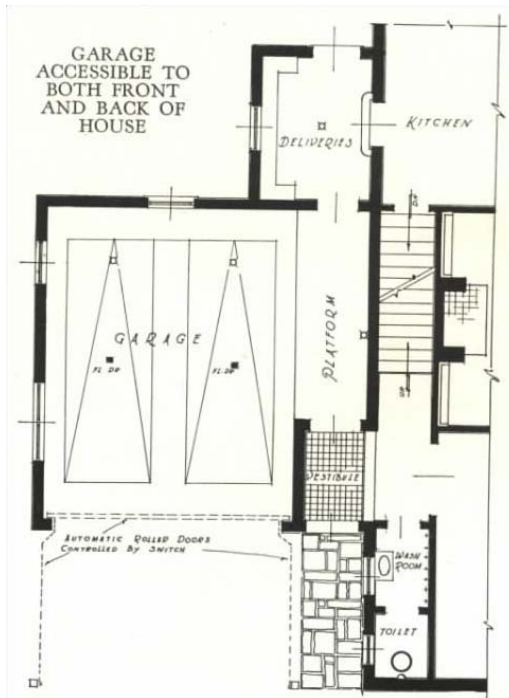
Classically styled 1935 “Motorcentric” house, Adams and Prentice, architects.

Figure 1.24



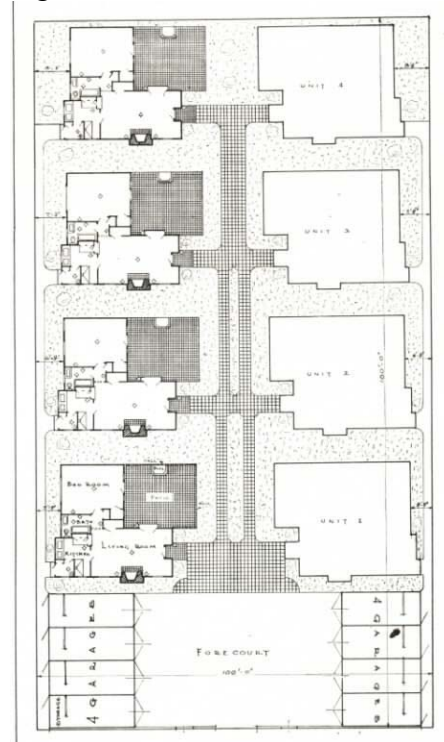
1934 “Motorcentric” house, E.H. Lovelace and M.R. Dobberman.

Figure 1.25



1929 garage with access to both service and formal entrance of house.

Figure 1.26



1929 "Small Houses Arranged in Relation to Forecourt," Christine Sterling, designer.

## VI. The Carport.

The precedents for the garage in most of its manifestations are fairly evident in pre-existing agricultural or commercial forms and in the stable. The origin of the carport is more obscure. The form has been credited to Frank Lloyd Wright, who frequently used it in his Usonian homes.<sup>95</sup> Like the garage, however, the carport has existed in vernacular construction as long as the car has. Wright did do much to popularize the form. His 1936 design for the Herbert Jacob's House, his first Usonian home, in Madison, Wisconsin includes parking under a broad cantilevered roof (Figure 1.28). One must go under the carport to enter the house by foot. Doors from the carport offer access

<sup>95</sup> Sergeant, 19; Kihlstedt, 567

to the main entrance and to a service entrance. Three years later, in 1939, at the Bernard Schwartz house in Two Rivers, Wisconsin, Wright expanded on the scheme. The carport formed under the extended cantilevered roof of the house also allows one to pull-through the structure, avoiding backing up or being blocked by another car.<sup>96</sup>

The earliest use of the carport in intentional design seems to arise out of the work of progressive Middle-Western architects in the years before World War One. The work of Walter Burley Griffin, who worked for Wright as a draftsman and landscape architect in the Oak Park Studio from 1901 to 1905, contains several early examples of the carport.<sup>97</sup> After studying architecture and landscape architecture at the University of Illinois in Champaign-Urbana, Griffin took a position in Dwight Perkin's Chicago architectural firm in 1899.<sup>98</sup> While working in the office, the young designer would have been acquainted with the work of many more established architects who also had studios in Steinway Hall. From the time he left Wright's office in 1905, until he departed North America to work on the design of Australia's new capital, Canberra, Griffin's work echoes an accelerated path of the evolution of domestic parking over the next four decades. In the years 1909 to 1913, Griffin's designs include detached garages, fully integrated attached garages, and early examples of covered open parking.

Griffin's 1912 plan for a pair of houses in Evanston, Illinois includes the placement of two detached garages with a common back wall. There is nothing remarkable about the two structures, but their siting shows the experience of the veteran landscape designer. In this innovative plan, the two houses for Hurd Comstock were situated on what was formerly a single corner lot. The houses were separated by a shared

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<sup>96</sup> Sergeant, 46-47

<sup>97</sup> Vernon, 219

sunken garden. The detached garages, built with a shared back wall, were situated at the rear of the lot, screened from view by a hedge of trees and other plants.<sup>99</sup> While the garages for each of the two homes are adjacent to each other, they are approached from different streets. One is reached by a straight drive off a busy city street, and the other by a longer drive off of a quieter residential street. One historian described the plan:

An important feature from the point of view of planning is the relationship of the houses to each other, combining a common site and joint facilities with individual privacy. This is a problem every architect of suburban houses had to face more and more frequently. Griffin's solutions were arrived at independently, without precedent in Wright's work ... [and are] a milestone in the domestic architecture of the Chicago School.<sup>100</sup>

Griffin's 1912 plan for the Melson House in Mason City, Iowa included a double, pull-through garage attached to the house and convenient to the main pedestrian entrance. In his 1909 plan for the W.B. Sloane House in Elmhurst, Illinois, Griffin included an early carport. The house is very similar in elevation to the Ward W. Willits house, which Griffin worked on in 1901 and 1902 while in Wright's office.<sup>101</sup> In the Willits house, a porch is balanced on one side by a porte-cochere. From under this porch, one walks directly into the entrance hall using the main pedestrian entrance. At the Sloane house, Griffin uses the carport in the same way. It balances a large veranda on the opposite side of the home. However, the design has been updated to account for the entrance of the automobile into everyday life. The house is entered from the parking area by either a short walk under an overhanging roof to the front pedestrian entrance (an early photograph shows the driveway, two parallel strips of concrete, also serving as the only

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<sup>98</sup> Garner, 218

<sup>99</sup> HABS, 4

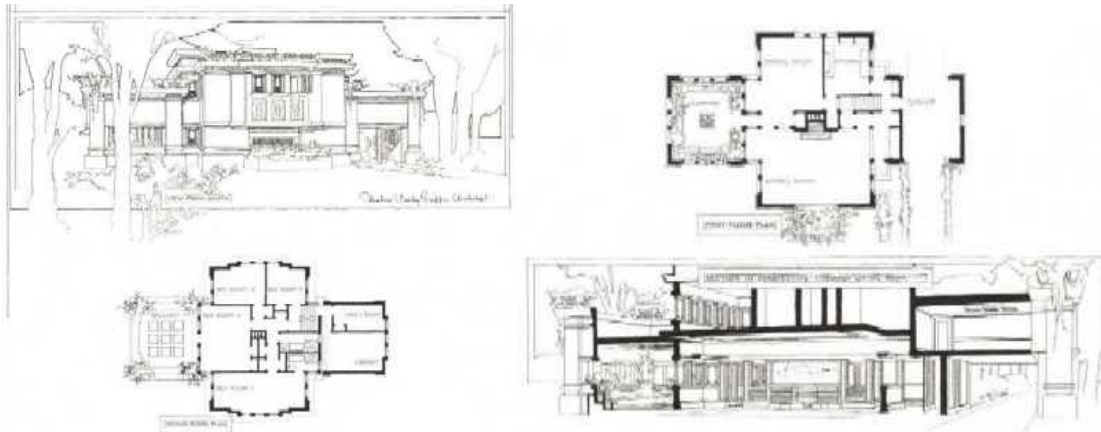
<sup>100</sup> Peisch, 60-61; HABS page 5.

<sup>101</sup> Birrell, 43

pedestrian approach to the home) or, one follows an identical path under an overhang at the rear of the parking area to enter a service entrance adjacent to the kitchen. In Wright's Willits house, the drive continues through the porte-cochere to a stable near the back of the lot, but in the Sloane house, the projection is intended to be the primary storage space for the family's transportation, not just an entrance point.

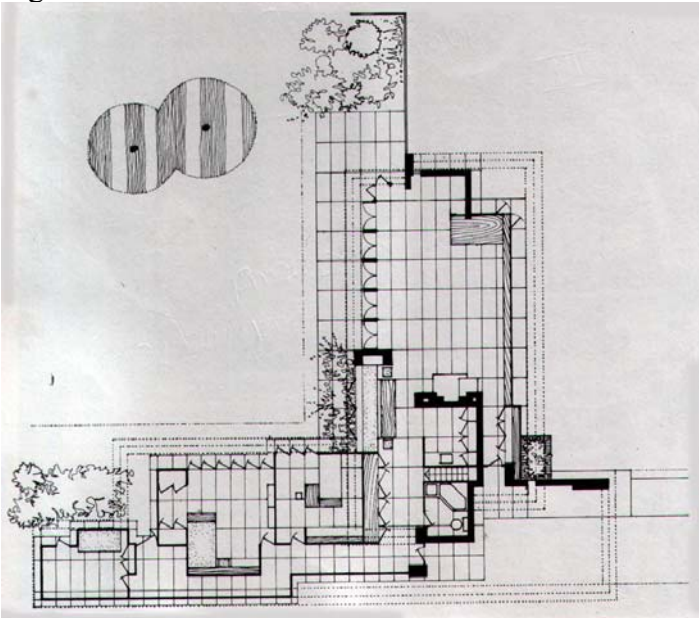
Griffin included this feature in a number of his early designs, including the 1914 Blythe House in Mason City, Iowa (Figure 1.27). The western wing of the house, consisting of a first floor veranda with a second floor balcony above, is balanced by the eastern wing pull-through garage, which Griffin's drawings indicate is to be left open as a carport. This opening of the attached garage space into a porte-cochere or even porch-like space seems to be a natural extension of many of the Chicago School's design goals. The form extends the house horizontally while opening up the plan and blurring the division between structure and landscape. While this open parking design was excellent in theory, it was not practical. Until after the First World War, many car companies continued to produce "open" models that were not weatherproof enough for outside storage, and it was not for many years after the war that both improved paint finishes and the adoption of the standard hard-top made the carport practical. Open parking proved to be ill suited for the climate and current state of automotive technology. The parking spaces at the Blythe and Sloane houses were enclosed with back walls and garage doors at the time of construction or shortly after.

Figure 1.27



Blythe House, Walter Burley Griffin, Architect.

Figure 1.28



Jacobs House with carport in lower right formed by cantilevered roof, Frank Lloyd Wright, architect.

The work of Griffin and others, like Minneapolis architects Purcell, Feick, and Elmslie, who included carport parking labeled "autospace" in their 1913 Lockwood Lake house,<sup>102</sup> received limited attention at the time, but would serve as precedent for much

<sup>102</sup> Gebhard, 110

later building. Following the Second World War the carport became widely accepted for a number of reasons. Improved cars did not need as much weather protection, owners no longer needed to maintain automobiles, eliminating the need for parts storage and service features, and they served to visually open up the building, meeting the goals of many designers of the time by creating a modern look of horizontality and a hovering, cantilevered roof.

## VII. The Garage in New Town and City Planning

By 1930 there was a need for auto storage at all residential buildings, not just in rural areas and not just the homes of the wealthy. In 1936 the garage was considered such a necessity that a study on low-cost housing by Purdue University listed it as a requirement for all design submissions.<sup>103</sup> By 1930 the village of Hastings-on-Hudson required “that there shall be provided on the same plot with any multi-family dwelling a graveled or paved parking area sufficient in size to accommodate one car for each family housed.”<sup>104</sup>

The importance of transportation to suburbs made the housing of the auto a particularly important issue in new town and community design. Possibly the first planned community to consider housing the automobile was the Sunnyside development in New York (Figure 1.29). The 1924 development by the City Housing Corporation was heavily influenced by the ideas of Ebenezer Howard and his garden city movement, so the car’s impact on the greater landscape was considered from the beginning of the

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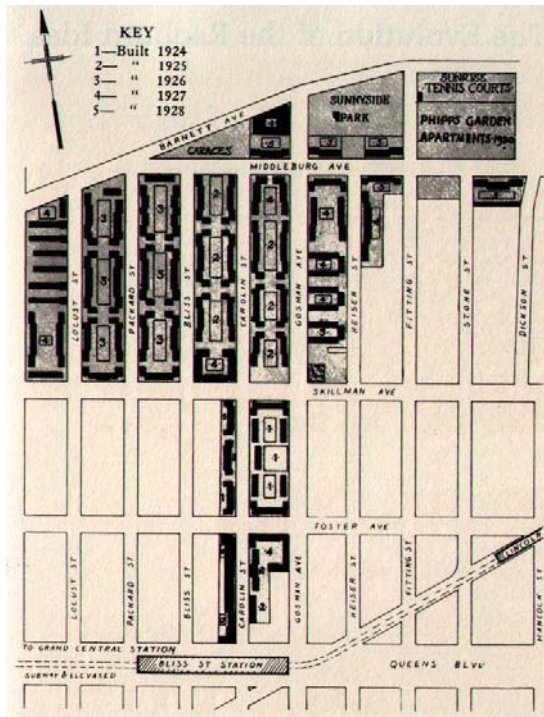
<sup>103</sup> Kihlstedt, 562

<sup>104</sup> Tech, 194



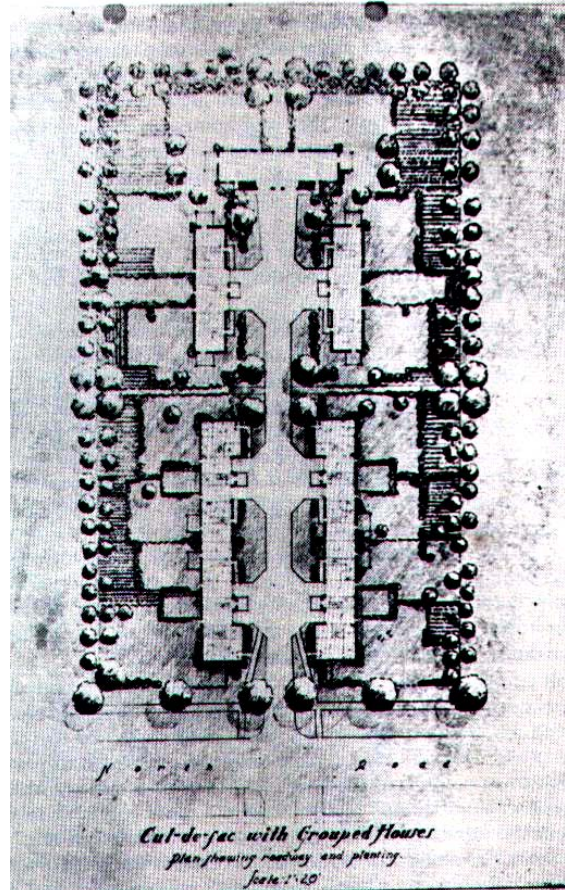
project.<sup>105</sup> Before Sunnyside, garages associated with new development were placed along the back of a lot. Since the lawns at Sunnyside were to act as one park-like space without divisions created by fences or outbuildings, all of the garages were clustered together and placed to the side.

Figure 1.29



Sunnyside plan with grouped garages.

Figure 1.30



Row houses separated by attached garages, Greendale, WI.

Five years later, the City Housing Corporation began planning to construct a much larger development on a tract of land 15 miles from Manhattan in Fair Lawn, New Jersey. The Radburn development was planned to house 25,000 to 30,000 people on one

<sup>105</sup> Schaffer, 121



The designers of the town used a super-block design to direct automobiles around the community and a system of service roads and cul-de-sacs to allow convenient access by car. Just as automobile and pedestrian traffic were intentionally given equal weight in the plan of the community, they were also recognized as equal in the plan of the house. One historian said, “To reduce the impact of the automobile upon the residential areas even further, each home was given two entrances of equal importance—one on the cul-de-sac, designed for the delivery of goods and services, and the other on the pedestrian walkway.”<sup>107</sup> While the idea of having two relatively equal facades for arrival by different modes of transportation, like a river and a land front, was not new, Radburn is probably the first time that recognition of the automobile resulted in such a significant change in plan for a large group of homes. Some Radburn plans had attached garages that provided direct entrance into service areas of the house.

Radburn influenced many smaller design projects across the country and would be the model for some large depression era developments. A 1929 plan for “Small Houses in Los Angeles, Arranged in Relation to Forecourt with Garages” by Christine Sterling shows eight houses arranged in a relatively high density.<sup>108</sup> The entrance to the development was through a 100-foot wide auto-court flanked on either side by four single car garages, each with a small storage area at the rear. The entrances to the homes were along a pedestrian path, facing away from the street and into the super-block. The use of two narrow strips of paving material rather than a single sidewalk on the two thirds of the path nearest the court may indicate that this area was to be accessible to cars for

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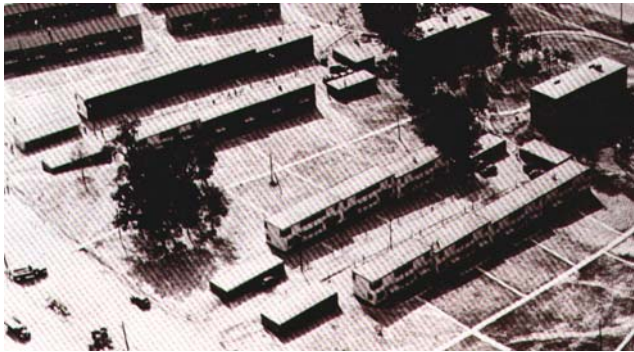
<sup>107</sup> Ibid, 156

<sup>108</sup> Technical, 194

occasional deliveries, but the lack of space for passing or turning around would prohibit every-day use.

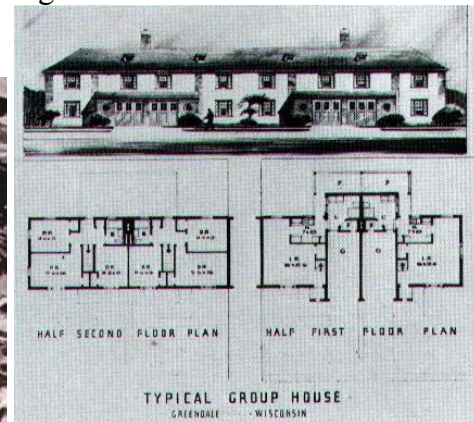
1938 plans for homes constructed by the depression era Resettlement Administration in Greendale, Wisconsin included a number of different plans for small and practical garages (Figures 1.30, 1.34 - 1.36). Detached houses in the community were constructed with detached and semi-attached garages on each lot. The row houses were constructed with detached and semi-attached garages on each lot. The row houses in Elbert Peets' 1938 plan included attached garages that separated each building, providing sound insulation and visual distance.<sup>109</sup> The attached garages entered directly into a service \ utility area of the house but required one to walk a circuitous path to reach living areas.<sup>110</sup>

Figure 1.33



Greenbelt, MD with three-sided parking structures at the end of each housing row.

Figure 1.34

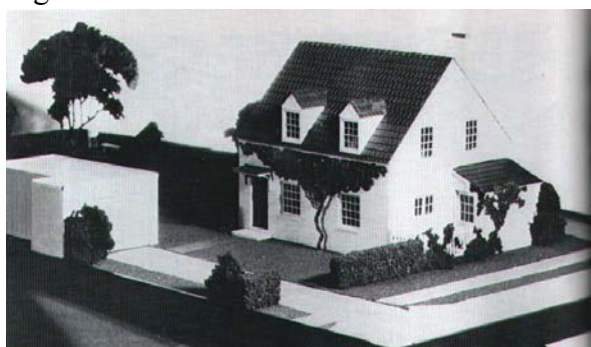


Greendale, WI house plans.

Ten years later, when the Resettlement Administration was planning the community of Greenbelt, Maryland, the requirements for parking were much less formal. Like Greendale, the Greenbelt plan was designed to separate pedestrian and auto traffic. Houses in rows of 2, 4, 6, and 8 units were placed around cul-de-sacs (Figure 1.33).

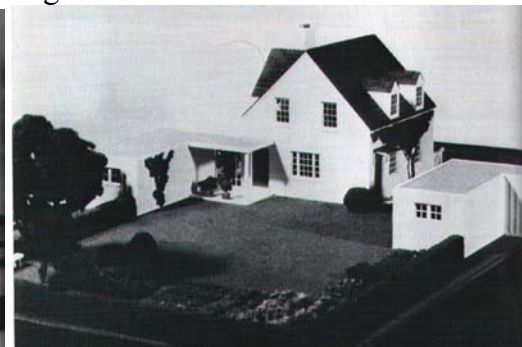
Pedestrian paths were placed behind the house rather than along the streets.<sup>111</sup> One parking space for each home was provided in the three-sided communal building located near the end of each row. Early photos indicate that street parking has always been as important as the designed storage areas at Greenbelt. When the community was expanded for defense housing in 1941, the only provision needed to house automobiles was the inclusion of additional surface parking lots.

Figure 1.35



Detached garage Greendale, WI.

Figure 1.36



Semi-attached garage, Greendale, WI.

## VIII. World War Two and After

The attached garage became a standard feature of suburban development following the Second World War. The garage usually provided direct access to the kitchen, living room, or entrance hall. In this form, the garage door typically faced the street and was used to visually balance the popular post-war picture window that would be placed on the opposite side of the facade. The garage also increased significantly in size during this time due to increasing car sizes, increased ownership of multiple cars, and a boom in suburban building on lots with more street frontage. Many cars

<sup>109</sup> Alanen, 36

<sup>110</sup> Ibid, plates

<sup>111</sup> Greenbelt, 13

manufactured between 1941 and 1944 were six feet or wider, and the popularity of two door models, with longer doors, required that parking spaces be made large enough to accommodate an open door to open door width of 12 feet 6 inches.<sup>112</sup> Housing the larger cars was a significant issue. According to a period article in House and Garden, “One manufacturer in 1941 advertised a ‘short’ model for those buyers who must garage their car in short buildings.”<sup>113</sup>

By this time, the inclusion of a garage was normative in newly constructed homes whether the builders were owners of automobiles or not. By the 1940s, designers might include a garage simply to increase resale value or to provide a space for easy expansion. A May 1943 article in American Home described the ease of converting the garage into a spare room.<sup>114</sup>

The 1950s saw an increased acceptance of both the carport and the fully integrated garage. Some architects and designers saw the carport as a multi-purpose area not only for parking, but also as a porch and entrance transition to the house, and even as a covered play space for children.<sup>115</sup> A carport could be constructed at a much lower cost than the traditional garage while providing a modern, open appearance. Many carports included a solid wall for storage.

The form became so popular after the Second World War for aesthetic reasons that some people converted enclosed garages into open parking areas. A 1955 article in Sunset magazine detailed the conversion of a two-bay attached garage into a carport.<sup>116</sup> The front doors were removed from the structure and used as covers for shelving along

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<sup>112</sup> Chambers, 90

<sup>113</sup> Ibid

<sup>114</sup> Soderstrom, 20

<sup>115</sup> Carport, 183

the house side of the parking area. The side exterior wall was removed and replaced with four four-by-four posts. The article listed the three benefits derived from the conversion as, “1. Organized storage better in smaller space, 2. Allowed the family car to be put under roof again, 3. Gave the whole front entrance a more open appearance.” Period literature like this demonstrated a backlash against using the garage as a general storage area, a phenomenon encouraged by the popularity of low-pitched roofs and the removal of the attic.

Since the early 1930s, the garage was increasingly considered a general service building, replacing the traditional service yard, for not only storage but performing tasks. The facility has also continued to increase in size. A 1931 article recommended that single car garages be at least 12 by 20 feet and 8 feet tall or 20 by 22 feet for a two-car garage.<sup>117</sup> Recently published architectural standards suggest that a single bay garage be 14 feet wide and 22 feet deep.<sup>118</sup>

An “ideal” carport designed by Pietro Belluschi was featured in a 1952 issue of House and Garden. The design consisted of a carport placed perpendicular to the house, forming an el, and creating a rear courtyard (Figure 1.37). The parking area was located at the front of the lot to minimize the amount of drive and increase the size of the backyard. The front door of the house could be reached under a sheltered walkway from the parking area. Cabinets built into the walls of the carport provided storage. The article described the car parking area as a “barrier between the street and house.”<sup>119</sup>

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<sup>116</sup> Garage Becomes Car Port, 67

<sup>117</sup> Olney, 40

<sup>118</sup> Ramsey / Sleeper, 869

<sup>119</sup> Entrance, 92

The same article described an ideal 1952 garage as entering the house directly at the kitchen, having a circular drive to eliminate backing, ample storage space for gardening supplies, refuse, and firewood, radio controlled door and lights, hot-water or steam pipes in the drive to eliminate snow and ice problems, and workshop space. The article stated that a two-car garage should be at least 20 feet by 22 feet.

Figure 1.37



1952 carport, Pietro Belluschi, architect.

Following World War Two the overhead-type garage door became dominant. All types of doors have been in existence nearly the entire history of the car, but the popularity of each type has varied greatly. Until about 1940, the two-per-bay outward swinging door was most common. From 1915 to 1929 folding doors in vertical sections of two or three were not uncommon. From 1920 to 1945 rolling doors of two or three sections that moved vertically along a track were often used. From 1935 to 1949, the single piece overhead door was most frequently used in new garage construction.<sup>120</sup> In their 1931 “Portfolio of Garage Doors,” *Architecture* magazine illustrated 62 possibilities for the opening. Almost all of these were simple swinging doors or ones that opened in vertical “accordion” sections along a track; only five were overhead models.<sup>121</sup> Materials

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<sup>120</sup> Wahlburg, 63

<sup>121</sup> *Architecture's*, 305-320

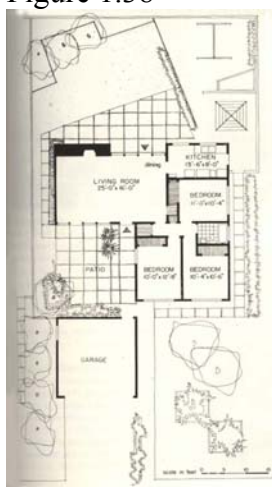


developed or popularized during the war made the overhead door more practical, and the use of other types almost disappeared.

The late 1940s and early 1950s were a time of experimentation that resulted in many unique layouts for the garage. The November 1951 issue of Architectural Forum showed a detached garage designed by Ward Thomas for a house in Palo Alto, California (Figure 1.38). In the layout, the detached garage is placed between the street and the house forming an “entrance garden.” The author stated that this layout was preferable to an attached garage “which usually blocks off an end and two valuable corners and makes the living room a front-to-back passage between garage and bedrooms.”<sup>122</sup>

By the mid-1950s all forms of domestic parking existing today were fully developed. The garage had become not only attached, but an integral part of a house plan that had been modified to accommodate it, and the automobile had become the first consideration for all but a few planned developments.

Figure 1.38



Palo Alto, California House with detached garage forming an "entrance garden," Ward Thomas, Architect.

<sup>122</sup> Up-front, 208

## **PART TWO: PRESERVATION**

### **I. Significance**

Few events in history have influenced the built environment as significantly as the popularization of the automobile. The garage is an invaluable resource for analyzing this trend and exploring America's relationship with the car. Despite their importance as historic artifacts, automobile storage structures are extremely fragile resources. Many of the buildings constructed before 1920 were impermanent, and between 1920 and 1950 changes in fashion and technology rendered many early garages obsolete as automobile storage structures.

The National Park Service has recognized that there are special preservation issues associated with the garage. In 1989, the Department of the Interior published a bulletin on technical issues surrounding the building type's rehabilitation. The document noted among other things that, "Garage, carriage, and freight doors can be important character-defining features of historic buildings," and that, "large utilitarian doors in historic buildings should be treated with sensitivity."<sup>123</sup> The bulletin briefly addressed practical issues surrounding the conservation of historic vehicle doors and included three case studies that highlighted garage preservation issues including compliance with modern building codes, general maintenance, and making sympathetic modifications.

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<sup>123</sup> Halda, 1

The park service has also included a number of garages as individual listings on the National Register of Historic Places, and many more have been registered in association with the houses that they served.

## II. Project Description.

Preservationists and historians performing fieldwork have traditionally overlooked many types of accessory structures, including stables, chicken coups, and outhouses. The research performed for part one of this project found few secondary resources and no examples of previous field studies focusing on the garage. The purpose of this resource survey was to determine the preservation rates and current condition of garages in a sample area and to identify regional methods of construction, forms, and types of exterior cladding.

In January and February of 2002, four sample areas were surveyed for garages. A resource form was completed for all of the structures, with the exception of those that were clearly constructed in the last 50 years. These documents recorded the location, condition, position on lot, type of construction, exterior cladding material, current use, and form of each garage. All of the resources recorded were associated with preserved historic residences.

Following the resource survey, archival research of Sanborn Company Fire Insurance Maps was performed to determine the location of all garages in the sample area that were in use in 1947. This information was compared to data from the survey, and a small number of structures that had been surveyed but were not constructed before 1947 were removed from the data set. One building, on the lot at 296 Boulevard, was in use as

a garage or storage facility at the time of the survey but was recorded on the Sanborn maps as a stable. This structure was kept in the data set, as were a number of preserved buildings that were marked on the maps as garages but now serve other purposes. Three surveyed garages (295 Bloomfield, 565 Boulevard, and 219 Cloverhurst) were found in the footprints of historic structures but their forms and materials made their actual age questionable.

### III. Method of Classification.

There have been some efforts in the past to develop a typology of garages that could facilitate their study and preservation. As part of Leslie Goat's research on the early garage, the author suggested organizing structures in four categories based on their location relative to the house: 1. freestanding; 2. connected to the house by fences, arbors, covered walkways, etc.; 3. attached to the house but visually distinguishable from its massing; 4. fully integrated into the body of the house.<sup>124</sup> The author also suggested the possible need for a fifth category to account for garages integrated into elements of the landscape.

An alternative typology, also suggested by Goat, would operate by function, separating "multifunctional structures, self-sufficient garages, single-purpose garages used primarily for vehicle storage, drive-through garages, portable garages, community and other rental garages, and attached garages," or by classifying them by the number of vehicles each was designed to store. In the essay "The Domestication of the Garage," J.B. Jackson used a division based on function, classifying the type into: the early

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<sup>124</sup> Goat, 72

“Romantic” garage, the “Practical” garage, and the post-World War II “Family” garage.<sup>125</sup>

For this project, a combination of the above classifications was used to record historic garages in the survey area. Form was documented by recording both the number of stories and bays in each building. The current use of each structure was noted, and position relative to the house was recorded as incorporated, attached, semi-attached, or detached.

#### IV. Survey Area

The study area for this project consisted of four historic districts in Athens, Georgia. While the districts date from varying times in the city's development, most of the properties surveyed contained the original residential structure constructed on the site, and nearly all of the lots contained historic homes. These four neighborhoods were selected for their high level of preservation and because of the availability of historical information about demolished garages. The total number of surveyed properties was approximately 430.

The Boulevard area (Figure 2.2) consisted primarily of structures built during the late nineteenth and early twentieth centuries. All of the residential district east of Chase Street was surveyed with the exception of the five lots, immediately north of Barrow Street, on the west side of Barber. These five properties were omitted because they were not clearly visible from the public right-of-way. The Boulevard district was placed on the National Register of Historic Places in April of 1985 and was designated as a local historic district in October of 1988.

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<sup>125</sup> Jackson, 104 - 109

The Bloomfield district (Figure 2.1) consisted of approximately 110 properties, most of which date from the first three decades of the twentieth century. With the exception of a small number of apartment complexes and post-World War II homes, all of the lots contained historic residences. The district was placed on the National Register of Historic Places in April of 1985 and was locally designated in November of 1988.

The Dearing Street neighborhood (Figure 2.3) contained approximately 90 properties with construction dates ranging from the mid-nineteenth century to the late twentieth. Approximately 20 percent of the district consisted of non-historic structures, mostly town-homes and apartment buildings, but a majority of these were built on previously undeveloped land and did not displace historic homes. The area was placed on the National Register of Historic Places in September of 1975.

The Woodlawn historic district (Figure 2.4) was the smallest and most homogenous area surveyed for this study. The neighborhood consisted of 21 homes constructed on large, suburban lots primarily during the 1910s and 1920s. It was placed on the National Register in October of 1987 and was locally designated in February of 1988.

## V. Survey Results.

The first garages shown on Sanborn maps for Athens, Georgia appeared on the 1908 edition, labeled "auto house." This early map did not include any of the selected survey areas and showed only a small number of the structures in the entire city. Parts of the survey area were shown on the 1913 and 1918 revisions. These records displayed five garages in 1913 and 33 in 1918. While the 1918 maps recorded a significantly

higher percentage of the study area than the earlier edition, the number of garages did increase dramatically in the five years between their publishing dates, especially along the two blocks of Milledge Avenue in the Dearing Street district. This area had one garage in 1913 and five 1918. Of the 37 earliest garages in the sample area, 25 (67.6%) were standing in 1947. Only one, located at 763 Pope, is still preserved today (Figure 2.12).

The vast majority of historic garages in Athens were constructed between 1918 and 1947, a time period probably consistent with the nation as a whole. A comparison of the 1918, 1926, and 1947 Sanborn maps indicated that a significant percentage of these were built in the eight years between 1918 and 1926. This probably indicates that this was a period during which automobile ownership in the area increased rapidly.

Approximately 65 percent of the lots in the sample area contained garages on the 1947 Sanborn maps. Of these 280 properties (69 in the Bloomfield District, 132 in the Boulevard District, 61 in the Dearing Street District, and 18 in the Woodlawn District), 67 (23.9%) retained their historic garages at the time of the resource survey. Of the preserved garages, 55 (19.6%) were found in good condition, nine (3.2%) were significantly modified, and three (1.1%) were abandoned and in danger of demolition by neglect.

The highest rate of preservation (50.0%) was in the Woodlawn district. The lowest (13.1%) was in the Dearing district. For each of the four study areas, the preservation rate of garages appeared to be proportional to, but considerably lower than, the preservation rate of residences.

The Woodlawn district had by far the highest concentration of garages in 1947 and the largest rate of preservation at the time of the survey. All of the houses in the area were constructed after the introduction of the automobile into the average American's life. This event made suburban development like the Woodlawn neighborhood feasible. The late construction date and relative wealth of homeowners in the neighborhood resulted in a large number of relatively permanent garages.

The Bloomfield District had the second highest concentration of garages in 1947 and the second highest rate of preservation. The Boulevard District, with the exception of the southwestern corner of the survey area, which contains houses that tend to be smaller and more modest than the rest of the district, had a similar density of auto storage structures in 1947, but a considerably lower preservation rate. This may indicate that garages built at the time of house construction, as well as newer garages, are more likely to be preserved.

Of the 280 garages on the 1947 maps, 244 (87.1%) were detached and located behind their associated houses. The second most common position was detached and at the side of the house (8.6%). Seven garages were located under the living areas of the house and five were attached in other ways. The siting of the vast majority of historic Athens' garages behind the home, with driveways approaching from an alley or side street when possible, is consistent with the nation-wide practice, prevalent throughout the first half of the twentieth century, of avoiding interference with the street front of the house.

Almost all of the driveways in the survey area were straight paths that passed from the street along the side of the house or were approached from an alley or side



street. Concrete drives, which were probably not historic, were the most frequent type identified by the survey, followed by those made of gravel. A number of drives constructed of two concrete strips were identified. This form was historically preferred to a single wide concrete path for its economy of materials and because it minimized visible grease stains on the ground. These drives and the landscape features used to accommodate and screen them are as culturally significant as the garages themselves and should be preserved.

The four survey areas all experienced a majority of their construction before 1930 and the Bloomfield, Boulevard, and Dearing areas consisted of similar lot sizes and shapes. In other locations, where more garages were constructed after 1930 and where there is more variation in property size and proportion, one would expect lot size and street frontage, as well as date of construction, to result in wider variations in location and street presence.

Among preserved garages, wood framing was by far the most common method of construction, and clapboard and horizontal wood siding were the most frequent types of exterior cladding. Other methods of construction identified were brick, concrete block, and structural clay tile. Brick and corrugated metal were the second most frequent types of exterior cladding followed by board and batten siding.

One-story structures with a single bay constituted 51.5% of the preserved garages. Many of these simple buildings were just large enough to hold an automobile. Single story, double bay garages were the second most common form. A total of 83.8% of the buildings were one-story.

Most buildings (80.9%) continued to be used as storage. A few had been converted to residences or served other adaptive purposes. The Bloomfield district, which had the highest percentage of simple, single story garages, had the lowest percentage of adaptive use. Although the sample of preserved garages was small in the Dearing Street district, this area had the highest percentage of multi-story, multi-bay garages (many of which were intended to serve more than one function) and many were found being used for purposes other than storage. From this information it seems reasonable to assume that larger garages and multiple purpose garages are more likely to be adaptively used. The information from the survey is not conclusive, but it would be interesting for future studies to determine how form effects preservation and adaptive use in more detail.

One and two bay garages with open fronts are probably a form relatively unique to the south or southeast region of the United States. Eleven of the 67 preserved buildings (16.4%) were of this type. Most of these structures were simple, wood frame buildings usually with diagonal braces in the upper corners of the front façade (Figure 2.13). While these 11 garages appear to have been historically open, the small garage at 220 Hall Street is similar but has two hinged front doors that were irregularly shaped to accommodate the braces. The garages at 186 Boulevard (Figure 2.11) and 125 Dearing, which were constructed by enclosing the space between the tall brick piers under houses, also demonstrate what is likely a regional form and are interesting examples of how existing structures were adapted to accommodate the automobile.

A majority of the surveyed resources were very basic buildings without windows, pedestrian doors, or applied stylistic elements. The surveyed garages were found to be

slightly more likely to have windows than pedestrian doors. The Woodlawn district, which contained generally larger and more permanent garages, had the highest percentage of structures with windows and pedestrian entrances.

Many of the historic garages in the survey area had been modified to some degree. The most common changes to the structures included the addition of carports and storage sheds to the side and front of the buildings and the enclosure of the front.

Figure 2.1

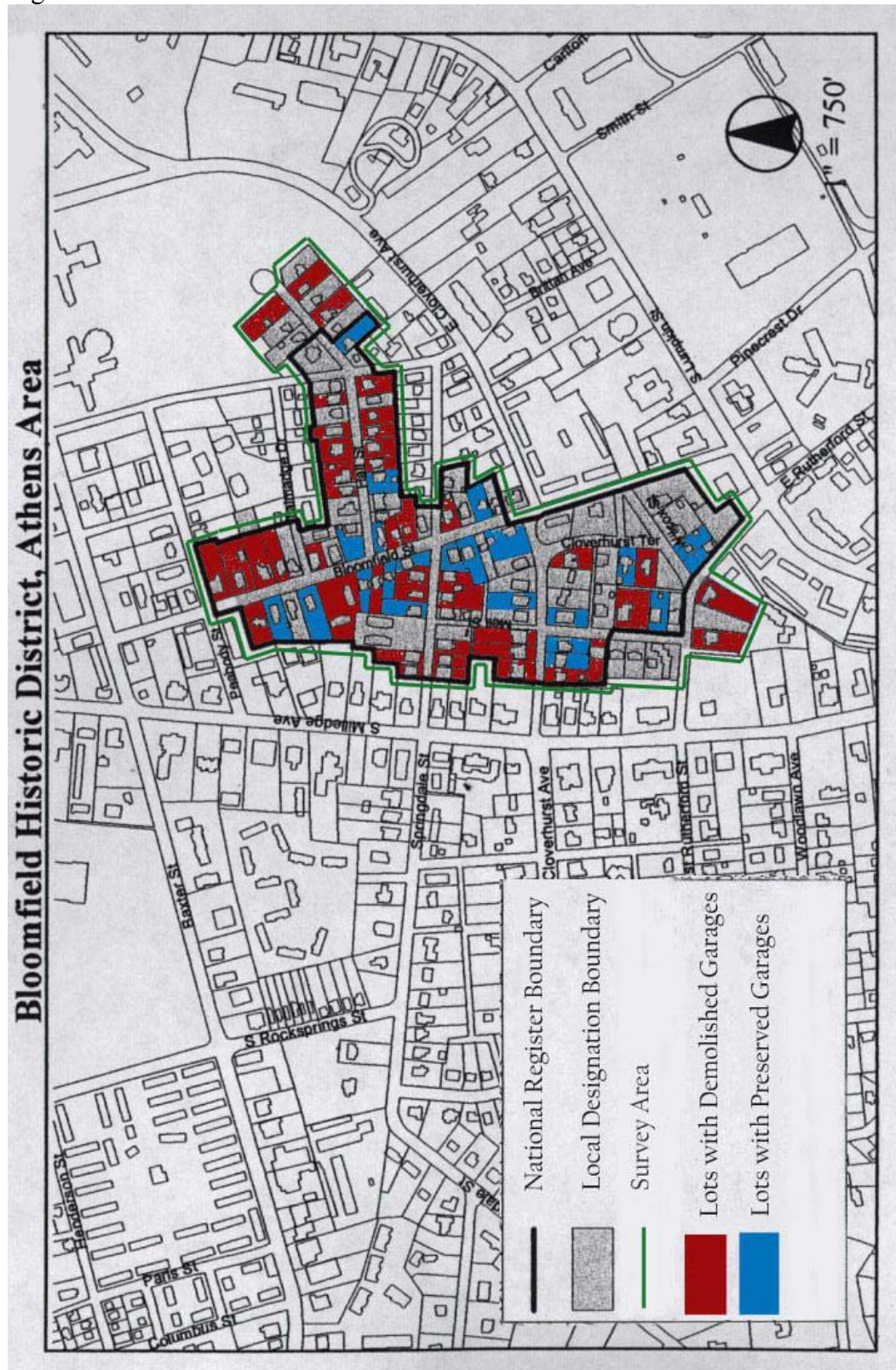


Figure 2.2

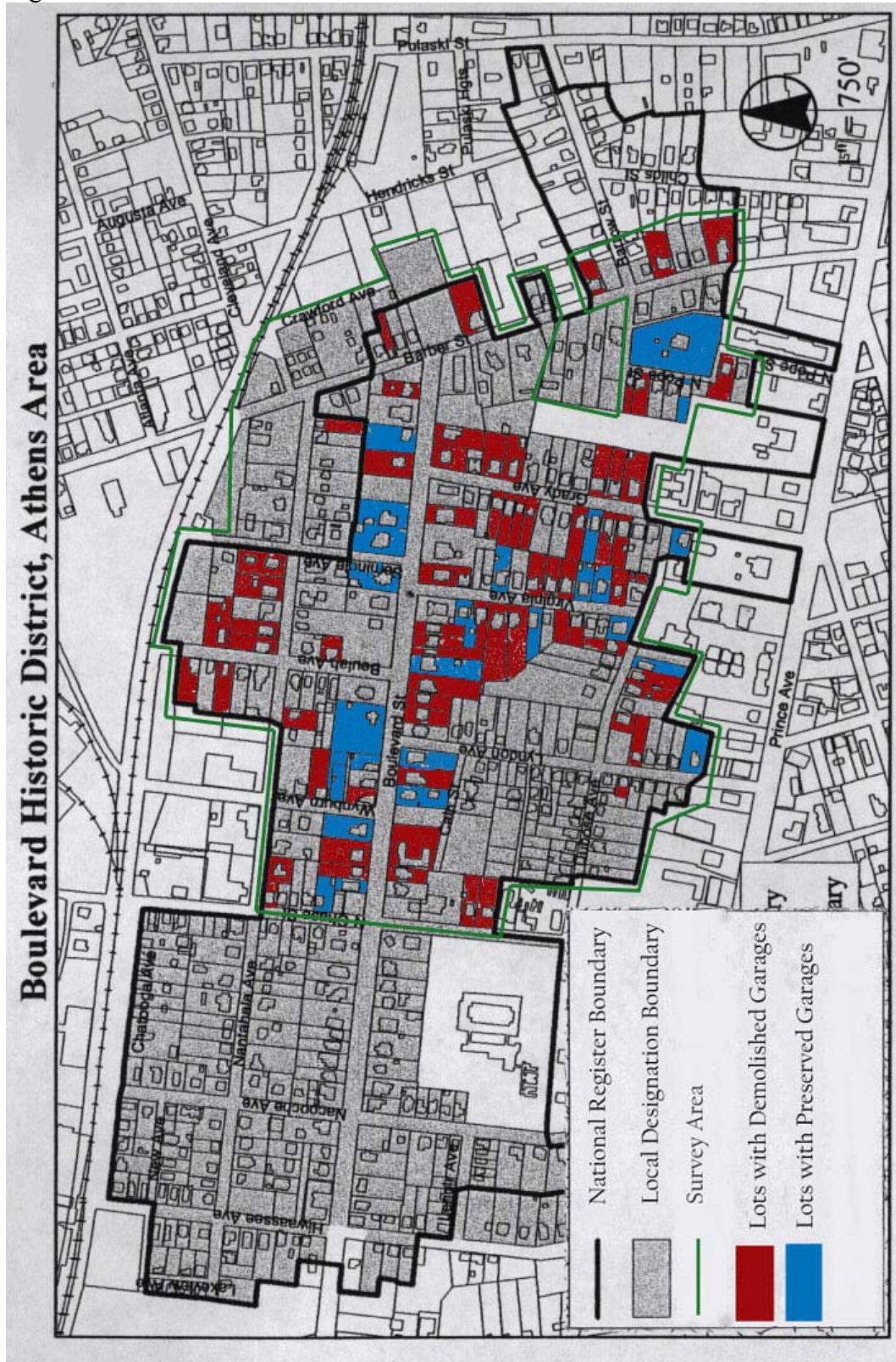


Figure 2.3

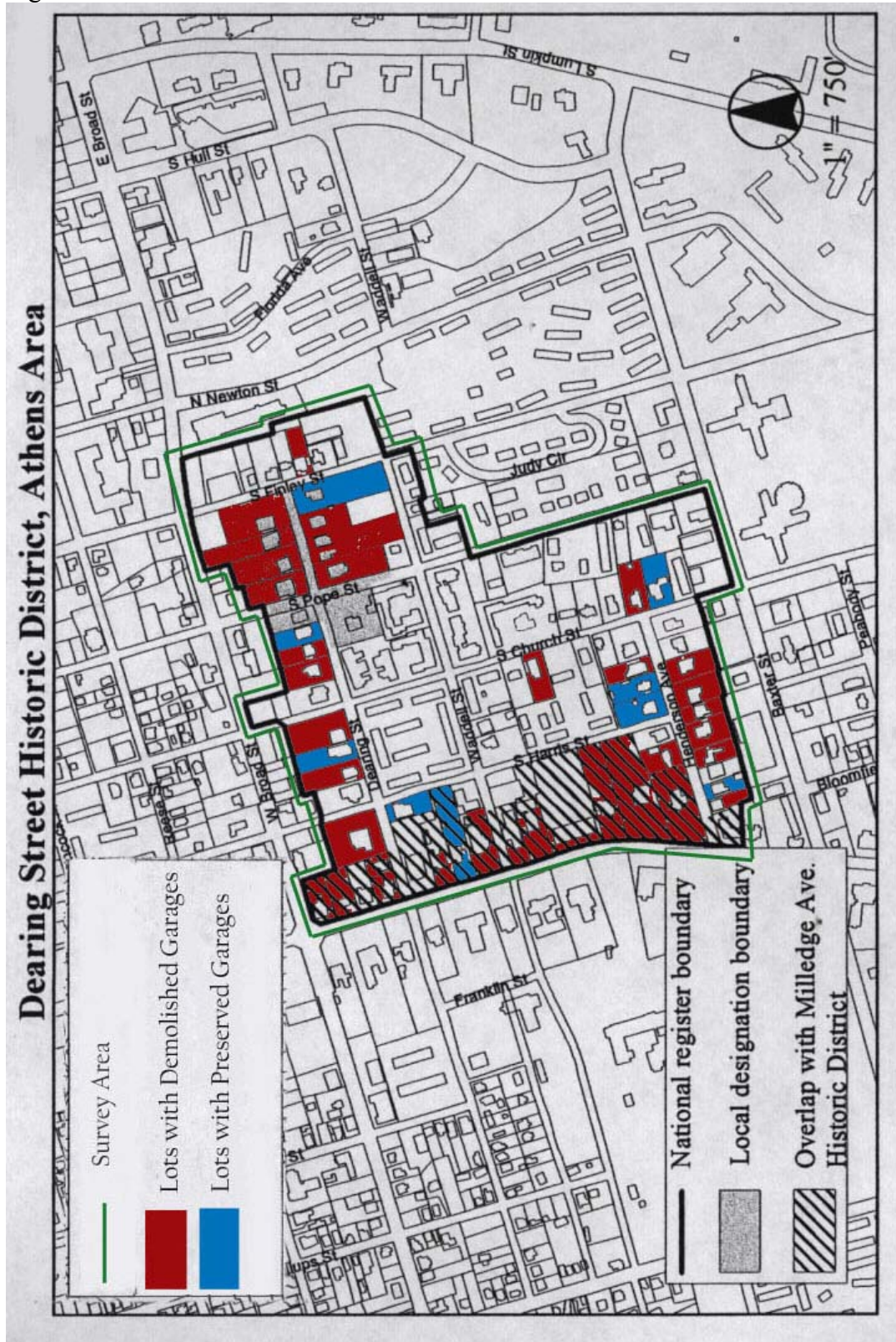


Figure 2.4

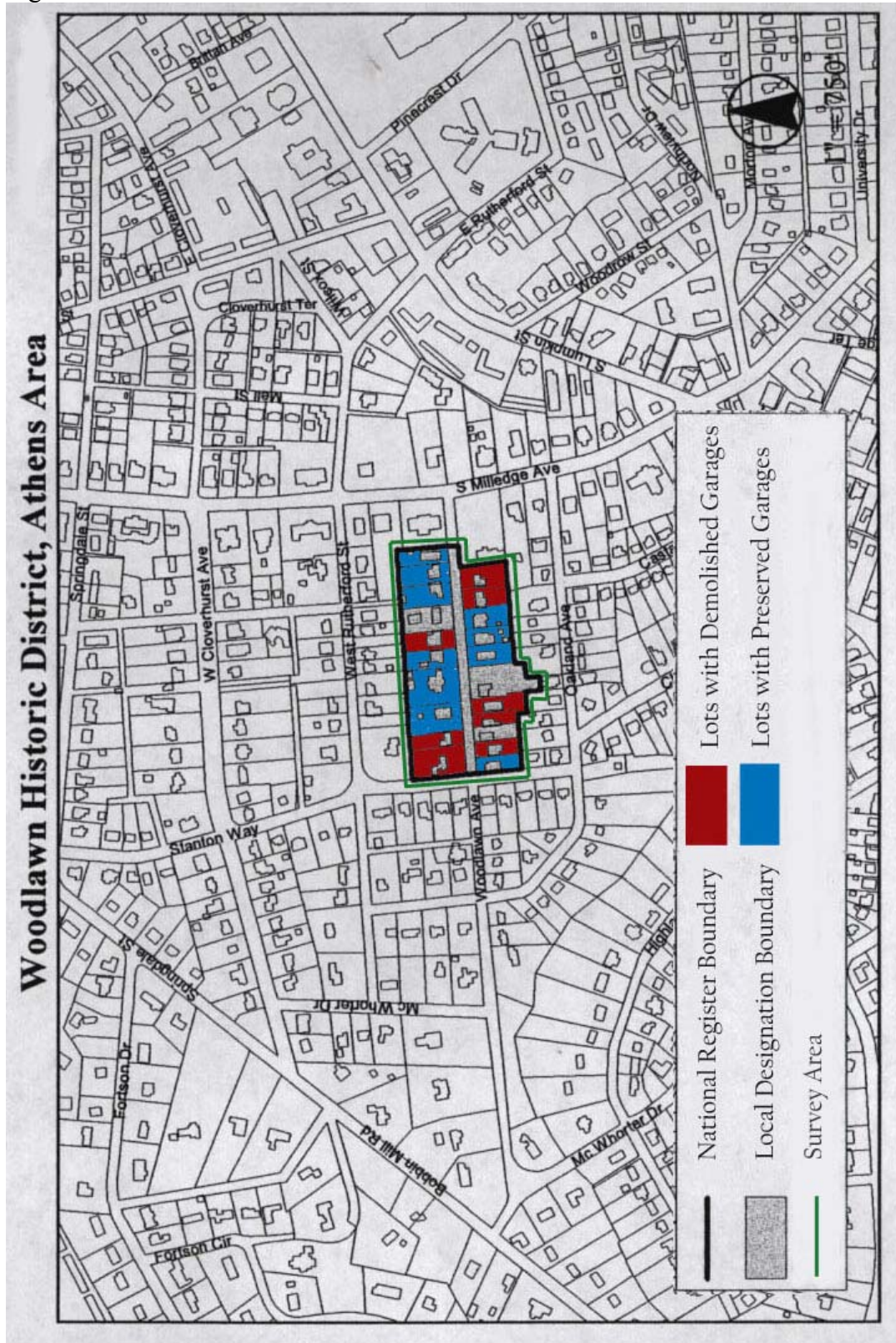


Figure 2.5

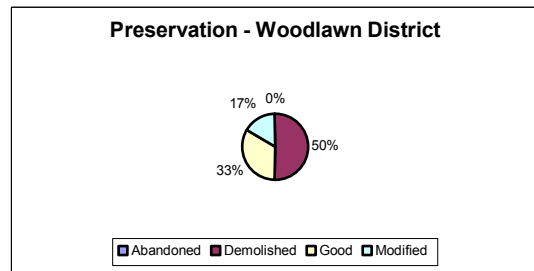
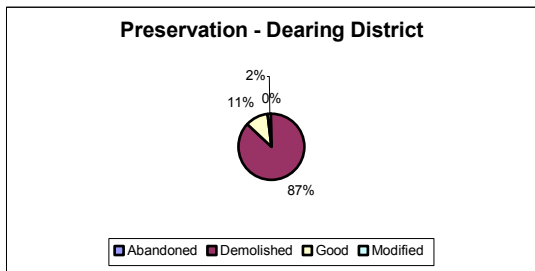
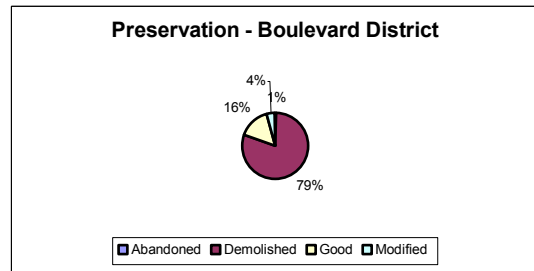
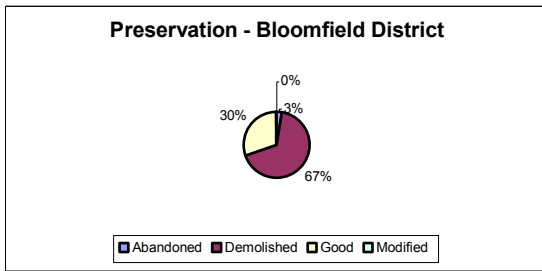
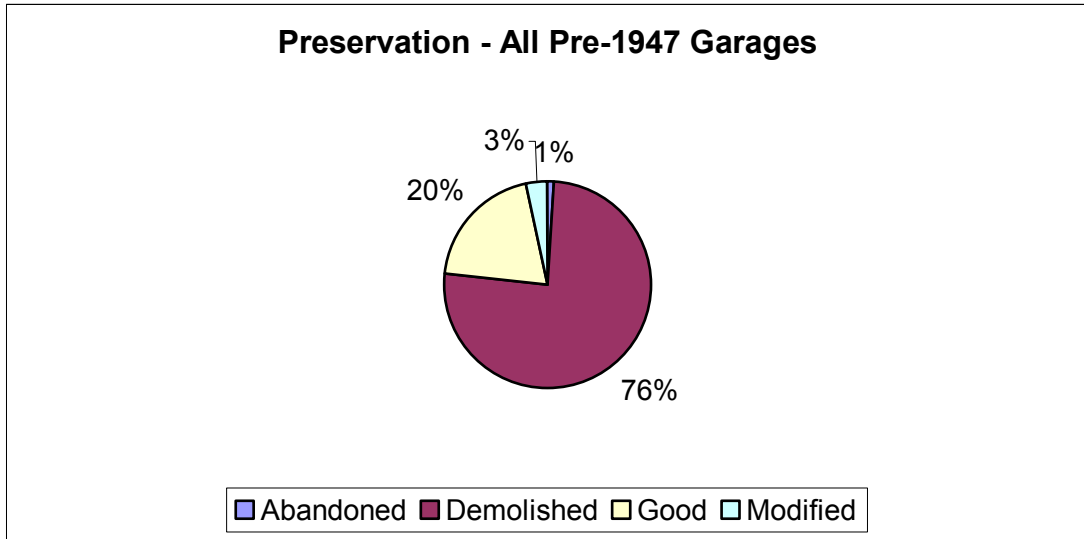




Figure 2.6

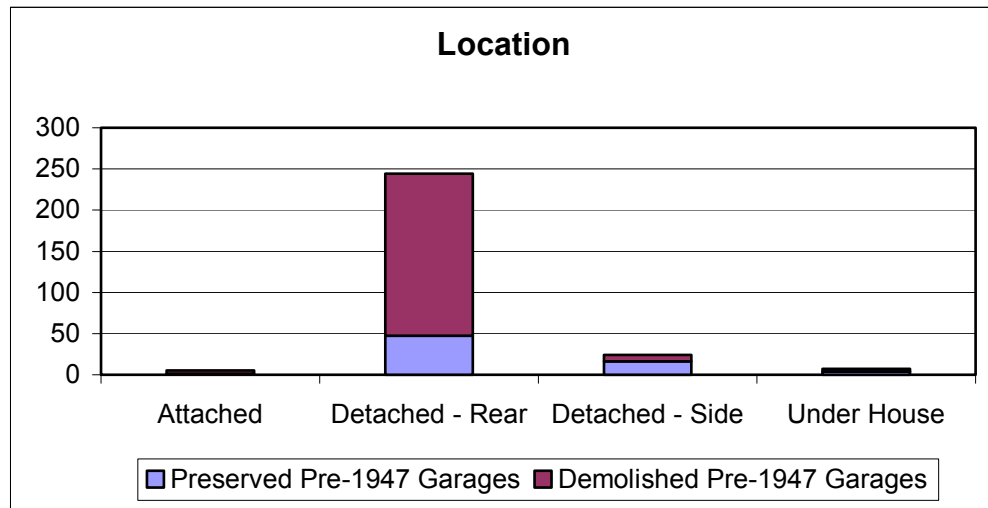


Figure 2.7

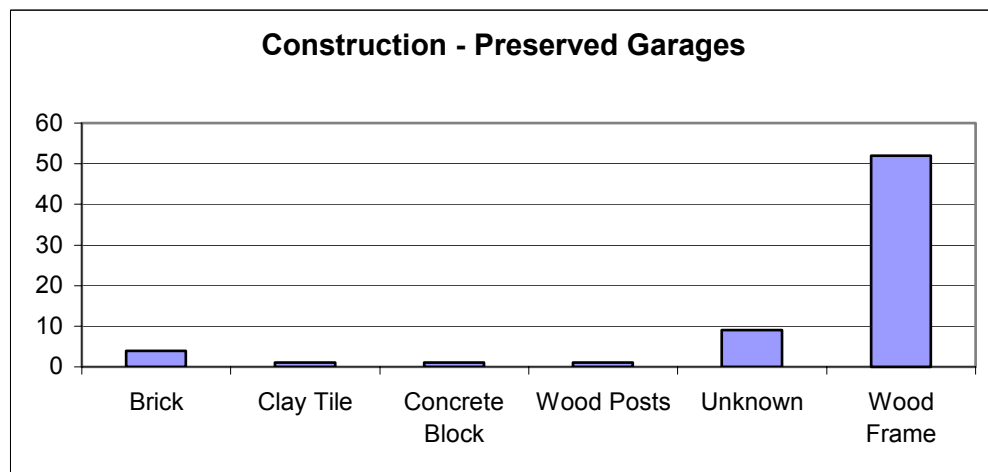


Figure 2.8

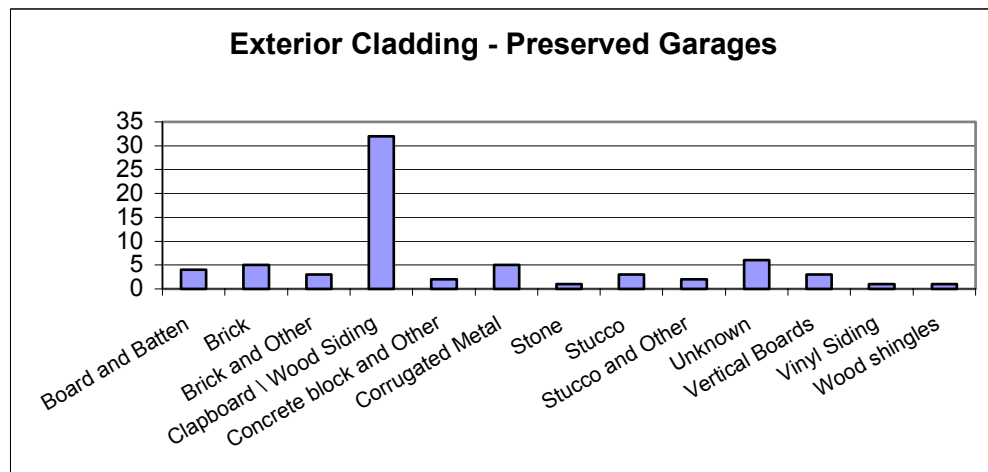


Figure 2.9

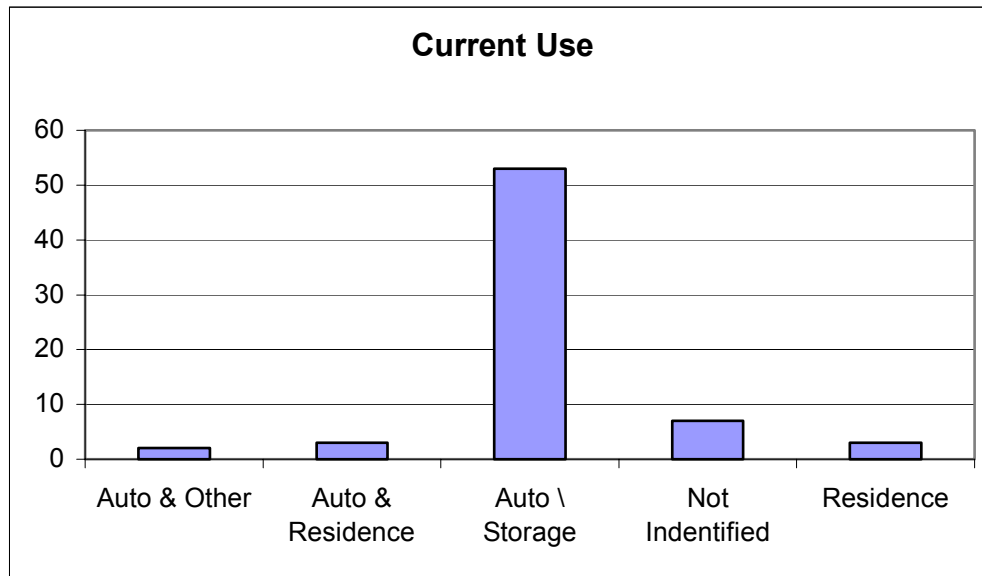


Figure 2.10

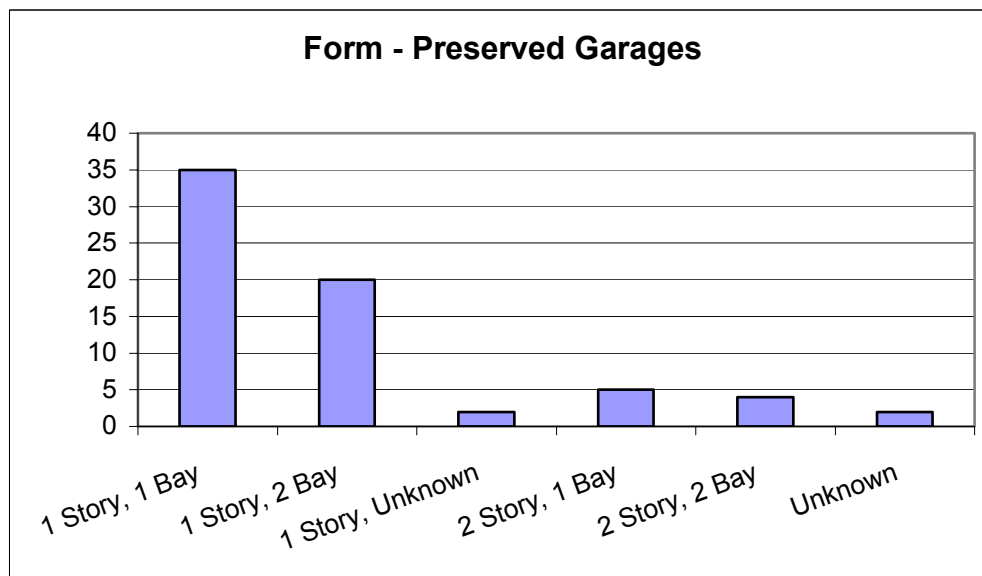


Figure 2.11



Garage constructed between foundation piers at 186 Boulevard.

Figure 2.12



763 Pope, one of the oldest garages in the survey area.

Figure 2.13



Typical open-front type garage at 380 Bloomfield Street.

## CONCLUSION

It has been widely assumed that the chief obstacle to the preservation of early garages has been obsolescence brought about by increased size requirements during the mid-twentieth century. However, it is probable that the low preservation rate of small early garages is due less to their ability to house larger cars than it is to the relative impermanence of the buildings, which were often built inexpensively of simple wood frames and without foundations, pedestrian doors, or sources of natural light. During the survey portion of this project, new storage sheds, often prefabricated, were frequently observed on the site of demolished garages. Apparently, the maintenance requirements of these buildings are at least perceived to justify demolition and construction of a new storage structure.

Most homeowners need some type of building to protect lawnmowers, bicycles, and other items that are not normally taken into the house. The preservation of the majority of historic garages; modest, single story, one and two bay structures; is not a matter of obsolescence, but an issue of education. As with all historic structures, the first and most important step in the preservation of the garage is to increase the public's awareness of its value and taking steps to make preservation more desirable to property owners than replacement. When this is not effective, it may be reasonable to slow the rate of resource attrition through landmark designation and the design review process.

Many municipalities, including the Athens-Clarke County area surveyed for this project, require design review for significant changes to accessory structures located within designated historic districts. In the future, this relatively recent phenomenon will

presumably slow the rate of demolition of historic garages to that of historic residences if commission members are aware of the cultural value of outbuildings. It is therefore desirable that the cultural importance of these structures be made clear to both property owners and these officials.

The preservation of high-end and more recent garages, which tend to have more substantial construction, presents fewer economic and structural problems than that of older buildings. It is advisable that when garages are no longer practical as storage buildings, and when it is feasible, they be adaptively used as apartments, studios, offices, workshops, or any other purpose that would not require excessive modification of the historic fabric. At several historic sites that are open to the public, managers have found garages to be valuable resources that allow them to accommodate new uses on a property, without the construction of non-historic buildings or the unnecessary modification of less flexible existing structures. At the Frank Lloyd Wright Home and Studio in Oak Park, Illinois, managers have used the historic garage as the gift shop and registration area, and at another Wright design, Falling Water, the garage is used as an interpretative area for group discussions and the presentation of educational programs.

Most comprehensive historic district design guidelines outline acceptable practices for the modification of garages and the construction of new accessory structures. The city of Galveston, Texas guidelines for secondary buildings in historic neighborhoods are fairly typical. The publication Design Guidelines for the Historic Districts of Galveston notes:

In addition to the primary structures, the neighborhoods in nineteenth century Galveston had a second network of buildings consisting of smaller buildings that were located in the back yards and on the alleys. These

buildings originally were used for a variety of purposes such as privies, carriage houses, stables, kitchens, and tenant or alley houses. Some properties had more than one of these structures. In appearance, the secondary buildings usually matched the primary structures in materials and design, but they were smaller and simpler.

Many secondary buildings have disappeared because modern conveniences replaced their original usefulness. Other secondary buildings have survived, but do not continue in their original use, such as carriage houses and stables that now function as combination garage and apartment.

The Commission encourages keeping early secondary buildings that continue to provide a useful purpose.

The guidelines that apply to primary residential buildings also apply to detached structures. These are the most important points:

1. Maintain materials that are in keeping with both the primary and the secondary structures on the property.
2. Keep details simple, including porches and stoops.
3. Use wooden garage doors.<sup>126</sup>

Other cities have made efforts to ensure that garages are considered with the same general aesthetic standards as they would have been at the time of their greatest historic significance. Design guidelines for San Francisco note, "The garage door is often the largest opening in the front of the building. Care must be taken to prevent it from becoming the dominant feature. In most of the city's residential neighborhoods, the width of the garage doors is between eight and twelve feet."<sup>127</sup> Along with restricting door size, the publication recommends recessing garage doors or embellishing them with panels to decrease their prominence.<sup>128</sup>

Like garages, the materials and form of driveways are representative of a specific time period and location. Cities that address historic landscapes holistically tend to have

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<sup>126</sup> Galveston, 40

<sup>127</sup> San Francisco, 40

<sup>128</sup> Ibid, 41

guidelines that treat both the garage and the driveway most appropriately. The city of Columbus, Georgia has made specific recommendations for historic driveways as part of their guidelines. The document notes, "Driveways within the districts, consisting primarily of double tracks and textured concrete drives, are important elements to preserve. Changes to driveway surfaces should strive to preserve the original driveway form."<sup>129</sup> Columbus recommends repairing and replacing their most common type of historic drive, two narrow concrete strips, in ways that maintain their historical appearance.<sup>130</sup> The city of Elgin, Illinois included a similar item in their guidelines saying, "Driveways and their original designs, materials, and placement should be preserved... Driveways in the front or side yards should be of brick, concrete, or concrete tracks (narrow strips). Asphalt or textured concrete designed to look like brick pavers are also appropriate materials."<sup>131</sup>

Guidelines for the construction of new parking facilities on historic sites are generally similar to those for preservation. Many local governments suggest avoiding the use of non-historical materials and the disruption of the traditional relationship of a structure and the street. Guidelines for Salt Lake City, Utah, recommend placing new garages at the rear of a lot and facing a side street or alley when possible.<sup>132</sup> The city also suggests that new garages and carports should not be attached to historic structures. This recommendation is appropriate for the majority of historic homes, but in some cases, like high-style modernist houses, attached parking would be more historically accurate and less disruptive to the landscape than the construction of a free-standing structure.

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<sup>129</sup> Columbus, 64

<sup>130</sup> Ibid

<sup>131</sup> Elgin, 76

<sup>132</sup> Salt Lake City, 115

All of the documents cited above are reasonably good guidelines for the treatment of historic parking structures and the construction of new buildings on historic sites. Generally, garages should be built or restored using historically accurate or sympathetic materials and sited in a way that respects historical patterns of landscape design, including their relationship to both the house and street. It is useful to view the whole of a property as a single resource to achieve an arrangement of curb cuts, driveways, plantings, and garages that is visually consistent with historical ideas of residential parking.

Garages have open and flexible plans by nature, and when they are no longer practical storage structures, adaptive use is an extremely valuable tool to encourage their continued viability and preservation. Governments desiring to maintain historic accessory structures should avoid limiting the potential uses of these buildings. The most important step in the preservation of the garage is the education of the public, design review commission members, and preservation professionals regarding the cultural importance of the building type.

Over the course of the twentieth century, a wide variety of garages have evolved across the United States. While these developments occurred at different times in different regions of the country, they were all reflective of America's evolving relationship with the automobile. The non-linear development of the garage makes the study of its history more difficult, but it also presents an opportunity to identify trends and phenomena that are locally and regionally unique.

As demonstrated by this project, the garage is a valuable historic resource with significant threats to its preservation. Further study of this building type has great



potential to provide illuminating information about the automobile's role in American history and about how residential building has evolved to accommodate changing technology. To facilitate this process, it is important that future studies are undertaken to document national and regional trends in the history and preservation of the garage and other traditionally overlooked accessory structures.

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**APPENDIX I: SAMPLE SURVEY FORM**

<b>Resource # \ Street</b>		_____	
<b>Condition</b>		<b>Use</b>	
Good	<input type="checkbox"/>	Auto\Storage	<input type="checkbox"/>
Modified	<input type="checkbox"/>	Other\Not Identified	<input type="checkbox"/>
Abandoned	<input type="checkbox"/>	Adaptive	_____
Demolished	<input type="checkbox"/>		
<b>Location</b>		<b>Drive</b>	
Incorporated	<input type="checkbox"/>	Non-Historic	<input type="checkbox"/>
Attached	<input type="checkbox"/>	Two Concrete Strips	<input type="checkbox"/>
Semi-Attached	<input type="checkbox"/>	Gravel	<input type="checkbox"/>
Detached-Side	<input type="checkbox"/>	Other	_____
Detached-Rear	<input type="checkbox"/>	Court-type-form	<input type="checkbox"/>
<b>Construction</b>		<b>Form</b>	
Wood Frame	<input type="checkbox"/>	1 Story, 1 Auto-Bay	<input type="checkbox"/>
Concrete Block	<input type="checkbox"/>	1 Story, Multiple Bay	<input type="checkbox"/> # _____
Other	_____	Multi-Story, 1 Bay	<input type="checkbox"/>
		Multi-Story, Multi-bay	<input type="checkbox"/> # _____
<b>Exterior Cladding</b>		<b>Other</b>	
Photo	<input type="checkbox"/>	Pedestrian Door	_____
		Windows	_____
		Styling (matching house)	_____
		Used as landscape feature	_____

**APPENDIX II: CATALOG OF SURVEYED RESOURCES**



Address	Condition	Location	Construction	Exterior	Use	Form
140 Barber	Demolished	Back - Right				
150 Barber	Demolished	Back				
160 Barber	Demolished	Back - Right				
186 Barber	Demolished	Basement				
198 Barber	Demolished	Back - Right				
199 Barber	Demolished	Back				
228 Barber	Demolished	Back - Left				
238 Barber	Demolished	Back - Left				
247 Barber	Demolished	Back				
248 Barber	Demolished	Basement				
250 Barber	Demolished	Back - Left				
290 Barber	Demolished	Back - Left				
297 Barber	Demolished	Back				
340 Barber	Demolished	Back				
395 Barber	Demolished	Back - Right				
180 Beulah	Demolished	Back - Left				
240 Beulah	Demolished	Back - Left				
250 Beulah	Demolished	Back				
255 or 265 Beulah	Demolished	Back				
289 Beulah	Demolished	Back - Right				
227 Bloomfield	Demolished	Attached, Right Side				
243 Bloomfield	Demolished	Side - Left				
244 Bloomfield	Demolished	Back - Right				
249 Bloomfield	Demolished	Back - Left				
250 Bloomfield	Good	Detached - Side	Wood Frame	Brick, wood, stucco	Auto/Storage	1 story, 2 bay
255 Bloomfield	Demolished	Back - Left				
260 Bloomfield	Good	Detached - Side	Wood Frame	Brick	Auto/Storage	1 story, 1 bay
275 Bloomfield	Demolished	Back - Left				
284 Bloomfield	Demolished	Back - Right				
288 Bloomfield	Abandoned	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 2 bay
292 Bloomfield	Demolished	Back - Left				
295 Bloomfield	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 2 bay
325 Bloomfield	Good	Detached - Side	Wood Frame	Board and Batten	Auto/Storage	1 story, 1 bay
340 Bloomfield	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
345 Bloomfield	Demolished	Back - Right				
345 Bloomfield	Demolished	Back - Right				
365 Bloomfield	Demolished	Attached				
380 Bloomfield	Good	Detached - Side	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
420 Bloomfield	Good	Detached - Rear	Wood Frame	Corrugated Metal	Auto/Storage	1 story, 1 bay
424 Bloomfield	Good	Detached - Side	Wood Frame	Corrugated Metal	Auto/Storage	1 story, 2 bay
427 Bloomfield	Demolished	Back				
441 Bloomfield	Good	Detached - Side	Wood Frame	Clapboard	Auto/Storage	1 story, 2 bay
134 Boulevard	Demolished	Back				
175 Boulevard	Demolished	Back - Left				
186 Boulevard	Good	Attached	Brick	Brick	Auto/Storage	1 story, 1 bay
197 Boulevard	Demolished	Back - Left				
198 Boulevard	Demolished	Back - Right				
230 Boulevard	Demolished	Basement				
245 Boulevard	Demolished	Back - Right				
286 Boulevard	Good	Detached - Rear	Concrete Block	Concrete block	Auto/Storage	1 story, 1 bay
296 Boulevard	Good	Detached - Rear	Wood Frame	Board and Batten	Auto/Storage	2 story, 2 bay
299 Boulevard	Demolished	Back - Left				
324 Boulevard	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	2 story, 1 bay
361 Boulevard	Demolished	Back - Right				
363 Boulevard	Demolished	Back				
375 Boulevard	Demolished	Back				
395 Boulevard	Demolished	Back				
397 Boulevard	Good	Detached - Rear	Wood Frame	Vertical Boards	Auto/Storage	1 story, 1 bay
419 Boulevard	Demolished	Back - Left				
420 Boulevard	Good	Detached - Rear		Stucco and shingle	Auto/Storage	1 story, 1 bay
420 or 422 Boulevard	Demolished	Back - Right				
421 Boulevard	Demolished	Back				
467 Boulevard	Demolished	Back - Right				
474 Boulevard	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
527 Boulevard	Good	Detached - Rear	Wood Frame	Vertical Boards	Auto/Storage	1 story, 1 bay
544 Boulevard	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
547 Boulevard	Demolished	Back - Left				
564 Boulevard	Demolished	Attached, under wing				
565 Boulevard	Good	Detached - Rear	Wood Frame	Wooden Siding	Auto/Storage	1 story, 2 bay
628 Boulevard	Abandoned	Detached - Rear	Wood Frame	Clapboard		1 story, 1 bay
645 Boulevard	Demolished	Side - Right				
646 Boulevard	Demolished	Side - Right				
650 Boulevard	Demolished	Back - Left				
683 Boulevard	Demolished	Back - Right				
694 Boulevard	Good	Detached - Rear			Auto/Storage	1 story, 1 bay
695 Boulevard	Demolished	Back				
760 Chase	Demolished	Back - Right				
770 Chase	Demolished	Back - Left				
784 Chase	Demolished	Back - Left				
850 Chase	Good	Attached	Wood Frame	Wooden Siding	Auto/Storage	1 story, 1 bay
896 Chase	Demolished	Back - Right				

Address	Condition	Location	Construction	Exterior	Use	Form
305 Church	Demolished	Back				
315 Church	Demolished	Back - Right				
323 Church	Demolished	Back - Left				
370 Church	Demolished	Back - Right				
395 Church	Demolished	Back - Left				
397 Church	Good	Detached - Rear	Wood Frame	Board and Batten	Auto/Storage	1 story, 2 bay
425 Church	Good	Semi-attached	Wood Frame	Clapboard	Auto & other	2 story, 1 bay
120 Cloverhurst	Good	Detached - Side	Unknown	Stucco and As. Tile	Auto/Storage	1 story, 2 bay
166 Cloverhurst	Demolished	Back - Left				
188 Cloverhurst	Good	Detached - Rear	Wood Frame	Stucco	Auto/Storage	1 story, 1 bay
193 Cloverhurst	Good	Detached - Side	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
219 Cloverhurst	Good	Detached - Rear	Wood Frame	Board and Batten	Auto/Storage	1 story, 2 bay
220 Cloverhurst	Demolished	Back				
226 Cloverhurst	Demolished	Back - Right				
229 Cloverhurst	Abandoned	Detached - Rear	Wood Frame	Wooden Siding	Auto/Storage	1 story, 1 bay
230 Cloverhurst	Demolished	Back - Left				
239 Cloverhurst	Demolished	Back				
120 Cloverhurst Terrace	Demolished	Back - Right				
150 Cloverhurst Terrace	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	2 story, 1 bay
161 Cloverhurst Terrace	Demolished	Back - Right				
180 Cloverhurst Terrace	Demolished	Back - Right				
125 Dearing	Good	Attached	Brick	Brick	Auto/Storage	1 story, 1 bay
126 Dearing	Demolished	Back				
145 Dearing	Demolished	Back - Left				
146 Dearing	Demolished	Back - Right				
159 Dearing	Demolished	Back - Left				
175 Dearing	Demolished	Back - Left				
178 Dearing	Demolished	Back - Right				
197 Dearing	Demolished	Back (Left & Right)				
198 Dearing	Demolished	Back - Right				
234 Dearing	Good	Detached - Rear	Wood Frame	Brick, Board and Batten	Auto/Storage	1 story, 2 bay
243 Dearing	Demolished	Back				
254 Dearing	Demolished	Back - Right				
264 Dearing	Demolished	Back - Left				
328 Dearing	Demolished	Back - Right				
329 Dearing	Demolished	Back - Right				
342 Dearing	Good	Detached - Rear	Clay Tile	Concrete block, wood siding	Auto/Storage	1 story, 2 bay
376 Dearing	Demolished	Back - Right				
421 Dearing	Good	Detached - Rear	Wood Frame	Vinyl Siding	Not identified	1 story, 1 bay
436 Dearing	Demolished	Back - Right, attached to stable				
458 Dearing	Demolished	Back - Right				
105 Dubose	Demolished	Back - Left				
108 Dubose	Demolished	Back - Right				
207 Dubose	Demolished	Back - Left				
224 Dubose	Good	Detached - Side	Port - two sides on wooden posts		Auto/Storage	1 story, 1 bay
225 Dubose	Demolished	Back				
227 Dubose	Demolished	Back - Left				
235 Dubose	Good	Detached - Rear	Wood Frame	Corrugated Metal	Auto/Storage	1 story, 1 bay
245 Dubose	Demolished	Back - Left				
255 Dubose	Demolished	Back - Right				
267 Dubose	Demolished	Side - Right				
389 Dubose	Demolished	Back				
227 Finley	Demolished	Back - Right				
120 Grady	Demolished	Back - Left				
130 Grady	Demolished	Back - Left				
131 Grady	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
132 Grady	Demolished	Back				
136 Grady	Demolished	Back - Left				
144 Grady	Demolished	Back - Left				
150 Grady	Demolished	Back - Left				
155 Grady	Demolished	Back - Left				
156 Grady	Demolished	Back - Left				
157 Grady	Demolished	Back - Right				
167 Grady	Modified	Detached - Rear	Unknown	unknown	Not identified	1 story, 1 bay
168 Grady	Demolished	Back - Right				
169 Grady	Demolished	Back - Left				
170 Grady	Demolished	Back - Left				
172 Grady	Demolished	Back - Left				
174 Grady	Demolished	Back				
179 Grady	Demolished	Back				
180 Grady	Demolished	Back				
183 Grady	Demolished	Back				
185 Grady	Demolished	Back				
186 Grady	Demolished	Back - Left				
189 Grady	Demolished	Back				
190 Grady	Demolished	Back - Right				
198 Grady	Demolished	Back - Left				
130 Hall	Good	Detached - Side	Wood Frame and block		Auto/Storage	1 story, 2 bay
139 Hall	Demolished	Back				
147 Hall	Demolished	Back - Right				
150 Hall	Demolished	Back - Left				
160 Hall	Demolished	Back - Left				
165 Hall	Demolished	Back - Right				

Address	Condition	Location	Construction	Exterior	Use	Form
170 Hall	Demolished	Back - Right				
175 Hall	Demolished	Back - Left				
180 Hall	Demolished	Back - Left				
191 Hall	Demolished	Back - Right				
198 Hall	Demolished	Back - Left				
220 Hall	Good	Detached - Side	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
230 Hall	Demolished	Back - Right				
242 Hall	Demolished	Back - Right				
243 Hall	Demolished	Back - Left				
125 Henderson	Demolished	Back - Left				
127 Henderson	Demolished	Side - Right				
138 Henderson	Demolished	Back - Right				
145 Henderson	Demolished	Back - Left				
150 Henderson	Demolished	Back - Right				
195 Henderson	Demolished	Side - Left & Back - Right				
196 Henderson	Demolished	Back				
220 Henderson	Demolished	Back - Right				
225 Henderson	Demolished	Back				
236 Henderson	Demolished	Back - Left				
277 Henderson	Demolished	Back				
279 Henderson	Demolished	Back				
287 Henderson	Good	Detached - Rear	Wood Frame	Wood shingles	Auto & residence	2 story, 2 bay
295 Henderson	Demolished	Back - Right				
140 Lyndon	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 2 bay
180 Lyndon	Demolished	Back				
183 Lynd	Demolished	Back				
146 Mell	Demolished	Back - Right				
163 Mell	Demolished	Back				
183 Mell	Good	Detached - Rear	Wood Frame	Stucco	Auto/Storage	1 story, 1 bay
125 Milledge	Demolished	Attached, under back wing				
131 \ 132 Milledge	Demolished	Back				
158 Milledge	Demolished	Back				
176 Milledge	Demolished	Back				
197 Milledge	Demolished	Back - Left				
247 Milledge	Demolished	Back - Left				
255 Milledge	Good	Detached - Rear	Wood Frame	Wooden Siding	Auto/Storage	1 story, 2 bay
285 Milledge	Demolished	Back - Right				
317 Milledge	Demolished	Back - Right				
327 Milledge	Demolished	Back - Left				
337 Milledge	Demolished	Back - Left				
347 Milledge	Demolished	Back - Left				
355 or 357 Milledge	Demolished	Back				
387 Milledge	Demolished	Back - Left				
397 Milledge	Demolished	Back - Right				
125 Nantahala	Demolished	Back - Right				
220 Nantahala	Demolished	Back - Left				
233 Nantahala	Demolished	Side - Right				
244 Nantahala	Demolished	Back - Right				
245 Nantahala	Demolished	Back				
284 Nantahala	Demolished	Back - Left				
294 Nantahala	Demolished	Back - Right				
345 Nantahala	Demolished	Back				
465 Nantahala	Demolished	Back - Left				
693 Pope	Demolished	Back - Right				
698 Pope	Modified	unknown	Stucco		Not identified	2 story, 1 bay
763 Pope	Good	Detached - Side	Wood Frame	Vertical Boards	Auto and housing	1 story, 1 bay
785 Pope	Demolished	Back - Right				
797 Pope	Demolished	Back				
180 Rutherford	Good	Incorporated	Wood Frame	Wooden Siding	Not identified	1 story, 1 bay
295 Rutherford	Demolished	Back - Left				
289 Seminole	Demolished	Back - Right				
290 Seminole	Demolished	Back - Left				
117 or 119 Springdale	Demolished	Back				
120 Springdale	Demolished	Back				
121 Springdale	Demolished	Back				
126 Springdale	Demolished	Back - Right				
130 Springdale	Good	Detached - Side	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
157 Springdale	Demolished	Back - Left				
161 Springdale	Demolished	Back - Right				
162 Springdale	Demolished	Back - Left				
165 Springdale	Demolished	Back - Left				
166 Springdale	Demolished	Back - Right				
124 Virginia	Good	Detached - Rear	Brick	Brick and Stucco	Auto & residence	2 story, 2 bay
126 Virginia	Good	Detached - Rear	Unknown	Stucco	Residence	2 story, 2 bay
130 Virginia	Demolished	Back - Right				
138 Virginia	Demolished	Back - Right				
147 Virginia	Modified	Detached - Rear	Wood Frame	Clapboard	Not identified	1 story, 1 bay
148 Virginia	Demolished	Back - Right				
150 Virginia	Demolished	Back - Left				
159 Virginia	Demolished	Back				
160 Virginia	Good	Detached - Rear	Wood Frame	Corrugated Metal	Auto/Storage	1 story, 1 bay
169 Virginia	Demolished	Back - Left				
170 Virginia	Demolished	Back - Right				

Address	Condition	Location	Construction	Exterior	Use	Form
173 Virginia	Demolished	Back - Right				
176 Virginia	Demolished	Back - Right				
179 Virginia	Modified	Detached - Rear	Wood Frame	Clapboard	Residence	unknown
180 Virginia	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
189 Virginia	Demolished	Back - Left				
195 Virginia	Demolished	Back - Left				
575 Waddell	Demolished	Side - Left				
595 Waddell	Demolished	Back - Left				
617 Waddell	Demolished	Back				
627 Waddell	Demolished	Back - Right				
165 Wilcox	Demolished	Back - Left				
175 Wilcox	Good	Detached - Side	Wood Frame	Clapboard	Auto/Storage	1 story, 2 bay
150 Woodlawn	Demolished	Detached - Side	Brick	Brick	Auto/Storage	unknown
180 Woodlawn	Modified	Detached - Rear	Wood Frame	Wooden Siding	Residence	1 story, 1 bay
187 Woodlawn	Demolished	Back - Left				
190 Woodlawn	Good	Detached - Rear	Wood Frame	Clapboard	Auto & other	2 story, 1 bay
197 Woodlawn	Demolished	Back - Right				
217 Woodlawn	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
220 Woodlawn	Demolished	Back - Right				
227 Woodlawn	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 2 bay
230 Woodlawn	Modified	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, unknown
237 Woodlawn	Good	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 2 bay
240 Woodlawn	Good	Detached - Rear	Unknown	Stone	Auto/Storage	1 story, 2 bay
267 Woodlawn	Demolished	Back - Right				
268 Woodlawn	Modified	Detached - Rear	Wood Frame	Clapboard	Auto/Storage	1 story, 1 bay
276 Woodlawn	Demolished	Back				
277 Woodlawn	Demolished	Back - Left				
290 Woodlawn	Demolished	Back - Right				
297 Woodlawn	Demolished	Back				
299 Woodlawn	Good	Detached - Rear	Wood Frame	Corrugated Metal	Auto/Storage	1 story, 1 bay
150 Wynburn	Modified	Detached - Rear	Unknown	unknown	Not identified	1 story, multi-bay
180 Wynburn	Demolished	Back - Right				



250 Bloomfield



260 Bloomfield



288 Bloomfield



295 Bloomfield



325 Bloomfield



340 Bloomfield



380 Bloomfield



420 Bloomfield



424 Bloomfield



441 Bloomfield



186 Boulevard



286 Boulevard



296 Boulevard



324 Boulevard



397 Boulevard



420 Boulevard



474 Boulevard



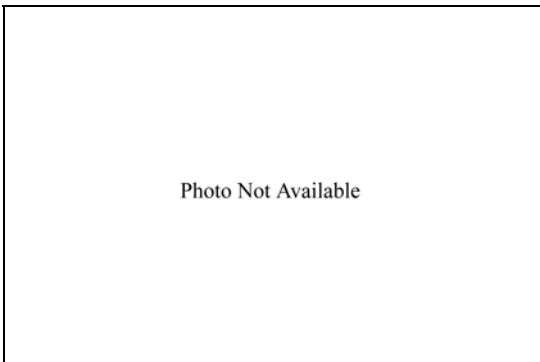
527 Boulevard



544 Boulevard



565 Boulevard



628 Boulevard



694 Boulevard



850 Chase



397 Church



425 Church



120 Cloverhurst



188 Cloverhurst



193 Cloverhurst



219 Cloverhurst



229 Cloverhurst



150 Cloverhurst Terrace



125 Dearing





234 Dearing



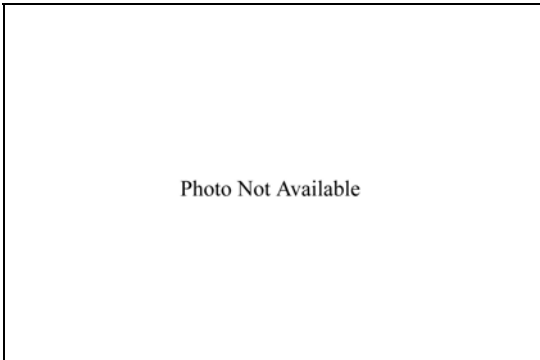
342 Dearing



421 Dearing



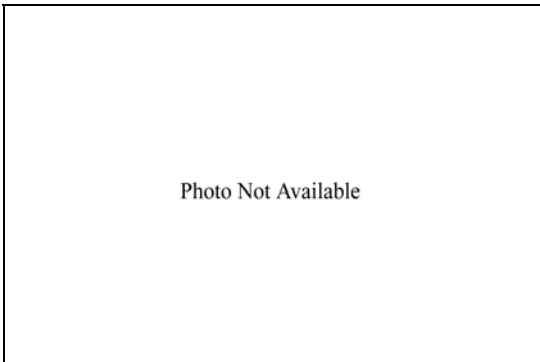
224 Dubose



235 Dubose



131 Grady



167 Grady



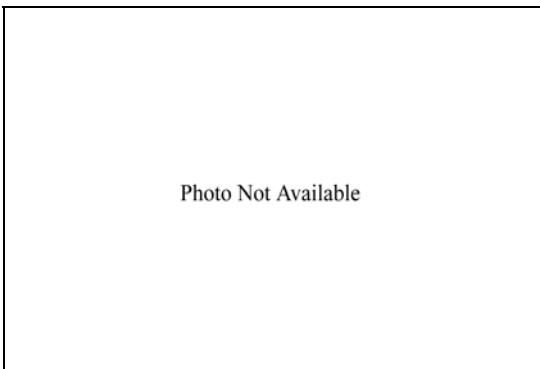
130 Hall



220 Hall



287 Henderson



140 Lyndon



183 Mell



255 Milledge



698 Pope



763 Pope



180 Rutherford



130 Springdale



124 Virginia



126 Virginia (Behind 138)



147 Virginia



160 Virginia



179 Virginia



180 Virginia



175 Wilcox



150 Woodlawn



180 Woodlawn



190 Woodlawn



217 Woodlawn



227 Woodlawn



230 Woodlawn



237 Woodlawn



240 Woodlawn



268 Woodlawn



299 Woodlawn



150 Wynburn