

ONE-WAY TO TWO-WAY STREET CONVERSIONS AS A PRESERVATION AND
DOWNTOWN REVITALIZATION TOOL: THE CASE STUDY OF UPPER KING STREET,
CHARLESTON, SOUTH CAROLINA

A Thesis
Presented to
the Graduate School of
Clemson University
and
the Graduate School of the
College of Charleston

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Historic Preservation

by
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May 2009

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ABSTRACT

In the first half of the twentieth century, historic urban areas in America were retrofitted to accommodate a mass amount of automobile traffic. These retrofits came in the form of highways, thruways, and one-way streets. Many historic commercial streets in American downtowns were converted to one-way streets, because of traffic engineers' narrow perspectives. After decades of decline, largely linked to automobile dominance, downtown economic revitalization emerged in the 1990s. One technique that appears to be remarkably successful is the re-conversion of one-way streets to two-way streets.

One-way streets allow for greater traffic capacity and higher automobile speeds, while two-way streets provide the same functionality, while also increasing pedestrian safety and business visibility, essentials for successful downtowns. In 2002, the National Trust's Main Street program, dedicated to the preservation and revitalization of historic commercial streets, acknowledged the use of one-way to two-way conversions, but declared the need for more research on the topic in 2002.

Charleston, South Carolina's major downtown retail center is the historic King Street corridor. Over time, King Street has undergone numerous transportation changes and traffic patterns. In 1956 a section of Upper King Street was converted to one-way traffic, to serve as an arterial road, negatively affected the street's intended purpose as a business corridor. The area subsequently became unattractive, dangerous, and economically unsuccessful. Along with other revitalization methods, Upper King Street was reconverted to two-way traffic in 1994. Because of this conversion, the area has regained its status as a cultural and retail hub in the City of Charleston.

In order to include the case study of Charleston's Upper King Street in the discussion of downtown revitalization and historic preservation through traffic calming methods, this thesis includes a comparison of one-way to two-way streets as commercial corridors and a report on the history and practice of such conversions. Following these informational chapters, this thesis presents a detailed history of Upper King Street from 1950 to 1990, including major economic, transportation and preservation actions. While the project is generally considered a success, no previous statistical analysis has been available to validate this conclusion. Included in this thesis is an analysis of business type, vacancy rates, and a regression model of real estate prices for proving the significance of the conversion on property values. This analysis reveals that the 1994 one-way to two-way conversion was significant in contributing to the enhancement of the property values of properties on King Street.

Beyond, an increase in property values, the one-way to two-way conversion of Upper King Street, generated a new interest in the commercial properties along the street, increased pedestrian activity of the area because of increased safety and general attractiveness, and has acted as catalyst in the further preservation of the storefronts lining Charleston's most recognizable street.

ACKNOWLEDGEMENTS

I would like to thank my advisor, Professor Robert D. Russell, Jr. for encouraging me to think harder and write more effectively. Special thanks must also go to Dr. Tim Allen, who has taught me everything I know about real estate statistics. I am truly grateful for his dedication to this research. Furthermore, this thesis would not have been as successful without the guidance and support of all faculty members involved, including Professor Robert D. Russell, Dr. Tim Allen, Jonathan H. Poston and Dr. Barry Stiefel.

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CHAPTER ONE

INTRODUCTION

There is a common adage used amongst preservationists that indicates use as a major factor in ensuring the continued preservation of a building. When a building is no longer useful as its intended purpose or even with a modified use, the probability that it will be neglected or demolished increases drastically. This is particularly noticeable in historic commercial storefronts and the streets that they line. Furthermore, it is difficult to preserve commercial buildings for two reasons, they by their nature change frequently to keep up with the economic trends, and secondly, because the way in which Americans currently shop has siphoned business away from central business districts.

The twentieth century was a time for great change in American cities. The first half was a period of growth, popularity, and influence. It is in this time that automobile traffic was fully integrated into the working infrastructure of urban environments. In order to accommodate their machines, traffic engineers promoted the concept of one-way streets. One-way streets carry a greater capacity of traffic and allow cars to move at faster speeds. Based on other national trends, residential properties were neglected due to increased suburbanization, but the commercial aspects of cities were maintained. However, in the late twentieth century commercial ventures also increasingly left the city. Many central business districts in downtowns or major business streets in large cities were abandoned. After a long period of decline, a new interest in downtown has begun to emerge.

Along with the new interest came a new perspective on the place and purpose of the automobile. Starting in the 1960s, the concept of traffic calming entered many American cities. By decreasing the negative effects of the automobile, residential neighborhoods were successfully improved and it can even be said that they regained their historic appeal. The same concept was soon extended to historic commercial streets. Because access is essential for commercial ventures, however, there must be a balance of automobile traffic, pedestrian safety, and general attractiveness of the area. Remember, shoppers must choose to shop. A common method for calming the traffic on commercial streets is the re-conversion of one-way streets to two-way streets. The decreased traffic capacity and traffic speed, along with streetscape improvements, have been successful components for downtown revitalization.

Charleston, South Carolina's business district on King Street has in many ways followed national trends of the twentieth century. Long operated as a busy commercial street, it was converted to one-way traffic in the 1950s to decrease traffic congestion. When the national decline of urban areas and development of suburban communities began in the mid twentieth century, the one-way street served as a commuter road and not as a business street. The shopping district continued to decline until the 1980s when several publicly funded projects aided the revitalization of Lower King Street, south of Calhoun Street. The benefits of these projects, however, did not reach north of Calhoun Street, to the area known as Upper King Street. It was not until 1992 that the area was granted appropriate attention from the local government, preservationists, and shoppers and a full retail strategy study was

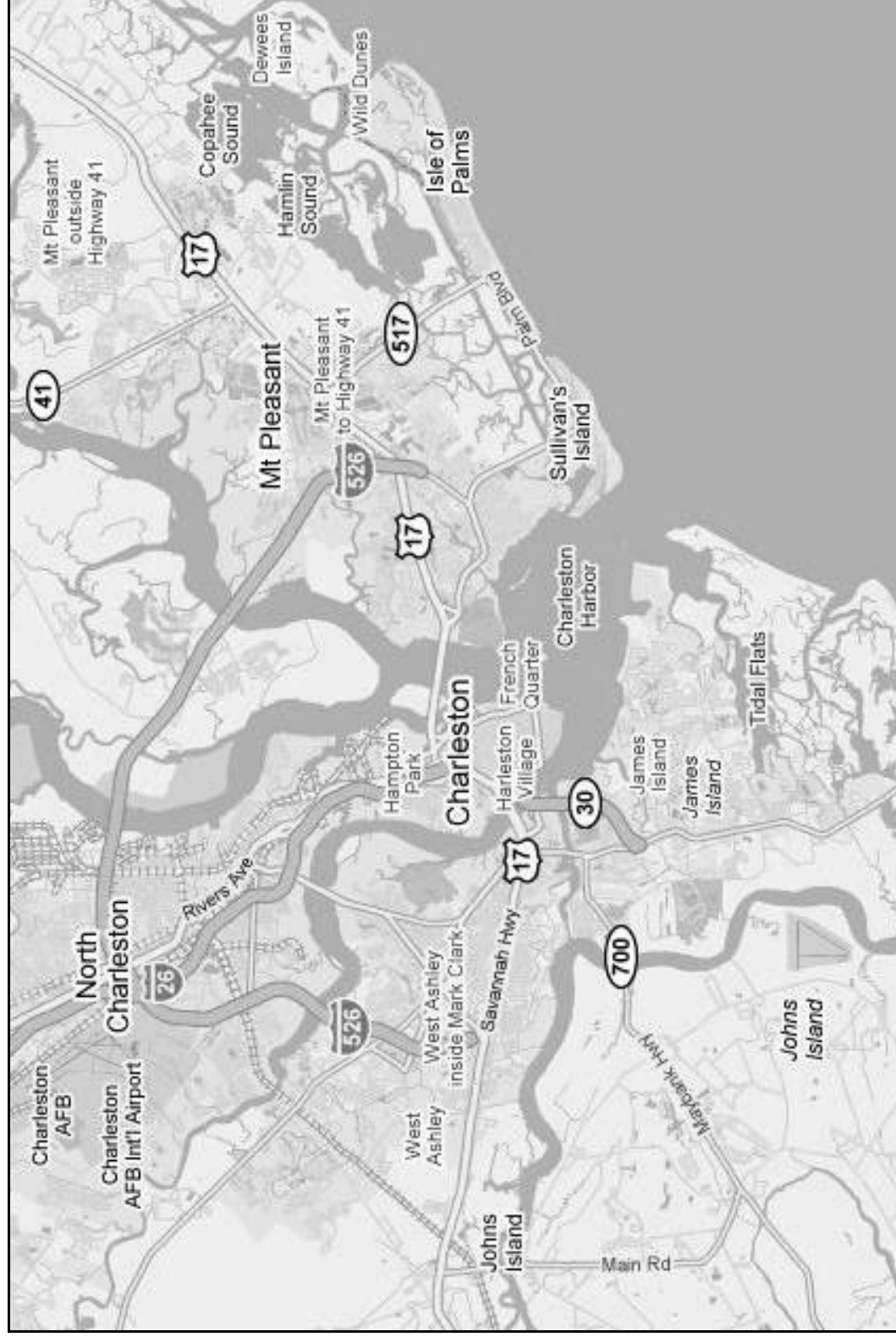


Figure 1.1 (UPPER) Map of the Charleston Metropolitan area.
Figure 1.2 (LOWER) Map of the Charleston Peninsula, including downtown Charleston, the most historic and urban area of the Metropolitan area. King Street travels in the north-south direction near the center of the peninsula. Upper King Street, the focus of this thesis, is defined as the area of King Street bounded on the south by Calhoun Street and to the north at Spring Street.

completed for the commercial district. While there is no mention of a one-way to two-way conversion in the 1992 study, Upper King Street was converted to two-way traffic in 1994, following general recommendations of the study. The one-way to two-way conversion acted as a catalyst for further revitalization, and Upper King Street now resembles the busy and diverse commercial corridor of the past, with several new additions and themes as well. City officials, merchants and shoppers, have observed the benefits of the conversion as generally successful but there have been no further study into the effects of the conversion on real estate values, pedestrian safety, business retention, new business development, or any other aspect.

The goal of this thesis is to statistically evaluate the practice of converting one-way streets to two-way operation in historic commercial corridors by studying Upper King Street. While some studies are available that describe the decision making process of past one-way to two-way conversion, few go beyond anecdotal evaluations after the conversion. The trend of conversions has continued because of their apparent success, but in order to be held up as viable methods for revitalization and preservation, more statistical and analytical research is required.

The next chapter of this thesis is devoted to presenting the pros and cons of both one-way and two-way streets as commercial corridors and understanding the practice. In the comparison, variables were chosen to show business and pedestrian safety related issues. One-way to two-way street conversions fall under a larger category of traffic calming that is described in Chapter Three. Following this information, several case studies are presented along with current information on the state of traffic calming and conversions in South Carolina and the City of Charleston.

The second half of this thesis delves further into the specific case of Upper King Street, including its history, its re-conversion to two-way traffic in 1994 and the evaluation of that conversion. A detailed history of Upper King Street is presented in Chapter Four that outlines major economic, transportation, and preservation trends from the 1950s to the 1990s. Finally, Chapter Five contains analytical and statistical evaluation of the one-way to two-way conversion of Upper King Street. The type of businesses found on the street along with vacancy rates derived from City Directories are presented in a brief look at the benefits of two-way traffic. The most detailed analysis involves creating a regression model with data from the Charleston County Assessor's Office. The analysis evaluates the change in sale price for commercial properties between the years 1990 and 1998, and identifies the most significant variables. On King Street, it was found that an increase of property values can be associated with the conversion of traffic from one-way to two-way.

By expanding the traditional scope of preservation research to including commercial district revitalization and real estate techniques, this thesis seeks to validate the field to a large audience. The concept of historic preservation, along with new perspectives on urbanity and livability can come together to help create successful places. One-way to two-way street conversions are a method of revitalization, and therefore a method of preservation, especially when implemented in historic commercial districts.

CHAPTER TWO

COMPARISON OF ONE-WAY AND TWO-WAY STREETS AS COMMERCIAL CORRIDORS

During the high point of commercial urban development in the early to mid twentieth century, American cities grew rapidly in density and importance. At the same time, automobile traffic increased exponentially in urban areas. This mobility increased access to all parts of cities, but also created unforeseen traffic problems. Because of the influx of cars, roadways were unprepared to deal with increased traffic volume. First much of the urban traffic volume increase is attributed to the increase of automobiles on the street and then, later in the twentieth century, the need to facilitate traffic in and out of downtown areas by commuting suburbanites. Traffic engineers tried to accommodate an ever increasing number of automobiles through urban areas.

Traffic engineers prescribed numerous measures widely, including highways, major arterials, and more precise traffic management. Smaller traffic projects were implemented in tighter urban areas that worked with the existing street network. This included street widening, construction of parking garages, and the conversion of many two-way streets to one-way streets.

Most one-way streets in this country were first created from two-way streets in the 1930s through the 1950s. These conversions took place in areas built before the automobile became the prevalent form of transportation. Such areas tend to have narrower streets and smaller blocks than post-auto cities. One-way streets were thus an attempt to accommodate auto traffic in areas not built for the auto.¹

¹ Thoreau Institute, "Should Cities Convert One-Way Streets to Two Way?" *The Vanishing Automobile* 30. Available at <http://www.ti.org/vaupdate30.html>. Accessed November 2009.

Traffic engineers and municipal governments accepted the benefits of one-way streets. At this time, traffic engineers did not seek public participation or suggestions from the communities affected, and hundreds of one-way streets were created to accommodate the automobile. The goal of city centers was to remain accessible and viable by allowing a high amount of automobile traffic. Furthermore, for some cities, one-way streets offered a way to increase traffic capacity and decrease congestion without the construction of new highways, arterials, or other thoroughfares. Because it's confined geographic setting and dense road network was not conducive to highways, the historic city of Charleston, South Carolina completed several one-way street traffic plans in the 1950s. Some streets were widened during this time, but few network changes were made throughout downtown Charleston beyond one-way conversions.

After several decades of boom, Charleston, like the majority of American downtowns, experienced bust in the 1960s through 1990s. As the rural landscape changed through residential suburbanization, so did the central cities. Over time, commercial ventures sought the same benefits as suburban homeowners: easy automotive travel, and cheap land.² With this exodus of commercial power, downtowns lost retail businesses, restaurants, and office space. Traffic volumes in American cities decreased substantially between the late 1950s and early 1970s, no longer requiring the capacity offered by one-way street grids. A new interest in downtown was not seen until the early 1990s, partially spurred by the building damage caused by Hurricane Hugo in 1989.

² G. Wade Walker, Walter M. Kulash, and Brian T. McHugh, *Downtown Streets: Are We Strangling Ourselves on One-Way Networks?*, 1999, 2.

Because of their strategic location within cities and typical long running length, commercial streets were the ones most frequently converted to one-way. The typical types of lots along these urban streets were long, rectangular parcels with the narrow side abutting the streets. This configuration allowed for maximization of storefront exposure and number of businesses per block. Furthermore, this type of development pattern was created before the emergence of the automobile but is still a viable and desirable layout. Many of America's historic downtowns illustrate this pattern and are seeking to revitalize and preserve its importance. This resurgence of interest was supported by the status of downtowns as cultural and entertainment centers, as well as their previous role as commercial centers. The revitalization of central cities to their former status is wide and well-supported and there is a desire to correct the transportation patterns that contributed to their decline. It is in the 1990s that the one-way streets of the 1950s, 1960s, 1970s, and 1980s began to be reconverted to two-way operation.

Presented below is a comparison of one-way and two-way streets as urban commercial corridors. The criteria used are traffic efficiency, including capacity and speed, as well as pedestrian safety, total travel distance, and ease of orientation, and business recognition. These four categories of criteria have been chosen to highlight both the commercial and public safety issues of one-way and two-way streets.

TRAFFIC EFFICIENCY: CAPACITY, SPEED, AND TOTAL TRAVEL TIME

Traffic engineers of the early and mid twentieth century created a new science and profession aimed at facilitating vehicular traffic. This period of American

history includes the paving of national highways, regional thruways and a reevaluation of urban transportation. National trends of suburbanization also affected the travel needs of downtowns. It was thought that cities could best compete with suburbanization by allowing the greatest volume of traffic to travel to and through their downtown. In order to keep up with automobile dependence, many downtowns converted two-way streets to one-way streets to gain traffic capacity, traffic speed and the perceived benefits. The perspective of traffic engineers was narrow and focused on the automobile. Because of this, one-way and two-way streets will first be compared based on traffic efficiency.

Traffic efficiency is a measure of the speed and success of transporting people and freight on roads to a determined destination. There are several components of traffic efficiency, including traffic capacity, traffic speed, and total travel time. Capacity is a measure given to a street or road that indicates the traffic volume that it can accommodate over a defined period. The measure of traffic capacity is related to the determined or estimated traffic volume which represents the vehicles per hour, day, month, or any determined period. Vehicular speed of traffic is determined by the posted speed limit and the ability of a vehicle to reach and maintain that speed. Beyond speed limits, placement of regulatory systems such as stop signs and traffic lights, as well as the design of the street itself can regulate traffic. The design of the street can affect the number of vehicular conflicts at intersections. Traffic capacity, traffic volume, and rate of vehicular speed determine the total travel time needed to reach a determined location.

One-way streets increase traffic capacity when implemented in pairs. These “couplets” spread the total number of cars that previously traveled on a single street to two streets. The total increase of capacity gained by converting a two-way street to a pair of one-way streets has been determined to be as much as 50 percent.³ In a time when urban streets were severely congested with traffic, this increase in capacity was greatly desired.

Another benefit of one-way streets, seen by traffic engineers, was increased vehicular speed. Because one-way streets segregate directional traffic, each one-way couplet can have wider travel lanes. Wider travel lanes encourage an increase of vehicular speed because of the decreased perception of friction. The appearance of friction created by a narrow street, on-street parking, and/or on-coming traffic affects the driver’s perception and therefore his or her calculation of safe speed. In fact, traffic theorists in the 1930s promoted one-way streets because they required the driver to pay less attention.⁴

Also affecting vehicular speed is the placement and frequency of uniform traffic control devices, such as stop signs and traffic signals. On the commercial streets of medium sized cities, traffic lights are used more than stop signs. Traffic lights on one-way streets can be synchronized to reduce the number of stops. It is understood that traffic lights stop traffic at their immediate location and decrease speed while approaching and leaving an intersection. By creating a traffic pattern

³ *Traffic Engineering Handbook*, ed. James L. Pline, Fourth ed. (Englewood Cliffs, New Jersey: Prentice Hall, 1992), 330.

⁴ Richard W. Lyles, Chessa D. Faulkner, and Ali Muazzam Syed, *Conversions of Streets from One-Way to Two-Way Operation*, (East Lansing, MI: Michigan Department of Transportation, 2000), 5.

that reduces stopping, automobiles are allowed “to proceed indefinitely at a fixed rate of speed.”⁵ Furthermore, because of the design of one-way streets, this fixed speed is increased.

In the 1990s, the purpose of one-way streets in American downtowns began to be re-evaluated. The circumstances, including traffic congestion, that lead to their proliferation were no longer universally apparent. Furthermore, the goal of downtown revitalization often includes the decrease or mitigation of automobile presence. Issues of traffic efficiency were also paramount to the decision to convert one-way streets to two-way streets but the latest conversions utilized a much different set of criteria.

Traffic capacity increases when a two-way street is converted to a one-way street. This fact is not typically disputed, but high-capacity one-way couplets may no longer be needed nor desired in downtown areas. A conversion of a one-way street to a two-way street can decrease traffic capacity. This decrease in capacity can lead to increased congestion. Traffic engineers of the mid twentieth century reconfigured cities to eliminate congestion while some downtowns are now seeking congestion. The appearance of congestion, to a certain degree, can give an area a look of healthiness and vitality. Congestion is measured on an A to F scale, known as Level of Service (LOS). A LOS of A characterizes highways and major free-flowing transportation routes, while a LOS of F means stop-and-go traffic.⁶ An appropriate level of congestion in a downtown area is between a LOS of D and E, which

⁵ Thoreau Institute, "Should Cities Convert One-Way Streets to Two Way?" *The Vanishing Automobile* 30. Available at <http://www.ti.org/vaupdate30.html>. Accessed November 2009.

⁶ John D. Edwards, "Traffic Issues for Smaller Communities," *Journal of the Institute of Transportation Engineers* (1998): 32.

represents a wait no greater than sixty seconds at an intersection.⁷ This LOS offers a balance of efficiency and congestion.

As discussed earlier, one-way streets allow for more vehicular traffic and at higher speeds. Even with traffic speed control measures such as a posted speed limit, stop signs and traffic lights, drivers on one-way streets typically travel at higher speeds. Higher speed was long desired by traffic engineers even in congested cities, but is now often seen as unsafe to motorists and pedestrians. In commercial areas, operating speeds of 20 to 25 miles per hour are ideal.⁸ This speed allows a driver to access areas in a reasonable amount of time while also creating a pace that allows for observance of storefronts, signs, and display windows. For commercial ventures on downtown streets, visibility is essential for success.

Downtown commercial streets have seen a dramatic change in their level of use in the twentieth century. Their boom and bust have occurred in the same century. Cities of the early twentieth century were centers of retail operations, office headquarters, and cultural and entertainment venues. With their popularity came the need to facilitate automobile traffic to and from these destinations. One-way streets were a common method implemented by traffic engineers to gain traffic capacity and increase traffic speed. However, with a shift in residential and commercial growth to the suburbs, the need for such streets decreased and in fact contributed to the further decline of central cities by creating hostile environments to all non-motorists. With new perspectives and needs for downtown traffic, many one-way streets were

⁷ *ibid.*, 32.; John D. Edwards, *Converting One-Way Streets to Two-Way: Managing Traffic on Main Street*, (Washington, D.C.: The National Trust's Main Street Center, 2002), 13.

⁸ Edwards, *Traffic Issues for Smaller Communities*, 32.

converted back to two-way streets. With a desire to decrease the negative effects of automobile traffic in downtowns, an increase in congestion and a decrease in vehicular speed were desired.

PEDESTRIAN SAFETY

Perhaps the greatest consideration for one-way to two-way conversions is that of pedestrian safety. The speed and pattern of vehicular traffic on a street greatly impacts the level of safety afforded to non-vehicular street users. This group of users can be pedestrians, bicyclists, and other non-motorists. Pedestrian safety in downtown commercial streets is paramount because pedestrians are shoppers. Even shoppers that arrive at a commercial street by automobile are “at some point...a pedestrian. In most cases, a downtown motorist’s destination is some place to park the car, namely a garage, lot or on-street parking space; upon parking, the motorist leaves the vehicle as a pedestrian to access the final destination.”⁹

Both sides of the one-way to two-way debate accept the importance of pedestrian safety but there is not an agreement as to which way of travel is actually safer. There are studies and statistics that quantitatively show the benefits of both one-way and two-way streets on pedestrian safety. Both sides of the debate are presented here, as pedestrian safety may depend on characteristics that can only be determined on a case-by-case basis. However, there are several benefits of two-way streets that positively affect pedestrian safety and *pedestrian experience*; a relatively new criterion for successful downtowns.

⁹ Walker, Kulash, and McHugh, *Downtown Streets: Are We Strangling Ourselves on One-Way Networks?*, 4.

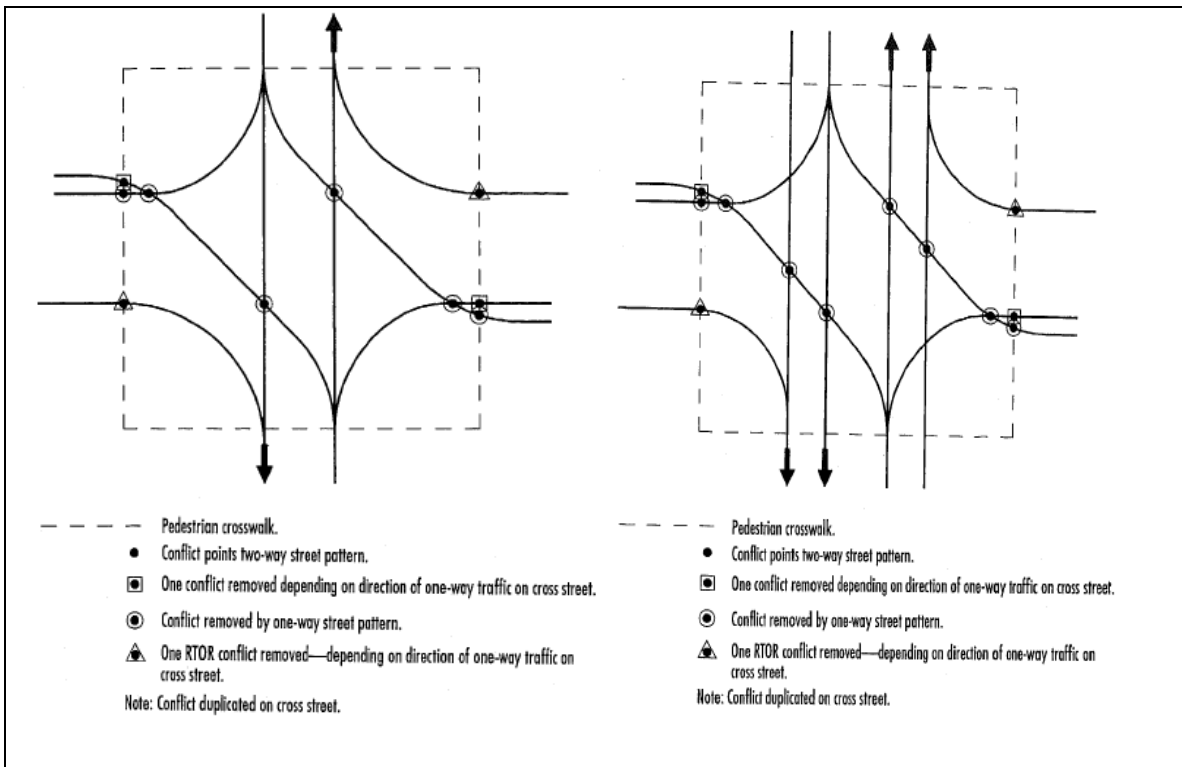


Figure 2.1 Illustration of vehicle/pedestrian conflicts of one-way street intersections. All black dots identify conflict points in two-way street intersections. All but two (right) or four (left) are presented as being eliminated in one-way street networks. This illustration and the article, from which it was taken, present one-way streets as safer than two-way streets. From “One-Way Streets Provide Superior Safety and Convenience,” 1998, pg 48-49.

Pedestrian safety has always been a concern for traffic engineers. At the time of many two-way to one-way conversions, it was believed that one-way streets offered several advantages to pedestrians. The main principle of this promotion was based on the need of both drivers and pedestrian to only be aware of traffic traveling in one direction.¹⁰ There are also sources that contend there are fewer vehicle/pedestrian conflict points in a one-way system. An article in the *Journal of the Institute of Transportation Engineers* in 1998 calculated that there are either two or four conflict points in a one-way system depending on the number of lanes and

¹⁰ *Traffic Engineering Handbook*, 331.

type of turns allowed, up to 24 conflict points of any two-way configuration (*Figure 2.1*).¹¹ Furthermore, because vehicles only travel in one direction, both head-on and left-turn accidents will dramatically decrease. It has been stated that traffic accidents involving both vehicle/vehicle and vehicle/pedestrian conflicts can decrease between 10 to 50 percent if one-way streets are employed.¹²

While there are indicators for the level of safety provided to pedestrians on one-way streets, there is a similar amount of evidence that contradicts that conclusion. The *Traffic Engineers Handbook* published by the Institute of Transportation Engineers indicates, "vehicles turning left out of one-way streets appear to hit pedestrians significantly more frequently than do all other turning vehicles."¹³ Furthermore, in an article published in the *Journal of the Institute of Transportation Engineers* in 2004, a computer model was used to compare one-way and two-way networks and concluded that on one-way streets, vehicles travel at higher speeds, have a lesser average delay, and stop less often, and because of these attribute are not safe for pedestrians.

Superficially, it would seem that crossing single direction of traffic on one-way streets is preferable to crossing a two-way street. As is often the case, the conventional wisdom is wrong. In fact, crossing a one-way street presents greater difficulties to the pedestrians than crossing a two-way street. The explanation lays in the greater numbers of different vehicle/pedestrian conflict sequences that are encountered in crossing a one-way street.¹⁴

¹¹ John J. Stemley, "One-way streets provide superior safety and convenience," *Journal of Institute of Transportation Engineers* (1998), 48.

¹² University of North Carolina Highway Safety Research Center, "One-way Streets," in *Florida Pedestrian Planning and Design Handbook* (1999), 89.

¹³ *Traffic Engineering Handbook*, 331.

¹⁴ Lum Kit Meng and Soe Thu, "A Microscopic Simulation Study of Two-Way Street Network Versus One-Way Street Network," *Journal of The Institution of Engineers, Singapore*. 44, no. 2 (2004): 114.

Analysis of vehicle/pedestrian conflict points by those advocating for two-way streets has been calculated as two possible sequences for conflicts at a two-way street intersection and sixteen possible conflict sequences at one-way intersections (*Figure 2.2*).¹⁵ This is a much different conclusion than that previously presented from the article “One-Way Streets Provide Superior Safety and Convenience.” It appears that with the manipulation of specific intersection criteria it is possible to determine a far different number of vehicle/pedestrian conflicts. The individual intersections in commercial districts must be evaluated on a case-by-case basis to create an accurate measure of pedestrian safety.

While the number of vehicle/pedestrian conflicts and the rate of accidents cannot be unequivocally determined until the traffic pattern is determined and implemented, there are indications that two-way streets are safer. As noted earlier, two-way streets, regardless of posted speed limit tend to have slower vehicular speeds. A decrease in vehicular speed decreases both the total number of collisions and because of lower speeds can decrease the seriousness of those collisions.¹⁶

¹⁵ Walker, Kulash, and McHugh, *Downtown Streets: Are We Strangling Ourselves on One-Way Networks?*, 11.

¹⁶ Reid H. Ewing, *Traffic Calming: State of the Practice* (Washington, D.C.: Institution of Transportation Engineers, 1999), 109.

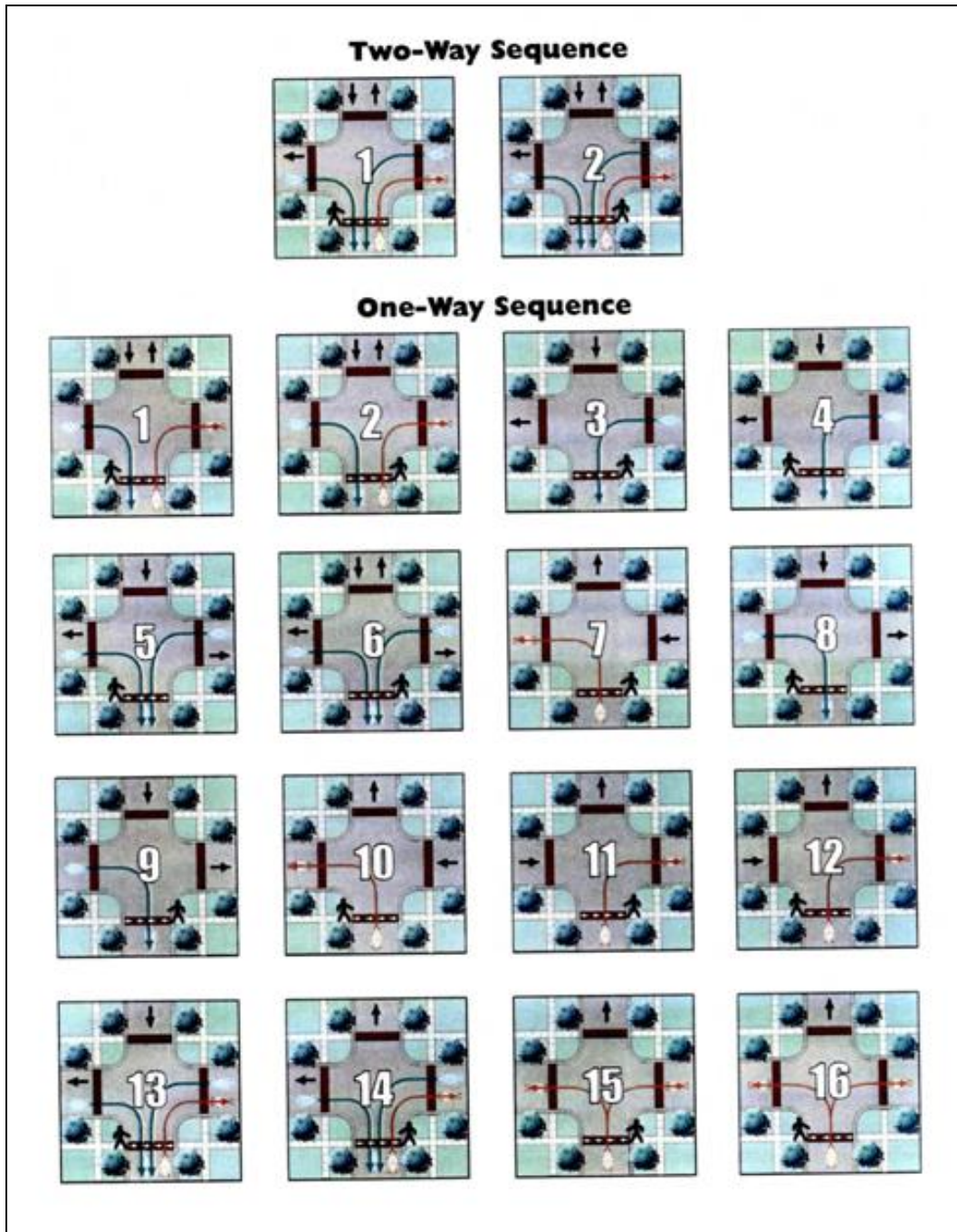


Figure 2.2 Illustration showing sixteen total pedestrian/vehicle conflicts created by a system of one-way streets and only two possible conflict points in two-way street systems. The article from which this figure was taken advocates for the conversion of one-way street to two-way streets in order to increase pedestrian safety. From "Are We Strangling Ourselves With One-Way Street Networks?" 1999, pg 11.

Pedestrian safety is a quality of life issue. The ability of non-motorists to utilize public space, specifically in the form of commercial corridors is essential for downtown vitality. Research by traffic engineers and those in other fields has competently analyzed the safety of both one-way and two-way streets. The results of these studies seem to be reliant on a number of factors beyond the direction of travel. It has been determined, however, that the single most dangerous vehicle/pedestrian conflict, a left turn from a one-way street, only occurs in a one-way street network. There is also evidence that two-way streets are better for pedestrian safety based on the decreased traffic speed. Pedestrian safety is cited as a major factor in the conversion of one-way streets to two-way streets in Denver, Colorado, Milwaukee, Wisconsin, and Toledo, Ohio.¹⁷

TRAVEL DISTANCE AND EASE OF ORIENTATION

The success of urban transportation is dependent on the ability of a motorist to reach his or her destination. Traffic capacity, speed, and street design affect this ability, so too does the availability of routes within the greater street network. Placement of one-way and two-way streets affects the number of routes available to reach a destination, and may increase or decrease total travel distance. Knowledge of the street network can greatly influence the ease with which a driver can find

¹⁷ Robert F. Dorroh and Robert A. Kochevar, *One-Way Conversions for Calming Denver's Streets*, 1996), 110.; A. Nelessen Associates, *Milwaukee Downtown: Catalytic Projects* (Milwaukee, WI: City of Milwaukee, 1999), 43.; Development Consulting Group and Typlan Consulting Ltd, *One Way Couplets Impact Analysis* (Kelowna, British Columbia, Canada: City of Kelowna; Downtown Kelowna Association, 2003), 20.

suitable routes. Drivers that traverse an area more frequently are better able to evaluate the best route.

Infrequent users of a street network do not have the knowledge needed to choose alternative routes and are therefore greatly affected by the street network. If the street network cannot be assessed and understood by infrequent users, such as visitors to a new city, motorists will often be forced to travel out of their way to reach a destination. Furthermore, even frequent users are forced to make out-of-direction travel to reach a destination. An easily understood road network is necessary to decrease total travel distance and ensure ease of orientation for drivers and therefore the ability to access their final destination.

By limiting travel in one direction, one-way streets restrict access to certain destinations in the street network and increase total travel distance. The need of street users to make extra turns was and is known by traffic engineers.¹⁸ It seems that a decrease in congestion and an increase in travel speed were more desirable in the mid twentieth century than the most efficient travel distance. Today there is evidence that some traffic engineers are still unconcerned with total travel distance because it does not always affect total travel time.¹⁹ Because total travel time is dependent on a number of other factors, travel distance is not the most important variable. However, in requiring additional turns and out-of-direction travel, the street network may become confusing to infrequent street users.

.... [I]t is the occasional visitors to downtown who are often most confused and disoriented on encountering a one-way street network. Often, these motorists are able to see their destination but are shunted away from it by

¹⁸ *Traffic Engineering Handbook*, 332.

¹⁹ Stemley, *One-way streets provide superior safety and convenience*.

one-way streets. But these occasional users are in fact the customers that revitalized downtowns are trying to attract. If circulation in the downtown area can be made easier by converting one-way streets, people in this target market segment may be better pleased with their overall downtown experience and become more regular downtown patrons.²⁰

During the revitalization of many American downtowns in the 1990s, it was determined that two-way streets were more “user friendly” for local, regional, and out-of-town shoppers. The desire to improve the ease of orientation by infrequent visitors is referenced in one-way to two-way conversions in Milwaukee, Wisconsin; Lubbock, Texas; Lansing, Michigan; Lafayette, Indiana; Dubuque, Iowa; New Haven, Connecticut and Great Falls, Montana.²¹

BUSINESS RECOGNITION: VISIBILITY AND STOREFRONT EXPOSURE

Traffic efficiency, pedestrian safety, and travel distance are common variables in assessing one-way and two-way streets. In evaluating the use of one-way and two-way streets as a commercial corridor there are more factors, including business visibility and storefront exposure. Business visibility is the ability of a driver to see and identify a storefront or sign and assess its use. Storefront exposure is the ability of a driver to see a specific storefront based on its location within the street network and within the block. These factors are essential to understanding the pros and cons of one-way and two-way traffic on commercial streets.

The assertion that one-way streets are good for business is verified for only a certain type of business. “Supermarkets and other high-volume, low-margin stores

²⁰ Walker, Kulash, and McHugh, *Downtown Streets: Are We Strangling Ourselves on One-Way Networks?*, 4.

²¹ A. Nelessen Associates, *Milwaukee Downtown: Catalytic Projects*, 43.; Lyles, Faulkner, and Syed, *Conversions of Streets from One-Way to Two-Way Operation*, 13.; *ibid.*, 13.; Development Consulting Group and Typlan Consulting, *One Way Couplets Impact Analysis*, 20.; *ibid.*, 20.; *ibid.*, 20.; Planning Department, City of Great Falls, Montana, *The Conversion of Downtown One-Way Streets Back to Two-Way Streets*, 2007), 5.

that have their own parking lots probably do better on a one-way couplet that gives lots of people quick access to those stores.²² This type of business typically sells convenience items needed regularly by a large number of people, such as household supplies, food, and other regularly purchased items. While urban environments, specifically small historic commercial districts, do sell this type of item they are not sold in a supermarket setting, but in small groceries. Many storefronts of downtown commercial corridors are locally owned and sell unique items.

Research has determined the appropriate speeds for smaller commercial streets and for business visibility. A traffic engineer of more than forty years, John D. Edwards, has determined that “operating speeds of 20 to 25 mph are necessary so that the shopper does not feel hurried and so that a leisurely pace is present. Furthermore, at operating speeds in excess of 30 mph it is difficult for the motorist or a researcher to even observe the types of retail outlets present.”²³ The posted speed of a street can reflect this appropriate speed, but because users of one-way streets are more likely to accelerate beyond the posted limit, storefronts and signs will be even less visible. Because the shopper does not typically plan purchases from small businesses on commercial streets, they can be considered “impulse” purchases. For this type of sale, storefront visibility from a moving automobile is essential, even if the shopper intends to return to the store on foot.

²² Walker, Kulash, and McHugh, *Downtown Streets: Are We Strangling Ourselves on One-Way Networks*, 5.

²³ Edwards, *Traffic Issues for Smaller Communities*, 32.

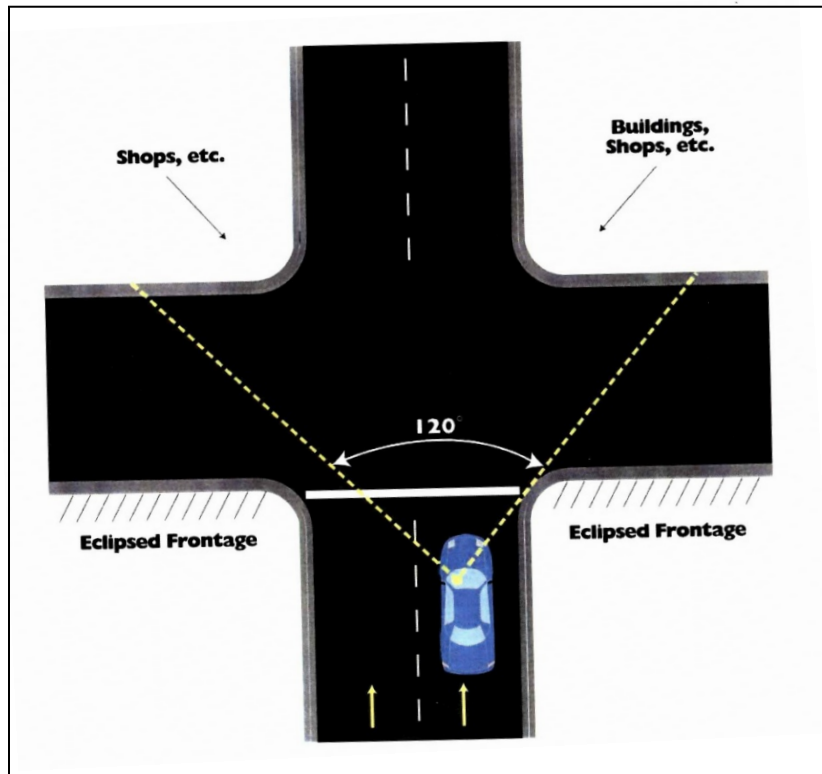


Figure 2.3 Graphic representation of eclipsed storefronts caused by one-way streets. From “Are We Strangling Ourselves With One-Way Street Networks?” 1999.

Increased vehicular speed decreases business visibility, so too does the direction of travel. If direction of travel is restricted to one direction, as it is on a one-way street, storefront eclipsing occurs. Storefront eclipsing is the loss of exposure to first floor commercial property caused by one-way streets. A methodology to determine storefront eclipsing was determined by several members of Glatting Jackson Kercher Anglin Lopez Rinehart Inc., a national community planning firm specializing in urban design, transportation planning and engineering. “The quantity of eclipsed store frontage is a function of the quantity of one-way street approaches

in the intersection, block perimeter size, building setback and street width.”²⁴

Consider the approach needed to view the maximum number of storefronts

(Figure 2.3):

As a vehicle stops at or enters an intersection the driver has excellent visibility of the storefronts on the far side of the cross street. On one-way street networks, precious storefronts exposure is lost when one direction of travel is removed, causing one side of every cross street to be partially ‘eclipsed’ from view...²⁵

Even opponents of one-way to two-way conversions admit that two-way streets may provide better visibility based on the type of business. “Specialty stores that rely on impulse sales and depend on high margins per sale do better on two-way streets, since only half their potential customers would see them on a one-way couplet.”²⁶

The stores along most small historic commercial streets are exactly the type of businesses that do better on two-way streets. Furthermore, there is evidence that very successful nationally known chain retailers of coffee and books choose locations on two-way streets because of increased exposure and accessibility.²⁷ The direction of travel on a street greatly influences the exposure of storefronts and signs to vehicular traffic.

There are numerous ways that traffic patterns are determined with the decision typically in the hands of the traffic engineer. In the 1950s, traffic engineers sought to facilitate the greatest amount of traffic through urban areas; little consideration was given to other factors such as business vitality, pedestrian safety

²⁴ Walker, Kulash, and McHugh, *Downtown Streets: Are We Strangling Ourselves on One-Way Networks*, 13.

²⁵ Meng and Thu, *A Microscopic Simulation Study of Two-Way Street Network Versus One-Way Street Networks?*, 114.

²⁶ Thoreau Institute, *Should Cities Convert One-Way Streets to Two Way?*, 29 October 2008.

²⁷ Walker, Kulash, and McHugh, *Downtown Streets: Are We Strangling Ourselves on One-Way Networks?*, 5.

and especially not to the historic character of commercial streets. It was believed that traffic congestion was the greatest threat to downtown commercial districts.

However, as national trends shifted residential properties and commercial ventures away from the city center, the level of traffic in urban areas generally decreased. The traffic that did remain in the city was commuter traffic. In the 1990s, a reevaluation of transportation needs occurred by those determined to revitalize downtowns.

Two-way streets offer important advantages over one-way streets in commercial corridors. They facilitate an appropriate amount of traffic while also providing a safe environment for pedestrians and a good location for small business. It is on these slower paced commercial streets that pedestrian shoppers, diners, and urban explorers feel the safest and the most comfortable. By returning one-way streets to two-way operation, the streets are able to be used as they were historically and are again important public gathering places. Because the high-capacity one-way streets are no longer needed and a more pedestrian friendly environment is desired by downtowns, a method to convert them to two-way operation was established and promoted.

CHAPTER THREE

CONVERTING DOWNTOWN STREETS FROM ONE-WAY TO TWO-WAY TRAFFIC

Transportation engineers have traditionally seen their purpose as the rearrangement of the landscape to allow for the greatest number of vehicles moving at the fastest speed conditions would allow. This goal was believed to align with the needs of American cities in the mid twentieth century, which were experiencing a sharp increase in car ownership, suburban commuting, and urban congestion. While these goals may have been seen as appropriate for that time, a new perspective on the role of transportation engineers emerged in the mid to late twentieth century in America.

This new perspective broadened transportation research to include the negative consequences of vehicular dominance on the social and economic spheres of cities. A major component of this shift was the recognition of traffic calming as a viable transportation tactic. The Institute of Transportation Engineers, an international agency for transportation research and implementation, defines traffic calming as “the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users.”²⁸ Furthermore, the Institute of Transportation Engineers indicates the three major reasons for traffic calming as neighborhood livability, crime prevention, and urban redevelopment.²⁹ The goals and methods of transportation

²⁸ Reid H. Ewing, *Traffic Calming: State of the Practice*, (Washington, D.C.: Institution of Transportation Engineers, 1999), 2.

²⁹ *ibid.*, 5.

engineers have changed drastically over the past century. Today, some transportation engineers have been willing to limit the number of cars and purposefully decrease their speed, a perspective completely opposite their original goal.

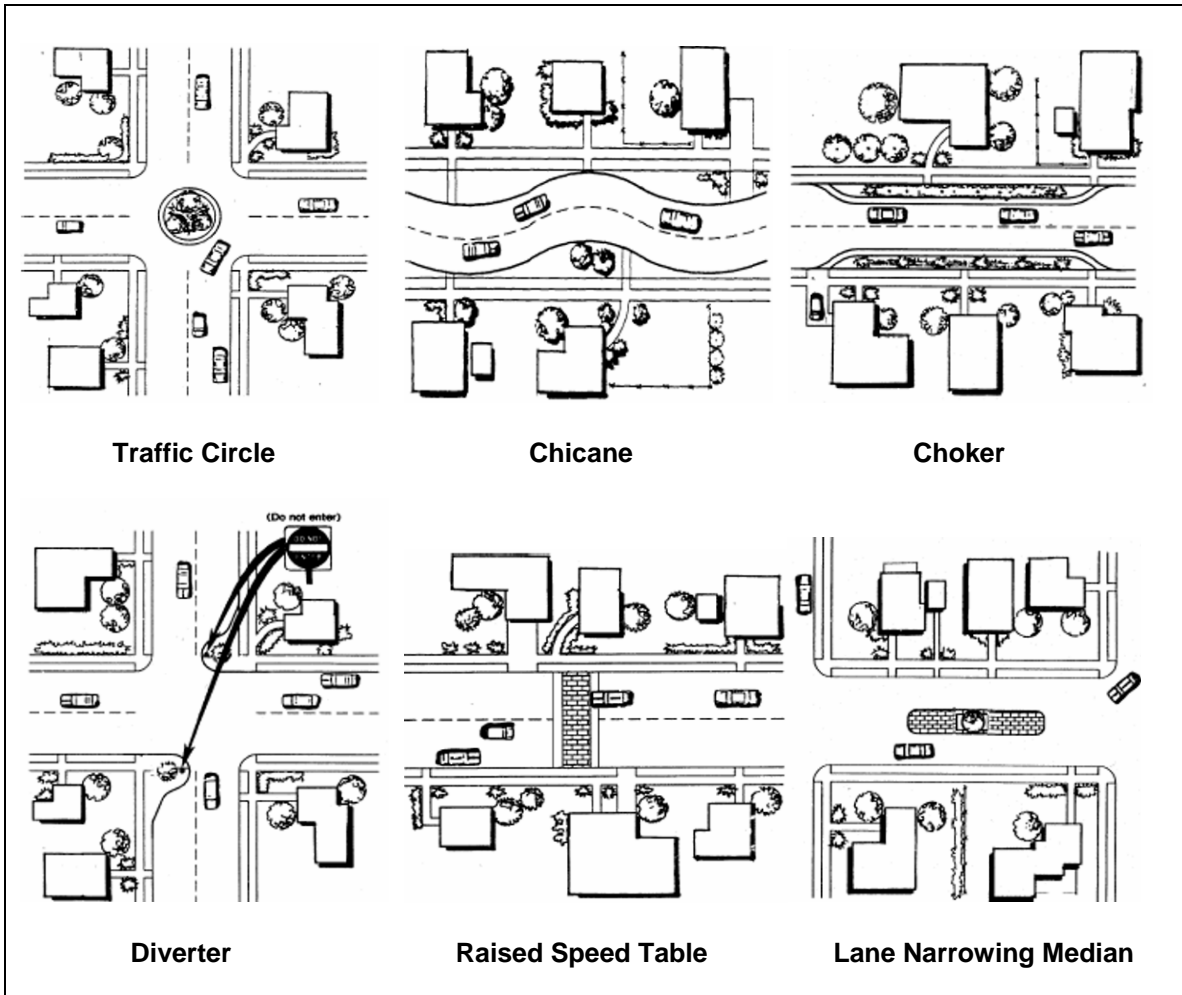


Figure 3.1 Examples of common traffic calming measures: traffic circle, chicane, choker, diverter, raised speed table, and lane narrowing median. From *Traffic Calming: State of the Practice*, 1999.

Traffic calming is relatively new to American cities, but its goals have been employed in other countries for decades. Urban streets in European countries

showcase concepts of traffic calming in their original design, such as narrow lanes, winding streets, and a high level of acceptance of non-vehicular street users. The successful qualities of these streets led to the purposeful introduction of such features to existing streets. The origin of traffic calming as a practice began in a grassroots movement to prevent the use of residential streets as major traffic routes in several European countries specifically Britain, the Netherlands, Germany, Sweden, Denmark, and Austria in the 1960s.³⁰ The most common methods for traffic calming are additions or alterations to streets such as traffic circles, chicanes, chokers, full diverters, jogs, raised crosswalks, speed tables, and textured pavement (Figure 3.1).³¹ These features are more successful than traffic control devices, like stop signs and street lights, because traffic calming is self-regulating. Instead of relying on drivers to follow posted regulations for fear of being caught by police, traffic calming measures alter the street's physics to disallow speeding.³²

Early examples of traffic calming strategies in the United States include Montclair, New Jersey and Grand Rapids, Michigan. Both cities diverted traffic away from problem streets in the 1940s and 1950s.³³ Berkeley, California and Seattle, Washington implemented the first large-scale traffic calming programs in the 1970s.³⁴ By 1998, over 350 American cities had prescribed some method of traffic calming to its urban streets.³⁵ The successes of traffic calming programs can be

³⁰ *ibid.*, 10-12.

³¹ Reid Ewing and Charles Kooshian, "U.S. Experience with Traffic Calming," *Institute of Transportation Engineers Journal* (1997): 28.

³² Ewing, *Traffic Calming: State of the Practice*, 3.

³³ Street closures are no longer a defined traffic calming measure. Street closures are now seen as route alterations.

³⁴ Ewing, *Traffic Calming: State of the Practice*, 14.

³⁵ *ibid.*, 7.

gauged by their increasing popularity and the extremely low rate of reversal. For example, only two of 600 traffic circles in Seattle have been removed, while none of Portland, Oregon's 300 speed humps have been removed.³⁶

ONE-WAY STREET TO TWO-WAY STREET CONVERSIONS

Traffic calming measures are typically additions to an existing street that narrow the road, change the physics of the road, and/or alter the texture of the driving surface. These measures decrease vehicular speed and demand greater driver attention. Another method of traffic calming that relies of the physics of the street, but does not require the addition of any features is the conversion of one-way streets to two-way streets. In the early to mid twentieth century, one-way streets were implemented throughout American downtowns to increase traffic capacity, increase speed and decrease congestion. Along with these perceived benefits, however, came negative consequences to non-vehicular street users, homeowners and businesses and to a greater extent the vitality of the neighborhoods and cities in which they were placed.

The emergence of one-way to two-way conversions as a traffic calming measure emerged in the 1990s. Like other traffic calming methods, the practice of one-way to two-way conversions emerged from the concern and action of residents who desired safer, more livable streets. The Department of Civil and Environmental Engineering at Michigan State University conducted a detailed literature review of

³⁶ Ewing and Kooshian, *U.S. Experience with Traffic Calming*, 33.

one-way to two-way conversions in 2000.³⁷ It is telling that the majority of the sources found concerning one-way streets written before 1990 tended to be about conversion of two-way streets to one-way operation, while those published after 1990 were more frequently about conversion from one-way street to two-way streets. This illustrates the radical shift in perspective of the purpose of urban streets and indicates that recent research has informed the decision to correct the auto-centric travel systems of the early twentieth century.

American Cities known to have One-way to Two-Way Street Conversions	
Alma, Michigan	Lansing, Michigan
Ann Arbor, Michigan	Lubbock, Texas
Anniston, Alabama	Miami, Florida
Baton Rouge, Louisiana	Milwaukee, Wisconsin
Berkeley, California	Minneapolis, Minnesota
Buffalo, New York	New Haven, Connecticut
Charleston, South Carolina	North Little Rock, Arkansas
Colorado Spring, Colorado	Portland, Oregon
Dallas, Texas	Sacramento, California
Danville, Illinois	San Francisco, California
Denver, Colorado	San Jose, California
Dubuque, Iowa	Sheridan, Wyoming
Gardner, Massachusetts	Toledo, Ohio
Great Falls, Montana	Wailuku, Hawaii
Green Bay, Wisconsin	Walla Walla, Washington
Hickory, North Carolina	Washington, Missouri
Holyoke, New Jersey	West Palm Beach, Florida
Lafayette, Indiana	Woonsocket, Rhode Island

Table 3.1 Municipalities that have converted One-way Streets to Two-way Streets. List compiled by Meagan Baco from multiple sources and the author's personal research for this thesis.

³⁷ Richard W. Lyles, Chessa D. Faulkner, and Ali Muazzam Syed, *Conversions of Streets from One-Way to Two-Way Operation*, (East Lansing, MI: Michigan Department of Transportation, 2000), 8.

One-way to two-way street conversions in residential neighborhoods are employed with the same goals as other traffic calming measures. In urban settings, one-way residential streets often become major routes for commuters into and out of downtown. Because drivers on one way streets tend to drive faster than on two-way streets, the street is not only used for a high capacity of vehicles but at higher speeds.³⁸ The fight for one-way to two-way street conversions has been said to have been started by the baby boom generation which started returning to urban residential neighborhood in the 1980s and 1990s.³⁹ In Denver, Colorado this demographic was so desirous of “quiet residential streets like those on which they had lived during their youth” that they demanded one-way to two-way conversions.⁴⁰ Because of the persistent urging of concerned residents, one-way streets in residential neighborhoods were the first type of street to be converted to two-way operation.

In a 1997 survey of traffic calming in the United States, eighteen residential programs were studied. In general, the authors reported high levels of success and popularity for calming programs across the nation. Reported information included the opinions of people living in and people living adjacent to the neighborhood that underwent one-way to two-way conversions. The most support for the method came from those living on converted streets while the most opposition came from those

³⁸ University of North Carolina Highway Safety Research Center, "One-way Streets," in *Florida Pedestrian Planning and Design Handbook*, 1999), 90.

³⁹ John D. Edwards, *Converting One-Way Streets to Two-Way: Managing Traffic on Main Street*, (Washington, D.C.: The National Trust's Main Street Center, 2002).

⁴⁰ Robert F. Dorroh and Robert A. Kochevar, *One-Way Conversions for Calming Denver's Streets*, 1996), 109.

that use the street for automobile travel.⁴¹ Because many residential street conversions are conceptualized and supported by residents of the area, there is a more positive response after conversion. Furthermore, a negative opinion of the conversion can be expected from drivers that used the one-way street as a thoroughfare as part of their larger commuting route. This dichotomy of opinion clearly illustrates to whom one-way streets are a convenience and to whom they are detrimental.

ONE-WAY TO TWO-WAY CONVERSIONS OF COMMERCIAL STREETS

Traffic calming measures emerged as a response to pressure from stakeholders of residential streets but traffic calming measures have also been implemented in commercial areas. By utilizing traffic methods designed to improve residential streets, commercial streets can reap the same benefits. Some early traffic calming efforts in Germany were applied to business districts quite liberally.⁴² In fact, most plans called for the complete removal of automobile traffic from commercial streets. By removing traffic, the streets became pedestrian malls that had a vital street life and allowed shoppers to quickly and safely access all storefronts. This nearly universal application by many German central business districts led to similar concepts in other European and American cities in the 1970s.⁴³ Pedestrian malls in America have not had the same success as European examples. Regardless, they

⁴¹ *ibid.*, 32.

⁴² Citizens Advocating Responsible Transportation, *Traffic Calming: The Solution to Urban Traffic and a New Vision for Neighborhood Livability*, (Australia: Citizens Advocating Responsible Transportation, 1989), 19.

⁴³ *ibid.*, 21.

represent a step towards urban design that considers non-vehicular travel an essential component of successful downtowns.

Managing automobile traffic in American downtowns has been an ongoing process. Since the emergence of the personal automobile as the leader in transportation options, transportation engineers have put vehicular mobility above all other considerations. It was not until the mid to late twentieth century that “traditional” transportation theory was scrutinized. Successful commercial districts in American cities require a balance of vehicular access and pedestrian comfort. This balance can be achieved by converting one-way streets to two-way streets. Two-way streets allow vehicular traffic to reach their target destination efficiently, while ensuring a safe environment for pedestrians and encouraging an active commercial district.

The National Trust for Historic Preservation’s Main Street program, dedicated to the preservation and revitalization of downtowns, has supported the use of one-way to two-way conversions. The Main Street approach was developed in the 1970s to prevent the continued decline of traditional commercial streets in American cities. By combining preservation values with economic development strategies, the approach has been successfully applied in 1,200 cities, towns, and neighborhoods. Because of its mixed mission, the Main Street program must promote development methods appropriate for historic districts. In 2002, the Main Street’s monthly periodical was devoted to new ways to manage downtown traffic, specifically

converting one-way streets to two-way streets.⁴⁴ In the main article, “Managing Traffic on Main Street,” the benefits of two-way traffic, as seen by Main Street, included making the area more “customer friendly” by increasing pedestrian activity, increased congestion and making downtown street networks more easily navigated by visitors. Revitalizing a commercial district increases the level and quality of use of the buildings along the street. By ensuring the use of an historic commercial building, its preservation is more probable.

One of the most recent and comprehensive surveys of one-way to two-way conversions in downtowns was completed for the Hyannis Main Street Business Improvement District (HMSBID) in Cape Cod, Massachusetts in 2000.⁴⁵ HMSBID was considering converting their downtown street, Main Street, to two-way traffic. Dissatisfied with relying on previous conversion case studies that focused on traffic flow, the HMSBID commissioned a study to evaluate business development and downtown livability. Of the 22 cities identified as having converted their main downtown streets from one-way to two-way, the majority reported positive results in terms of business development. One community reported mixed results but no municipality reported a negative impact.⁴⁶ It is important to note that many of the conversions were part of a greater revitalization program that included myriad streetscape improvements.

⁴⁴ John D. Edwards, *Converting One-Way Streets to Two-Way: Managing Traffic on Main Street*, (Washington, D.C.: The National Trust's Main Street Center, 2002).

⁴⁵ Ted Brovitz, "Converting Downtown Streets from One-Way to Two-Way Yields Positive Results," *The Urban Transportation Monitor* (2000).

⁴⁶ *ibid.*

As presented in Chapter Two, traffic efficiency, pedestrian safety, and directional orientation represent the most common factors of analysis between one-way and two-way streets. These factors are applicable to both residential and commercial districts. Both types of districts benefit from slower vehicular speeds, improved streetscapes, and easy access to intended destinations. Beyond that however, the traffic needs and goals of commercial streets, are quite different from residential streets. "Mobility in many of our smaller downtowns is not the key issue anymore—economic vitality is!"⁴⁷

In general, stakeholders in commercial streets *desire* increased traffic congestion, from residents and visitors alike. An appropriate amount of congestion can give the appearance of vitality to an area and allows drivers to see signs and storefronts. The number of cars that can travel along a commercial street represents a large number of potential sales, but the speed is an important factor in storefront visibility. Slow speeds decrease the severity of collisions, increase pedestrian safety, and ensure the visibility of storefronts and signage. Because of these benefits, revitalization strategies are often centered on the conversion of one-way streets to two-way operations.

CASE STUDIES OF ONE-WAY TO TWO-WAY STREET CONVERSIONS

Research completed for this thesis has indicated that there are just fewer than 40 one-way to two-way conversions that can be identified and have some level of documentation. Many sources provide detailed information on Denver, Colorado; Milwaukee, Wisconsin; and West Palm Beach, Florida. Their diversity of geography,

⁴⁷ John D. Edwards, "Traffic Issues for Smaller Communities," *Journal of the Institute of Transportation Engineers* (1998): 33.

land use, and guiding principles represents the broad application of one-way to two-way conversions. Information on the type and scale of traffic calming is presented along with any available information useful in evaluating the success of the conversion.

Denver, Colorado – The Importance of Public Participation

With traffic calming measures growing in popularity in the 1970s, Denver, Colorado, sought to evaluate their potential use. Denver's Public Works Department began to investigate one-way streets that could be returned to two-way operation at the request of urban residents that desired slower traffic and quieter streets.⁴⁸ The most support for conversion came from neighborhoods that contained several long streets that were "used to disperse CBD-oriented traffic to the suburbs."⁴⁹ While the reports of the 1970s did not recommend conversions of any of the streets, studies of the same streets in 1985 identified three north-south couplets that could benefit from two-way traffic.⁵⁰

A survey of public opinion about the conversion projects was completed by Bernie Jones at the University of Colorado at Denver and published in the *Journal of Planning Education and Research* in 1986.⁵¹ Jones conducted face-to-face to interviews with 232 residents about one-way arterials and adjacent two-way local streets. The report concluded that 71 percent residents of one-way streets declared that traffic was a problem on their streets, while only 27 percent of residents on two-

⁴⁸ Dorroh and Kochevar, *One-Way Conversions for Calming Denver's Streets*, 109.

⁴⁹ Lyles, Faulkner, and Syed, *Conversions of Streets from One-Way to Two-Way Operation*, 8.

⁵⁰ Dorroh and Kochevar, *One-Way Conversions for Calming Denver's Streets*, 109.

⁵¹ Bernie Jones, "One Way to Neighborhood Deterioration?" *Journal of Planning Education and Research* (1986): 154.

way streets said traffic was a problem.⁵² Beyond traffic, residents on one-way streets cited concerns about noise, fear of accidents, inconvenience of entering and exiting their driveways, poor air-quality, and lack of cleanliness. Alternatively, some residents of one-way streets resigned themselves to adapt to their street's characteristics and changed their driving and parking routines to avoid peak traffic and other inconveniences.⁵³ Some residents of both one-way and two-way streets opposed any traffic changes as they thought it would increase the volume of traffic on their streets.⁵⁴

Because of the multiplicity of opinions, the City of Denver had trouble completing one-way to two-way conversions, but was successful in converting nine streets before 1990.⁵⁵ While the response to these conversions was mixed, neighborhoods that did not warrant conversions according to the earlier studies demanded new studies in hopes of being eligible for a future one-way to two-way conversion. In dealing with new conversions, the City of Denver eased neighborhoods into alternative traffic patterns; trial periods were often completed before a final decision.⁵⁶

The lesson to be learned from the series of conversions made in the residential neighborhoods in Denver is the importance of community education and support. Because of their fluidity, transportation issues have the ability to affect many neighborhoods differently. While the support of all residents, property owners, or

⁵² *ibid.*, 161.

⁵³ *ibid.*, 160.

⁵⁴ Dorroh and Kochevar, *One-Way Conversions for Calming Denver's Streets*, 109.

⁵⁵ *ibid.*, 110.

⁵⁶ *ibid.*, 111.

stakeholders is not necessary for one-way to two-way conversions, it is documented that the most successful projects are those that garner and sustain public support.⁵⁷

*Milwaukee, Wisconsin –
New Urbanist Principles and One-way to Two-way Conversions*

Largely responsible for the current path and status of downtown Milwaukee, Wisconsin is the city's former mayor, John O. Norquist, who served from 1988 to 2003.⁵⁸ Norquist is the current President and CEO of the Congress for the New Urbanism, "the leading organization promoting walkable, neighborhood-based development as an alternative to sprawl."⁵⁹ The City of Milwaukee selected ANA Associates, a visioning, planning and design firm from Princeton, New Jersey, to complete the Milwaukee Downtown Plan in 1999 that the city is currently working to implement.⁶⁰ In order to "add to the value" of downtown Milwaukee and to the greater metropolitan region, the Downtown Plan focused on increasing downtown housing, expanding its entertainment options, providing attractive downtown transportation operations, increasing office space, bettering pedestrian safety, maximizing existing downtown features and ensuring investment from both private

⁵⁷ Lyles, Faulkner, and Syed, *Conversions of Streets from One-Way to Two-Way Operation*, 22.; Dorroh and Kochevar, *One-Way Conversions for Calming Denver's Streets*, 113.

⁵⁸ Melanie Eversley, "Many cities changing one-way streets back," *USA Today*, 20 December 2006.

⁵⁹ "Who We Are," Congress for the New Urbanism [cited 2009]. Available from http://www.cnu.org/who_we_are.

⁶⁰ ANA Associates is the inventor of a process known as Visual Preference Survey (VPS). This system introduces city officials and citizens with a series of 80 to 120 images, while the image is presented, participants are asked to respond to a questionnaire. From this information, ANA Associates believes that each demographics vision can be better represented in current and future planning developments. Parts of the Downtown Milwaukee Plan were determined from the results of this process. "About the Firm: Our Process," [cited 2009]. Available at http://www.anelessen.com/get.php?page=Our_Process.

and public sectors.⁶¹ These goals were addressed throughout the plan and were highlighted significantly by the plan's thirteen "catalytic projects." Several of the catalytic projects included development of specific districts within the city, while others focused on connectivity of those "town attractions and meeting places" through transportation infrastructure investments.⁶² One of those transportation initiatives was the desire to convert "as many streets as possible" to two-way operation.⁶³

Like other American cities, the urban landscape of Milwaukee has changed dramatically with major adjustments to street traffic made in the mid twentieth century, including a one-way street plan that was implemented in 1946, designed to facilitate automobile traffic downtown.⁶⁴ A reevaluation of the traffic plan indicated that in no location was the street network at capacity except at "brief portions of the peak periods" typically morning and evening commuters.⁶⁵ Because the streets were no longer needed as major arterial roads, Mayor Norquist saw the opportunity to implement traffic calming measures, including one-way to two-way conversions, to achieve new goals, including reduced automobile speed, greater visibility to storefronts, and a better and safer pedestrian experience.⁶⁶

An incremental plan for street conversions was set in place to prevent mistakes and to allow time for evaluation of completed projects. As of January 2008,

⁶¹ ANA Associates, *Milwaukee Downtown Plan: Executive Summary*, (Milwaukee, WI: City of Milwaukee, Wisconsin, 1999), 9.

⁶² *ibid.*, 30.

⁶³ A. Nelessen Associates, *Milwaukee Downtown: Catalytic Projects*, (Milwaukee, WI: City of Milwaukee, 1999), 42.

⁶⁴ ANA Associates, *Milwaukee Downtown Plan*, (Milwaukee, WI: City of Milwaukee, 1999), 125.

⁶⁵ *ibid.*, 125.

⁶⁶ A. Nelessen Associates, *Milwaukee Downtown: Catalytic Projects*, 42.

there have been six complete conversions in the downtown area, with more conversions being studied.⁶⁷ A pair of one-way streets, Farwell Avenue and Prospect Avenue that run parallel to the Lake Michigan shore in the Northeast Side neighborhood are under consideration for conversion. While Prospect Avenue is primarily a residential street, Farwell Avenue supports a mix of uses with the most commercial section at North and Brady Streets.⁶⁸ It is expected that a conversion of this one-way couplet to two-way traffic will decrease traffic speed in the residential areas, while increasing the viability of small businesses, and creating a more attractive view of the waterfront from both streets.

Responses to the completed one-way to two-way conversions have been mixed. From a commuter's stand point, the conversion may not have been so successful, forcing motorists to amend their typical route to avoid recently converted streets during commuting times. Alternatively, Jim Ito, a traffic engineer working in Milwaukee, declares the project's general success in saying, "The two-way system has allowed downtown circulation to improve. It's easier for suburbanites to come back downtown."⁶⁹ The biggest fear from the traffic engineer's standpoint was the potential for two-way streets to backup the freeway ramps and prevents traffic from those highways efficiently entering the city. This problem was prevented by maintaining one-way roads immediately adjacent to the ramps before gradually integrating two-way traffic.⁷⁰ Along the commercial corridors of Milwaukee, an

⁶⁷ Department of City Development, City of Milwaukee, *Downtown Plan Update Report*, (Milwaukee, WI: City of Milwaukee, 2008), 13.

⁶⁸ Solomon Cordwell Buenz and City of Milwaukee Department of City Development, *Northeast Side: A Plan for the Area (DRAFT)*, (Milwaukee, WI: City of Milwaukee, 2009), 111-113.

⁶⁹ Edwards, *Converting One-Way Streets to Two-Way: Managing Traffic on Main Street*, 13.

⁷⁰ *ibid.*, 13.

Institute of Transportation Engineers Journal article reported that, “the two-way streets have improved business accessibility, have created less confusing circulation system for downtown visitors and business customers....”⁷¹ This evidence has supported the City of Milwaukee’s decision to continue converting one-way streets to two-way streets.

West Palm Beach, Florida – One-way to Two-way Conversion for Revitalization

The traffic calming measures implemented in West Palm Beach, Florida were done so with the goal of urban redevelopment.⁷² In order to serve their goal, the city studied and implemented several traffic calming measures throughout its neighborhoods, both residential and commercial. The traffic calming program coincided with a downtown plan created by Duany Plater-Zyberk & Company (DPZ), among the founders of the New Urbanism, to unify it and other revitalization projects into a “coherent context.”⁷³

The largest revitalization project within the commercial district of West Palm Beach involved Clematis Street, its main street. The street suffered from years of decline and loss of investment. In 1993, 70 percent of building space along Clematis Street was vacant.⁷⁴ As part of a \$10 million dollar revitalization project, including streetscape improvements and renovations of historic buildings, the entire length of Clematis Street was converted from one-way to two-way in 1993.⁷⁵ In order to

⁷¹ Kenneth H. Voigt and Jeffery S. Polenske, "Applying New Urbanism Street Principles in Downtown Milwaukee," *Institute of Transportation Engineers Journal* (2006)

⁷² Ewing, *Traffic Calming: State of the Practice*, 6.

⁷³ "West Palm Beach, Florida," in Duany Plater-Zyberk & Company [database online]. [cited 2008]. Available from <http://www.dpz.com/pdf/9233-Project%20Description.pdf>.

⁷⁴ Ian M. Lockwood and Timothy Stillings, *Traffic Calming for Crime Reduction & Neighborhood Revitalization*, Toronto, Ontario, Canada., 1998), 5.

⁷⁵ *ibid.*, 5.; Ewing, *Traffic Calming: State of the Practice*, 115.

evaluate the success of the conversion, vacancy rates and average rents were compared before and after the conversion. As of 1998, 80 percent of commercial properties on Clematis Street were occupied and space was typically rented at \$30 per square foot.⁷⁶ Spurred by the city's infrastructure improvements, private investment in the area was reported to have been \$300 million.⁷⁷ In a final report by Ian M. Lockwood, West Palm Beach City Transportation Planner, it was concluded that, "Traffic calming has many benefits besides reducing speeding and collisions. It results in streets that feel safe; it attracts investment and new business; it improves social links; and it raises property values."⁷⁸

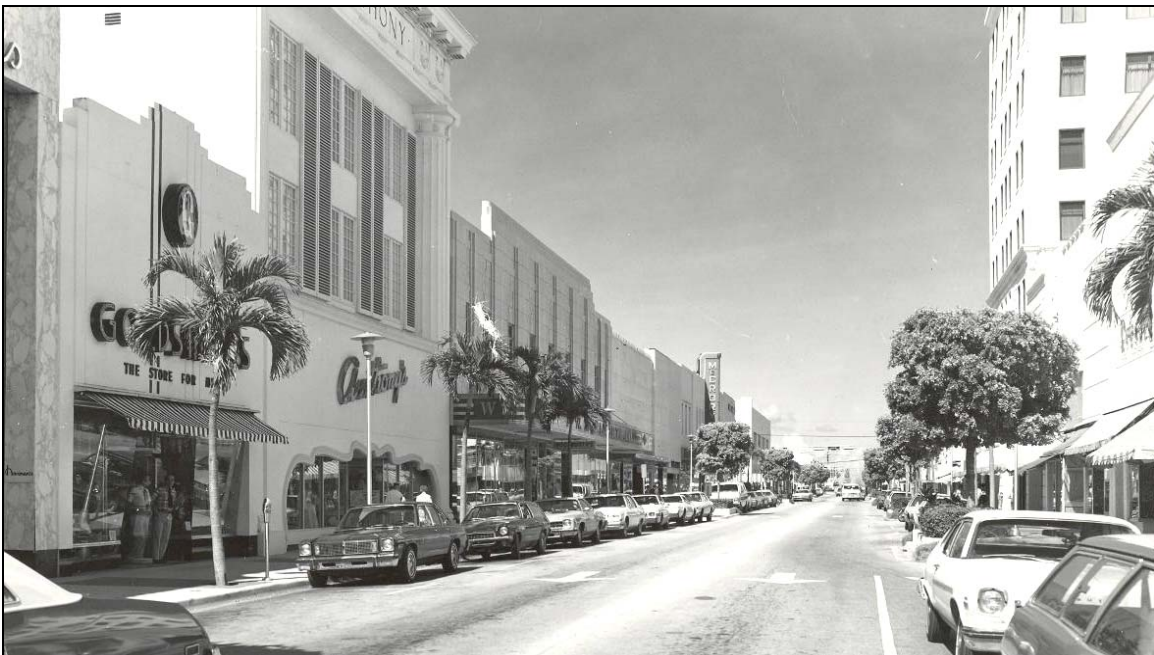


Figure 3.2 Clematis Street prior to 1970s. Courtesy of City of West Palm Beach Planning Department.

⁷⁶ *ibid.*, 115.

⁷⁷ Edwards, *Converting One-Way Streets to Two-Way: Managing Traffic on Main Street*, 3.

⁷⁸ Lockwood and Stillings, *Traffic Calming for Crime Reduction & Neighborhood Revitalization*, 8.



Figure 3.3 Clematis Street in 2009. Automobile traffic travels in two directions. Notice use of textured pavement, bicycle racks, bicycles, and street furniture for restaurants. Courtesy of City of West Palm Beach Planning Department.

As has been shown, there are many reasons and applications for one-way to two-way street conversions. Understanding the process and results of prior conversions is essential. One of the first cities to introduce both traffic calming and one-way to two-way conversions is Denver, Colorado, which offers an important perspective on conversions. Because streets are in the public domain, but so influential on the lives of residents, property owners and commuters, there is a delicate balance of political support and citizen cooperation that needs to be achieved. In introducing New Urbanist ideas to revitalize their historic downtown, the City of Milwaukee has converted nine streets from one-way to two-way operation. Implementation has been gradual and met with mostly positive opinion. There is a

documented improvement of accessibility to commercial areas and more conversions are currently on the table. The City of West Palm Beach, Florida has also converted one-way streets to two-way streets with the largest project being Clematis Street. Along with other revitalization strategies, the conversion of Clematis Street has decreased vacancy of its commercial properties. Each of these cities have implemented one-way to two-way conversions and have declared their success based on the opinions of residents and visitors, a decrease in storefront vacancy and an increase in rental costs per square foot and as a general catalyst for revitalization.

TRAFFIC CALMING IN SOUTH CAROLINA AND CHARLESTON, SOUTH CAROLINA

The South Carolina Department of Transportation (SCDOT) produced a document called “Traffic Calming Guidelines” in 2006.⁷⁹ The stated goal of South Carolina’s traffic calming program is to “....reduce the speed and volume of traffic to acceptable levels. Intermediate goals are to reduce accidents and to provide safer environments for pedestrians and children. Urban redevelopment and the reduction of noise, pollution, and crime are long-term goals.”⁸⁰ The report includes a brief introduction to the theory of traffic calming and indicates very clearly what roads in South Carolina would be appropriate candidates for traffic calming measures. Also, outlined are seven common traffic calming elements: speed humps, raised crosswalks, traffic circles, medians, road closures, lane width reduction, and standard traffic control devices such as stop signs and posted speed limits.

⁷⁹ South Carolina Department of Transportation (SCDOT), *Traffic Calming Guidelines* (Columbia, South Carolina: South Carolina Department of Transportation, 2006)

⁸⁰ *ibid.*, 5.

Before traffic calming measures can be implemented, the local municipality must submit an application and the SCDOT will assess the project's feasibility. Eligibility criteria are defined for residential and commercial districts, but the majority of the document is focused on residential traffic calming measures. While no funding for community projects is provided through SCDOT, their approval is required. Once approval is given by the SCDOT the local municipality will receive an "encroachment permit" allowing it to install traffic calming measures.⁸¹ Local municipalities are responsible for preparing the project application and completing the necessary preliminary reports, as well as installing and maintaining any traffic calming elements.

Several years before the state of South Carolina implemented its state-wide traffic calming guidelines, the City of Charleston developed a local program dedicated to the practice. In 1999, the City of Charleston's Department of Traffic and Transportation created a Neighborhood Traffic Calming program with the goal of improving safety and quality of life as well as returning some residential streets to their former character.⁸²

An informational brochure available on the city's website clearly directs all traffic calming measures to residential areas. It states, "To qualify for traffic calming your street must meet the following requirements: be a local, residential street...etc."⁸³ The City of Charleston's focus on residential areas is not unlike other

⁸¹ *ibid.*, 9.

⁸² "Neighborhood Traffic Calming Program," in City of Charleston, South Carolina [database online]. Charleston, South Carolina [cited 2009]. Available at <http://www.charlestoncity.info/dept/content.aspx?nid=353>.

⁸³ City of Charleston Department of Traffic and Transportation, *City of Charleston Traffic Calming Program*. Available at http://www.charlestoncity.info/shared/docs/0/traffic_calming_brochure2.pdf.

cities. Michael Mathis at the City of Charleston's Department of Traffic and Transportation indicates, however, there have been measures taken by the Department on non-residential streets. These measures are aimed at improving pedestrian safety at intersections with high levels of vehicular and pedestrian traffic. Mathis points to the raised crosswalks at Ashley and Calhoun Streets near the Medical University of South Carolina complex.

Furthermore, at this fast and busy intersection, the Department has placed "pedestrian flags," neon orange flags that are placed at each corner of the intersection and can be used by pedestrians to increase their visibility.⁸⁴ This superficial measure forces the pedestrian to beg for awareness from motorists traveling in unsafe patterns, instead of addressing the larger issues of vehicular speed and automobile dominance. To date, the City of Charleston's traffic calming measures have been aimed at residential areas and consist of mostly reactionary tactics to increase pedestrian safety. While a Neighborhood Traffic Calming program is in place, it appears to rely on the complaints of residents before action is taken. Furthermore, of all the traffic calming measures available to municipalities, those implemented by the City of Charleston have been those that require the least amount of infrastructure alteration and are therefore the least costly.

Joining the Department of Traffic and Transportation in efforts to increase the level of traffic calming taken in the city, the City's Department of Planning is working

⁸⁴ "Pedestrian Safety Program," [cited 2009]. Available at <http://www.charlestoncity.info/dept/content.aspx?nid=1461>.

to amend their official guidelines concerning streets.⁸⁵ The guidelines would allow for more on-street parking and narrower lane widths which will serve to reduce the speed of traffic. With these regulations, the Department hopes to promote traffic calming in new suburban developments while also preventing the need to retrofit streets with speed humps in the future.⁸⁶ The concept of traffic calming has migrated to several city departments, and appears to be a strengthening trend.

Outside of the Neighborhood Traffic Calming program, the City of Charleston has implemented several one-way to two-way conversions. These conversions are not part of the Neighborhood Traffic Calming program, and they are only implemented in special cases because the one-way to two-way conversions require a greater amount of feasibility research and are larger scale projects. However, even with the difficulties they present, there have been four one-way to two-way conversions in recent years, with another conversion in the works (*Fig. 3.4*).

Traffic was converted from one-way to two-way on Wentworth Street and Beaufain Street in 2004 and Rutledge Avenue and Ashley Avenue were converted in 2008.⁸⁷ More one-way to two-way conversions are gaining approval by the City's Department of Traffic and Transportation. As of this writing Spring Street and Cannon Street are about to be converted from one-way to two-way as part of a large Spring-Cannon Corridor project that began in 2004.⁸⁸ The recent conversions in Charleston have taken place on both east-west and north-south streets that traverse

⁸⁵ Michael Mathis, *Re: Research on Upper King Street - One-way to Two-way Street Conversions*, personal communication with author, Meagan Baco, 2009)

⁸⁶ *ibid.*

⁸⁷ *ibid.*

⁸⁸ *ibid.*

the entire peninsula. The four streets that have already been converted are primarily residential streets that contain a scattering of commercial properties.



Figure 3.4 Map of Charleston, South Carolina, showing recent one-way to two-way conversions, including the couplet of Beaufain Street and Wentworth Street, Ashley Avenue and Rutledge Avenue, and Spring Street and Cannon Street.

There have been no sources found that link the success of Upper King Street's conversion from one-way to two-way in 1994 to the popularity of the recent conversions of other Charleston streets. King Street remains the only commercial street in the city to be converted. The omission of the Upper King Street conversion is also apparent in other documents. The research for this thesis was only able to find four sources that reference the Upper King Street conversion; however, only one offers any analytical information.

In 2000, the HMSBID in the Town of Barnstable, Massachusetts, conducted a nationwide survey of cities and towns that had converted major downtown streets from one-way to two-way.⁸⁹ Among the twenty-two cities identified, Charleston, South Carolina was included but the information provided by the report was brief. Upper King Street was described as a minor business corridor that after the one-way to two-way conversion “experienced a dramatic increase in new retail and service business.”⁹⁰ The document also notes the increase of traffic congestion and the elimination of some on-street parking opportunities. While the reference is succinct, it is the only resource found that included the conversion of Upper King Street in its analysis. An unpublished report by Ecologically Sustainable Design Pty Ltd from Victoria, Australia and an impact analysis completed by Typlan Consulting Ltd for the Downtown Kelowna Association of British Columbia included the information presented in the Hyannis Main Street Business Improvement District, but did not

⁸⁹ Theodore Brovitz, *Survey of Communities Converting Downtown Streets from 1-Way to 2-Way Traffic Circulation*, (2000).

⁹⁰ Development Consulting Group and Ltd Typlan Consulting, *One Way Couplets Impact Analysis*, (Kelowna, British Columbia, Canada: City of Kelowna; Downtown Kelowna Association, 2003).

offer any further information.⁹¹ In 2006, a *USA Today* article identified Charleston as having converted a downtown commercial street but does not indicate the street.⁹²

The conversion of streets from one-way to two-way traffic is a form of traffic calming. Conversions, however, are used less frequently and have been a later addition to the toolbox of traffic calming measures. Since their wide use in the 1990s they have been implemented to improve the conditions of residential and commercial areas. Conditions are improved through traffic calming by decreasing the speed of automobile traffic, creating a more pedestrian friendly environment and allowing urban areas to maintain a vital street life. Traffic calming is not intended to eliminate automobile traffic, especially on commercial streets. Instead, the aim is to create an environment that improves a business's visibility, accessibility by many modes of transport, and creates an attractive environment. The use of traffic calming, specifically the conversion of one-way streets to two-way streets has been acknowledged and promoted by National Trust's Main Street program for historic commercial districts. Cities such as Denver, Milwaukee, and West Palm Beach have all completed one-way to two-way conversions found to be successful at some level, offering validation to the practice.

The conversion of Upper King Street in Charleston occurred around the same time but has not been evaluated, studied or presented. The following Chapters Four

⁹¹ Ecologically Sustainable Design Pty Ltd, *Summary Report on the Conversion of One-Way Streets to Two-Way Street in North American Town Centres* (Victoria, Australia: Prepared for the Midland Redevelopment Authority, 2005); Development Consulting Group and Typlan Consulting, *One Way Couplets Impact Analysis*.

⁹² Eversley, *Many cities changing one-way streets back*, 2006.

and Five of this thesis will focus on the significant transportation and commercial changes in the area and evaluate the success of the 1994 conversion.

CHAPTER FOUR

CHARLESTON'S UPPER KING STREET SHOPPING DISTRICT, 1950-1995

The importance of transportation was well-known by early Americans as so many of their cities were established along prominent waterways to encourage trade. Charleston's establishment in 1680 at the convergence of the Ashley and Cooper Rivers and the Atlantic Ocean is a clear indication that its founders were aware of the necessity of transportation for commercial success. Economic stability and gain was second only to survival for early Charlestonians, and the merchants of the town were looked to for leadership.⁹³

Early shipping and warehousing businesses were along East Bay Street, while retail districts in Charleston were centered along Tradd Street and Broad Street.⁹⁴ It was not until cotton became the major crop of Charleston that King Street emerged as a commercial corridor. As cotton planters entered the city by wagon from the north, merchants developed retail outlets along their route, then called Broad Path.⁹⁵ The area of King Street north of Calhoun Street was an upper-class suburb until the 1800s that developed as several suburban villas such as the Aiken-Rhett, William Aiken, and Manigault Houses.⁹⁶ By the mid-nineteenth century King

⁹³ Stuart Owen Stumpf, "Merchants of Colonial Charleston, 1680-1756" (Ph.D. diss., Michigan State University, 1971), 69.

⁹⁴ *ibid.*; Robert P. Stockton, "King Street: City Preservationists Think of it as Priceless but for Others it's an Economic Cul-De-Sac," *Charleston News and Courier*, 11 June 1973, sec. B, p. 1.

⁹⁵ *ibid.*

⁹⁶ Post, Buckley, Schuh & Jernigan, Inc., *National Trust Design Quality Panel: Uptown District, Charleston, South Carolina*, (Charleston, SC: 1985)

Street up to Line Street was developed to some extent and 1860-1880 has been identified as a high point for development in the area.⁹⁷



Figure 4.1 View looking north from Wentworth Street onto a busy Lower King Street in 1905. From *Charleston: An Album of the Collection of the Charleston Museum*, 1997, pg 35.

Historically and today, the major commercial corridor of Charleston, South Carolina is King Street, a north-south street that begins at the southern tip of the city continuing northwards for several miles. Like the city, in general the buildings along King Street are typically the oldest at its south end decreasing in age as one travels

⁹⁷ Stockton, *King Street: City Preservationists Think of it as Priceless but for Others it's an Economic Cul-De-Sac*; Post, Buckley, Schuh & Jernigan, Inc., *National Trust Design Quality Panel: Uptown District, Charleston, South Carolina*.

north. A long standing demarcation of this age has been the northern boundary of the city, having been at various times Broad Street, Calhoun Street and Spring Street. These boundaries have created separate districts along King Street. From the Battery north to Broad Street, King Street is primarily residential while Broad Street north to Spring Street is commercial. Separating the commercial district is the east-west Calhoun Street.

The district known as Upper King Street is bounded by Calhoun Street to the south and Spring Street to the north. There have been two major periods of development along Upper King Street; 1860-1880 and 1940-1950. The development, significance, and condition of these sections have been drastically different, with Upper King Street being the last portion to draw attention from city officials, residents, and preservationists. Unlike the story of the majority of peninsular Charleston, Upper King's active and conscious preservation history resides almost solely in the second half of the twentieth century.

The following history of Upper King Street briefly introduces the two major periods of commercial success, including its major players, then presents a detailed essay of the district from 1950 to the mid 1990s. It is during this time that the City of Charleston, transportation and preservation agencies, and King Street merchants, fought to find a balance between automobile traffic, business vitality and an attractive and active street life.

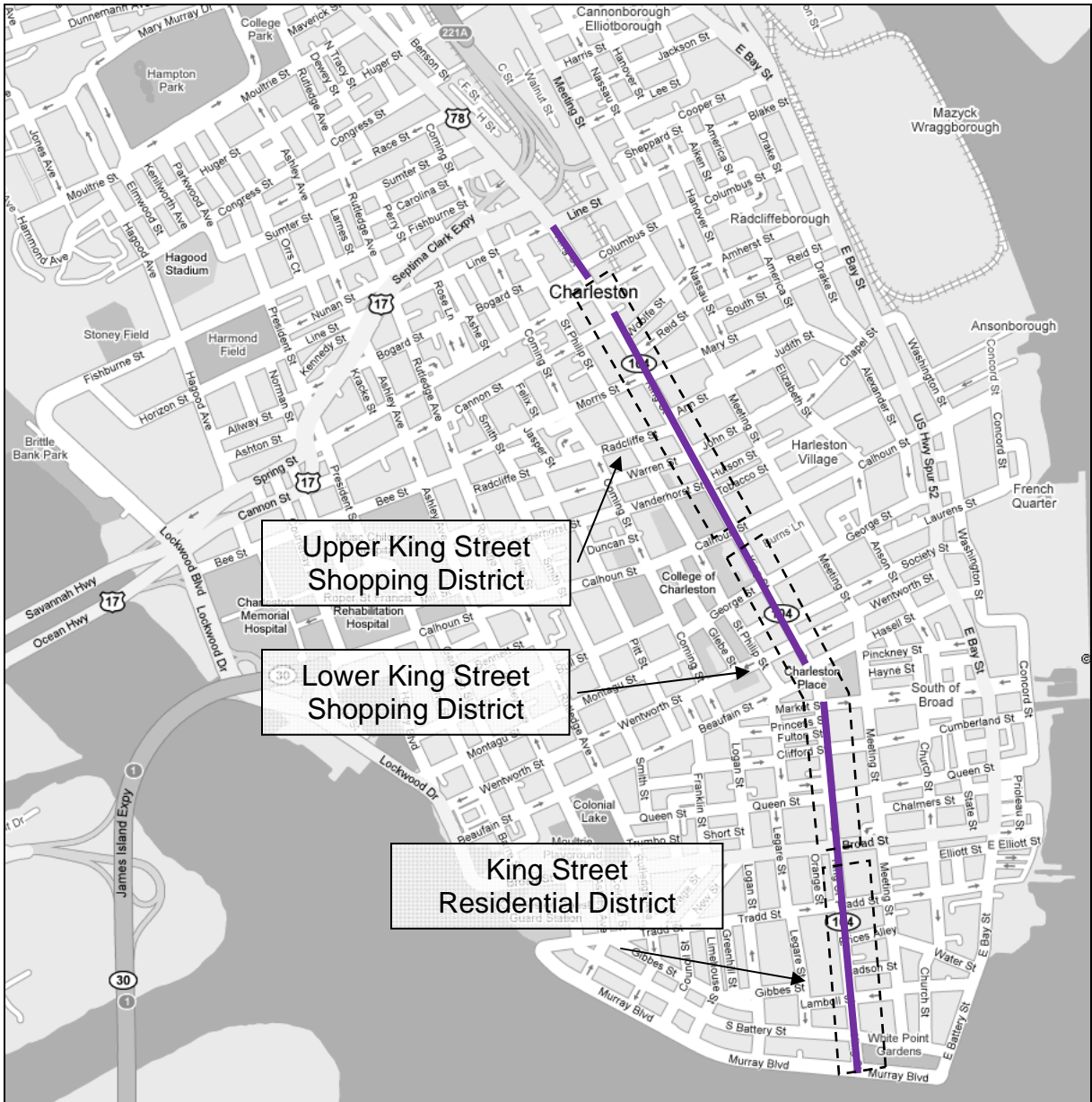


Figure 4.2 Map of Charleston South Carolina. King Street begins at Murray Boulevard at the southern tip of the peninsula and continues northward. At Line Street, King Street becomes King Street Extension. The area of Upper King Street is demarked by the uppermost dashed rectangle. Its northern boundary is Spring Street and its southern boundary is Calhoun Street.

DEMOGRAPHICS OF UPPER KING AND SURROUNDING NEIGHBORHOODS

The second high-point for development along Upper King Street has been identified as 1940-1950. This coincides with the most significant period of Jewish influence in the area.⁹⁸ The presence of a Jewish community in Charleston begins with the arrival of the first known Jew in 1690, the founding of the Kahol Kadosh Beth Elohim congregation in 1749 and the building of a synagogue in 1792-1794.⁹⁹ After two hundred years of residence, the Jewish population greatly influenced the development of several Charleston neighborhoods, specifically Upper King Street. A majority of businesses in the Upper King Street district were owned and operated by Jewish Charlestonians in the early twentieth century. This concentration was both spurred and supported by the dense Jewish neighborhood in the Radcliffeborough area that contained several religious and community institutions.

The location of the Jewish community in the twentieth century was greatly influenced by the location of important religious institutions such as synagogues and community centers. One of the first permanent establishments of faith for the Jewish community in the Upper King Street area was the Brith Sholom Synagogue at 68 St. Philip Street in 1874.¹⁰⁰ This synagogue served the Ashkenazic Orthodox community of Charleston until the early twentieth century saw a new congregation form at the Beth Israel Synagogue, founded on less Orthodox principles. Its location, however, barely strayed from its origins. Beth Israel Synagogue built in 1911, held

⁹⁸ *ibid.*

⁹⁹ Walter J. Fraser Jr., *Charleston! Charleston! The History of a Southern City*, (Columbia, South Carolina: University of South Carolina Press, 1989), 82.

¹⁰⁰ Jeffrey S. Gurock, *Orthodoxy in Charleston: Brith Sholom Beth Israel & American Jewish History*, (Charleston, South Carolina: College of Charleston Library, 2004), 8.

temple at 145 St. Philip Street, about three blocks from Brith Sholom Synagogue.¹⁰¹

In 1948, Beth Israel dedicated a new synagogue on Rutledge Avenue, just three streets west of King Street and within the primarily Jewish neighborhood of Radcliffeborough.

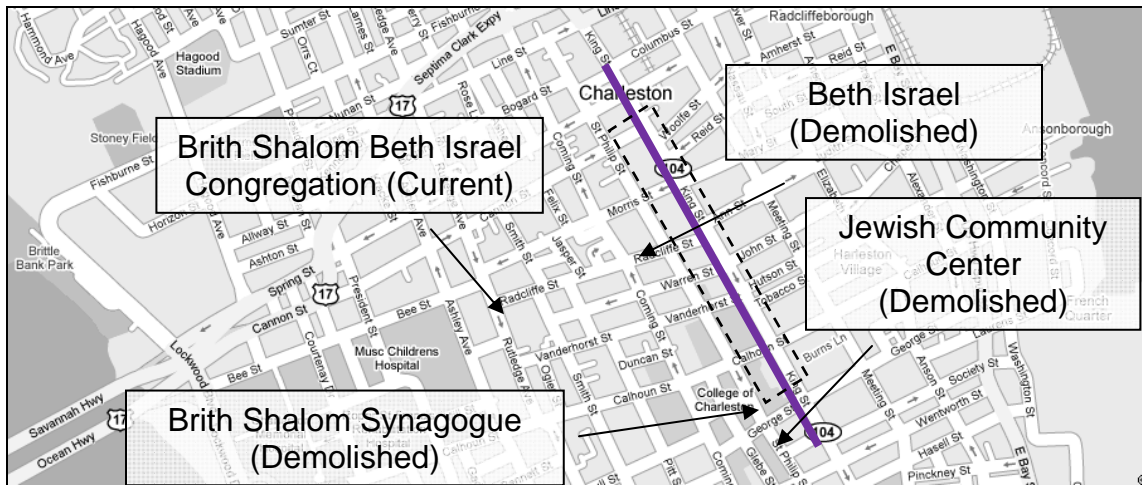


Figure 4.3 Location of Jewish religious and cultural institution in Charleston, South Carolina, in relation to the Upper King Street shopping district, demarked by the dashed rectangle.

The tradition of the Jewish population in Charleston was not limited to worship at their chosen synagogue. Branching out to more social and recreational activities, the Jewish Community Center first opened at 52 George Street and later on St. Philip Street in 1945.¹⁰² Edna Ginsburg Banov, who recollected the important street as, “St. Philip Street, the street of streets,” evokes the community of Jewish life along the street.¹⁰³ Later the combined Brith Sholom and Beth Israel

¹⁰¹ Soloman Breibart, *Explorations in Charleston's Jewish History*, (Charleston, South Carolina: The History Press, 2005), 224.

¹⁰² Jeffrey S. Gurock, *Orthodoxy in Charleston: Brith Sholom Beth Israel & American Jewish History*, (Charleston, South Carolina: College of Charleston Library, 2004), 47, 49.

¹⁰³ "The Street of Streets," in Adlestone Library, College of Charleston [database online]. Charleston, South Carolina 30 March [cited 2009]. Available from <http://www.cofc.edu/~jhc/stories/stphilip.html#Anchor-spsStreetofStreets>.

congregation located on 182 Rutledge Avenue along with the Community Center.¹⁰⁴ Furthermore, even when the Charleston Jewish population started to migrate across the Ashley River to more suburban sites, the physical presence of strong Jewish traditions remained in the Upper King Street District.



Figure 4.4 Many Jewish merchants on Upper King Street closed their storefronts for religious observances and holidays. From *Orthodoxy in Charleston*, 2004, pg 25.

With the Jewish community anchored by important religious institutions in the area between King Street and Rutledge Street, many Jewish families sought to make their living in the same area. The period of significance of the Jewish

¹⁰⁴ Jeffrey S. Gurock, *Orthodoxy in Charleston: Brith Sholom Beth Israel & American Jewish History*, (Charleston, South Carolina: College of Charleston Library, 2004), 55.

population in the Upper King Street commercial district and its adjacent residential neighborhoods has been identified as 1907-1947.¹⁰⁵ Many Jewish merchants started as peddlers, who profited so greatly from the influx of soldiers between WWI and WWII that stores were opened. Several stores along upper King Street held minyan, a prayer group, in their upper floors during business hours. Also, regardless of their role as businessmen, about 60 percent of Jewish merchants closed their stores on Saturdays in observance of the Sabbath.

Catering to their own population, Upper King Street hosted several kosher delis, but could not be described as exclusionary. Having major success in furniture, clothing, shoes, and other dry good items, Jewish merchants created a diversity of shopping along Upper King Street. Diversity in goods was also coupled with diversity of clientele. In fact, there are several instances of Jewish owned shops catering directly to the strong African American population of surrounding neighborhoods.

Charleston was a deeply segregated city, even in terms of shopping districts. "Afro-Americans were expected to shop on King Street north of Calhoun Street, while whites shopped south. Even when the city's brown elite occasionally patronized the better stores south of Calhoun, they were not permitted to try on shoes and certain articles of clothing."¹⁰⁶ What has been described as an open door policy was extended by Jewish merchants to African American shoppers. Not only were they tolerated, as they were not in Lower King Street, Jewish merchants treated African Americans with the same personal service granted to Caucasians,

¹⁰⁵ Dale Rosengarten, Curator, Special Collections, Addlestone Library, College of Charleston, Charleston, South Carolina. Personal Communication with Meagan Baco, 3 February 2009.

¹⁰⁶ Fraser Jr., *Charleston! Charleston! The History of a Southern City*, 411.

being called by name and “cultivated as steady customers.”¹⁰⁷ Furthermore, the merchants of Upper King Street, both Jewish and non-Jewish, extended lines of credit to African Americans more easily than the merchants below Calhoun Street.¹⁰⁸ As African Americans became a strong percentage of clientele, specific businesses opened for their needs, including a movie theatre at 601 King Street.¹⁰⁹

Over time, the Upper King Street area was changed drastically by national trends of white flight and suburbanization, leaving the district with a majority of African American residents. Much like other cities in America during the mid twentieth century, the abandonment of the city by white residents, along with national economic trends, led to the decline of urban areas. Because of the number of variables that can affect the success of urban commercial areas, the following history of Upper King Street will not include substantial information about the demographics of the district. It will instead focus on the effects of transportation changes in the area, specifically, the direction, capacity, and speed of streets.

AUTOMOBILE TRANSPORTATION AND TRAFFIC PATTERNS IN CHARLESTON

The following history of Upper King Street begins in the mid twentieth century; the streetcars have been replaced by buses, and the popularity of those buses has been replaced by the personal automobile. Like previous forms of transportation including boats, trains, and streetcars, Charleston sought to accommodate automobiles and maximize their benefits. This perspective led to major street, traffic

¹⁰⁷ Jeffrey S. Gurock, *Orthodoxy in Charleston: Brith Sholom Beth Israel & American Jewish History*, (Charleston, South Carolina: College of Charleston Library, 2004), 51.

¹⁰⁸ "Uptown Jews," in Addlestone Library, College of Charleston [database online]. Charleston, South Carolina 30 March [cited 2009]. Available from <http://www.cofc.edu/~jhc/stories/uptown.html>.

¹⁰⁹ John Coles, *Movie Theaters in Charleston: Hollywood Meets the Holy City*, (Lake Bluff, Illinois: Graphic Data Services, 1994), 92.

and route changes over the second half of the twentieth century. Because of national trends and local planning decisions, Upper King Street was transformed many times in hopes of remaining a successful commercial corridor. The changes made to Upper King Street are the most contemporary example of Charleston's longstanding dedication to transportation as an economic necessity. However, because of the narrow focus on automobile dominance, the negative effects of the plans are still mitigated today.

In order to remain viable, commercial streets are always updating, renovating, and changing to the times. Improvements to the downtown commercial districts of Charleston, especially along King Street, have been continuous over time, with major changes occurring in the mid twentieth century. Along with changes to private property, there have also been alterations to the public domain specifically the street. The street on which commercial properties are located plays a vital role in their success. Storefronts are spaced tightly together to maximize street frontage and allow for a diversity of businesses in one compact area. This approach was satisfactory for many decades and Charleston's King Street was extremely successful. However, once the automobile became the prevailing mode of transportation, the longstanding pattern was thought insufficient. With the increasing number of cars, on street parking became sparse and slow speeds caused high levels of traffic congestion.

From the 1950s through the 1990s, Charleston's government officials, commissioned urban planners and traffic engineers and approved a litany of planning documents. The majority of plans that dealt with King Street identified the

weakness of the street in terms of automobile capacity; few mentioned the street's historic or architectural significance. Because of the then-contemporary views that King Street was out-dated and slow, the plans, several of which are outlined below, were detrimental to the street life, business vitality and historic architecture of Charleston's most recognizable street. The plans of the era systematically degraded the corridor's character and vitality.

City Wide One-Way Traffic Plan, 1950 and 1951

In 1945, there were 284,904 registered vehicles in South Carolina and by 1952, there were 627,968.¹¹⁰ The increasing number of vehicles on the narrow roads of Charleston became a major concern for merchants, motorists and the politicians charged with mitigating their needs. At this time, personal automobile mobility was given the highest consideration. Beyond beautification projects, the altering of roads and traffic patterns was seen as improving the physical environment and as a way to increase commercial business. There was a need for cities to accommodate the ever increasing number of automobiles on the road.

Prior to the 1920s, Lower King Street, south of Broad Street operated as a northbound one-way street. Within the same decade, it became a one-way street in the southbound direction and motorists and merchants were pleased.¹¹¹ At this time, Upper King Street, Calhoun Street north to Spring Street, operated as a two-way street. Both of the King Street districts flourished with this traffic pattern. With the

¹¹⁰ "Intersection of King and Spring Rated as Charleston's Fourth Most Dangerous," *Charleston News and Courier*, 9 May 1954, sec. A, p. 12.

¹¹¹ "90-Day Trial of Changed Traffic Plan is Requested by Merchants," *Charleston News and Courier*, 26 November 1950, sec. A, p. 8.

success of the King Street shopping district, however, came increased traffic congestion (Figure 4.4).



Figure 4.5 A 1940s southbound view of Lower King Street; crowded with automobiles, delivery trucks, bicycles, and pedestrian shoppers. From *Charleston News and Courier*, “King Street: City Preservationists Think of It as Priceless but for Others it is an Economic Cul-de-Sac,” 11 June 1973.

In attempting to manage congestion, the new profession of transportation engineering promoted the idea of eliminating automobile traffic and therefore the problem of congestion.¹¹² A traffic ban plan was proposed by the South Carolina Department of Transportation in 1947 for Lower King Street. Public perception of the plan was mixed. A manager of a women’s clothing store on King Street favored the plan because, he claimed, “the street is a menace to the entire city” while the

¹¹² It is important to note that the traffic would have typically been diverted to other streets, or in many cases to newly created city highways; traffic bans in this time period were not an attempt to limit automobile traffic in the whole city.

majority of merchants felt the removal of automobile access would “cripple” business.¹¹³ Various suggestions came from merchants, including the construction of an alleyway behind the storefronts for deliveries, the banning of parking on either side of the street, and the allowance of two-way traffic.¹¹⁴ From this early attempt to manage traffic on Charleston’s busiest commercial street, it is clear that traffic congestion was a concern, but that the automobile was here to stay.

If transportation engineers could not ban traffic, they often sought to impose restrictions on the direction of traffic. One-way grids were a commonly employed method by traffic engineers that were intended to decrease congestion while increasing the street’s capacity and increasing vehicular speed.¹¹⁵ One of the first one-way traffic plans for downtown Charleston was commissioned by Mayor William Morrison in 1949 from a traffic engineering consulting firm from Columbia, South Carolina, known as Smith-Dibble & Company. The goal of the one-way plan was to “relieve many of the city’s acute vehicle congestion problems and provide safer traffic operations.”¹¹⁶ In total, the plan recommended directional changes on 22 of Charleston’s existing streets, some of which already operated as one-way streets, in addition to the construction of new street. The plan called for the reversal of traffic on King Street; it would operate one-way northbound from Tradd Street, located just

¹¹³ "Most Merchants Interviewed Oppose Plan to Bar Traffic on King Street," *Charleston News and Courier*, 29 October 1947.

¹¹⁴ Traffic was not banned on King Street at this time, but the idea was revisited in the 1970s. *ibid.*

¹¹⁵ In an article in May of 1947, a discussion of turning Cannon and Spring Streets into a one-way couplet was published. Cannon Street would act as the entrance to the city, while Spring Street would function as an exit. "City to Try to Make Cannon and Spring One-way Streets," *Charleston News and Courier*, 17 May 1947, sec. A, p. 1.

¹¹⁶ "Traffic Survey Recommends Network of One-Way Streets," *News and Courier*, 21 January 1949, sec. A, p. 1.

south of Broad Street, to Line Street. North of Line Street, two-way traffic would be allowed.

Along with the directional changes, Smith-Dibble suggested the installation of new traffic lights, the rerouting of buses and trucks away from commercial streets, the installation of pedestrian lights, and creating off street parking opportunities downtown.¹¹⁷ Several days later, the *Charleston News and Courier* published a map of peninsular Charleston showing the directional changes of each street (*Figure 4.5*).

A Smith-Dibble representative explained why King Street would best be used as a northbound street. "King Street is a funnel (southbound). If you fill up from the mouth of the funnel it will flow over. So we feed traffic into the funnel from the spigot end and as the opening gets larger (northward) at the Francis Marion Hotel, there's ample room to take care of all the traffic that's coming out of that narrow portion."¹¹⁸ By attempting to simplify the fine-grained peninsula of Charleston into a geometric shape formed by a single element, the Smith-Dibble plan was designed to facilitate an increasing volume of traffic.

¹¹⁷ *ibid.*

¹¹⁸ "Parking on East Side of King Street is Planned," *Charleston News and Courier*, 17 September 1950, sec. A, p. 1.

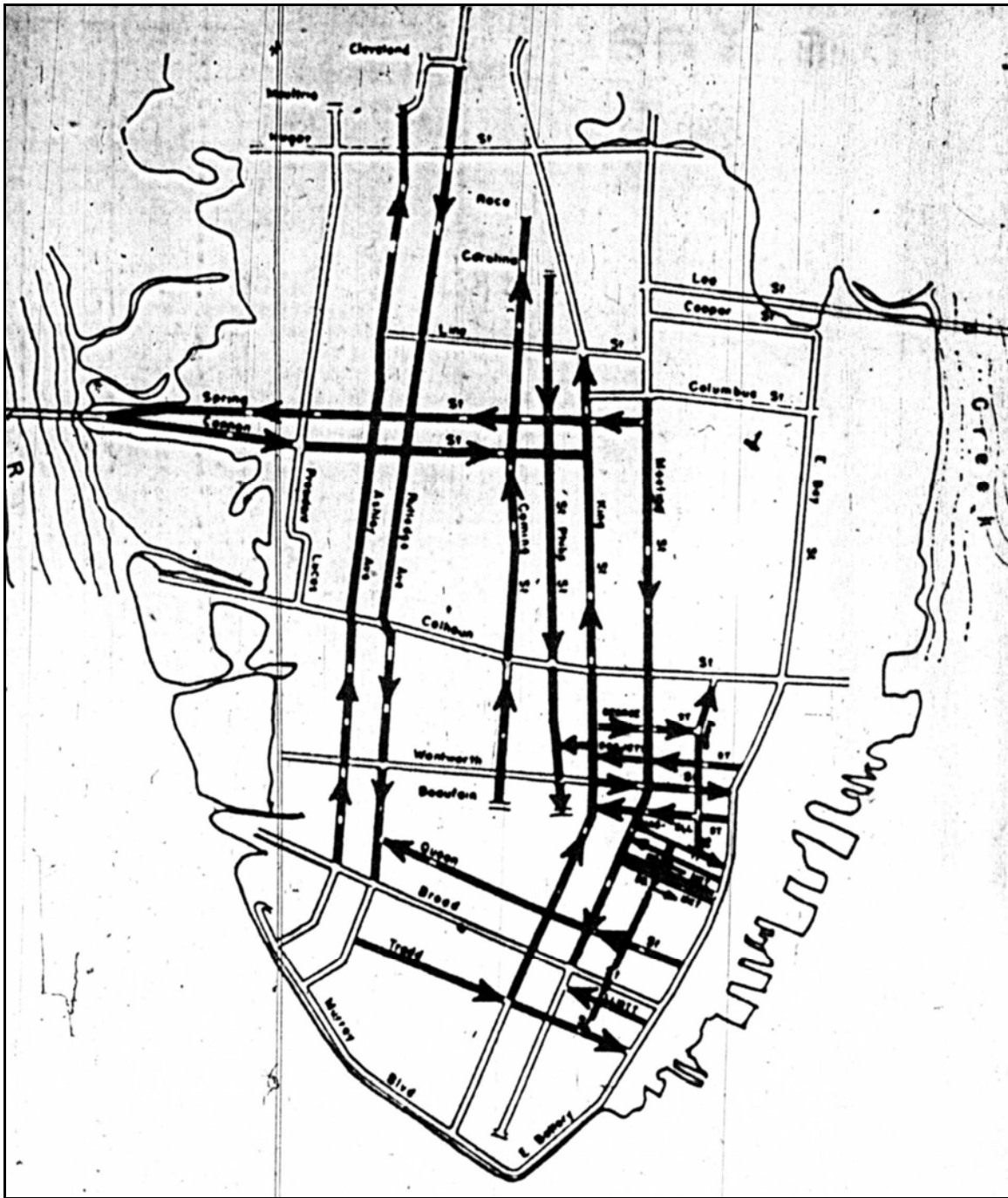


Figure 4.6 Map illustrating the transportation changes proposed by the Smith-Dibble traffic plan. King Street was to become one-way northbound from Tradd Street up to Line Street. From *Charleston News and Courier*, "Proposed Plan Would Supervise – and Protect – Pedestrians." 26 January 1949.

Based on the support of Mayor Morrison and a unanimous vote by the Traffic Committee, the Smith-Dibble plan was slated for a 120 day trial in March 1949. After installation and several weeks granted to allow for familiarization by motorists, the one-way network was to face evaluation before becoming permanent, but opinions of the plan came immediately. Rudolph J. Ortman, the President of the Retail Merchants Association of Charleston led the opposition against northbound traffic on King Street stating, "We feel quite sure that to bring the buying public into Charleston *down* King Street is the only solution."¹¹⁹ Other King Street merchants declared that the reversal of traffic would decrease the visibility of signage and storefront displays.¹²⁰ Others soon joined the merchants of King Street, including City Council members. Alderman J. C. Long objected to the plan's price tag, saying he "did not understand why all the changes were necessary."¹²¹ Because of the amount spent on the initial survey and plan, corners were cut on labor. The police department was directed to make "whatever signs it could make with its own forces."¹²²

With the Charleston Police and other city departments working hard, King Street merchants were only able to delay the plan in August and October, but not able to squash the whole idea.¹²³ In February 1949, after a City Council meeting, the Smith-Dibble plan was approved. A modification that would have omitted King Street from the plan, preserving its southbound flow, was not approved.¹²⁴ The City's

¹¹⁹ "Mayor Delays Traffic Plan Trial," *Charleston News and Courier*, 14 Oct 1949, sec. A, p. 1.

¹²⁰ "120-Day Trial of Traffic Plan Asked," *Charleston News and Courier*, 8 Mar 1949, sec. A, p. 1.

¹²¹ "Plan Delayed," *News and Courier*, 9 May 1949, sec. A, p. 14.

¹²² *ibid.*

¹²³ "City Traffic Plan is Delayed Again," *Charleston News and Courier*, 16 August 1949, sec. A, p. 1.; *Mayor Delays Traffic Plan Trial*, 1.

¹²⁴ "Entire Traffic Plan Approved by Council, Modification Dropped," *Charleston News and Courier*, 15 February 1950, sec. A, p. 1.

apparent transgression against merchants was captured in the article, "City Turns Deaf Ear to Retailers Demands."¹²⁵ Sam Berlin, of Berlin's Clothing Store on King Street at Broad Street attempted to speak to the mayor before the conversion's approval, but was denied a meeting several times. In frustration, Berlin insulted Mayor Morrison by suggesting that instead of supporting local businesses, the Mayor preferred to purchase suits from traveling salesmen!¹²⁶

Starting on September 5, 1950, the one-way network plan was officially completed and opened to traffic. Following tradition, "historic King Street was the main attraction of the Labor Day pleasure riders" but something was different, as "several commented on the 'odd sensation' of traveling northward in the traditionally one-way south thoroughfare."¹²⁷ Others observing King Street operation more intently noticed "traffic moved noticeably faster."¹²⁸ An aerial inspection of the traffic flow revealed some incidents at the King and Line Streets intersection, as well as a tendency of drivers to stay in the center of the street not utilizing all lanes available in that direction.¹²⁹ But a representative from Smith-Dibble was pleased with the plan, and suggested only slight changes to the timing of traffic lights and the painting of lines on the road.¹³⁰

¹²⁵ "City Turns Deaf Ear to Retailers Demands," *Charleston News and Courier*, 11 March 1950, sec. A, p. 1.

¹²⁶ *ibid.*

¹²⁷ "New One-Way Traffic Plan is off to Good Start Here," *Charleston News and Courier*, 5 September 1950, sec. A, p. 1.

¹²⁸ *ibid.*

¹²⁹ "City Expected to Unravel Traffic Knots Soon," *Charleston News and Courier*, 6 September 1950, sec. A, p. 1.

¹³⁰ "Author of Traffic Plan Pleased," *News and Courier*, 8 September 1950, sec. A, p. 1.

Consequences of the Smith-Dibble One-Way Traffic Plan

As could be expected, retailers continued their campaign against the reversal of King Street from southbound to northbound. The CRMA and others convened a meeting just day after the plan went into effect to discuss the immediate changes they observed. Major issues discussed were the new pedestrian hazards, removal of much needed on street parking and other negative consequences. It is not known if the speed limit on King Street was increased, or if the increased speed can be attributed to the lack of perceived friction created by oncoming traffic, on street parking, or other factors. One consequence of the increased speed as indicated in the meeting and the published article was a decrease in local business caused by what was called a “hazardous condition for people to shop.”¹³¹ Furthermore, nonresident sales were also down because “tourists were continuing on through Charleston rather than to shop because the plan was too confusing.”¹³² George Birlant of George C. Birlant & Company, a glass and ceramic merchant, succinctly stated his observations in saying, “King Street is a racetrack.”¹³³

While the concerns of retailers on King Street in downtown Charleston were regularly voiced and can be verified as common consequences of one-way traffic plans, the plan was supported by the desire to alleviate automobile traffic congestion above all else. A city council member, Alderman Thomas Perry, rejected the opposition of Charleston merchants and asserted that “the Smith-Dibble plan is encouraging people to shop downtown—actually bringing them downtown more

¹³¹ "Retailers Say Traffic Plan is Hurting Business," *News and Courier*, 12 September 1950, sec. A, p. 1.

¹³² *ibid.*

¹³³ *ibid.*

swiftly and comfortably....”¹³⁴ Again, the differing terminology and viewpoints of merchants and city officials are seen in the statements of Birlant and Perry. From Birlant’s King Street shop the street had become a “racetrack,” but through Perry’s eyes, traffic was simply moving “swiftly.”

Seemingly tired of the opposition, Mayor Morrison addressed the merchants and the shoppers in this September 13, 1950 statement, “The public should realize that it is no longer possible to shop from an automobile. It is necessary to leave cars in parking lots and walk to the store like shoppers in other cities do.”¹³⁵ If Mayor Morrison’s suggestion to shoppers to park their car and then walk to the desired store was to be heeded, King Street needed parking. Sidney C. Snelgrove, then President of the CRMA stated his concerns by saying, “The parking area has been drastically reduced and shoppers are not even allowed to slow down on King, much less stop to transact business.”¹³⁶ In a small victory for merchants, parking was allowed along the east side of King Street between Wentworth and Broad Streets on September 17, 1950.¹³⁷ After parking was added several merchants ceded the battle and decided to make the best of the new one-way configuration, “We have hurt ourselves by telling people that it is hard to shop in Charleston now. We should take out ads and tell them it’s easy to shop in Charleston now.”¹³⁸ If Charleston

¹³⁴ Bryan Collier, "Alderman Perry Charges King St. Merchants Don't Want to Give Traffic Plan a Chance," *News and Courier*, 14 September 1950, sec. A, p. 1.

¹³⁵ "Public Favors Traffic Plan, Mayor Says," *News and Courier*, 13 September 1950, sec. A, p. 1.

¹³⁶ Collier, *Alderman Perry Charges King St. Merchants Don't Want to Give Traffic Plan a Chance*.

¹³⁷ *Parking on East Side of King Street is Planned*.

¹³⁸ "Retailers Show Patience with Traffic Plan," *Charleston News and Courier*, 6 October 1950, sec. A, p. 1.

merchants continued to oppose the one-way plan and publicize its negatives, there was a chance that potential shoppers would avoid King Street all together.

There were several clear concerns that surfaced about the affect of northbound travel on King Street including a poor circulation route for nonlocal shoppers, increased vehicular speed, and decreasing property values. Motorists may have been able to reach downtown faster through the newly created one-way couplets, but by converting commercial streets into thoroughfares, those streets lost business. Furthermore, King Street was one-way northbound which limited the possible origin of shoppers to those coming from below Broad Street.¹³⁹ “The one-way northbound approach to this street is from the area south of Broad Street,” which represents “a smaller potential in day-in and day-out retail purchasing power that area approaching King Street from the north.”¹⁴⁰ The area south of Broad is the upper-class residential core of Charleston. While this demographic was certainly responsible for a large amount of retail sales, King Street merchants also relied on sales from out-of-town visitors.

The manager of the Francis Marion Hotel at the northwest corner of the King Street and Calhoun Street intersection, H. Oliver Riley, wrote to the *Charleston News and Courier* declaring that King Street merchants were rightfully concerned with the ease of transportation of visitors to Charleston, and not just necessarily residents that lived below Broad Street. Most visitors approached Charleston from the north along King Street; with the Smith-Dibble plan, visitors were only able to

¹³⁹ "Dibble Recommends Traffic be Left 'As Is'; Lists Alternatives," *Charleston News and Courier*, 25 November 1950, sec. A, p. 1.

¹⁴⁰ *ibid.*

take King Street south to Carolina Street or Line Street, but were then forced to take unpaved St. Philip Street into the heart of the downtown commercial district.¹⁴¹ The northbound one-way plan allowed for Charleston residents south of Broad Street to access the King Street shopping district, but drastically inconvenienced potential shoppers, visitors, and suburbanites from the same district.

Another negative consequence of the one-way traffic plan on King Street was the increased vehicular speed. In November 1950, statistics about the one-way traffic plan were published in a *News and Courier* article, along with the first acknowledgement by the local government of Charleston to merchant's concerns. It was reported that there was increased traffic volume on King Street, Meeting Street, St. Philip Street and Coming Street, and that traffic which was previously two-way traveling at about 10-14 miles per hour, was now traveling at 16-22 miles per hour on a one-way street.¹⁴² The merchants' observations about the increase in speed were verified by this information. Because of the increased speed on King Street and lack of parking, local shoppers "are going to the suburbs and to the north area where they can do their business in the leisurely way to which Charlestonians have been accustomed."¹⁴³ With the decentralization of residential areas from peninsular Charleston, the merchants of the city were acutely aware of the threat of shoppers to do the same.

¹⁴¹ H. Oliver Riley, "Letter to the Editor," *Charleston News and Courier*, 30 June 1951, sec. A, p. 4.

¹⁴² "Dibble Recommends Traffic be Left 'As Is'; Lists Alternatives," *Charleston News and Courier*, 25 November 1950, sec. A, p. 1.

¹⁴³ Collier, *Alderman Perry Charges King St. Merchants Don't Want to Give Traffic Plan a Chance*.

The issue that finally forced City Council to review the one-way plan was the decreasing land values along King Street, caused by the poor access to downtown, limited parking facilities, increased speed, and decreased pedestrian safety. To verify the accuracy and impact of this complaint, the CRMA sought the technical opinion of the Charleston Real Estate Exchange. After analyzing the data, the Real Estate Exchange stated that the “present routing of traffic north on King Street has depreciated the value of real estate in well-established King Street trading areas.”¹⁴⁴ This appraisal of property values was enough to validate the ten months’ of objection by merchants. After a quick unanimous vote by the City Council on November 30, 1950, King Street was returned to southbound traffic and Meeting Street to two-way traffic.¹⁴⁵ Starting on February 6, 1951, King Street between Calhoun Street and South Battery Street was returned to one-way southbound while King Street above Calhoun Street accommodated two-way traffic.¹⁴⁶ The change in February was the beginning of a 90 day trial period, but as there were no meetings at the end of the trial period, the conversion was assumed permanent in May 1951.¹⁴⁷

Accommodating an Ever Increasing Traffic Level

In the years 1930 to 1955, the urban population of Charleston increased from 62,000 to 70,000 while the population of the suburban areas grew from 21,000 to

¹⁴⁴ *90-Day Trial of Changed Traffic Plan is Requested by Merchants*, 8.

¹⁴⁵ "King Street to be Southbound, Meeting St. Two-Way Again," *Charleston News and Courier*, 30 November 1950, sec. A, p. 1.

¹⁴⁶ "New Traffic Plan is Given its First Trial," *Charleston News and Courier*, 6 February 1951, sec. A, p. 1.

¹⁴⁷ "Present Plan Apparently to be Permanent," *Charleston News and Courier*, 11 May 1951, sec. A, p. 14.

91,000.¹⁴⁸ In South Carolina and elsewhere in America, car ownership continued to increase, persuading the federal government to improve and extend existing roadways. In the first five months of 1953, 41,542 new cars were registered in South Carolina, and in the first five months of 1954, 43,759 new cars were registered in the state. Between 1954 and 1956, vehicle registration increased by 112 percent in South Carolina, as did licensed drivers for a total of 942,000 in the state.¹⁴⁹ New levels of car ownership were caused by the decrease in sale price of the automobile. This allowed more families to purchase vehicles, which increased their mobility and therefore, their options for living and shopping. Because of the geographic restrictions of peninsular Charleston, many families chose to settle in the city's suburbs in this time.

The Charleston Chamber of Commerce and the CRMA joined in August of 1953 to advocate for the retention of downtown as the major commercial center.¹⁵⁰ David T. Coleman of the Chamber of Commerce Traffic Committee stated, "one-way streets are not the answer to the problem" and seemed to surrender to the traffic problems because of "too much progress in the automobile business."¹⁵¹ Ceding that one-way traffic grids are not a "silver-bullet" solution to traffic congestion was a major step in the evolution of urban traffic management in Charleston. An April 1954 *Charleston News and Courier* article, "Traffic Congestion Costs Money" indicates a

¹⁴⁸ Charleston County Planning Board, Charleston City Council, *How Shall We Grow?* (Charleston, SC:, 1956), 58.

¹⁴⁹ Associated Press, "State Motor Vehicle Traffic has Doubled in Past 10 Years," *Charleston News and Courier*, 26 January 1957, sec. B, p. 1.

¹⁵⁰ "Agencies Join Forces to Seek Solution for Traffic Problems," *Charleston News and Courier*, 23 August 1953, sec. A, p. 14.

¹⁵¹ "Off-Street Parking Seen as Answer to Congested Streets," *Charleston News and Courier*, 28 October 1953, sec. A, p. 14.

concern over the increase of automobile ownership and that growth's effects on an already congested area. The factors presented by the article that contribute to the loss of money are the cost of maintenance to the operator in the form of repairs, increased chance of injury by accident, loss of time by congestion delay and an "adverse affect on the general economy."¹⁵²

The author of the article continues by criticizing the patterns of settlement the automobile allows as well as its consequences for South Carolina, and certainly, Charleston. "Decentralization... depresses downtown business activities causing a depreciated business district, land values, loss of high tax yields...."¹⁵³ However, as Coleman stated, it seemed to much of the City that increased automobile reliance was unavoidable and that Charleston must do what it could to capture its mixed benefits. Issues of decentralization of the city of Charleston pressed politicians and traffic engineers to develop a new regional perspective on transportation infrastructure.

In order to facilitate better automobile traffic from the suburbs and encourage economic connectivity in the central city, Chief Highway Commissioner Claude R. McMillan proposed the building of "a throughway across Charleston from the Ashley to the Copper River so as to properly convey U.S. 17 traffic through the city." Also proposed was the extension of Interstate 26 "all the way into the city to make a "T" connection with U.S. 17."¹⁵⁴ These new highways would connect the Port of

¹⁵² "Traffic Congestion Cost Money - Cars on Increase," *Charleston News and Courier*, 22 April 1954, sec. A, p. 11.

¹⁵³ *ibid.*

¹⁵⁴ W.D. Workman Jr., "Solution Possible for Traffic Woes," *Charleston News and Courier*, 10 Aug, 1958, sec. A, p. 4.

Charleston to Columbia, Greenville, and other cities in the region, including Charlotte, North Carolina and Savannah, Georgia (Figure 4.7).

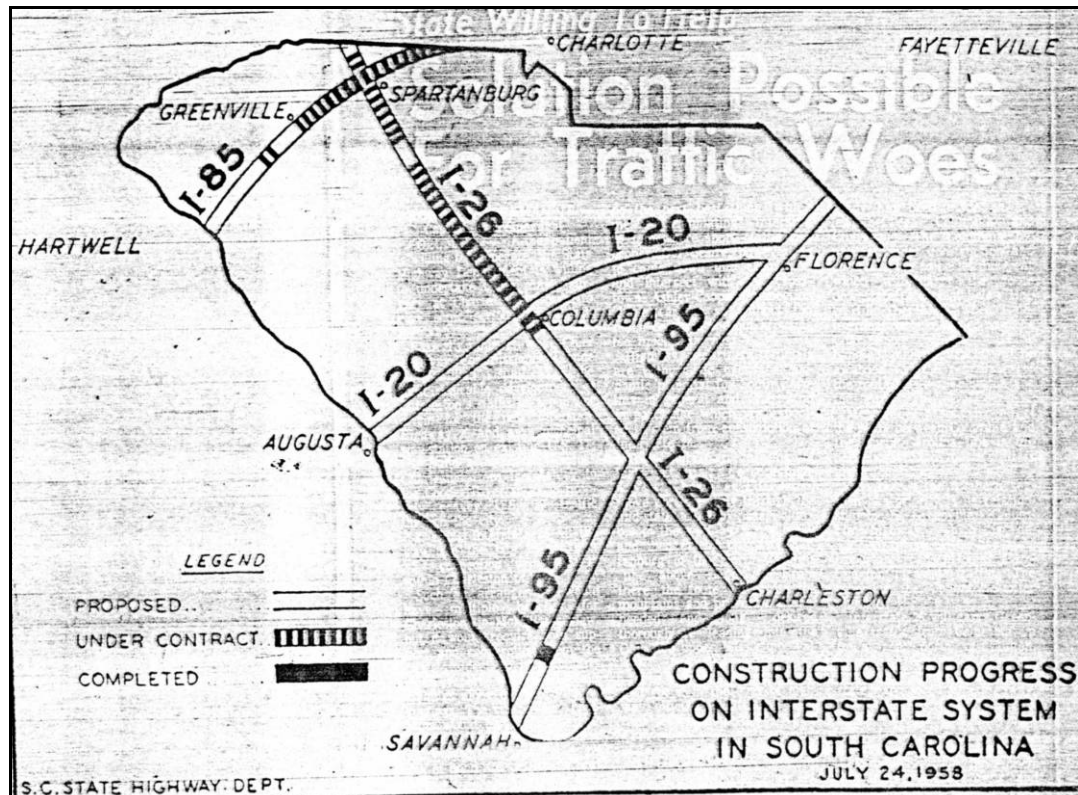


Figure 4.7 Map illustrating major transportation routes in South Carolina. The portion of Interstate-26 that would enter peninsular Charleston was proposed in 1958 and built in 1963. From *Charleston News and Courier* "Solution Possible for Traffic Woes".

Following national trends, this was a boom era for Charleston, with an increase in jobs, wages, car ownership, and physical growth. In order to plan future physical and economic growth, a report by the Charleston County Planning Board and the Charleston City Council, was commissioned. The report called "How Shall We Grow?" had a regional perspective and introduced the growth of Charleston's suburban neighborhoods as major successes. Furthermore, the report negatively

portrayed the appearance and function of the peninsula; regional Charleston is determined not to make the same “mistakes” of unplanned growth.

During this time, the importance of Charleston did not lie in its historic architecture and urban design but in its ability to stay abreast with the booming American economy. The report denounces commercial streets for being a “nuisance to neighboring homes” and insufficient because they do not have their own off-street parking.¹⁵⁵ Included in the report is an illustration of the negative characteristics of traditional commercial corridors, what can be done to “fix” them and the ideal design of new shopping plazas (*Figure 4.8*).

The figure that best represents King Street is labeled with drawbacks to traditional design such as storefronts too close to the street, a mix of uses, and no off street parking. In the most telling of the drawings, a traditional street is remodeled to fit the city’s new needs, perhaps illustrating the dream plan of Charlestonians? A “by-pass for through-traffic” is drawn around the densest portion of the street, turning it into an enormous parking lot. Other suggestions include the removal of street-facing storefronts and the separation of uses. Completing the triptych, the final drawing shows the ideal shopping plaza consisting of a low number of large stores, on massive blocks surrounded by parking. The overwhelming opinion of the 1956 report is that King Street is an undesirable area for retailers and shoppers.

With more growth occurring in the suburbs of Charleston and the regional transportation infrastructure in the form of the Interstate-26 and US 17, the urban

¹⁵⁵ Charleston County Planning Board, Charleston City Council, *How Shall We Grow?*, 14. Available at the South Carolina Room, Charleston County Public Library, Charleston, South Carolina.

center of Charleston declined in popularity and suffered from traffic congestion. With the increase of automobile ownership in the region and traffic congestion in Charleston, came an increase in traffic accidents. In a series of *Charleston News and Courier* articles, the worst intersections in Charleston were identified. The intersection with the worst accident record was Columbus Street and Meeting Streets, with 21 accidents in six months of 1954.¹⁵⁶ Fourth most dangerous was the intersection of King Street and Spring Street, the northern boundary of the Upper King Street District. Because of "light jumping": traveling through an intersection on a red light, there were sixteen "fender smashing" accidents in the same six months of 1954.¹⁵⁷

In order to reevaluate the regional transportation needs of Charleston, a traffic study was completed for the region in November of 1954. The congestion levels of downtown Charleston that were identified in the study spurred the proposal of a new traffic system in March of 1956.¹⁵⁸

¹⁵⁶ Rod Harris, "Intersection of Columbus and Meeting has Charleston's Worst Accident Record," *News and Courier*, 25 April 1954, sec. C, p. 11.

¹⁵⁷ *Intersection of King and Spring Rated as Charleston's Fourth Most Dangerous*, 12.

¹⁵⁸ "Traffic Study to Shift into City," *Charleston News and Courier*, 13 November 1954, sec. A, p. 10.; "One-Way Street Proposals Listed," *Charleston News and Courier*, 4 Mar 1956, sec. A, p. 16.

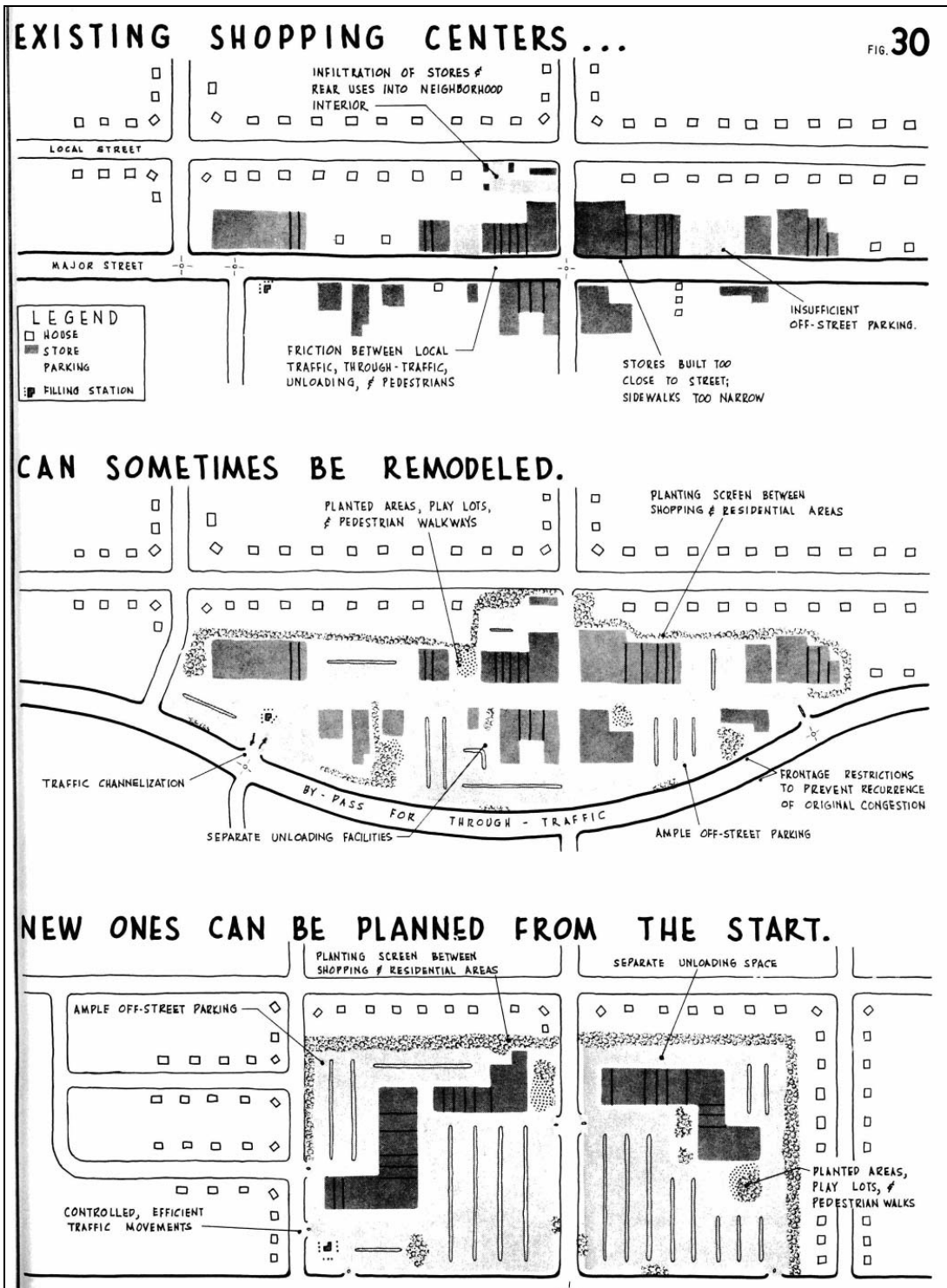


Figure 4.8 Drawing depicting the unfavorable view of historic commercial corridors, like Upper King Street. From *How Shall We Grow?*, 1956.

UPPER KING STREET BECOMES ONE-WAY SOUTHBOUND

South Carolina State Highway Department Plan, 1956

Like the previous traffic plans of this period, a network of one-way streets was heavily recommended for downtown Charleston. One-way streets were still seen as the best option for congested downtown areas. The traffic recommendations made by the South Carolina State Highway Department in early March, 1956 were reviewed by Charleston's Mayor Morrison and approved later that month. Fifty-nine one-way streets were included in the new traffic plan, including already existing one-way streets from the Smith-Dibble plan along with newly converted one-ways.¹⁵⁹ It was through the implementation of this plan that King Street became one-way southbound from Columbus Street south to South Battery Street, which included Upper King Street that previously operated as a two-way street. Approval of the plan came quickly as it was believed that in addition to easing traffic congestion, it would accommodate future traffic trends.¹⁶⁰

Exactly six years after the controversial Smith-Dibble & Company plan was debuted, the replacement Highway Department plan became effective on September 5, 1956.¹⁶¹ Like previous plans, several days were needed to introduce motorists to the new traffic plan, but the Chief of Police, William F. Kelly, stated that the "public is catching on fast" and that issues surrounding store deliveries and trash collection

¹⁵⁹ *ibid.*; "New Traffic Plan for City is Approved," *Charleston News and Courier*, 14 March 1956, sec. A, p. 1.

¹⁶⁰ "Committee Approves Traffic Plan for the City," *Charleston News and Courier*, 8 March 1956, sec. A, p. 18.

¹⁶¹ "New Traffic Plan Becomes Effective Today," *Charleston News and Courier*, 5 Sept 1956, sec. A, p. 1.

would be handled as soon as possible.¹⁶² Later changes to the Highway Department plan included returning the section of King Street above Cannon Street north to Columbus Street to two-way traffic after requests by business owners of that corridor.¹⁶³ This amendment may have been allowed because the identified section of King Street was crossed by Spring Street and Cannon Street, a major east-west one-way couplet that connected the peninsula to its surrounding suburbs across the Ashley River.

After its poor review in 1953, the National Safety Council returned to Charleston in September 1956 to compliment the new one-way system.¹⁶⁴ Opinion on the new traffic plan was positive by Lower King Street merchants and can be considered to have at least temporarily aided their battle against increased competition from suburban shopping centers. In August 1956, over 600 downtown stores participated in a full-page ad identifying and illustrating the stores by type and location in "Coastal Carolina's Largest Shopping Center."¹⁶⁵ In 1957, the CRMA was able to compete with suburban shopping centers by pointing to recent physical investments in the business district in the form of "remodeling, construction and expansion" and the traditional claim of the "greatest selection" of stores.¹⁶⁶ The reversal of traffic from northbound to southbound seemed to also reverse the

¹⁶² "Patience & Police Cope with 1-Way Traffic," *Charleston News and Courier*, Sept 1956, sec. A, p. 14.

¹⁶³ "King Street Section to get 2-Way Traffic," *Charleston News and Courier*, 6 July 1958, sec. A, p. 4.

¹⁶⁴ "Engineer, More Parking Advocated for City," *Charleston News and Courier*, 18 Sept 1956, sec. A, p. 10.

¹⁶⁵ "Charleston, Largest Shopping Center," *Charleston News and Courier*, 31 Aug 1956, sec. B, p. 18.

¹⁶⁶ "King Street to Keep Retail Trade Lead," *Charleston News and Courier*, 18 Feb 1957, sec. A, p. 14.

business climate on King Street, allowing merchants to regain some measure of their previous success.

The CRMA had a public presence by sponsoring sales and other promotions, and also created a decal for merchants to place in their window. Directions for use include, “put in a conspicuous place at the entrance to your business, display it proudly.”¹⁶⁷ Publicity for the shopping district was created with the distribution of simple street maps that indicated the best route for reaching parking facilities and stores. Furthermore, as technology allowed, the CRMA also advertised on radio and television. In 1956, the organization ran this advertisement:

Sound Effect: Car Starting

1st Person: Say, Where are you going?

2nd Person: Come on and go with me. Let’s go to Charleston.

1st Person: This is really the time to be in Charleston. I understand the stores are jam-packed with values for Spring and Easter.

2nd Person: You are certainly right. The stores in Charleston have just everything you need and this year I think selections are exceptionally good. We can also make this a pleasure trip, for the flowers are in full bloom, & Charleston is so attractive this time of year. So while we are there, let’s take in all the sights.

1st Person: I think that’s a grand idea and you know if we want to we could find plenty of accommodations and spend a couple of days in Charleston, do our shopping & see the historical points of interest.

2nd Person: That’s right...so what do you say? Let’s go to Charleston!¹⁶⁸

The above advertisement is targeted at potential shoppers living in Charleston’s surrounding areas, or even long-distance travelers. King Street and other

¹⁶⁷ Charleston Retail Merchants Association, *Membership Decal*, 1953)

¹⁶⁸ WCSC Channel #5, *Promotion n/c Retail Merchants*, 1956)

commercial districts were in competition with suburban shopping centers geographically closer to large residential enclaves. By highlighting the selection of unique goods and the other positive attributes of Charleston as a city, merchants sought to separate themselves from shopping plazas, and avoid that comparison.

DE-EMPHASIS AND DECLINE OF KING STREET

Charleston County Planning Board Report, 1963

In 1963, the Charleston County Planning Board tackled the most severe issues facing the status of the county, including the condition of the Charleston central business district. Anticipating an increase in need within the county, the Charleston County Planning Board created a report of existing and required county facilities, such as schools and offices. In order to fill the need for county services and to increase development within the city of Charleston, several areas within downtown were considered for county use, including King Street and Marion Square. The report suggested many common recommendations for traffic and parking problems in downtown, but it also made several unique points.

The report suggested that Charleston County, with a population of 225,000 at the time, could not be expected to support a central business district as large as King Street's, nearly 20 city blocks long. Beyond the size of the King Street district, the arrangement was also criticized as being too scattered and poorly defined. An option to create a focal point for downtown by developing Marion Square, however, was strongly discouraged by the Planning Board. The value of Marion Square as a landmark was not argued, but the way in which the green space was used and developed certainly was. The intersection of King Street and Calhoun Street was

dominated by the Francis Marion Hotel and Marion Square which served to unite the lower and upper portions of King Street.¹⁶⁹

The decision of the Charlestown County Planning Board to not support the development of Marion Square was conscientious and forward thinking. Even while the area was suffering from lack of investment, the turnover of the open space to a county office park would have damned its fate. Furthermore, by drawing attention to Marion Square in the report, the Planning Board was able to increase awareness of its importance. Over time, Marion Square would continue to be an essential piece of the area's success.

Urban Land Analysis, 1965

In 1965, Charleston County commissioned another county-wide survey, this time focusing on urban land uses. The project was funded by a grant from the Urban Renewal Administration of Housing and Home Finance Agency and completed by Candeub, Fleissig, Adley & Associates. The plan sought to define the existing pattern of development, detail the existing population, and project a land use, economic and traffic plan for the needs of 1985, while also suggesting public improvements. Development trends were summarized by the following statements, "extensive population dispersion flowing from the center," "commercial dispersion is becoming more noticeable," and "the heart of the region- the older portion of the city of Charleston is losing population and has traffic and housing problems...."¹⁷⁰ While the housing problems most likely refers to the increased presence of African

¹⁶⁹ Charleston County Planning Board, *A Study of the Existing and Required County Space Facilities Report* (Charleston, SC: Charleston County Planning Board, 1963)

¹⁷⁰ Candeub, Fleissig, Adley and Associates, *Charleston County, South Carolina: Urban Land Analysis* (Charleston, SC: Charleston County Planning Board, 1965), 21.

Americans in the area, the traffic problems can be interpreted as a more warranted concern.

The density of retail establishments in the Charleston central business district decreased from the 1950s to the 1960s. In fact, there were 1,111 stores in the district in 1954, but 986 in 1958, and only 916 in 1963.¹⁷¹ Of the 84 acres of “concentrated retail and service facilities” the report said: “the business area is relatively inaccessible from the outlying districts and is served by limited off-street parking facilities. Traffic circulation within the area is also difficult.”¹⁷² This Charleston County report clearly describes the decrease in popularity, density, and regional importance of the central area of Charleston. Because the historic city was not capable of accommodating the new desires of residents, spoiled by the slow pace and open space of the suburban Lowcountry, the city suffered. Downtown businesses were hard to access causing a loss of business density, which caused further deterioration of the district’s physical appearance and also, its image.

General Development Plan for King Street and Meeting Street, 1966

Several members of the Urban Land Analysis team, Candeub, Fleissig & Associates, completed another report that focused strictly on the commercial developments along King Street and Meeting Street in early 1966. By addressing the long-standing issues of traffic congestion, lack of parking and other transportation issues, the agency sought physical infrastructure changes that would benefit the commercial streets of Charleston. Their measurements, at the time, indicated that

¹⁷¹ Fleissig & Associates Candeub, *General Development Plan, City of Charleston, South Carolina*, (Charleston, SC: City of Charleston, 1966), A3.

¹⁷² Candeub, Fleissig, Adley and Associates, *Charleston County, South Carolina: Urban Land Analysis*, 27.

King Street was 32 feet wide in the area from Line Street south to Spring Street, 40 feet from Spring Street south to Calhoun Streets, narrowed to 30 feet between Calhoun Street south to Market Street and had a width of less than 30 feet from Market Street to South Battery Street.¹⁷³ Most major arterial streets that abut commercial properties in an urban area are 25-35 feet wide; only some sections of King Street were at this width.¹⁷⁴ Furthermore, the plan declared that two-way Meeting Street, which was 40-45 feet wide, the most satisfactory of the major north-south routes in the city.¹⁷⁵ Based on the success of Meeting Street as a two-way street and the fact that King between Spring Street and Calhoun Street is 40 feet wide which is enough room for opposing lanes of traffic to pass safely, it was suggested that Upper King Street be returned to two-way operation.¹⁷⁶ This recommendation in 1966 was one of the first to advocate for two-way traffic on Upper King Street, but other issues including the area's strong minority population, prevented such changes from being made. It would be another 30 years before the recommendation would be heeded.

Traffic Circulation and Parking Plan and Charleston Area Transportation Study, 1968

Based on the continued inclusion of negative statistics on the traffic pattern of downtown Charleston, a traffic plan for its central business district was completed in 1968.¹⁷⁷ The report addressed all aspects of operation including signaling, parking and infrastructure changes and improvements in hopes of increasing access to the

¹⁷³ Candeub, *General Development Plan, City of Charleston, South Carolina*, C3.

¹⁷⁴ *ibid.*, 30.

¹⁷⁵ *ibid.*, 39.

¹⁷⁶ *ibid.*, 38.

¹⁷⁷ Traffic Planning Association, *Summary Report: Traffic Circulation & Parking Plan, Charleston Central Business District* (Charleston, SC: City of Charleston, 1968)

shopping districts of Charleston. The most pertinent information from this plan was the criticism of the then current downtown traffic plan. It states unequivocally that “the multiplicity of uncoordinated one-way streets and their orientation” was that largest transportation problem facing Charleston.¹⁷⁸ This is the strongest statement made about the one-way traffic plans that were implemented in Charleston and indicates the ineffectiveness of one-way streets that had been so well-thought of just ten to fifteen years before.

Not only are one-way streets criticized in this report, they also appear to be omitted from further study. Charleston’s main street, King Street, is not mentioned in several analyses of the report and while it is included in diagrams, no specific recommendations were made. This omission represents the inability of traffic engineers to deal with such a unique and historic street, and certainly the factor of racial demographics influenced that decision. In another 1968 report by Wilbur Smith & Associates, this is explicitly indicated: “Being too narrow to provide adequate service and the widening being cost prohibitive, King Street should be de-emphasized as a major street.”¹⁷⁹ By removing King Street from the majority of their recommendations, Wilbur Smith & Associates served to trivialize the purpose and continue to tarnish the reputation of Charleston’s most well-known street.

Robert M. Leary & Associates, a firm from Raleigh, North Carolina, completed a later transportation study for the County of Charleston. In the report’s Major Street Plan all of the streets in peninsular Charleston were evaluated as freeway, arterial,

¹⁷⁸ *ibid.*

¹⁷⁹ Wilbur-Smith & Associates, *Charleston Area Transportation Study: Travel Demands and Recommended Traffic Plan* (Charleston, SC: South Carolina Highway Department, Charleston County Planning Board, 1968)

collector or minor streets. Ashley Avenue, Coming Street, St. Philip Street and King Street just below Calhoun Street were determined to be collector streets. Concerning collector streets, it was noted that, “functions of moving traffic and providing access to abutting properties are of about the same importance.”¹⁸⁰ Alternatively, arterial streets were characterized as having heavy traffic, long trip lengths, and restrictions limiting access to and from abutting properties. While Lower King Street operated as a collector street, the report recommended the treatment of Upper King Street above Calhoun Street as an arterial. Based on the definitions provided and the poor condition of Upper King Street it can be said that it was viewed more as a way to get from one place to another and not as a destination of its own. Encouraging retail on the most important commercial street in downtown Charleston was not more important than providing a direct and fast route to areas further downtown, typically accessed by suburban commuters.

Like other downtowns in America, the peninsula of Charleston suffered a loss of investment in all forms, residential and commercial during the mid twentieth century. The trends of the country were too great to be surmounted by the small, historic city. Furthermore, stopping this downward trend was not a high priority for many cities that were experiencing increased investment in other areas. Because of the condition of downtown Charleston, many businesses in the city began to close. Based on information provided by the Charleston City Directories the vacancy rate of Upper King Street was 4.3 percent in 1961 and increased to 10 percent by 1970.

¹⁸⁰ Robert M. Leary & Associates, *Major Street Plan* (Charleston, South Carolina: County of Charleston, 1975), 17.

There were some studies completed in the 1960s and 1970s that intended to bring back Charleston's earlier successes but none of these plans integrated the reasons that Charleston was successful in the past. Development plans in the time were massive mega-structures that consumed full city blocks and turned public space to private space. There was also a return to the idea of pedestrian malls. While the concept of pedestrian malls appeared sound to planners, time has proven otherwise. Many cities that reached out to this fad, have suffered irreversible loss of downtown vitality.

In 1971, the newly created King Street Restoration Committee within the Downtown Council of Trident Chamber of Commerce supported a pedestrian mall for King Street from Broad north to Calhoun. An earlier project by fifth-year architecture students from Clemson University, in Clemson, South Carolina, visualized both sections of King Street if such a plan was implemented.¹⁸¹ Typical design features included removal of automobile traffic, the construction of one or two massive buildings and skywalks to connect them. King Street was never converted into a pedestrian mall and no skywalks were built, but the continued proposal of such features, so opposite to all the characteristics of historic Charleston, served to continue the poor opinion of King Street.

Later in the century, there were some studies completed in the 1960s and 1970s that intended to bring back Charleston's earlier successes but none of these plans integrated the reasons that Charleston has been successful in the past. Development plans at the time typically called for massive mega-structures that

¹⁸¹ "King Street Potential Studied," *Charleston News and Courier*, 16 October 1967, sec. A, p. 6.

consumed full city blocks and turned public space into private space. There was also a brief return to the idea of pedestrian malls. While the concept of pedestrian malls appeared sound to planners of the period, time has proven otherwise. Many cities that embraced this fad have suffered irreversible loss of downtown vitality.



Figure 4.9 Condon's Department Store was a successful business on Upper King Street at Warren Street between the 1920s and 1960s. Notice the then-modern store design that included a skywalk to help shoppers avoid the predominately African American neighborhoods nearby. From *Charleston Grows*, 1949, page 134.

PRESERVATION EFFORTS ALONG UPPER KING STREET

Historic Preservation Plan, 1974

The poor condition of businesses along Upper King Street affected the physical stability and appearance of many of its historic storefronts. The declining Upper King Street was targeted by preservationists in the city as an area deserving of their attention in the 1970s, and by 1977 the National Trust's Southern Regional Office was located in the William Aiken House at 456 King Street. Due to several demolition requests along King Street, the *News and Courier* published a brief

history of the commercial spine of Charleston in June of 1973. The reporter, Robert P. Stockton, cited preservationists who remained confident that King Street could return to prosperity, as it had fluctuated in the past but managed to recover.¹⁸²

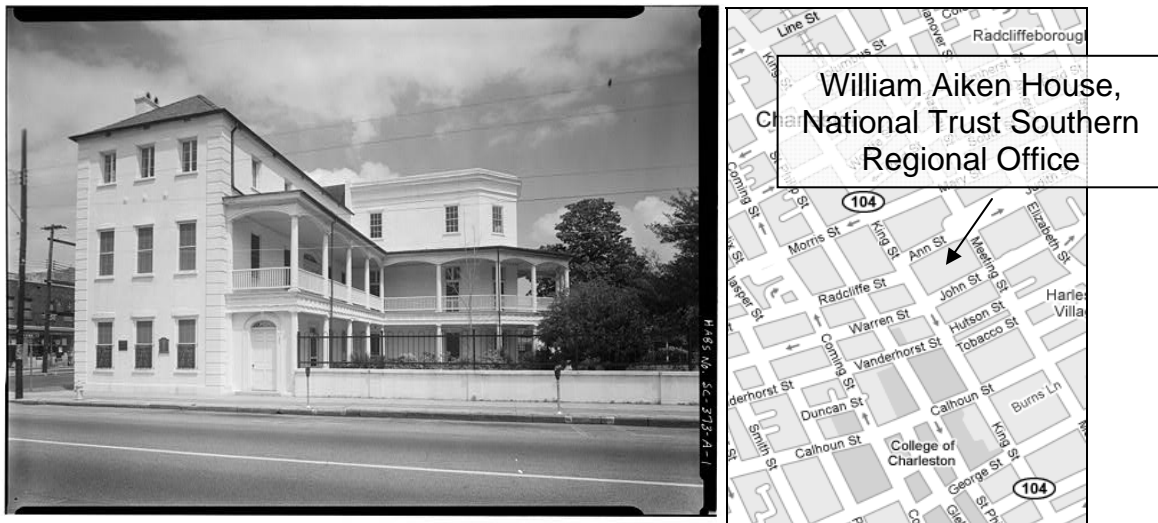


Figure 4.10 (Left) Photograph of William Aiken House c. 1969, location of the National Trust Southern Regional Office starting in 1977. From the Historic American Building Survey collection at the Library on Congress, HABS SC, 10-CHAR, 54-1

Figure 4.11 (Right) Map of Upper King Street indicating the location of the National Trust Southern Regional Office at 456 King Street, within the Upper King Street district.

A preservation plan was completed for the City of Charleston in 1974 by City Planning & Architecture Associates of Chapel Hill, North Carolina, along with Russell Wright of Barrington, Rhode Island, Carl Feiss of Gainesville, Florida and National Heritage Corporation from West Chester, Pennsylvania. This plan revisited previous plans, created an inventory of 2,500 historical structures based on their current condition, and recommended action. Among the most important recommendations made about Charleston's downtown by the study's authors was the need to preserve

¹⁸² Robert P. Stockton, "King Street: City Preservationists Think of it as Priceless but for Others it's an Economic Cul-De-Sac," *Charleston News and Courier*, 11 June 1973, sec. B, p. 1.

the vistas created by the narrow tree-lined streets of the residential areas and the high-walled storefronts of commercial areas. These characteristics were “visually and emotionally stimulating.”¹⁸³ With new interest in the area by preservationists, Upper King Street benefited. Their attention to the physical structures brought a new perspective to the area, demanding its physical preservation, and in turn, requiring investment in the business’s the structures housed.

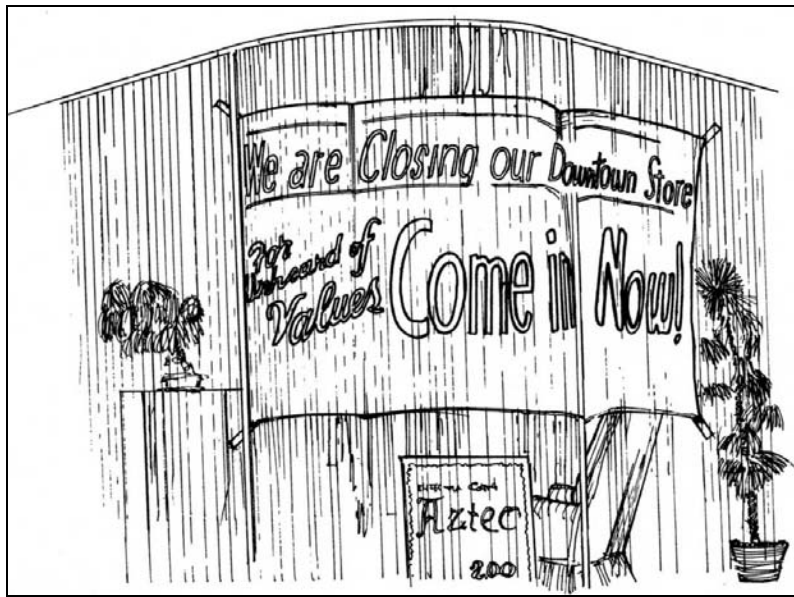


Figure 4.12 Illustration of closing storefronts in Charleston from the Preservation Plan of 1974. The caption reads, “...many of the older buildings on King Street have been inadequately maintained over the years. Peeling paint, rotted trim and cracked masonry walls are jarring to the eye. The day when a King Street address was enough to assure a successful business venture is gone.” From *Historic Preservation Plan*, Charleston, South Carolina, 1974, pg 15.

The first mention of King Street revitalization, as opposed to maintenance or improvement, appears in a series of articles by Margaret L. Moore in the *News and Courier* in 1974. Beginning the series is an article briefly describing the recent history

¹⁸³ City Planning & Architecture Associates, Russell Wright, Carl Feiss, National Heritage Corporation, *Historic Preservation Plan, Charleston, South Carolina* (Charleston, SC: City of Charleston, 1974).

of the commercial corridor, including the causes of its decline: “traffic patterns, inadequate parking, the exodus of city residents to the suburbs coupled with the advent of the neighborhood shopping center, poor sidewalks and shabby buildings.”¹⁸⁴ Succinctly put, “shopping downtown became more of a chore than an excursion.”¹⁸⁵ However, even with this bleak identification of factors of decline, Moore was able to end the series with a final article that was decidedly more optimistic. A former City Council Chairman and business owner, Otis Conkin, suggested not only optimism but also realism, saying, “People are concerned about King Street but it was never as bad as people thought.”¹⁸⁶

The growth of the College of Charleston and the Medical University of South Carolina were cited as positive components necessary for King Street revitalization. Along with the new clientele of young adult shoppers, increased police patrol in the form of motor scooters “reduced shoplifting and purse snatching drastically.”¹⁸⁷ Furthermore, while some long-time King Street stores had opened suburban branches, James Deaton of the Downtown Council, contended that businesses downtown would remain “first class” and appeal to those “looking for something special.”¹⁸⁸ Suburban shopping plazas, both a cause and result of all King Street’s

¹⁸⁴ Margaret L. Moore, "Resurgence in Popularity Sought: Downtown Merchants Fight Problems," *Charleston News and Courier*, 20 April 1974, sec. B, p. 1.

¹⁸⁵ *ibid.*

¹⁸⁶ Margaret L. Moore, "Rebirth of Downtown Area is Predicted," *Charleston News and Courier*, 23 April 1974, sec. B, p. 1.

¹⁸⁷ *ibid.*

¹⁸⁸ *ibid.*

commercial decline, include South Windermere in 1953, Pinehaven in 1959, Ashley Plaza in 1964 and Northwoods (a mall), in 1972.¹⁸⁹

The Upper King Street revitalization project gained a major supporter with the election of Mayor Joseph Riley in 1975. In his first mayoral campaign, Riley “promised to reverse the flow of business from downtown Charleston to the suburban shopping malls by revitalizing the central business district. To do this he planned to attract more tourists for longer periods of time...”¹⁹⁰ Soon after his election, a full revitalization strategy was created by a planning firm, Barton-Aschman Associates, Inc, from Washington, D.C.

The plan created seven different districts of the Charleston peninsula, using King Street as the “spine” of the project. The plan suggested that Upper King Street from Cannon to Calhoun encourage community shopping, create a compact shopping district, improve facades and the streetscape, improve existing parking, provide better automotive access and circulation, and provide better pedestrian circulation to and from shops.¹⁹¹ Specific recommendations in the Barton-Aschman report included making Upper King Street open to two-way traffic for several reasons, one of them being the opportunity of the area to be used as an “intra-city bus terminal or a tourist visitor center.”¹⁹² While the visitor’s center was finally built in 1991, Upper King Street was not converted to two-way traffic as prescribed by the Barton-Aschman report.

¹⁸⁹ Margaret L. Moore, "Resurgence in Popularity Sought: Downtown Merchants Fight Problems," *Charleston News and Courier*, 20 April 1974, sec. B, p. 1.

¹⁹⁰ Fraser Jr., *Charleston! Charleston! The History of a Southern City*, 430.

¹⁹¹ Jerry R. Sanders, "Traffic Changes, Hotel Center Part of Proposals," *Charleston News and Courier*, 15 June 1976, sec. A, p. 1.

¹⁹² E. M. Freeman, "Merchants Say Upper King Street Sales Good," *Charleston News and Courier*, 4 December 1977, sec. A, p. 1-16A.

The Wrong Type of Investment on Upper King

While much of the Mayor Riley's revitalization efforts centered on Lower King Street, specifically the funding, construction and operation of Charleston Center, commonly known as Charleston Place, Kenneth A. Gifford, executive director of Charleston's Revitalization Office, declared that Charleston Center was only half of his department's job.¹⁹³ There were some smaller projects and opportunities headed by the Revitalization Office that affected Upper King Street, one being the George-Society Street parking lot, located just one block south of Calhoun Street, that created 150 spaces of metered parking just south of Calhoun (*Figure 4.15*).

The project was completed through a series of property exchanges between merchants and the city of Charleston that allowed the lot to stay on the tax rolls. Gifford called the parking lot his department's "proudest achievement."¹⁹⁴ While Lower King Street was being revitalized with a multi-million dollar hotel, convention center and mall, Upper King Street's revitalization hinged on a surface parking lot. Painfully small and shortsighted investment continued in the area by public and private ventures.

A plan for multiple properties abutting the King and Spring Street intersection was proposed in September 1987 by a private developer that was seeking financial incentives in the form of bonds and tax exceptions through local and federal programs. The project intended to maximize profit by developing low-income housing at 595, 597, 599, and 601 King Street as well as 32 and 34 Spring Street,

¹⁹³ Jerry Adams, "Revitalizing Charleston," *Charleston News and Courier*, 18 Feb 1979, sec. E, p. 11.

¹⁹⁴ *ibid.*

for which the developer could receive tax credits.¹⁹⁵ Through city help and federal funds, several upper King Street facades were improved in 1981, including 567 King Street. The long-term, low-rate loan for \$172,000 allowed for the creation of five apartments within the property.¹⁹⁶



Figure 4.13 Image of the then newly created George-Society Street parking lot, heralded as one of Charleston Revitalization Office’s “proudest achievements.” From *Charleston News and Courier*, “Revitalizing Charleston,” 18 February 1979.

The placement of low income housing on Upper King Street and the adjacent neighborhoods represents what was thought of the area in the 1980s. By this time the area had been in decline for economic and racial reasons, and with the aid of tax credits, developers could pocket more money for low-income housing than any other type of construction or business. No other strategy would elicit more money, and the

¹⁹⁵ Charles Francis, "Renovation on Upper King Proposed," *Charleston News and Courier*, 10 Sept 1987.

¹⁹⁶ "King Structure Improvements Reviewed," *Charleston News and Courier*, 24 July 1981, sec. C, p. 6.

general opinion was that Upper King Street was not fit for any other type of investment.

While some buildings on Upper King Street were being “renovated” for low-income apartments, some were flat-out demolished. A 1950s façade had been improperly attached to 605 and 607 King Street, located above Spring Street, and was presenting a “hazardous condition” to those walking by.¹⁹⁷ Instead of repairing the façade or renovating the building for use, the owners decided to demolish both buildings. It is unknown if the facade was truly a danger or if the owner of the obviously dilapidated structure thought it more profitable to demolish. The “big” plan for the newly vacant parcel was a surface parking lot.¹⁹⁸

Another task undertaken in the Upper King district was the removal of the metal security bars that welcomed visitors into the city by warning them not to travel above Calhoun Street.¹⁹⁹ It is uncertain when the majority of the bars were installed, and even if they were warranted, their appearance and purpose feed the negative perception of Upper King Street. The removal of the security bars, however small a detail was probably equally if not more effective in improving the appearance of Upper King Street, far more so than the development of low-income housing and location of surface parking lots, then thought to be good investments.

¹⁹⁷ "Demolition of Buildings get Approval," *Charleston News and Courier*, 15 October 1981, sec. B, p. 2.

¹⁹⁸ *ibid.*

¹⁹⁹ Conley Smith, "'Burglar Bars' Use Uptown is Debated," *Charleston News and Courier*, 15 February 1990, sec. This Week in Peninsular Charleston.

Revitalization through Good Urban Design, 1980s

With a new interest in King Street under Mayor Riley, the City of Charleston began to expand and improve early efforts along Upper King Street within the context of the historic city. In 1982 an urban design study was commissioned from HLW/Planning Partnership by the Zoning Division of Charleston's Department of Planning & Urban Development, which dealt exclusively with the newly named "Uptown District."²⁰⁰ Bounded by George Street to the south, Coming Street to the west, Meeting Street to the east and U.S. 17 to the north, the area was essentially the Upper King Street corridor and intersecting residential streets (*Figure 4.16*).



Figure 4.14 (Left) Map showing the Uptown District, which encapsulates the Upper King Street district, as defined by HLW/Planning Partnership in 1982. This distinction and name is not commonly used today, in fact, a current mixed-use development at King Street and Spring Street is called Midtown.

Figure 4.15 (Right) Recommendations for in-fill buildings along King Street that are similar in height, scale and mass to the historic street wall. The architectural style, however, remains of its time and does not seek to replicate existing structures. From *Uptown District*, 1982, pg 9.

²⁰⁰ HLW/Planning Partnership, *Uptown District* (Charleston, SC: Zoning Division, Department of Planning & Urban Development, City of Charleston, 1982).

The goal of the plan was to apply appropriate urban design to redevelopment efforts to create a certain image of the central business district. In general, the plan sought to keep St. Philip Street residential, honor Meeting Street as the main entry to the historic city, and maintain King Street as a retail corridor, while focusing on the area above Calhoun Street in order to absorb the impact of tourists. In order to preserve the character of King Street, the plan suggested a maximum height of four stories, but also a minimum of two stories to maintain the high street-wall (*Figure 4.17*).²⁰¹ These are important “height, scale, and mass” issues that make up the foundation of guidelines for new developments appropriate for historic districts.

A National Trust Design Quality Panel also addressed the creation of the “Uptown District” along with its preservation and design needs in 1985.²⁰² Based on the ideas presented at the panel, a report was published with the hopes of informing a major phase of revitalization. The report sought to define the existing historic patterns and then create a framework for new development. Conclusions were rather broad, but suggested the use of the old South Carolina Railroad Company tracks that run north-south between King and Meeting with their southern terminus at John Street, as a pedestrian corridor that connected several historic features.²⁰³ This indicated the potential investment that could be made in the Upper King Street area in the process of Charleston creating a visitor center at the railroad site.

In another sign that interest in Upper King Street was growing, the city of Charleston, under the direction of Mayor Riley, used just under \$50,000 to fund the

²⁰¹ *ibid.*

²⁰² Post, Buckley, Schuh & Jernigan, Inc., *National Trust Design Quality Panel: Uptown District, Charleston, South Carolina*,

²⁰³ *ibid.*

rebuilding of Bluestein's clothing store at 494 King Street. After an accidental fire in October 1987, the 1913 building was left gutted from the inside, but the distinctive blue-glazed brick façade remained. In defending his spending to restore the structure, Mayor Riley, stated that rebuilding was essential because "that area [Upper King Street] will one day be a prime and much more commercial area. The Bluestein creates a special renewal statement."²⁰⁴



Figure 4.16 (Left) Photograph of Bluestein's clothing store at 494 King Street, c. 1973. From Scrapbook of Charleston, SC Architecture Inventory. Available at South Carolina Room, Charleston County Public Library, Charleston, South Carolina.

Figure 4.17 (Right) Photograph of Bluestein's clothing store at 494 King Street the day after an accidental fire left the building gutted. From "Case of King Street Fire a Mystery," *Charleston Saturday Post*, 3 October 1987, sec. A, p. 1.

Citing the positive influence of the Bluestein's restoration, the *Charleston News and Courier* ended 1987 with an article describing the movement of Charleston's revitalization up King Street.²⁰⁵ The article cited increased investment

²⁰⁴ Kerri Morgan, "Chas. City Council Agrees to Help Rebuild Upper King Street Building," *Charleston News and Courier*, 8 June 1988, sec. B, p. 1.

²⁰⁵ Charleston Francis, "Revitalization Effort Moving Up King Street," *Charleston News and Courier*, 3 December 1987.

by the city, shop owners and visitors to the city as reasons for success. The article also indicated the hope that the proposed visitor's center would have the same positive affects that Charleston Place had on the commercial success of Lower King Street. Unfortunately, the city would suffer a major natural disaster setting back the progress made in the Upper King Street district.

HURRICANE HUGO'S EFFECT ON UPPER KING REVITALIZATION, 1989

On September 21, 1989, Hurricane Hugo struck Charleston. The effects of the water and wind were detrimental to many of the city's finest historic buildings. Many of the building on Upper King Street, especially those already showing signs of structural instability and deterioration, were damaged severely. The scene created by the storm has been vividly described as, "Along Charleston's King Street glass store fronts exploded. Macabrely twisted mannequins spilled into the sidewalks. Fire erupted from natural gas leaks and water poured through the streets as the tide neared its crest."²⁰⁶ Even after months of clean up, stabilization and restoration, the damage incurred by the disaster would be evident for decades to come.

Based on the City of Charleston Directories, the Upper King Street vacancy rate in 1981 was 11 percent. This reflects the poor condition of the shopping district and the inability of businesses to stay open, while demand for the area also declined. Hurricane Hugo damaged many of these vacant buildings, already abandoned and undervalued. After being boarded up for several years during decline, the storefront owned for decades by Samuel Banov, was severely damaged by Hurricane Hugo. The wind and rain reduced the building to its structural

²⁰⁶ Fraser Jr., *Charleston! Charleston! The History of a Southern City*, 440.

members, while most of the façade crumbled into the northwest corner of the intersection of King Street and Spring Street. Because the building was categorized as being the “most highly rated” in terms of architectural quality, the cleanup of the rubble that blocked the intersection of King and Spring Street took nearly two months.²⁰⁷ Resembling Bluestein’s at 494 King Street in material, design, and importance, the rubble was meticulously sorted to recover any “historical debris.”²⁰⁸ Even without the increase in demolitions, Hurricane Hugo may have been responsible for the closing of many storefronts along Upper King Street. In 1981, the vacancy rate was eleven percent. In 1990, 40 percent of all Upper King Street storefronts were vacant. For some the hurricane damage may have been an excuse to finally close an unsuccessful business.

Still in operation when Hurricane Hugo struck, Robinson’s Bicycles on King Street at Ann Street was also damaged by water and winds, but only moderately. The owner was able to take advantage of the situation, conducting other needed repairs at the same time. The rehab work forced the business, however, to remain closed over the Christmas shopping season for the first time in 101 years. Johnny Robinson, the grandson of the original owner, remained optimistic about the family business and the new opportunity to rent bicycles to tourists as they arrived at the Visitor’s Center on Ann Street.²⁰⁹ Interest in Upper King Street increased after

²⁰⁷ Schulyer, Kropf and Kerri Morgan, "Rubble in King Street Stays Put," *Charleston News and Courier*, 1 November 1989.

²⁰⁸ Schulyer, "Building Rubble Clogs Traffic," *Charleston News and Courier*, 31 October 1989.

²⁰⁹ Conley Smith, "Robinson's Owner Sorry to Miss 1st Christmas in 101 Years," *Charleston News and Courier*, 22 November 1989, sec. This Week in Peninsular Charleston, p. 5.

Hurricane Hugo, as the community of Charleston re-evaluated the importance of its architecture, even in commercial districts, and even above Calhoun Street.

Beyond repairing and restoring buildings damaged in the storm, a broader evaluation of the needs of the city also appeared as a result. Early in 1990, the Preservation Society of Charleston secured a grant from the National Trust to inventory the historic uses of the building along King Street from Calhoun Street north to Line Street. The perceived need for this study stemmed from the damage caused by Hurricane Hugo and the desire to prevent demolition of the damaged structures.²¹⁰

Norman Mintz from Brooklyn, New York, an expert in finance and economics, used funds allocated by the National Trust for the study of the historic uses of King Street buildings. Obviously inspired by the uniqueness of the Charleston single house, Mintz recommended the restoration of that type of building above others, even though King Street showcases buildings from multiple periods and of styles atypical of the rest of Charleston. Furthermore, he referenced the opportunities created by the Visitor Reception and Transportation Center that opened in 1991 on Ann Street, but indicated that positive changes for the area did not have to be multi-million dollar projects.²¹¹ While Mintz's assessment of Charleston may have been narrow, he did highlight the need to integrate several projects to achieve success.

²¹⁰ Kerri Morgan, "Preservationists Target Upper King," *Charleston News and Courier*, 25 January 1990, sec. B, p. 1.

²¹¹ Tony Bartleme, "Upper King Street has Potential, Expert Says," *Charleston Post and Courier*, 15 March 1991, sec. B, p. 7.



Figure 4.18 Picture taken from Condon's Department Store on Warren Street looking north along Upper King Street. From *News and Courier*, "Up and Coming King," 19 November 1990.

Having survived Hurricane Hugo and years of decline, caused by suburbanization, the merchants along King Street were also invigorated with the need for positive change. But not so much positive change that new chain stores, hotels or other larger establishments would overshadow their business. The reason for their worry was warranted, as Charleston Place had physically and economically displaced a handful of businesses from King Street near Market Street. The Downtown Business Association in Charleston declared the need for a "certain amount of national tenants" but also agreed that they did not want to "lose the flavor"

of King Street.²¹² The goal of the Upper King Street revitalization was to preserve as many unique businesses as possible in order to retain the character of the district.²¹³ New improvements would be integrated within the existing businesses, with the hope of achieving a balance. While city officials could not guarantee rent stabilization nor control the eventual rise in property values, officials had a certain level of awareness of the issue. There was a feeling that the city could retain only so much tourist-based retail and because of that threshold, King Street's unique, local characteristics could be preserved.²¹⁴ Later commercial strategies for the district would emphasize Upper King Street's use for residents' needs not tourist needs, in terms of convenience items and home furnishing.

With increased awareness and investment available after the disaster of Hurricane Hugo, the businesses of Upper King Street took hold of an opportunity to further improve their commercial corridor. As it had been for several decades, the use of King Street as an arterial through the center of the peninsula was again cited as a major concern for the vitality of the area. The chairman of the Central Business District Revitalization Commission, Maurice Fox, declared the need for King Street from Cannon Street south to Calhoun Street to return to two-way traffic stating "business vitality is damaged by the street's use as a thoroughfare" not as it was intended as a business street.²¹⁵ In response to such a proposal, Carl Alhert from

²¹² John P. McDermott, "What's New on King, Recent Arrivals Have an Upscale Look," *Charleston Post and Courier*, 4 December 1995.

²¹³ Post, Buckley, Schuh & Jernigan, Inc., *National Trust Design Quality Panel: Uptown District, Charleston, South Carolina*,

²¹⁴ J. Dean Foster and Jim Parker, "Merchants Want Change, But Not Increased Rent," *The Evening Post/Charleston News and Courier*, 19 November 1989, sec. A, p. 1.

²¹⁵ Conley Smith, "2-Way Flow Promoted for Upper King St." *Charleston News and Courier*, 9 November 1989

Charleston's Department of Traffic and Transportation responded much as traffic engineers had in the past and asserted that such an alteration to King Street would require the reworking of too many other streets on the peninsula.²¹⁶ The benefits of slower moving traffic along commercial streets were not yet known or accepted. Even so, Fox's desire to convert King Street to two-way traffic was supported by the majority of merchants on Upper King Street who had been working towards revitalization for many years. In fact, many of the same storeowners that took part in the campaign against one-way traffic in the 1950s also participated in the emergence and popularity of the two-way proposals in the 1990s.

UPPER KING STREET'S TRANSITION FROM ONE-WAY TO TWO-WAY

King and Meeting Street Area: Retail Strategy and Implementation Program, 1992

The major document guiding the revitalization of Upper King Street in the 1990s was a retail strategy and implementation program drafted by ZHA, Inc., Greenburg Development Services, Hollander, Cohan & McBride and the Institute of Public Affairs and Policy Studies at the College of Charleston. Commissioned by Charleston's Local Development Corporation in 1992, the plan cost \$60,000.²¹⁷ By dividing the commercial portion of King Street into several distinct districts, the ZHA plan of 1992 was able to address specific needs of each. The three portions of King Street below Calhoun Street were categorized as an antiques center targeted at upper class residents, a visitor orientated retail center and as a place for traditional goods and convenience needs. Upper King Street's categorization departed from the

²¹⁶ *ibid.*

²¹⁷ "The Keys to King's New Look," *Charleston Post and Courier*, 25 August 1991, sec. B, p. 1.

retail-only trend and was slated to become the culture and entertainment district of the city.²¹⁸

Before offering implementation strategies, ZHA recorded important observations of the current conditions of Upper King Street. Of the many vacant buildings on King Street, 60 percent were in the Upper district.²¹⁹ Furthermore, ZHA estimated that one fourth of first floor square footage in the area was vacant.²²⁰ When the buildings were functioning, they catered primarily to “low- to moderate-income minority residents.” Residents of the area were identified as the major demographic of shoppers, while visitors made up the least compared to the other King Street sub-districts.²²¹

	VACANT BLDG		OFFICE/ MISC		PERSONAL SERVICES		ENTER-TAINMENT		RETAIL		TOTAL BUILDING SPACE	
Lower King	5,025	7%	27,784	38%	1,205	2%	0	0%	40,030	54%	74,044	100%
	2%		16%		4%		0%		8%		8%	
Lower-Middle King	72,729	34%	36,083	17%	4,770	2%	0	0%	100,171	47%	213,753	100%
	31%		21%		16%		0%		20%		23%	
Middle-King	17,558	8%	8,142	4%	13,074	6%	3,300	2%	167,564	80%	209,638	100%
	7%		5%		43%		100%		33%		22%	
Upper-King	142,557	32%	103,476	23%	11,292	3%	0	0%	192,804	43%	450,129	100%
	60%		59%		37%		0%		39%		48%	
TOTALS	237,869	25%	175,485	19%	30,341	3%	3,300	0%	500,569	53%	947,564	100%
	100%		100%		100%		100%		100%		100%	

Table 4.1 Street level uses in buildings on King Street, divided into sections. From ZHA, Inc, *King and Meeting Street Area: Retail Strategy & Implementation Program*, 1992.

²¹⁸ ZHA, Inc, et al., *King and Meeting Street Area: Retail Strategy & Implementation Program* (Charleston, SC., 1992).

²¹⁹ *ibid.*, 19.

²²⁰ *ibid.*, 19.

²²¹ *ibid.*, 19.

The condition of the existing buildings and businesses was found to be suffering from lack of investment from building owners who had little or no incentive to improve their structures. “It appears that many owners on Upper King Street are waiting to sell their buildings when the area improves and they can reap the greatest financial reward.”²²² ZHA exposes the unbalanced spending of public funds in the Lower King districts compared to that above Calhoun Street as the reason for some of the area’s poor qualities.

After this less-than-positive condition survey, ZHA offered their suggestions for revitalization. The strategies addressed all scales of action. While the condition report illustrated the poor physical condition of Upper King, ZHA also indicated that the area suffered for its appearance more than it deserved. The area was rundown, but not as badly as public perception would have one think. Because of this, ZHA included both an advertising and education budget to combat the negative image of Upper King Street. Suggested physical improvements included the renovation of the Francis Marion Hotel, not only as a functioning business, but also as an attractive link between the Middle King sub-district and the Upper sub-district.²²³ Streetscape improvements and incentives for building maintenance were also suggested. The recommendations were as much about actual physical improvements as fighting the perceived image of Upper King Street.

Long term plans for the area were focused on attracting a certain type of retail and/or entertainment venue. Because Upper King had historically been recognized for its cluster of furniture stores, the area had the potential to become a regional

²²² *ibid.*, 25.

²²³ *ibid.*, 33.

center for furnishings, home decorating, and other design goods. If a restaurant was to be opened, it should be ethnic; if a theatre should open, independent movies would be best. This re-branding of the area coined Upper King Street as the “funky district.”²²⁴

King Street Two-Way Operation Analysis: Calhoun Street to Cannon Street, 1993

With a clear goal for the area, new studies offered specific projects to reach that goal. The City of Charleston gave attention to the idea of significantly altering traffic patterns in downtown in September 1993. Wilbur Smith Associates, successor to the Smith-Dibble & Associates firm responsible for the city’s one-way plan in the 1950s, was commissioned to complete the study.²²⁵ The stated goal of the report was to “ascertain the potential impact on traffic operations and parking” on King Street between Cannon Street and Calhoun Streets, if that portion was converted to two-way traffic flow. This change indicates the transition of Upper King Street from the arterial street it had served as since 1956, to the business street it was established as and as such had previously prospered.²²⁶

First, the existing conditions were identified: King Street’s width ranged from 41-45 feet, had at least two lanes of traffic, parking on both sides, and facilitated about 700-800 vehicles per hour between 8:00 am to 5:00 pm.²²⁷ The average travel time for the seven tenths of a mile from Line Street south to Calhoun Street was

²²⁴ "The Keys to King's New Look," *Charleston Post and Courier*, 25 August 1991, sec. B, p. 1.

²²⁵ Robert Behre, "City Studies 2-Way Traffic on King Street," *Charleston Post and Courier*, 16 September 1993, sec. B, p. 1.

²²⁶ Wilbur Smith Associates, *King Street Two-Way Operation Analysis, Calhoun Street to Cannon Street* (Charleston, SC:, 1993), 22.

²²⁷ *ibid.*, 12.

calculated to be about three minutes.²²⁸ A total of 620 on-street parking spaces were counted in the immediate area, as well as four off-street parking structures creating an additional 485 parking spaces.²²⁹ Pedestrian usage of the district was found to have declined significantly since 1979, with only 208 pedestrians identified at major intersections during peak morning and midday hours, a 45 percent decrease from 1979.²³⁰ Other analyses were also completed including transportation and parking needs projection based on major projects in the area such as the renovation of the Francis Marion Hotel, redevelopment of the Old Citadel and Charleston County Library on Hutson Street, and the location of the Visitor Reception and Transportation Center on Ann Street.²³¹ Based on this information it was determined that King Street could be returned to two-way traffic without burdening other streets in the area with increased volume, and the loss in on-street parking spaces would be minimal.

The authors of the report, Wilbur Smith & Associates were aware of the impact their plan would have on the Upper King revitalization. While they reported and took into consideration several physical improvements to the area, they indicated the importance of two-way traffic to the area's continued success. "It is

²²⁸ *ibid.*

²²⁹ In order to combat the loss of on-street parking several parking garages were proposed. The parking garage proposed at 320 King, adjacent to the Francis Marion Hotel was approved by the City of Charleston's Board of Architectural Review in July 1994, and provided more than enough off-street parking to offset the loss of parking along King Street based on the Wilbur Smith plan. In order to be appropriate for the area, especially because of its prominence along Marion Square, the garage had three storefronts at street level and a pergola with vines at the second floor level. *ibid.*, iii.; Robert Behre, "BAR Backs Parking Garage Plan," *Charleston Post and Courier*, 8 July 1994, sec. B, p. 3.; Wilbur Smith Associates, *King Street Two-Way Operation Analysis, Calhoun Street to Cannon Street*, iii.

²³⁰ *ibid.*, 9.

²³¹ *ibid.*, 23.

expected that improvements in traffic circulation, streetscape and parking will be the catalyst necessary to bring about further redevelopment.”²³² The Wilbur Smith plan was approved by City Council in January 1994.²³³ On November 17, 1994, upper King Street from Line Street south to Calhoun Street was converted to two-way traffic.

MAJOR DIRECTIONAL CHANGES OF KING STREET, CHARLESTON, SC			
Date	Upper King	Lower King	Other
Starting in the 1920s	Two-way, Calhoun Street north to Line Street	Southbound, Calhoun Street south to Broad Street	
September 5, 1950	Northbound, Tradd Street north to Line Street		Two-way, north of Line Street
February 30, 1951	Two-way, north of Calhoun Street	Southbound, Calhoun Street South to South Battery Street	
September 5, 1956	Southbound, Columbus Street south to South Battery		Two-way, Cannon Street north to Columbus Street (1958)
November 17, 1994	Two-way, north of Calhoun Street	Southbound, Calhoun Street south to Broad Street	It is unknown when Broad Street south to South Battery Street became two-way.

Table 4.2 Chart detailing the major directional changes of King Street over time.

Early Reactions and Benefits of Two-Way Traffic

While they prefaced their statements by saying it was “too early to tell,” several long-time King Street merchants reported positive results from the traffic

²³² *ibid.*, 23.

²³³ R. Behre, "Two-Way Traffic on King is Studied," *Charleston Post and Courier*, 26 Jan 1994, sec. B, p. 3.

pattern change in December 1994. Joe Sokol, owner of Morris Sokol furniture store, who supported the conversion to two-way traffic, because of the “left turn onto King from Calhoun,” stated, “business has been better than it’s been in quite a few years.”²³⁴ Sensing the potential of Upper King Street, several buildings received renovations, acquired totally new occupants, and benefited from other examples of increased investment in the area. An explosion of property sales and grand openings characterized the time after the conversion.

One of Charleston’s oldest hardware stores, Charleston Paint, took advantage of the increased business along King Street as a result of two-way traffic while also ensuring growth by expanding their line of merchandise. Opened in 1914, the Blaton family has operated Charleston Paint since 1957. The current Blaton owner, Gerry, has worked there since he was fourteen. Blaton describes the business atmosphere as good after Hurricane Hugo in 1989, low in 1992 and 1993, a ten percent increase in 1994 over 1993, and an anticipated profit in 1995 that would allow him to complete renovations to the store at 522 King.²³⁵ In responding to the new two-way traffic pattern he stated, “Contractors who work downtown have been very positive about it...access is so much easier.”²³⁶ A major component of the Upper King revitalization project was the renovation of the Francis Marion Hotel. Serving as the southern anchor of Upper King Street, it can be said that the status of the Francis Marion Hotel has mirrored that of the district. The hotel was renovated in

²³⁴ Laura Willoughby, "King Street Draws Mixed Reviews," *Charleston Post and Courier*, 8 Dec 1994.

²³⁵ John McDermott, "Charleston Paint is Planning for Growth," *Charleston Post and Courier*, 26 Dec 1994.

²³⁶ *ibid.*

1995 for \$12 million while the city spent \$4 million on an adjacent parking garage to aid its success.²³⁷

Another gauge of the success of the one-way to two-way conversion is the drastic increase in property sales that occurred after the conversion. As mentioned previously, Upper King Street was sustained by many long-standing businesses, but there was also a fair amount of real estate speculation occurring. Even long-standing businesses understood that this time was the best time to sell their family properties in order to make a profit. In fact, many businesses benefited from the conversion simply because they could close their struggling business while make a profit on their property.

For example, Short Order, Inc., purchased Robinson's Bicycle shop at the corner of King Street and Ann Street along with 462 and 464, in order to host a new Huddle House restaurant, a low-class diner.²³⁸ Because Huddle House restaurants are typically open 24 hours, it was thought to be a good fit for the needs of students and visitors to the city who may be arriving at night and utilizing the new Visitor's Center.²³⁹ Although, the replacement of a family run bicycle shop with a diner is not fully commendable, it represents a new interest in the area.

²³⁷ Robert Behre, "Try, Try Again, Francis Marion Hotel Begins Another Makeover," *Charleston Post and Courier*, 2 March 1995.

²³⁸ John McDermott, "Huddle House Targets Tourist Trade," *Charleston Post and Courier*, 7 May 1995.

²³⁹ *ibid.*



Figure 4.19 Two-way traffic on Upper King Street near Morris Sokol Furniture Store at 510 King Street. From *Charleston News and Courier*, "Reaction Runs Hot, Cold on King Street Traffic Switch," 7 September 1995.

Reluctant to sell his property and business because of its history, Sonny Goldberg, of Goldberg's Furniture nevertheless ended the presence of his family on King Street which had created the business in 1934.²⁴⁰ Goldberg remembered when Upper King Street was the "only good place to shop" and regularly attracted customers from the entire Charleston region.²⁴¹ While closing his own business, however, he recognized that "Upper King Street is poised to recover from a long financial slump."²⁴² Engel Brothers, another large furniture store, sold their 20,000 square foot building to a developer considering a ten restaurant food-court to serve

²⁴⁰ Elsa McDowell, "'King Street Singer' Offers his Last Refrain," *Charleston Post and Courier*, 10 September 1995.

²⁴¹ *ibid.*

²⁴² *ibid.*

students, thought it was never built.²⁴³ Both Goldberg's and Engels' stores were slated for closing in early 1995, just months after the one-way to two-way conversion. Several new stores and restaurants opened along Upper King Street, catering to a younger clientele provided by the College of Charleston, the Citadel, and the Medical University of South Carolina. Indicating why she and her husband chose to open a trendy clothing store in the district, Tracy Rosenlieb mentioned her desire to be in an up-and-coming area.²⁴⁴

In order to understand the greater context into which the one-way to two-way conversion operated. The *Charleston Post and Courier* sought a development expert from the Urban Land Institute in Washington, D.C., Michael Beyard, to describe the status of retail returning to "Main Street." "I think that people are becoming bored with the malls as they become more educated, as their incomes rise, and as they travel more. They see more, they know more, and they want more. And retailers think they can provide that on city streets."²⁴⁵ The concept of one-way to two-way conversion as a revitalization tool was popularized in the early 1990s, with Charleston's King Street being one of the many downtowns to utilize its method. Because of the historic nature of the street and its diverse uses and clientele, the area benefited from the slower paced, more vibrant street-life. The street's usage as

²⁴³ John McDermott, "Optimism Brewing on King Street," *Charleston Post and Courier*, 24 June 1995.

²⁴⁴ Laura Willoughby, "Upper King Getting the Business," *Charleston Post and Courier*, 11 December 1997.

²⁴⁵ McDermott, *What's New on King, Recent Arrivals Have an Upscale Look*.

a one-way arterial thoroughfare was declared a failed experiment and merchants welcomed the return of congestion.²⁴⁶

The district has been in existence for approximately 200 years and has experienced the majority of national social, economic and transportation trends in America. In contemporary history, specifically the second half of the twentieth century, Upper King Street changed drastically from a successful Jewish retail corridor, to a depressed inner-city arterial, and has reemerged as a “funky” two-way street. As the anecdotal evaluation of the one-way to two-way conversion has maintained its overall accuracy, there has not been a detailed study that compares vacancy rates, quality of businesses, or real estate values along Upper King Street. The next chapter will analyze these factors in order to pinpoint the one-way to two-way conversion of 1994 as a catalyst for Upper King Street’s revitalization.

²⁴⁶ Robert Behre, "Upper King Traffic Two-Way," *Charleston Post and Courier*, 17 Nov 1994, sec. B, p. 1.

CHAPTER FIVE

EVALUATION OF THE 1994 ONE-WAY TO TWO-WAY STREET CONVERSION OF UPPER KING STREET

In researching one-way to two-way conversions for preservation and revitalization, it is clear that the majority of evaluations have been conducted with anecdotal evidence. In order to validate the practice and increase the research base, this thesis includes statistical evidence to support the positive benefits of the conversion on Upper King Street. The first analysis was completed using City Directories over a broad period of time to understand the changes in business typology and to provide vacancy rates for that period in time. A more detailed analysis that requires the collection and refinement of property value data and knowledge of specific statistical processes was also completed.

BUSINESS TYPE AND VACANCY RATES

As stated in Chapter Two, Upper King Street developed as a commercial street just north of Charleston's large shopping district on Lower King Street. The areas developed at different periods, served different clientele, and provided a diversity of goods. In order to understand the historic and contemporary uses of Upper King Street, the City Directories of Charleston have long been utilized. For this analysis, the area of Upper King Street, bounded on the south by Calhoun Street and to the north by Spring Street has been identified and studied. Directory entries for this area in 1910, 1920, 1930, 1940, 1950, 1955, 1961, 1970, 1981, 1990, 1993, 1994, 1996, 1998, 2000, and 2009 have been compiled into a chart.²⁴⁷ Due to the

²⁴⁷ Charleston City Directory. Available at South Carolina Room, Charleston County Public Library, Charleston, South Carolina.

changes in information provided by City Directories over the years, editions differ in information. In general, they offer information on business owner, property use, business name, and business type. By comparing the business along the length of Upper King Street and evolution of use of individual properties over time, important social and economic trends appear.

In 1910, Upper King Street was a diverse district in use and demographics. The majority of properties were commercial with a high number of furniture stores, clothing and shoe stores, pharmacies and some financial service businesses, such as a life insurance agent, a pawn broker, and a qualified state lending bank. As presented in Chapter Two, Upper King Street was a commercial district and residential neighborhood with strong Jewish ties. The names of business owners and occupants, like Karesh, Mazo, and Prystowsky are a clear indication that Jewish merchants occupied the majority of King Street storefronts. Also, while primarily commercial, this year shows the highest number of residences on the street at ten entries. The directory also identifies fourteen “colored” businesses. Ten years later, Upper King Street had only four residential returns and displayed an even broader array of businesses, including furniture stores, pharmacies, bakeries, restaurants, and clothiers. There are also indications that show the area developing as a place for hardware, painting, and other property-based services.

In the 1910 and 1920 City Directories, the popularity and success of the district is apparent by the low vacancy rate. Of the 162 entries returned in 1910, only three were vacant and in the 130 returns of 1920, only two were identified as vacant. This represents a vacancy rate of 1.6 percent and 1.1 percent, respectively. The

1930 Directory, however, shows a vacancy rate of ten percent; of the 189 address entries, nineteen reported as vacant. Corresponding with America's poor economy and the city's own financial slump, this rate represents the increasingly depressed economic times of the 1930s.

The types of businesses found in the 1930 City Directory also begin to diverge from those of the 1910s and 1920s. There are still a large number of furniture stores, shoe stores and clothiers, but there are an increasing number of them with bargain, thrift, and 5¢ & 10¢. These new advertising trends are clearly directed to the common shopper, who may have been experiencing financial difficulties. It is important to note that even with a higher vacancy rate and bargain stores, there were several businesses along Upper King Street that grew. The Jewish run furniture stores of the district opened second storefronts and creating show rooms. Another type of business that appears to be booming because of the times is personal loan offices, pawn shops and other low-end money lenders. To be successful a business must have a market, it is clear by the nature of the business on Upper King Street that the district and to a greater extent the city of Charleston was experiencing the beginning of an economic depression. Upper King Street would continue to be a place for such financial services.

The majority of "cut-rate" stores remained in the 1940 City Directory, but business appears to have returned to Upper King Street. Based on the return of vacant entries, there was a 5.7 percent vacancy rate, nearly half of that calculated for 1930. The district boasted 45 clothiers and shoe stores, 27 groceries and pharmacies and twelve furniture stores. A new form of business that was emerging

are department stores such as Condon's, Read Brother's and Read & Snyder's, as well as bars, restaurants and theaters. The 1940s were a successful time for Upper King Street businesses, helped by the country's positive economic trends. As presented in earlier chapters, the automobile has influenced greatly the growth and health of Upper King Street. It is important to note that in the 1940 Directory, two auto-related businesses are identified; one for auto accessories and the other, "Fort Sumter Chevrolet Co," may have sold automobiles from Upper King Street.

Vacancy rates again decrease in 1950, with a rate of 2.4 percent based on the 1950 City Directory. Business continued as usual with furniture stores, clothing and shoe stores as well as financial services and auto accessory stores increasing. As presented in Chapter Four, the traffic congestion of the Upper and Lower King Street shopping district became problematic in the 1950s. In 1950, the City adopted the one-way street plan created by Smith-Dibble and Associates that was opposed by King Street merchants. In 1951, Lower King Street merchants were able to return their corridor to southbound traffic, but in 1956 Upper King Street was included in a widely opposed one-way street plan by the South Carolina Highway Department. The City Directory for the mid-1950s shows a slight increase in vacancy to 6.8 percent.

As the status of American downtowns decreased because of national suburbanization trends, the central business districts of cities suffered. The one-way streets that once served as high capacity routes into Charleston were no longer needed and created an unattractive shopping atmosphere on Upper King Street. What was once a business street was operated as an arterial street, designed to

facilitate commuter traffic. Based on the City Directories, there was a 4.3 percent vacancy rate in 1961 but a ten percent rate in 1970 and an eleven percent rate in 1981. Along with vacancies, the quality of businesses and services declined. In 1970, there were ten stores with “budget” names and twelve storefronts devoted to personal loans.



Figure 5.1 (Left) Photograph of 515 King Street, at Morris Street, c.1973. From Scrapbook of Charleston, SC Architecture Inventory. Available at South Carolina Room, Charleston County Public Library, Charleston, South Carolina.



Figure 5.2 (Right) Photograph of 492 King Street, George's Loan Co., c. 1973. From Scrapbook of Charleston, SC Architecture Inventory. Available at South Carolina Room, Charleston County Public Library, Charleston, South Carolina.

In 1981 there were fourteen personal finance and loan offices on Upper King Street. Small financial services businesses, like those on Upper King Street, are indicative of check-cashing services, payday loans, etc and are typically targeted at a lower-income clientele. Furthermore, Upper King Street became the location of

Charleston Plasma Corp, a business that paid participants for their blood plasma; a sure sign that the district had reached economic rock bottom.

The decline of Upper King Street as Charleston's second largest retail corridor was exacerbated by the damage done to the entire city in 1989 when Hurricane Hugo struck. Much of the city was damaged by wind and water, especially those buildings already in disrepair. The effect of Hurricane Hugo was physically and economically dramatic in many ways, especially on the city's commercial districts. A vacancy rate of 40 percent in 1990 can be attributed to the steady decline of the area and damage resulting from Hurricane Hugo. It is partially because of the damage of Hurricane Hugo, however, that Upper King Street began to exit from its economic slump. Some buildings along the corridor were demolished while others were repaired and restored.

The attention created by the losses attributed to the storm is partially responsible for a renewed interest in the success of Upper King Street. In 1992, a retail strategy and revitalization program was developed for all of King Street and Meeting Street that included streetscape and storefront improvements along with larger advertising strategies to re-brand the street as an entertainment and commercial district. Following up on the 1992 report, a transportation study was commissioned by the City of Charleston to evaluate the possibility of converting Upper King's one-way traffic to two-way traffic. The findings suggested that traffic could be converted and that doing so would be beneficial to Upper King Street's shopping district. The conversion project was completed in 1994.

VACANCY RATES OF UPPER KING STREET			
YEAR	DIRECTORY ENTRIES	VACANT RETURNS	VACANCY RATE
1910	177	3	1.7%
1920	174	2	1.1%
1930	189	19	10.1%
1940	173	10	5.8%
1950	163	4	2.5%
1955	161	11	6.8%
1961	162	7	4.3%
1970	130	13	10.0%
1981	109	12	11.0%
1990	111	45	40.5%
1993	111	36	32.4%
1994	111	36	32.4%
1996	119	46	38.7%

Table 5.1 Vacancy rates of Upper King Street based on Charleston City Directory entries. Vacancy increased from 1910 to 1980 and peaked in 1990. Rates have decreased or remained the same from 1990 to 1996. Because of the change in format of the City Directories, rates are not available beyond 1996.

The City Directory of 1994 was used to determine a vacancy rate of 32 percent, a slight decrease since 1990. The majority of businesses that were in operation in 1990 were still on Upper King Street in 1994 and it is not until 1996 that the benefits of the conversion were seen based on business type. While there were still over ten loan offices, new businesses can be identified as bookstores, cafes, restaurants, and one design-related storefront. It is this type of investment that emerges from revitalizing downtown districts. By 1998, there were eleven arts and culture based storefronts, including a gallery, stained glass studio and two preservation-based organizations. In 2000, Upper King Street boasted numerous

high-end restaurants, clothing stores, hair salons, and entertainment and cultural organizations.

While Upper King Street still supports several loan offices, low-end clothing stores and some vacant storefronts, the turning point of the street's revitalization can be determined based on the number of successful local, design, and culture-based businesses and organizations along the corridor. After Hurricane Hugo, the city, local merchants, and preservationists turned their attention to the Upper King Street district. By preserving its historic commercial architecture and returning the street to a slower-paced two-way business street, the Upper King Street district was able to emerge from the twentieth century as a revitalized commercial corridor.

SALE PRICE OF COMMERCIAL PROPERTIES

In order to accurately evaluate the effects of the one-way to two-way conversion of Upper King Street real estate data was compiled, studied and analyzed. If the conversion is to be described as successful, property values along the corridor must show an increase from pre-conversion values to post-conversion values. An increase in sale price of properties along King Street will serve to indicate that those businesses in the district were successful, Upper King Street was a desirable area for both businesses and shoppers, and that public investment in the street configuration is associated with increased private investment in the area.

The market value of commercial real estate is directly related to the property's ability to generate income. More specifically, the price investors are willing to pay to own a commercial property depends on the rental income the investors expect to receive from the tenant or tenants who will occupy the property. Rental income is

directly related to characteristics of the property that determine the property's usefulness to tenants. Property characteristics that enhance business profitability lead to higher property value and characteristics that do not enhance tenant profitability lead to lower property value.

This suggests that the market value of a commercial property can be expressed as the combined values of its individual characteristics, and real estate economists frequently use this line of reasoning in property analysis. The best method of understanding the phenomena is a regression analysis using multiple variables. Regression models are universally accepted by real estate researchers as a statistically rigorous method for evaluating the contributions to value from specific property characteristics. Typically, regression models are used to predict the values of dependant variables based on a single independent variable; such as predicting the commercial success of store, in terms of monetary profit, based on the size of the store. However, for this analysis of property values on Upper King Street, we are already aware of the independent variable, in this case, sale price of commercial and want to understand the contribution of dependant variables on the value of sale price, specifically the one-way to two-way street conversion. The research question examined in this thesis using regression analysis is whether or not the conversion of Upper King Street from one-way to two-way traffic, in November 1994, is statistically related to the transaction prices of commercial properties in the area, and if so in what direction.

Data

The data observations used in this study were collected from the Charleston County Assessor's Office with assistance from the Carter Real Estate Center at the College of Charleston in Charleston, South Carolina.²⁴⁸ The data set included all parcels in Charleston County with an Assessor's ID; a total of 181,412 original observations. This data was then narrowed to include properties on streets in the City of Charleston on the peninsula. All types of streets were selected for the study; north-south, east-west, one-way, two-way, residential and commercial, north and south of Calhoun Street.²⁴⁹ This extraction reduced the data set to 6,006 individual observations. Because King Street is primarily commercial and the conversion occurred in 1994, it was decided that commercial properties that sold between 1990 and 1998 would be extracted from the data set.

The Assessor's Office does not calculate total usable square footage for commercial properties, as it does for residential properties. Because it was necessary to determine the cost of commercial property per square foot, it was manually calculated using the available data that was separated into square footage per specific use, per floor. While all of the properties had a general use code of commercial, some had income-generating residential space on the upper stories; this information was included into the total square footage calculation. Square

²⁴⁸ Charleston County Assessor's Office, 101 Meeting Street, Suite 300, Charleston, South Carolina, 29401.

²⁴⁹ Streets included in the peninsula study group are Ann Street, Ashley Avenue, Beaufain Street, Broad Street, Bull Street, Calhoun Street, Cannon Street, Carolina Street, Church Street, Columbus Street, Coming Street, East Bay Street, Gadsen Street, George Street, Hasell Street, John Street, King Street, Legare Street, Line Street, Logan Street, Market Street, Mary Street, Meeting Street, Montagu Street, Morris Street, Pitt Street, Queen Street, Radcliffe Street, Reid Street, Rutledge Avenue, Saint Philip Street, Smith Street, Society Street, Spring Street, Tradd Street, Vanderhorst Street, Warren Street, Wentworth Street and Woolfe Street.

footage of the observations was calculated by multiplying the given square feet by its total number of floors. Because some property observations did not include the needed dimensions, square footage could only be calculated for 121 of the selected properties. This method and the previous methods, resulted in a data set of 121 commercial properties, located on the selected downtown streets, which sold between 1990 and 1998, and for which square footage could be calculated.

After reaching the desired data set, unnecessary variables were removed from the table, such as address of owner, tax district, etc, while other variable were retained and some were added. Retained variables include parcel ID number, parcel address, parcel use code, location (interior or corner lot), street type (one-way or two-way), traffic (high, medium, low), sale price and sale date. The variables introduced specifically for this study included the price per square foot, which was calculated from the sale price and the determined square footage data. Several dummy variables were also created to allow for the consideration of categorical information. These variables are binary, and can only have a return of a “yes/one” or “no/zero.” This method was used to quantify the location of a property on King Street, location of a property north of Calhoun Street, location of a property on a two-way street, location of a property on a corner lot, location of a property on a high-traffic street and sale of a property after the 1994 one-way to two-way street conversion.

Amendments to the data also included the calculation of the sale price as a natural log, which improves the fit of the regression model.²⁵⁰ This was done as

²⁵⁰ S. Rosen, "Hedonic prices and implicit markets", *Journal of Political Economy*, Vol. 82 (1974).

recommended by credited research in the field of real estate analysis, and was overseen by the Director of the Carter Real Estate Center at College of Charleston. The sale price data was also adjusted to reflect the value of the dollar in 1994 using the Consumer Price Index, to remove any effects of general currency value fluctuation. The method of ordinary least squares is employed, which minimizes the sum of the differences between the possible coefficients. Essentially, by referring to the square of the contribution value, the number will be positive for both allowing for a better fit to the regression model. The sign, positive or negative, of the variable coefficient will, however, be identifiable in order to understand the contribution of that variable to the sale price.

In pursuit of a regression model that best replicates reality, it is essential to include as many relevant variables as possible. This allows for the contribution of the one-way to two-way street conversion, as the primary relationship of interest in this study, to be more accurately estimated. Furthermore, the adjustment of the sale price to reflect dollar values of 1994, also removes the effects of general currency fluctuation. Because there are other external factors that affected property values in the study period of 1990 to 1998, all efforts were taken to verify the accuracy of the data.

Regression Model #1 -- Commercial Property on Peninsular Charleston

In order to become familiar with the changes in real estate values for the larger downtown Charleston area, the first analysis completed addressed all commercial properties, sold between 1990 and 1998, located on the selected streets in downtown Charleston. The following explanation of the first analysis also includes

important information about the regression model used, specific processes and methods and other clarifying statements about the accuracy of the model.

The mean sale price of the properties is \$391,013 and the mean price per square foot is \$94.14. Of the 121 properties, 33 percent are located on King Street and 37 percent are located north of Calhoun Street. Furthermore, 58 percent are located on two-way streets, 30 percent are on corner lots, and 67 percent were determined by the Assessor's Office to be located on high traffic streets.

The regression model created for the larger set of 121 commercial properties can be expressed as the following equation:

$$ADJUSTED\ SALE\ PRICE = \beta_0 + \beta_1 (TOTAL\ SQUARE\ FOOTAGE) + \beta_2 (TRANSACTION\ DATE) + \beta_3 (CORNER\ LOT) + \beta_4 (TWO-WAY\ STREET) + \beta_5 (LOCATION\ NORTH\ OF\ CALHOUN\ STREET) + \epsilon.$$

DATA POOL FOR COMMERCIAL PROPERTIES IN DOWNTOWN CHARLESTON SOLD BETWEEN 1990 AND 1998				
Variable	Mean	Std. Dev	Min	Max
Sale Price	\$391,013	\$350,517	\$15,000	\$1,650,000
Log of Sale Price	12.47	0.96	9.61	14.31
Log of Sale Price Adjusted for 1994 Dollar Values	12.42	0.95	9.73	14.23
Total Building Square Footage	5,374	4,621	314	36,953
Location on King Street	0.33	0.47		
Location North of Calhoun Street	0.37	0.48		
Location on a Two-way Street	0.58	0.49		
Location on a Corner Lot	0.30	0.46		
Location on a High-Traffic Street	0.67	0.46		

Table 5.2 Descriptive statistics for data used to analyze the relationship of property factors on the transaction prices of commercial properties that sold in Charleston from 1990 to 1998.

RESULTS OF REGRESSION ANALYSIS OF COMMERCIAL PROPERTIES IN DOWNTOWN CHARLESTON SOLD BETWEEN 1990 AND 1998				
LN Sale Price Adjusted for 1994 Inflation Rates	Coefficient	Standard Error	t-Test	Level of Statistical Significance
North of Calhoun Street	-1.101599	0.1287651	-8.56	100
Total Building Square Footage	0.0000826	0.0000134	6.16	100
Month of Transaction	0.0128763	0.0026866	4.79	100
Location on a Corner Lot	0.0512144	0.1386922	0.37	71
Location on a Two- way Street	0.028061	0.1281018	0.22	82
Number of Observations: 121		R ² = .5476		

Table 5.3 Results of regression analysis of log of inflation adjusted sale price of commercial properties on Charleston peninsula, 1990-1998.

In the regression analysis concerning commercial properties, sold between 1990 and 1998 on any of the selected downtown streets, it was found that, of the variables included in the regression analysis, location, size and year sold were significantly related to sale price. The property characteristic that had the most significant impact was identified through the dummy variable of location north of Calhoun Street. Because the sign of the coefficient is negative, it can be said that a location north of Calhoun Street is associated with a lower property value. Next, the size of the building is associated with the sale price, with larger buildings having a greater value. Lastly, the transaction month variable created a linear adjustment for time over 1990-1998, indicating that properties sold later in that time period sold for

higher amounts. Location of the parcel, as either an interior or corner lots and its location on a one-way or two-way street, were found to not be significant variables.

Model #2 -- King Street Properties

After determining the most significant property characteristics for commercial properties in Charleston, a more specific analysis of King Street properties can be completed. Of the 121 observations available for the peninsula, 41 were located on King Street. The mean sale price between 1990 and 1998 of properties located on King Street is \$362,945 and the average price per square foot is \$62.82. Of the properties, 75 percent were determined by the County Assessor's Office to be on a high traffic portion of King Street and 53 percent were located above Calhoun Street. Because the block position (corner or interior) was determined in the previous regression to be insignificant, it was not included in this analysis.

DATA POOL FOR COMMERCIAL PROPERTIES LOCATED ON KING STREET SOLD BETWEEN 1990 and 1998				
Variable	Mean	Std. Dev	Min	Max
Sale Price	\$362,945	\$298,405	\$45,000	\$1,150,000
Log of Sale Price	12.4327	0.92649	10.7144	13.9553
Log of Sale Price Adjusted for 1994 Dollar Values	12.3799	0.90635	10.744	13.8719
Total Building Square Footage	6,407	4,257	1,066	2,071
Location North of Calhoun Street	0.53	0.50		
Location on a High-Traffic Street	0.75	0.43		

Table 5.4 Descriptive statistics for data used to analyze the relationship of property factors, including the one-way to two-way conversion on the transaction prices of commercial properties on Charleston's King Street that sold from 1990 to 1998.

The dependent variable for the King Street regression model is the natural log of the 1994 inflation-adjusted sale price. The independent variables are the total square footage of the building, location of the property north of Calhoun Street, and the transaction period (1990 through November 17, 1994 or November 17, 1994 through 1998). The regression model for the 41 King Street properties is expressed in the following equation:

$$\text{ADJUSTED SALE PRICE} = \beta_0 + \beta_1 (\text{TOTAL SQUARE FOOTAGE}) + \beta_2 (\text{LOCATION NORTH OF CALHOUN STREET}) + \beta_3 (\text{AFTER THE 1994 CONVERSION}) + \varepsilon.$$

The regression equation was able to account for 70 percent of sale price fluctuation of the 41 commercial properties on King Street. Based on the results of the regression analysis for commercial King Street properties and like the model created for the larger data set, location and size are associated with an enhanced sale price. The most significant property characteristic is the location of a King Street north of Calhoun Street, resulting in a reduced transaction price. Building size is the second most significant characteristic affecting King Street parcels. A greater square footage measurement is associated with an enhancement in sale price. Controlling for location and size characteristics, the affect of the one-way to two-way conversion is also a significant variable. Based on this analysis, with 99 percent certainty, the 1994 one-way to two-way conversion is significantly associated with higher property sale prices of parcel on King Street.

RESULTS OF REGRESSION ANALYSIS OF COMMERCIAL PROPERTIES LOCATED ON KING STREET SOLD BETWEEN 1990 AND 1998				
Semi-Log of Sale Price Adjusted for 1994 Inflation Rates	Coefficient	Standard Error	Ratio	Percent of Certainty
Location North of Calhoun Street	-0.9841235	0.1649539	-5.97	100
Total Building Square Footage	0.0000868	0.0000192	4.52	100
Conversion	0.7204999	0.2079599	3.46	99
Number of Observations: 41		R² = .7025		

Table 5.5 Regression Analysis of Semi-Log Inflation Adjusted Sale Price of Properties on King Street, 1990-1998. The ratio of coefficient to standard error is significant for all three property characteristics, including the one-way to two-way conversion. This result associates the 1994 conversion to an increase in property value.

Results

The price at which commercial properties are sold is contingent on the ability of that property to make a profit. An increased sale price indicates that businesses are able to operate successfully in that location. By assessing the transaction price of commercial properties in peninsular Charleston and more specifically on King Street, it is possible to explain the increase or decrease of price over time by understanding certain property characteristics. It was found that the most significant property characteristic affecting commercial properties in Charleston is the location either north of or south of Calhoun Street. For decades, Calhoun Street has served as the actual and de facto boundary of Charleston proper. Properties north of Calhoun Street are associated with lower sale prices than those south of Calhoun Street. As expected, the size of the property is also a significant characteristics associated with transaction price. Understanding the significance of these factors, it is possible to assess the statistical importance of other characteristics. With building

location and size held at constant, the results indicate that the 1994 one-way to two-way conversion of Upper King Street is associated with a statistically significant increase in property value.

Even so, the data and the regression analysis presented above has identified limitations. While the analysis was completed with the most accurate data and executed correctly and ethically, there is no way to create a fully realistic regression model. The property values of commercial properties in Charleston, were most likely increasing through the time period of 1990 and 1998 due to public and private investments in the downtown area, including the city's streetscape improvement program including the removal of power lines and installation of new blue slate sidewalks, the development of Charleston Place Hotel on Lower King Street, the continued growth of the College of Charleston urban campus, etc. In the period of 1990-1998, the largest project in the area was the conversion of Upper King Street from one-way to two-way traffic flow operation. These limitations are apparent; however, the analysis that has been completed identified a number of important factors that deal exclusively with real estate value, including location (in several different ways), building size, and major public investments in the area.

While one-way to two-way conversions have been implemented throughout the 1990s and today, there has been little empirical evidence evaluating their success. By studying the type of businesses and vacancy rate on Upper King Street, an initial evaluation can be made. It was found that the frequency and quality of business increased after the 1994 one-way to two-way conversion. A more accurate representation of the conversion's significance and success was determined by a

regression analysis of property sale transaction values before and after 1994. With a high level of certainty, the 1994 conversion is consistent with a positive change in commercial property values on King Street.

CHAPTER SIX

CONCLUSION

The field of historic preservation promotes a set of concepts, standards and skills that can be integrated into myriad other professions and fields. In this thesis the fields of transportation planning, specifically traffic calming and methods of economic development, were employed under the direction of public and private interests in order to recapture the past successes of Charleston's major commercial corridor, Upper King Street. In Charleston, a leading city in preservation advocacy and action, these revitalization efforts were aligned with the need to retain the historic use, design, and buildings of the area. In the case of Upper King Street, it was, in fact, transportation planners working to revitalize the business district who were responsible for the preservation of the area.

The connection between preservation and downtown revitalization is clearly illustrated in the National Trust for Historic Preservation's Main Street program. By combining the concepts of economic redevelopment and historic preservation, each can aid the goals of the other. In 2002, the Main Street program promoted the conversion of one-way to two-way streets, effectively declaring the method appropriate for historic streets but also effective enough to be an economic development tool. A transportation planner with 35 years experience, John D. Edwards, wrote for the *Main Street News*,

"While a growing number of communities are opting for two-way traffic in their business districts and there is significant anecdotal evidence that positive changes occur after most street conversions, there has been limited research

on actual retail sales and property value increases. More economic data is needed to support the economic benefits of these conversions.”²⁵¹

This thesis heeded Mr. Edwards’ request and conduct a research study that statistically evaluated the success of the 1994 one-way to two-way conversion. In increasing property values on Upper King Street, the one-way to two-way conversion preserved the historical use, design, architecture, and importance of Charleston’s most recognizable street. By including this level of qualitative and quantitative research, historic preservation can increase its acceptance and influence in the field of real estate development and appraisal.

Additionally, the study of Upper King Street welcomes another profession into the conversation: transportation engineers. For the first part of the twentieth century the plans and actions of transportation engineers were the problem, today, they can be part of the solution for historic American downtowns. In fact, like the case of Upper King Street, it is essential to undo the previous one-way plans that accommodated the needs of motorist above all others, including pedestrians, business vitality, and the street life of downtowns. One-way streets have been shown to increase automobile speed, decrease pedestrian experience, and decrease business storefront visibility. In returning appropriately selected one-way streets back to two-way operation, street restoration, like buildings restoration, can be used to return a corridor to a more appropriate match for its historic use. Beyond typical economic redevelopment methods or historic preservation methods,

²⁵¹ John D. Edwards, *Converting One-Way Streets to Two-Way: Managing Traffic on Main Street*, (Washington, D.C.: The National Trust's Main Street Center, 2002).

successful revitalization projects require a comprehensive approach that includes diverse methods from diverse fields.

This thesis has looked at the recent history of Upper King Street and determined that there was a series of systematic one-way transportation plans that contributed to the decline of the district. An appropriate method to reverse the negative effects includes the re-conversion of one-way streets to two-way operation. In analyzing the affects of a 1994 one-way to two-way conversion, it became apparent that historic research must adapt to new periods of significance, and start to include detailed research of the happenings of the mid and late twentieth century. Urban patterns and buildings in the modern style, and specifically modern commercial buildings, of which Upper King Street has several, are in need of fervent protection and preservation. The research conducted to this thesis and others like it will be the building blocks for historic researchers in the approaching times.

The decline of American downtowns in the mid twentieth century has finally reached that all-important fifty year birthday, the age at which preservationist start to deem a building "historic." This distinction in age is essential to ensure that an appropriate amount of time has passed, and a fresh and hopefully, respectful perspective can be applied. It is now that the effects of America's greatest transportation plans and suburban settlement patterns of the past century can be viewed critically, and the resounding desire is to return downtowns to their previous and prosperous conditions.

APPENDICES

Appendix A

Charleston City Directory Information for Upper King Street

Please see interior binding pocket for a hardcopy, or see separate file named Appendix A for electronic versions of this thesis.

Appendix B

Charleston County Property Data

LINK_ID	PARCEL_ID	ST #	PROPERTY STREET_NAM	LOT LOCATION	ST TYPE	TRAFFIC	SALE PRICE	SALE DATE	SQ FEET	PRICE PER SQ FOOT	LOG PRICE	1994 \$	SOLD AFTER CONVERSION	TWO-WAY	CORNER LOT	HIGH TRAFFIC	ON KING ST	NORTH OF CALHOUN
243193	4600804007	39	SPRING ST	IN	O	H	15000	1/2/1990	2790	5	1.682008605	1.13	0	0	0	1	0	1
244315	4601504117	0	RUTLEDGE AVE	IN	O	H	143617	4/28/1992	3584	40	3.690670539	1.06	0	0	0	1	0	0
240150	4580903186	84	CHURCH ST	IN	T	L	130000	11/9/1992	891	146	4.982945302	1.06	0	1	0	0	0	0
239756	4580901084	122	MEETING ST	CR	T	H	180000	12/31/1992	1914	94	4.543761558	1.06	0	1	1	1	0	0
236747	4570404013	314	KING ST	IN	O	H	338000	1/25/1993	8680.8	39	3.661932205	1.03	0	0	0	1	1	0
243914	4601203011	141	SAINT PHILIP ST	IN	T	M	290000	4/13/1993	7392	39	3.669482589	1.03	0	1	0	0	0	1
244543	4601602049	416	KING ST	IN	O	H	85000	4/15/1993	13794.3	6	1.818395793	1.03	0	0	0	1	1	1
239561	4580503055	86	N MARKET ST	IN	O	H	1050000	4/22/1993	12652	83	4.418730138	1.03	0	0	0	1	0	0
246441	4631504070	698	RUTLEDGE AVE	CR	T	M	115000	4/23/1993	7391	16	2.744669085	1.03	0	1	1	0	0	1
240058	4580903115	104	CHURCH ST	CR	O	M	230000	7/20/1993	4067	57	4.035173682	1.03	0	0	1	0	0	0
243903	4601202092	481	KING ST	IN	O	H	45000	8/20/1993	2268	20	2.987764104	1.03	0	0	0	1	1	1
244528	4601602024	14	VANDERHORST ST	CR	T	M	610000	8/30/1993	9398	65	4.172962056	1.03	0	1	1	0	0	0
246462	4631504096	700	RUTLEDGE AVE	CR	T	M	68000	9/20/1993	1827	37	3.616832428	1.03	0	1	1	0	0	1
241529	4590903104	390	MEETING ST	CR	T	H	296400	9/28/1993	2340	127	4.841558964	1.03	0	1	1	1	0	0
239720	4580901045	61	QUEEN ST	IN	O	M	185000	11/3/1993	3769	49	3.893546111	1.03	0	0	0	0	0	0
240075	4580903132	15	BROAD ST	IN	T	H	425000	11/11/1993	6240	68	4.221108987	1.03	0	1	0	1	0	0
244710	4601603115	124	SMITH ST	CR	T	M	110000	11/19/1993	6834	16	2.778570212	1.03	0	1	1	0	0	0
242396	4600404061	683	KING ST	CR	T	M	45000	11/20/1993	1250	36	3.583518938	1.03	0	1	1	0	1	1
243833	4601202007	532	KING ST	CR	O	H	75000	11/23/1993	6583	11	2.432997545	1.03	0	0	1	1	1	1
239225	4580103094	284	MEETING ST	IN	T	H	415000	12/13/1993	3384	123	4.809220078	1.03	0	1	0	1	0	0
242989	4600802039	232	COMING ST	IN	O	L	38000	3/18/1994	702	54	3.991408035	1	0	0	0	0	0	0
238332	4571204015	103	BROAD ST	CR	T	H	425000	4/18/1994	6781	63	4.137964585	1	0	1	1	1	0	0
236951	4570801010	87	HASELL ST	IN	T	M	330000	4/20/1994	3382	98	4.580625404	1	0	1	0	0	0	0
236965	4570801020	219	MEETING ST	IN	T	H	325000	4/26/1994	2343	139	4.932393023	1	0	1	0	1	0	0
236963	4570801019	221	MEETING ST	IN	T	H	355000	4/26/1994	3432	103	4.638974608	1	0	1	0	1	0	0
244247	4601504053	130	RUTLEDGE AVE	CR	O	M	572000	5/12/1994	2107	271	5.603873857	1	0	0	1	0	0	1
236600	4570402036	343	KING ST	IN	T	H	370000	6/27/1994	5754	64	4.163607741	1	0	1	0	1	1	0
242394	4600404060	687	KING ST	IN	T	L	50000	8/29/1994	1066	47	3.84810968	1	0	1	0	0	1	1
245950	4631201129	1109	KING ST	CR	T	M	110000	9/8/1994	5096	22	3.072024448	1	0	1	1	0	1	1
236956	4570801016	227	MEETING ST	IN	T	H	337500	9/29/1994	2400	141	4.946096773	1	0	1	0	1	0	0
237008	4570802002	137	MARKET ST	IN	O	H	265000	10/25/1994	1821	146	4.980344025	1	0	0	0	1	0	0
236983	4570801052	251	KING ST	IN	O	H	550000	11/29/1994	6192	89	4.486660142	1	1	0	0	1	1	0
239093	4580102016	332	EAST BAY ST	CR	T	H	545000	11/30/1994	4482	122	4.800716419	1	1	1	1	1	0	0
236783	4570404097	309	KING ST	IN	T	H	242157	1/31/1995	5258	46	3.82983555	0.97	1	1	0	1	1	0
243853	4601202028	480	KING ST	IN	O	H	165000	4/21/1995	4437	37	3.615967002	0.97	1	0	0	1	1	1
236768	4570404041	290	KING ST	IN	O	L	305000	5/1/1995	6036.8	51	3.922437706	0.97	1	0	0	0	1	0
244545	4601602050	418	KING ST	IN	O	H	165000	6/2/1995	6738	24	3.198182329	0.97	1	0	0	1	1	1
243216	4600804025	55	SPRING ST	IN	O	H	21300	6/27/1995	314	68	4.217069366	0.97	1	0	0	1	0	1
239950	4580903008	115	CHURCH ST	IN	O	M	230000	7/5/1995	7950	29	3.36490738	0.97	1	0	0	0	0	0
243452	4601104083	131	SPRING ST	CR	O	H	82150	7/12/1995	5784	14	2.65345136	0.97	1	0	1	1	0	1

243896	4601202073	563	KING ST	IN	O	H	172500	7/28/1995	11997	14	2.665740618	0.97	1	0	0	1	1	1
240063	4580903123	33	BROAD ST	IN	T	H	590000	8/7/1995	5124.6	115	4.746070064	0.97	1	1	0	1	0	0
239668	4580901009	143	EAST BAY ST	IN	T	H	230000	8/30/1995	8047.2	29	3.352755104	0.97	1	1	0	1	0	0
236597	4570402032	351	KING ST	IN	T	H	341000	12/4/1995	5094	67	4.203819101	0.97	1	1	0	1	1	0
239577	4580503076	225	EAST BAY ST	CR	T	H	1450000	12/20/1995	2024	716	6.574243084	0.97	1	1	1	1	0	0
236773	4570404046	278	KING ST	IN	O	H	550000	12/28/1995	5460	101	4.612469488	0.97	1	0	0	1	1	0
239669	4580901009	143	EAST BAY ST	IN	T	H	282500	2/8/1996	8047.2	35	3.558354346	0.94	1	1	0	1	0	0
239640	4580504012	16	MARKET ST	IN	O	M	175000	2/8/1996	2163	81	4.393289827	0.94	1	0	0	0	0	0
239564	4580503058	96	N MARKET ST	IN	O	H	410000	2/15/1996	2038.4	201	5.303991973	0.94	1	0	0	1	0	0
243088	4600803073	103	SPRING ST	IN	O	H	50000	3/14/1996	3844	13	2.565509514	0.94	1	0	0	1	0	1
236781	4570404092	301	KING ST	IN	O	H	525000	3/25/1996	12004	44	3.778158335	0.94	1	0	0	1	1	0
240956	4590503072	478	MEETING ST	IN	T	H	275000	4/17/1996	2305	119	4.781690421	0.94	1	1	0	1	0	1
244537	4601602038	1	KING ST	CR	O	H	145000	7/8/1996	8709	17	2.812376769	0.94	1	0	1	1	1	0
243170	4600803174	76	SPRING ST	CR	O	H	165000	7/10/1996	2992	55	4.010003414	0.94	1	0	1	1	0	1
239994	4580903053	51	BROAD ST	IN	T	H	775000	7/26/1996	6636.4	117	4.760293382	0.94	1	1	0	1	0	0
242280	4600401089	602	RUTLEDGE AVE	CR	T	L	95000	8/19/1996	3620	26	3.267402866	0.94	1	1	1	0	0	1
239161	4580103048	61	SOCIETY ST	IN	O	M	252550	8/19/1996	5266	48	3.870338188	0.94	1	0	0	0	0	0
239662	4580901001	0	EAST BAY ST	IN	O	L	230000	8/22/1996	3934	58	4.068422589	0.94	1	0	0	0	0	0
242255	4600401037	582	RUTLEDGE AVE	CR	O	M	120000	8/28/1996	1294	93	4.529753547	0.94	1	0	1	0	0	1
241287	4590901042	450	MEETING ST	IN	T	H	285000	10/15/1996	5202	55	4.003446013	0.94	1	1	0	1	0	1
245956	4631201136	1107	KING ST	CR	T	M	60000	11/4/1996	4863	12	2.512689031	0.94	1	1	1	0	1	1
239368	4580501031	28	HASELL ST	CR	T	H	310000	12/5/1996	5805.6	53	3.977749328	0.94	1	1	1	1	0	0
244546	4601602050	418	KING ST	IN	O	H	203000	12/9/1996	6738	30	3.405442834	0.94	1	0	0	1	1	1
236593	4570402027	369	KING ST	IN	T	H	585000	12/13/1996	6549	89	4.492299481	0.94	1	1	0	1	1	0
237283	4570804027	181	KING ST	IN	O	H	400000	12/30/1996	5814	69	4.231195745	0.94	1	0	0	1	1	0
239138	4580103029	299	EAST BAY ST	CR	T	H	330000	2/26/1997	2080	159	5.066724761	0.92	1	1	1	1	0	0
242150	4600303007	627	RUTLEDGE AVE	CR	T	H	325000	2/26/1997	3864.6	84	4.431966999	0.92	1	1	1	1	0	1
237354	4570804087	68	QUEEN ST	IN	O	M	250000	5/5/1997	1722	145	4.977974512	0.92	1	0	0	0	0	0
246416	4631504037	658	RUTLEDGE AVE	CR	T	H	147125	5/22/1997	2350	63	4.136867237	0.92	1	1	1	1	0	1
236598	4570402033	349	KING ST	IN	T	H	550000	6/10/1997	3418	161	5.080862694	0.92	1	1	0	1	1	0
240231	4580904008	102	EAST BAY ST	CR	T	H	1650000	6/19/1997	2340	705	6.558379638	0.92	1	1	1	1	0	0
245986	4631202018	747	MEETING ST	IN	T	H	125000	7/2/1997	6879	18	2.899840445	0.92	1	1	0	1	0	1
243895	4601202071	567	KING ST	IN	O	L	253000	7/15/1997	4237	60	4.089534017	0.92	1	0	0	0	1	1
236784	4570404097	309	KING ST	IN	T	H	495000	7/21/1997	5100.8	97	4.575160372	0.92	1	1	0	1	1	0
236788	4570404105	291	KING ST	IN	T	H	1150000	7/31/1997	20712	56	4.016803979	0.92	1	1	0	1	1	0
235863	4570302020	51	PITT ST	IN	T	L	300000	8/7/1997	3771	80	4.376442256	0.92	1	1	0	0	0	0
243239	4600804050	556	KING ST	CR	O	H	130000	8/18/1997	3998	33	3.481740214	0.92	1	0	1	1	1	1
241104	4590504095	80	COLUMBUS ST	CR	T	M	35000	8/22/1997	2038	17	2.843379127	0.92	1	1	1	0	0	1
239226	4580103094	284	MEETING ST	IN	T	H	575000	9/2/1997	3384	170	5.135311599	0.92	1	1	0	1	0	0
243915	4601203011	141	SAINT PHILIP ST	IN	T	M	391250	9/3/1997	8121	48	3.874893443	0.92	1	1	0	0	0	1
240069	4580903129	21	BROAD ST	IN	T	H	430000	9/12/1997	4774	90	4.500600681	0.92	1	1	0	1	0	0
243884	4601202062	180	SAINT PHILIP ST	IN	T	M	37500	10/31/1997	1104	34	3.525400985	0.92	1	1	0	0	0	0
242069	4600302007	733	KING ST	IN	T	M	114000	11/19/1997	2367	48	3.874575118	0.92	1	1	0	0	1	1
240080	4580903135	9	BROAD ST	IN	T	H	175000	12/18/1997	1536	114	4.735604339	0.92	1	1	0	1	0	0
240081	4580903136	7	BROAD ST	IN	T	H	170000	12/18/1997	1848	92	4.521694464	0.92	1	1	0	1	0	0
241532	4590903105	394	MEETING ST	IN	T	H	317000	12/29/1997	10218	31	3.434750903	0.92	1	1	0	1	0	0

237002	4570801070	77	WENTWORTH ST	IN	O	H	450000	1/15/1998	15432	29	3.372804307	0.91	1	0	0	1	0	0
246315	4631501045	759	RUTLEDGE AVE	CR	T	M	96000	2/3/1998	2153	45	3.797485973	0.91	1	1	1	0	0	1
237289	4570804035	165	KING ST	IN	O	H	639000	2/6/1998	3951	162	5.085935743	0.91	1	0	0	1	1	0
236786	4570404103	295	KING ST	IN	T	H	500000	2/13/1998	4748	105	4.656884622	0.91	1	1	0	1	1	0
235858	4570302011	231	CALHOUN ST	IN	T	H	215000	2/26/1998	1700	126	4.840009777	0.91	1	1	0	1	0	0
243279	4601101018	220	SPRING ST	IN	O	H	655803	3/6/1998	2200	298	5.697403079	0.91	1	0	0	1	0	1
237034	4570802036	195	KING ST	IN	O	H	577500	3/13/1998	2200	263	5.570251082	0.91	1	0	0	1	1	0
239087	4580102012	321	EAST BAY ST	CR	T	H	700000	3/31/1998	10530	66	4.196852009	0.91	1	1	1	1	0	0
241530	4590903104	390	MEETING ST	CR	T	H	397500	4/14/1998	2340	170	5.135044005	0.91	1	1	1	1	0	0
239670	4580901009	143	EAST BAY ST	IN	T	H	639000	4/15/1998	8047.2	79	4.37458025	0.91	1	1	0	1	0	0
374275	4580903115	104	CHURCH ST	CR	O	M	468000	4/24/1998	4067	115	4.745562669	0.91	1	0	1	0	0	0
428375	4600803187	106	SPRING ST	IN	O	H	187000	4/28/1998	10860	17	2.846022302	0.91	1	0	0	1	0	1
374175	4580903084	100	CHURCH ST	CR	T	L	585000	5/1/1998	5530	106	4.661424032	0.91	1	1	1	0	0	0
382375	4631202018	747	MEETING ST	IN	T	H	131387	5/4/1998	6879	19	2.949673874	0.91	1	1	0	1	0	1
449675	4570404046	278	KING ST	IN	O	H	801100	5/15/1998	5460	147	4.988536993	0.91	1	0	0	1	1	0
458275	4590503074	498	MEETING ST	IN	T	H	65000	5/20/1998	3304	20	2.979253414	0.91	1	1	0	1	0	1
469875	4601202088	493	KING ST	IN	O	H	1025000	5/26/1998	17590	58	4.065117333	0.91	1	0	0	1	1	1
526976	4590503103	487	MEETING ST	CR	T	M	91500	6/5/1998	2334	39	3.668755438	0.91	1	1	1	0	0	1
546375	4601201049	200	COMING ST	IN	T	H	1500000	6/5/1998	36953	41	3.703573552	0.91	1	1	0	1	0	1
564875	4580901073	38	QUEEN ST	IN	O	M	550000	6/15/1998	2296	240	5.4787498	0.91	1	0	0	0	0	0
600475	4601602045	415	KING ST	IN	O	H	500000	6/23/1998	5686	88	4.476601085	0.91	1	0	0	1	1	1
622493	4570802001	139	MARKET ST	IN	O	M	925000	6/30/1998	4550	203	5.314666505	0.91	1	0	0	0	0	0
629379	4570402029	363	KING ST	IN	T	H	1150000	7/8/1998	14933	77	4.343943692	0.91	1	1	0	1	1	1
640017	4570404049	56	WENTWORTH ST	IN	O	H	550000	7/17/1998	3500	157	5.05715531	0.91	1	0	0	1	0	0
724891	4591302015	0	EAST BAY ST	CR	T	H	820000	7/20/1998	5049	162	5.090114136	0.91	1	1	1	1	0	0
662818	4580903074	91	CHURCH ST	IN	T	L	1420000	7/31/1998	8451.1	168	5.12411554	0.91	1	1	0	0	0	0
664923	4631201127	1117	KING ST	CR	T	M	67000	7/31/1998	1830	37	3.600376653	0.91	1	1	1	0	1	1
724893	4601202089	489	KING ST	IN	O	H	230000	8/4/1998	7284	32	3.452399147	0.91	1	0	0	1	1	1
712345	4600404027	634	KING ST	IN	T	M	125000	9/28/1998	4609.5	27	3.300194346	0.91	1	1	0	0	1	1
712346	4600404028	640	KING ST	IN	T	M	125000	9/28/1998	2694	46	3.837286659	0.91	1	1	0	0	1	1
715025	4570402027	369	KING ST	IN	T	H	730000	10/1/1998	7285	100	4.607227094	0.91	1	1	0	1	1	0
717780	4580902027	180	EAST BAY ST	IN	T	H	1500000	10/15/1998	9687.5	155	5.042383992	0.91	1	1	0	1	0	0
718517	4570302002	247	CALHOUN ST	CR	T	H	1180000	10/16/1998	10005.4	118	4.77014477	0.91	1	1	1	1	0	0
723892	4600704195	280	ASHLEY AVE	CR	O	M	110000	10/27/1998	2546	43	3.765956866	0.91	1	0	1	0	0	0
725777	4601202029	478	KING ST	IN	O	H	192500	10/30/1998	4242	45	3.815061298	0.91	1	0	0	1	1	1
737872	4580903186	84	CHURCH ST	IN	T	L	335000	12/3/1998	891	376	5.929541383	0.91	1	1	0	0	0	0
752777	4601203008	147	SAINT PHILIP ST	IN	T	M	185000	12/29/1998	2719.2	68	4.220018106	0.91	1	1	0	0	0	1
744418	4570801015	229	MEETING ST	IN	T	H	800000	12/29/1998	3412	234	5.457313098	0.91	1	1	0	1	0	0

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