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Completing City Streets

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Walden University 2020

Abstract

Completing City Streets

by

Christopher Alan Phillips

MA, Kent State University, 2016

BS, Tennessee Technological University, 2013

Professional Administrative Study Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Public Administration

Walden University

May 2020

Abstract

As a city in Tennessee continues to expand and the population continues to grow, citizens are concerned with safety and accessibility for pedestrians and cyclists. In this study, citizen comments and concerns for the city planning department were collected. A case study design was used for this study because it allowed for a focus on one setting and gathering data from a specific set of key stakeholders in the community. Data represented the thoughts and experiences of community pedestrians and were collected through surveys and 1-on-1, semistructured interviews with select participants that reflect the citizens of this community. The survey asked citizens their thoughts on sidewalk coverage, pedestrian accessibility, safety concerns, and how concerned they felt the city administration was about these topics. The data indicated that the citizens believe the city lacked adequate sidewalk coverage, but they also understood the administration was doing the best it can with the resources it has. The community was very concerned with the issue of urban sprawl, and they were divided on the economic impact pedestriancentric infrastructure could have on the city. The findings of this case study have the potential to advance communication on pedestrian safety between city administrators and citizens. The results of this study could further advance the city's pedestrian safety projects throughout the city by shedding light on multiple factors, such as urban sprawl, economic benefits, and competing priorities.

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Dedication

To my wife, Tiffany. Thank you for taking this journey with me. To my mother, Beverly, thank you for always pushing me to continue. To my brother, Chadwick, thanks for always setting the example and the standard for me. To my dad, Billy, this one is for you. Thanks for showing me how to enjoy life to the very end.

Acknowledgments

To all the faculty who have given their time and attention, Thank You. From my Undergraduate degree at Tennessee Tech to my master's degree from Kent State, and now to the amazing educators at Walden, I cannot thank you enough. To Dr. Larkin, Dr. Gordon, and Dr. Settles, thank you all for your assistance and direction. From your time at the residencies to your emails and words of encouragement, you have made an impact.

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Section 1: Introduction to the Problem

Sustainable Development

Municipalities are now considering sustainable development as a viable method of improvement. As Dernbeck (2001) wrote,

sustainable development is a new way of approaching the environment and its relationship to everything else we care about as a society...It is not about more economic growth or less economic growth, but about growth in things we value, including jobs, productivity, and profits, and reduction or elimination of things we do not value, such as waste, pollution, and poverty. (p. 10003)

As municipal governments begin to consider how to enrich the lives of all residents, pedestrians and cyclists are obtaining the chance to have safe and equal access to all areas of the community through Complete Street initiatives. Holzer and Lockrem (2011) noted that the goals of Complete Streets "are transposed. Rather than considering automobile mobility as the primary goal, the Complete Streets model seeks to accommodate the most vulnerable users first: pedestrians, bicyclists, transit users, and finally automobiles" (p. 31). One important aspect of Complete Streets initiatives is adequate sidewalk coverage. Arroyo, Mars, and Ruiz (2018) wrote, "the reduction in car use and the increase in walking and cycling contribute to diminishing pollution, improving health of people, and taking greater advantage of urban space for green areas and pedestrian paths" (p. 1) Sidewalk coverage not only provides a sense of safety and security for pedestrians and cyclists, but the coverage can also improve the health and appeal of the community. Without suitable sidewalk coverage, pedestrians and cyclists are at risk when walking on

busy roads and streets. Osama and Sayed (2017) wrote, "pedestrians are regarded as vulnerable road users due to their fragility and slow movement, which make them a higher crash risk than other road users" (p. 117). Municipal governments should provide sidewalk coverage that allows safe routes of travel to pedestrians and cyclists as well as allows pedestrians and cyclists equal access to the entire community. When municipalities provide full sidewalk coverage, each member of the community has access to the amenities and services the area provides.

Sustainable development can enhance the livability of our communities. Polloni (2018) wrote that livability refers to "community quality of life as experienced by the people who live, work and recreate there" (p. 18). Increasing livability increases the quality-of-life of every member of the community. This increase in livability can improve the economic, social, and environmental aspects of our neighborhoods and populations.

How the City is Facing the Challenge of Sustainable Development

The city's website praises itself as a top 40 affordable micropolitan area with a world-renowned university and a state-of-the-art medical center. A publication listing their 100 best places to retire in the United States recently named the city as a top destination for retirement. With these accolades and awards, the city is growing and expanding: The population is increasing, and new residential neighborhoods are being constructed throughout the municipality. As new residents consider establishing residency in the city, the ability of new neighborhoods to provide safety and ease of access to the rest of the city will be a factor for some people to consider. With the lack of

sidewalk coverage throughout community neighborhoods, pedestrians and cyclists cannot safely navigate the city.

As new neighborhoods are built in the expanding boundaries of the city, citizens who do not travel by automobile are finding longer distances and fewer sidewalks to safely navigate the city. MacLeod, Sanders, Griffin, Cooper, and Ragland (n.d.) stated that a Complete Streets initiative can provide a community with a healthy and safe alternative to moving throughout the city. When new residential areas are constructed, sidewalks provide inhabitants with a safe alternative to crossing the city by automobile. As Yu, Xu, Towne, and Iman (2018) noted, "investments in transportation infrastructure in promoting walking and biking have reshaped community environments, and Complete Streets have grown in the past decade from a concept to a national movement" (p. 177). As communities and citizens look to sustainable development, preserving the environment, and improving both personal and overall community health, Complete Streets initiatives may allow members to feel safe and have ease of access throughout the city. Dodds (2017) reported that "walking continues to be dangerous on too many streets in America. Between 2005 and 2014, a total of 46,149 people was struck and killed by cars while walking" (p. 16).

Through construction policies and government oversight, Complete Streets initiatives can improve sidewalk coverage throughout the community. According to the city's codes department, the city issued 221 new residential building permits and 43 new commercial building permits between January 2018 and November 2018. This represented new apartment complexes, houses, townhouses, and condominiums that are

springing up throughout the city limits. The U.S. Census Bureau (2018) showed an increase of over 1,000 new residents between 2016 and 2017, and this population expansion seems to be continuing between 2017 and 2018. Appendix B provides a view of the current sidewalk coverage within the city limits. According to the city's public works department, new sidewalk construction projects were scheduled for 2019, including sidewalk coverage expansion and repairs throughout the city limits, which highlighted the expansion of the city's population and boundaries. These increases in people and dwellings offered the municipal government ample opportunity to promote livability throughout the city.

The data collected through this professional administrative study can provide useful information to other growing municipalities. Cities with similar population demographics could investigate the collected narratives and build a model of questions to pose to the citizens of their communities. They could also watch to see what progress was made by the city planning department and study the methods that provided the most effective and efficient solutions to the issue of sidewalk coverage.

In this study, I explored and recorded the experiences of community residents with Complete Streets initiatives and their perceptions of safety within their community. According to Hui, Saxe, Roorda, Miller, and Hess (2018), "Complete Streets are broadly defined as streets that can safely accommodate all road users, regardless of mode of travel or ability" (p. 73). Using a qualitative approach, I investigated community members' experiences with sidewalk safety and safety within their neighborhoods due to sidewalk coverage, traffic calming measures, and other Complete Streets aspects. Using

a case study design, I conducted a two-step data collection process of a general survey and semistructured interviews with residents throughout the community to document and categorize their experiences. The survey and interview questions that were asked of participating citizens are found in the Appendices B and C. From the survey responses, I selected participants for in-depth, semistructured interviews to share their comments and opinions on the issue of sidewalk coverage and safety. These data were used to provide recommendations to the city planning department on the impact Complete Streets initiatives can have on the safety and security of neighborhood residents within the city. Partnering with the city planning department provided access to sidewalk coverage data throughout the community. The findings of the study provided information for the partnering organization regarding citizens' perceptions and thoughts on what measures the city's governing body could implement to meet their concerns.

The data collected for this professional administrative study has a wide impact on the area of public administration by providing an example of how municipal government administrators can interact with their community. By providing citizens an opportunity to give their thoughts and opinions on public safety and the administration's efforts to protect the community, this study offered an example of building and strengthening a working relationship between community members and local government officials. The potential for positive social change from this professional administrative study is profound. This study helped provide an opening to greater communication between the citizens and the city administration. By listening to the citizen's concerns, the administration has an opportunity to strengthen their relationship with members of the

community. The findings of this study provided the city with a greater understanding of the areas throughout the city that needed more attention than others, according to the people who live and work in the city.

As municipalities continue to promote sustainable development and communities look to pedestrian-friendly construction, municipal governments must consider sidewalk coverage and safety as important areas of study. This community was growing and as the city expanded, pedestrians and cyclists needed safe routes to commute throughout the city. By surveying community residents for this study, I gathered the community's thoughts and opinions on sidewalk coverage and safety as well as on how well the city administration planned for this issue. Data from previous studies was gathered and analyzed to prepare this study's conceptual approach.

Section 2: Conceptual Approach and Background

Complete Streets and Livability Background

As the city continues to develop, pedestrians and cyclists were concerned about sidewalk coverage and safety. Members of the community are concerned whether or not the city administration will provide adequate sidewalk coverage for safe and equal access throughout the city. In this study, I surveyed the citizens of the local community to gather their thoughts on and experiences with this issue. Building on the results of previous research, a city in Tennessee was the setting and focus of this case study. In previous studies, researchers have examined Complete Streets initiatives and livability, investigated such issues as the effects of sidewalk coverage on community members across the globe, pedestrian and cyclist safety, and policy changes and implementations involving Complete Streets initiatives.

As municipalities begin to develop planning strategies that incorporate the environment and focus on people first, rather than automobiles, quality of life for all residents becomes a central issue for municipal administrations. Liu and Han (2017) reported, "an increasing number of cities have targeted the improvement of livability as an important development goal in their long-term planning, and their inhabitants want to know whether the livability has been truly improved according to their implemented policies" (p. 2). A Complete Streets initiative is one such strategy that city planners can consider. Hui et al. (2017) noted, "the Complete Streets movement emerged to expand the focus of transportation design from streets from automobility to the accommodation of all modes of travel" (p. 73). As cities look to combat urban sprawl and damage to the

environment, the appeal of providing safe travel routes for pedestrians and cyclists offers municipal administrators the opportunity to expand access throughout the city to all residents and decrease the dependence on automobiles, which can alleviate air and noise pollution along with traffic congestion. Arroyo et al. (2018) wrote, the "reduction of car use and the increase of walking and cycling contribute to diminishing pollution, improving health of people, and taking greater advantage of urban space for green areas and pedestrian paths" (p. 1). Hattam (2006) found that greener cities save money, attract new businesses, and improve overall health for community residents. To see these goals achieved, municipalities must begin to plan communities with pedestrians and cyclists, not automobiles, in mind.

Multiple studies have concluded that walking, as a means of transportation, is good both for the individual and the community. Dodds (2017) noted that for members of a community who travel on foot or by bicycle, how streets are designed, and layout of the community are vitally important to safety, mobility, and the desire to travel. Planners considering the built environment can create neighborhoods that offer safe travel and expanded access throughout the city for pedestrians and cyclists. Yu (2015) opined that walkable neighborhoods must provide safe alternatives to automobiles, stating that if they do not provide a level of safety for pedestrians and cyclists, encouraging people to use alternative modes of transportation can be dangerous and increase death and injuries for vulnerable commuters. Municipalities must provide safe alternative travel options to encourage citizens to take advantage of these options. MacLeod et al (2018) wrote, "the built environment impacts whether and how much people walk. People who live in

walkable neighborhoods walk more than those who do not" (p. 16). Key safety measures include adequate sidewalk coverage; bicycle lanes; suitable lighting for all travel routes; and traffic calming measures, such as speed limit decreases and designated crosswalks at street intersections.

Adequate sidewalk coverage allows pedestrians and cyclists safe travel routes throughout a community. As municipalities provide increased and suitable sidewalk coverage, pedestrians and cyclists can obtain equal access to the community and feel safe and secure while traveling. Jones, Kelly, Rodriguez, and Aytur (2010) conducted a study to understand pedestrian master plans, designed to implement pedestrian and cyclist concerns into current city planning policies, that municipalities are implementing throughout the country. The researchers found that safety was the most important factor in creating and executing pedestrian master plans.

Barajas, Beck, Cooper, Lopez, and Reynosa (2019) found that city administrations who offered workshops to pedestrians and cyclists that gather the community together can "identify community needs, develop partnerships between stakeholders, and change perceptions of safety in historically disadvantaged communities" (p. 183). Partnerships between the local administration and members of the community can help to raise awareness and create efficient and effective programs to protect the community.

By reviewing previous research on pedestrian safety and equal access to all modes of transportation, in this study I applied these methods and research questions locally to a city in Tennessee. Past researchers highlighted the importance of pedestrian safety and

municipalities providing adequate sidewalk coverage and safety measures. Did residents of the city's neighborhoods feel safe when walking or cycling? Did they feel that the city council has done enough to provide them access to the city and security to travel? These questions were central to this study.

Approach to Professional Administrative Study

In this professional administrative study, I employed a qualitative case study approach to focus on a city in Tennessee. A qualitative study was selected as the study method to provide data on community residents' experiences with Complete Streets initiatives. The city had recently begun studying the issue of pedestrian safety and sidewalk coverage, and a town hall meeting was held on April 25, 2019 to allow citizens the opportunity to hear the planning department's strategy for making the city's streets safer for pedestrians and cyclists. Planning department officials proposed improvement projects to sidewalks throughout the city over the past year.

In this professional administrative study, I provided local community members with a survey to rate how they agreed with statements regarding sidewalk coverage and safety and incorporated a semistructured interview process that allowed citizens an opportunity to write down personal thoughts and comments without the possibility of framed questions. These collected data were used to offer recommendations to the planning department about where the need was greatest for improvement and new construction.

The central research question for this study was: How do current residents of the city perceive the administration's ability to provide safe and adequate pedestrian and

cyclist means of travel throughout their community? I also asked residents about aspects of Complete Streets initiatives, including sidewalk coverage throughout the city and traffic calming measures, such as crosswalks and speed limits.

As a member of the local community and as a former intern with the city administration, I chose to study this issue to strengthen the relationship between administration and the community. As an intern, I worked closely with the planning department in conducting sidewalk and parking surveys throughout the city. The surveys looked to understand pedestrian traffic at varying times throughout the workweek and identify areas of the community in which sidewalks needed improvement or areas that did not have sidewalk coverage for pedestrians but needed it for safe commuting throughout the city. This endeavor sparked my interest in the issue of sidewalk coverage and safety. As the researcher in this study, I worked with the planning department, including the Geographic Information Systems manager and senior planner, to analyze the current public data displayed by the city on the official city website. I also gathered data from members of the community on the areas of the city that need improvement or sidewalks constructed. According to community members, the desire to feel safe and have access to the entire city was of great concern.

I avoided the following potential biases: confirming there was a problem, assuming people would state there is a need for more sidewalks and safety measures, and framing questions to elicit a positive response. I had to have an open mind when conducting the survey and interviews. Some residents did not see any need for more sidewalks. Some pedestrians already felt safety was a top priority for the city

administration. Other residents did not want to pay higher taxes to cover the costs of new and improved sidewalks, and these feelings affected how they responded. I had to be mindful to remove my thoughts concerning the problem areas of this study. I also had to remember that not everyone thought there was a need for more sidewalks and safer pedestrian routes. I took care of how I asked questions and in what order questions were asked so that I did not lead any participant to a premeditated response.

In this professional administrative study, I examined the concept of livability. Livability, as Liu and Han (2017) noted is, "a notion that is generally understood to encompass those elements of home, neighborhood, and metropolitan area that contribute to safety, economic opportunities and welfare, health, convenience, mobility, and recreation" (p. 2). Complete Streets initiatives focus on the quality of living for pedestrians and cyclists as well as the impact city planning has on the environment. Shu, Quiros, Wang, and Zhu (2014) stated that

one purpose of adopting the complete street concept is to provide people the option of different transportation choices for these short-distance trips. By providing a safer and more scenic street environment, complete streets are thought to encourage walking and bicycling, and therefore may reduce vehicle miles traveled and bring environmental benefits. (p. 388)

Through conducting this professional administrative study, I was able to provide data and recommendations on how the city can better deliver safe and environmentally friendly streets that offer equal access throughout the city to all residents.

With the gathered knowledge from previous research, the data collection for the study can begin. Building on previous studies and using methods described in the previous research, it was time to collect data from members of the community.

Section 3: Data Collection Process and Analysis

Data Collection Process

As previous research has shown, the idea of sidewalk safety and sustainable development are becoming more prominent in municipal government. The local city also understood the importance of pedestrian safety and city access. In this professional administrative study, I gathered data to fill the gap in knowledge and inform the city's pursuit of a government-community partnership to find solutions to the sidewalk access issue. As the city looked to collect information on pedestrian safety and sidewalk coverage, the findings of this study added one more source for the planning department to consider. Using a two-step process of collecting results from a general survey and gathering direct narratives from a selected group of citizens, in this study I presented important data from the community and feedback that the planning department should consider in finding solutions to sidewalk coverage and pedestrian safety throughout the city.

The purpose of this study was to gather personal narratives and opinions from citizens of the local community. These data provided the planning department with first-hand knowledge of the problem areas within the community. The study comprised a Likert-scale survey that asked residents to provide responses to how he or she perceived the level of concern the city administration had for pedestrians and cyclists and to what degree the administration was working towards keeping all citizens safe and allowing for complete access to the city to all citizens. Along with the survey, I asked selected residents to participate in a semistructured interview to provide a deeper analysis of their

responses to the survey. The responses from the interviews were recorded, transcribed, analyzed, and coded to provide first-hand accounts of pedestrian and cyclist safety concerns and comments. The narratives collected from the community highlighted the fact that some citizens believed certain areas of the city were in dire need of repair or sidewalk construction. These narratives also indicated that some residents are not concerned about sidewalk coverage and had no desire to pay for any new sidewalk construction or the repair of existing sidewalks.

The survey responses and personal narratives gathered in this study were coded and grouped for content analysis. Through analyzing the survey responses and text from the interviews, I created categories and grouped patterns that pertained to how residents feel about the city administration's efforts to provide equal access to pedestrians and cyclists as well as safe routes of travel throughout the city. The patterns that emerged from the content were used to address the central research question. This collection of personal narratives from citizens aligned with the qualitative case study approach.

In this study, I also analyzed the current data from the city planning department concerning neighborhood planning, construction projects, and sidewalk coverage areas. The planning department provided data and maps on current sidewalk coverage, planned sidewalk projects, and permit data from the previous year showing new construction and growth throughout the city. These data were available for public viewing on the city's website. This city-wide growth emphasized the need for new sidewalks to allow pedestrians safe and equal travel throughout the city. Using this public information, I located areas of the city that were already noted for needing repair or construction, which

helped to guide the semistructured interviews of community residents. Through a partnership with the planning department, the findings of this study provided data on the total sidewalk coverage currently throughout the city.

Archival Data Research

Over the past 2 years, I researched sustainable development and sidewalk safety for individual classes at Walden University. These classes were building blocks leading up to this professional administrative study. To locate previous research on the topics of sustainable development and pedestrian safety, I used the databases accessible through the Walden University Library. The following keyword search terms were used: sustainable development, sidewalk safety, pedestrian safety, and green streets initiatives. With the resulting literature from these database searches, I was able to extensively research these topics and build a solid foundation of previous research to begin my study. Using this previous research, I was also able to understand the methods that worked in other communities and base my questions and hypotheses on these methods. Gathering the necessary data from the city planning department allowed me to develop an understanding of sidewalk coverage of places within the city limits and provided me with knowledge of previous resident complaints or concerns about pedestrian safety, which helped focus on areas of the city where complaints were abundant and where they were scarce.

In this study, I collected data from the city planning department through public channels only. The data on sidewalk coverage, new permits issued, and the map of the city's current sidewalk coverage were accessed from the city's official website. The

residents selected participation in this study were random pedestrians and cyclists from the local community who were using public sidewalks throughout the city. All participants were at least 18 years of age and resided in the city. The number of participants who completed the general survey was 56 participants, and from those responses, I chose a pool of 10 participants for in-depth interviews. The participant pool reflected the community and attempted to include members of both genders, from all age ranges, and varying levels of perceived economic levels.

Study Generated Evidence

I recruited participants for this study through face-to-face interactions in defined areas of the city. Beginning in the downtown area, an area that encompasses the center of the city, I spoke with possible participants face-to-face near the city park, city hall, the library, and a local athletic store. This area of the city is a nucleus of pedestrian and cyclist activity. To recruit from these defined areas, I relied on snowball sampling to build a larger pool of participants. Ungvarsky (2017) noted that "snowball sampling is a method for recruiting subjects for research studies in which people who have already participated are asked to recommend others to take part" (p. 2). Identifying pedestrians and cyclists who live in the area could have been time-consuming. By using the snowball sampling method, I was able to identify other participants that meet the criteria of being a city resident and someone who walks or cycles around the city regularly, based on information from friends and acquaintances who also used the sidewalks throughout the city. This sampling methodology was then repeated in four other areas of the city. The city was mapped into four quadrants surrounding the downtown area. Using the snowball

sampling method, I gathered survey data from 10–12 participants within each defined area of the city. Using the snowball sampling method allowed this study to be conducted more quickly than attempting to knock on doors or gather focus groups for data collection. By conducting the survey in-person, I was able to build a level of trust with participants and constructed a large pool of community members that were willing to contribute and offer insight into questions concerning sidewalk coverage and pedestrian and cyclist safety. Participants were asked if they knew any friends, relatives, or acquaintances that would be interested in participating in this study. As the data being collected for the study were not considered sensitive, the snowball sampling method was appropriate to use to contact other potential participants for this study.

I obtained written consent from each participant; they provided me with their name and contact information. Giving me their contact information was a voluntary part of the study. No incentives or compensation were given for taking part in the study. As new participants were identified and contacted, surveys were conducted in person at an agreed-upon meeting place. From the surveys, I asked 10 participants to sit down for a semistructured interview that allowed them to offer longer, more in-depth responses to open-ended questions about sidewalk safety. Participants could decline to sit down for interviews if they did not wish to contribute.

The survey consisted of 10 questions, generated from reviewing previous research surveys used in municipalities around the United States. I studied the questions from these previous surveys, then shaped 10 to reflect the local community. A semistructured interview process was used to allow for more open-ended questions to be asked of

participants. This process provided the opportunity for more discussion and permitted participants to give personal accounts and narratives on the topics. With the interview questions, I sought to elicit longer, more in-depth responses to the issues of sidewalk coverage and safety as well as the awareness of the city administration. The timeline for gathering data from the general survey was 2 weeks. The in-depth interview responses were gathered over 3 weeks.

Data Analysis

I rated and coded the data collected from the surveys and immediately transcribed the interviews after they took place. The data were analyzed for keywords and phrases that could be coded and grouped. These keywords and phrases that emerged from the data helped to group the narratives into categories and highlight patterns and themes about sidewalk coverage, safety, and accessibility. These categories were then analyzed for anomalies or interesting stories that highlighted specific sidewalk concerns or issues. Using conventional content analysis, I let the themes and categories emerge from the data naturally. This method of content analysis allowed me to look at the data and not form a preconceived idea of what the data should show. The data were grouped into categories based on the responses to the open-ended questions from the interviews, and the data from the surveys were coded based on the rating responses. These categories and ratings looked to describe community member's perceptions of the city administration's ability to provide safe and adequate pedestrian and cyclist means of travel throughout the city. As Hsieh and Shannon (2005) noted, "Knowledge generated from content analysis is based on participants' unique perspectives and grounded in the actual data" (p. 1280).

The data collected from this study allowed local citizens to speak directly to the city administration regarding safe streets for pedestrians and cyclists. Data analysis was a fluctuating process and continued throughout the study. By analyzing data throughout the study, new themes and patterns emerged and new stories created new categories, which constituted revisiting previously examined data.

Once the data were collected, coded, categorized, and reviewed, I drew conclusions from the analysis. The conclusions of this study were based directly on the responses given by the citizens who participated and reflected their opinions and thoughts. The goal was to eliminate any preconceived ideas of how citizens would respond and build the conclusions directly from the gathered data. These conclusions were compiled into a report that was distributed to the city planning department in hopes of building a relationship between the administration and the community. By listening to the citizens, the city administration had an opportunity to involve them in sustainable development decisions and projects that could help create or sustain a pedestrian-friendly community.

I took great care to protect the participants in this study. Participants were asked to provide proof of their age so that minors were not included in the study. Participants provided consent to participate and were informed that they could withdraw or refuse to participate at any time before the surveys and interviews were conducted. Personal identifiers, such as names, income levels, or addresses, were not collected for this study; only relevant data, such as gender, age, and residency, were used as identifiers. This study was examined and approved by Walden's Institutional Review Board (IRB) before

proceeding. The interviews were recorded, with participants' permission, and then transcribed. I purchased transcription software to professionally code and present the data; the NVivo program allowed me to upload audio files for transcription. Once the files were transcribed, the software coded keywords and phrases to present nonnumeric data for examination and presentation. To ensure the integrity of the data, recordings and transcriptions were kept throughout the process.

With the necessary data collected and presented, I analyzed the results and offered recommendations to the city planning department.

Section 4: Evaluation and Recommendations

Introduction

Once IRB approval was obtained (IRB Approval Number 02-13-20-0736377), I began gathering data for the study. In this section, I discuss the data evaluation process and the recommendations produced from data analysis. Data were gathered via in-person surveys and semistructured interviews. Surveys were conducted in 1 of the 5 geographic areas of the city with community residents recruited through the snowball sampling method. The participant responses were categorized into three categories based on the average score of the survey responses: negative, neutral, and positive. From these three categories, I randomly chose participants to take part in a semistructured interview that would allow for more in-depth responses concerning pedestrian safety, sidewalk coverage, and the city administration's approach to these issues. The interview responses were coded for keywords and phrases with which to establish observations and recommendations that were presented to the city planning department for review.

Data Evaluation

As cities continue to grow and expand, sidewalk coverage and pedestrian safety will remain a concern with many citizens. Pedestrians and cyclists need to feel safe when commuting through the city. They need equal access to all areas of the city. The city administration must be concerned about pedestrian safety and do their part in offering safe sidewalks and city access to all commuters, including pedestrians and cyclists. In this qualitative professional administrative study, I gathered community residents' opinions and thoughts concerning pedestrian safety and city access.

To begin collecting survey data, I partitioned the city into five geographic areas. Area 1 was the center of downtown, encompassing historic downtown, the city park, city hall, the public library, and the depot museum. Area 2 consisted of the northwest corner of the city, which includes the university, the hospital, and residential areas. Area 3 was the northeast corner of the city, which consisted of residential areas. Area 4 was the southwest corner of the city, involving a local park, university apartments, and residential areas, while Area 5 consisted of the southeast corner of the city, including residential areas, the county courthouse, and the justice center. A total of 56 surveys were completed by community members. Within each area, I approached community members on public sidewalks or in city parks and asked them to participate in the study. The consent form was read and explained to them before participant consent was given. Once consent was given, the participant was handed a clipboard with the survey and a pen. Once the participant was finished, the consent form was stapled to the completed survey and placed into a zipped binder. I explained interview participation and asked the participant to recommend another person to participate in the study. Overall, participants were agreeable with recommending another person, but some participants declined. As participants recommended a friend or family member for possible participation, the new participant was contacted via phone call and the purpose of the study and the process was explained. If the new participant was agreeable, a public location and time for a meeting were established. The study was then administered to the new participant at the assigned time and location.

I scored the completed surveys for each area of the city and placed them into 1 of 3 categories: negative response, neutral response, and positive response. Each response to individual survey questions was based on a 5-point, Likert scale, with 1 being *Strongly Disagree*, 2 being *Disagree*, 3 being *Do Not Agree or Disagree*, 4 being *Agree*, and 5 being *Strongly Agree*. The total of all 10 responses was added up and divided by 10 to give an overall score for the responses. A negative response was a final score between 0 and 2.7. A neutral response was a final score between 2.8 and 3.2. A positive response was a final score between 3.3 and 5.0. Table 1 shows each area of the city and the number of surveys for each response category.

Table 1

Table Title

City	Negative	Neutral	Positive
Area	Response	Response	Response
Area	6	3	3
1			
Area	2	8	2
2			
Area	4	3	4
3			
Area	7	1	3
4			
Area	4	0	6
5			

Once the results were categorized, I grouped each city area by the response; to allow for a broad spectrum of thoughts, surveys were kept in the negative, neutral, and positive response categories. This allowed for a total of 23 negative responses, 15 neutral responses, and 18 positive responses. For this study, survey responses were considered as a whole and not individually for each area of the city. The responses were quite different than was expected. My early assumption was that citizens would not think the city was doing enough for pedestrian safety and that the number of negative responses would be higher. The results of the survey were somewhat balanced between all three categories. The lowest score was 1.8, and the highest score was 4.7.

The surveys provided a snapshot of citizens' thoughts on pedestrian safety, sidewalk coverage, and the city administration's commitment to pedestrians. I grouped the survey questions into two categories: sidewalk coverage/safety and city administration's handling of the issues. Analysis of the negative responses revealed that participants strongly felt that the city was lacking in sidewalk coverage, pedestrian safety, and pedestrian access to the city. While the majority of participants with negative responses were critical of the administration's efforts to promote safety and accessibility, some participants thought the city was lacking in sidewalk coverage and safety measures but that the city administration was concerned about the lack of coverage and safety measures and was doing an adequate job at protecting citizens and adding sidewalks. Neutral responses were filled with criticism and praise for both sets of questions. Some believed the city did not have enough sidewalk coverage, but the city adequately maintained the sidewalks they did have. Others believed there was plenty of coverage, but the city did not maintain them properly. Participants also felt that the city was concerned about pedestrian safety and ease of access but that they were not doing enough to build new sidewalks and keep pedestrians safe. Positive responses showed that participants felt the sidewalk coverage and safety measures were adequate and the city administration's concerns were acceptable.

While the surveys offered a glimpse of citizens' opinions, semistructured interviews allowed participants to offer more in-depth responses concerning their feelings and opinions on pedestrian safety, sidewalk coverage, and the city administration's approach to these issues. I randomly selected a total of four surveys from each of the

three response groups and contacted these participants to be interviewed. Of the 12 participants who were contacted, three sat for in-person interviews, two completed interviews by e-mail, five completed over-the-phone interviews, and two participants declined to take part in an interview due to extemporaneous circumstances. In-person and telephone interviews lasted between 20 and 30 minutes, and the e-mail interviews were returned within 2 days of being delivered. The saturation point was reached with the 10 interviews because keywords and phrases were repeating within each interview and no new keywords or phrases were appearing after the ninth and tenth interview.

I transcribed and coded each interview immediately after its completion and with each subsequent interview, evaluated the data for any new emerging themes. Once the ninth and 10th interviews were coded, no new themes emerged. As the themes were concrete after the tenth interview, saturation was reached, and the data could be compiled. The transcripts and e-mails were coded for keywords and phrases that generated categories based on patterns within the interviews. These patterns and themes brought interesting personal stories and concerns together to provide the city administration with citizens' true feelings about the administration's decisions and policies affecting pedestrians and their safety.

The semistructured interview process provided some opinions and ideas that I had not considered at the outset of this study. While each participant had his or her personal views on the issue of sidewalk coverage, they all shared some concern regarding the urban sprawl taking place in the city. While some agreed that the sidewalk coverage and maintenance are currently adequate, they still believed the issue of sprawl was making it

more difficult for the city administration to keep up with acceptable sidewalk coverage and maintenance. Those that disagreed that the city currently has enough sidewalk coverage and that the city provides upkeep and maintenance on the current sidewalks also mentioned his or her concern with the city continually expanding outward and not building with the current infrastructure in the city limits. One participant stated,

I can remember being a teenager and being able to walk to the depot museum and from there I could safely walk to a restaurant or store for something to eat before walking back home for the day. Now, the city is spread out that walking to the depot museum is safe, but the restaurants are on the other side of town, and good luck finding sidewalks to walk there safely.

Personal stories from participants provided the city administration with an opportunity to build personal relationships with citizens and involve them in the administration's consideration of future planning decisions and projects. Personal stories make situations real. Putting names and faces to concerns and issues allows the administration to see citizens as part of the city. This also allows for citizens to connect with the administration and explain how the administration's decisions can affect the community.

The concern regarding urban sprawl provided an opportunity to ask follow-up questions concerning citizens' dependency on vehicles versus walking or riding bicycles. Because participants agreed that the city was expanding outward at a rapid rate, I asked a follow-up question about whether urban sprawl was the reason that the administration was more focused on vehicular traffic over pedestrian traffic or if they thought vehicular traffic was just a solution to dealing with urban sprawl. Participants were divided in their

responses to this question. Some believed that the city administration's focus on vehicular traffic, such as new roads, stop light/sign implementation, and fewer sidewalk/greenspace construction projects, was based on urban sprawl. The participants felt the administration was more concerned with welcoming new businesses and financial opportunities to the community rather than taking care of pedestrians. One participant noted,

New businesses need to be brought to town; the city will build new buildings for these new businesses on the outskirts of town. More roads will be needed to reach these new businesses, and more roads mean more cars. Focusing on cars is just another way to focus on more money for the city.

Another participant disagreed with this idea, writing,

I think urban sprawl is just going to happen. The city will always grow. More people will move to the city and the boundaries will expand. People bring their cars with them, and they drive to get from one place to another. This is not the administration's fault.

The opportunity for debate between citizens and the administration was available based on the responses to these questions.

When asked whether the city administration was doing enough about sidewalk coverage and pedestrian safety, the key phrase that was repeated by most participants was, "Yes, but they can only do so much with the resources they have." One participant who was selected from the negative response group was very critical of the lack of

sidewalk coverage and was fearful for her safety and the safety of her family when walking in areas away from downtown, responding,

While I do fear for my safety, I understand that the administration is not just turning a blind eye to this issue. It is not like they can just shut traffic down to build sidewalks in 1 week! They must make do with the resources and time that they have. They have held town halls and asked for our input, and I really feel that they have listened. It is just an issue that could use a little more recognition and a little more resource.

Citizens understood that this is not an issue being ignored by the administration, but they felt the administration could do more.

When asked if more pedestrian-centric infrastructure would increase the participant's desire to walk or cycle the city, most of the responses were yes. Nine out of 10 participants stated their desire to walk or cycle would increase if the city provided more pedestrian-centric infrastructure. One common theme of why the participant's desire would increase was personal stress. The city continues to be a vehicular traffic-oriented city, and most residents drive to the city for work, school, or leisure, adding another vehicle to the congestion. This causes traffic jams early in the mornings when people are driving in for work, during lunchtime when workers are looking for a place to eat, and in the afternoons when people are driving home. With an increase in sidewalk coverage and pedestrian safety measures, such as traffic calming, decreasing speed limits, and constructing more crosswalks, participants would walk or bicycle to get away from the stress of traffic congestion. One participant noted,

The more I drive in congested areas, and the longer I have to sit at lights because of the overwhelming numbers of cars and trucks, the higher my stress level goes. It is a chore to get home in the afternoons. Just going the three or four miles from work to my home takes me 30–45 minutes on some days. If I were able to walk safely from home to work and back, I could be home sooner and would not have to deal with the bumper-to-bumper traffic and horns honking at each other.

Each vehicle off the road would decrease the congestion, the pollution, and the stress of community residents.

When asked the question concerning whether an increase in pedestrian-centric infrastructure would benefit the city's economy, participants were split in their answer. Those that believed it would benefit the economy seemed to agree that providing pedestrians safe and equal access to all parts of the city would offer pedestrians equal opportunity to visit stores and restaurants and spend money on goods and services they otherwise would not have had access to. One participant wrote,

If pedestrians felt safe to walk to all areas of the city, like Restaurant Row, an area of the city lined with fast-food and fine dining establishments on both sides of the road, they would have more choices of where to spend their money and not just the burger joint beside their apartment or house. If they had more choices they could easily get to, they could go to a different place every week, or every other day and spend more money.

Those that did not believe new pedestrian-centric infrastructure would benefit the economy believed that spending money on more sidewalks or crosswalks would limit

out-of-towners by limiting road construction or increasing congestion due to crosswalk and street light timings. One participant noted,

If we focus on just building sidewalks, we have to take that money from other projects. If we stop building roads and it is harder for people who drive, and people from out of town, to get from one place to another, who can say they will continue to come and spend money in our community? Will they just stay home or stay in their hometowns and not visit our city? I do not think forcing people to walk and give up their car or truck is the way to make money.

These issues of greenspaces, traffic-calming measures, and sidewalk expansion are areas in which the city could benefit from townhalls and educational discussions with the citizens. Explaining how pedestrians and automobile commuters can travel together would help garner more consensus on the issues.

While the surveys provided a quick snapshot of what citizens felt about pedestrian safety and sidewalk coverage, the interviews allowed putting faces to stories. The participants gave accounts of why they do or do not walk around the community and what areas they felt safe in and those they did not. The downtown area was overwhelmingly praised for being a safe and well-maintained area for pedestrians and cyclists. The area provides enough sidewalks, enough crosswalks, and the city limits the speed limit so that pedestrians feel safe and an equal part of the city. Each participant mentioned the downtown area and shared a personal story of walking to a business, or museum, or eatery and not having to feel afraid to cross the street or use the sidewalks. At the outset of this study, the assumption was that citizens would criticize the

administration and demand more sidewalks and safer streets for pedestrians and cyclists. This assumption was inaccurate. The citizens that participated in the study were critical of the lack of safe sidewalks but also understood that the city administration was aware of the issue and was doing their best to make the situation better. The concern over urban sprawl was also not considered at the outset of this study. That the citizens considered the city, and not only the areas in which they lived was another positive development from this study.

During the completion of this study, a major storm hit the local area bringing an EF-4 Tornado that demolished several neighborhoods and claimed 18 lives. The storm impacted the city emotionally and physically by shutting down areas of the city and causing other areas to become relief centers and shelters for those displaced by the storm. The initial surveys were already completed before this natural disaster hit the area, but the storm impacted the interview process. The spread of the COVID-19 coronavirus also impacted the interview process. In-person contact was limited and inhibited the study's ability to provide a central location for interviews to be conducted. The Walden IRB allowed for phone interviews and e-mails as acceptable interview techniques due to the epidemic. As interviews were not completed before the epidemic, the allowance of these techniques permitted the research to continue. The e-mail interview process impacted the open-ended questioning the interview was meant to provide. Follow-up questions could not be sent along with the initial interview questions and both participants failed to respond to the second e-mail sent with follow-up questions provided.

Conclusions and Recommendations

While this professional administrative study was not designed to solve the problems of sidewalk coverage and pedestrian safety, it was designed to gather personal data of community residents to provide the city administration with personal stories and opinions to consider these topics and how the public feels they have addressed the issues. The overall evaluation from this study was that the city administration should understand that citizens do feel they are aware of the issues of pedestrian safety and accessibility. While some citizens did feel strongly that the city administration could do more, the consensus was that the city is doing the best they can with the resources available. Townhalls and public forums held by the city administration over the past year on the topics of pedestrian safety and accessibility were well-received by the community and the community was aware that the city administration has been proactive on the issues. One recommendation collected from this study was that the city administration should address the issue of urban sprawl with the community. The city should discuss any future infill development plans and reconsider future projects designed to push the boundaries of the city further from the city center. For future research, the topic of urban sprawl within the city should be considered an important point of focus. The city should also continue to hold public forums and town hall events to include community members and show that the administration values the citizens and the opinions they bring to these meetings. Building and preserving a strong working relationship between administration and community would provide an excess of benefits to both sides.

This professional administrative study impacted positive social change by bringing the city administration together with the community to find solutions to the issues of pedestrian safety and access. Listening to the members of the community allowed the administration to understand problem areas within the city and to hear ideas that members of the community had for seeing pedestrians achieve safer, more encompassing access to the city. The community could see positive social change in how the city administration listens to their ideas and what measures the city administration takes to improve sidewalk coverage, pedestrian safety, and pedestrian access throughout the community.

There were both strengths and limitations to this professional administrative study. The strength of this study was bringing the research directly to the citizens. This study allowed for the community to offer ideas and opinions directly to the city administration. The study offered a voice to the citizens that would be heard by the administrative body capable of bringing about positive social change to the city. This study also provided the city administration direct access to members of the community who would not normally feel comfortable speaking at a public event or city council meeting. The direct and open line of communication started by this study brought about a working partnership between citizens and the city administration.

Study Limitations

The limitations of this project were the size of the participant pool due to time constraints and unanticipated events that prevented more participants from being heard. The study attempted to gather a sampling that represented the local community but not

every voice could be heard. Without major funding for an extensive and in-depth study, this study was limited in the amount of data that could be gathered from community residents regarding pedestrian safety.

Recommendations for Future Study

Future projects addressing pedestrian safety and safe access throughout the city should also focus on the topic of urban sprawl. Asking for participant's thoughts on urban sprawl and the positive or negative impact it can have on pedestrian safety and sidewalk coverage would allow for a more in-depth review of the community's opinions and recommendations. Future researchers should also consider focus groups to gather a larger collection of data. The initial survey and semistructured interview worked well for this study and could be used in future studies.

Section 5: Dissemination Plan

Dissemination Plan

I designed the dissemination plan for this study and created multiple copies of the findings to reach multiple key stakeholders in the community from city planners to the city council and city manager. I scheduled a meeting with the planning director and delivered the findings and recommendations of the study via an in-person presentation. A personal meeting with the planning director allowed for discussion of the study process and recommendations as well as for the planning director to review the material before the study was given to the city manager and city council. The planning director needed to have an opportunity to discuss and understand the findings because the planning department oversees creating new pedestrian-centric infrastructure projects for the city. With the findings, the planning director heard from the community members that more sidewalks and pedestrian safety measures were needed, and that the community understood the administration was aware of the issues. The planning department can also now address the issue of urban sprawl with members of the community.

I distributed the six remaining copies of the findings to the city council and the city manager. Meetings were scheduled with the city manager and the city council once the study had been approved by and discussed with the planning department. Council members can now open avenues of communication with constituents within their districts to discuss pedestrian safety concerns and urban sprawl. This will allow for citizens to voice their concerns with their council member and work together to offer ideas on how

to deal with pedestrian safety, sidewalk coverage, and pedestrian access throughout the city.

I then presented the findings of the study to the city council and city manager using the same presentation developed for the planning department. The study was completed with the approval of the city as a partnering organization, and the results were shared with the city manager and the city council for their review.

Summary

As cities continue to grow and planning departments look for sustainable development alternatives, pedestrian-centric infrastructure, traffic-calming measures, sidewalk construction and maintenance, and infill development should all be considered as alternatives to urban sprawl and vehicle-focused transportation decisions. In this professional administrative study, I examined pedestrian safety and sidewalk coverage in a city in Tennessee. This professional administrative study was completed with the help of the city administration and community members were invited to share their opinions and thoughts on the issues of sidewalk coverage, pedestrian safety, and pedestrian access in the city. Through a Likert scale survey and semistructured interviews, participants provided their thoughts, opinions, and personal stories of dealing with these issues. The collected data were compiled and prepared for the city administration to hear directly from the citizens. The citizens believed the city lacks adequate sidewalk coverage, but they also understood the administration is doing the best it can with the resources it has. The community was very concerned with the issue of urban sprawl, and they are divided on the economic impact pedestrian-centric infrastructure could have on the city. Future

studies should delve deeper into the issue of urban sprawl and include focus groups as a means of gathering data. Focus groups would allow for greater numbers of community members to offer personal stories and opinions to be collected.

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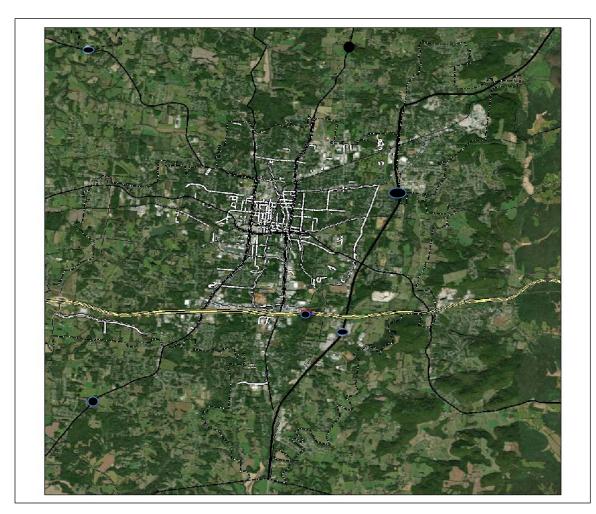
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Appendix A: Sidewalk Coverage Map



- Appendix B: Pedestrian Safety and City Access Interview Questions
- 1. Can you describe the current situation regarding pedestrian safety in the city?
- 2. Can you describe the current situation regarding pedestrian access throughout the city?
- 3. What are the main pedestrian safety concerns in the city?
- 4. Is there enough sidewalk coverage in city? If not, what areas of the city are lacking?
- 5. Are the sidewalks throughout the city safe and maintained?
- 6. Do pedestrians have the same access to city as automobile commuters?
- 7. Do you feel that city administrators are aware of pedestrian concerns and safety? Do you believe they are doing enough to protect pedestrians and provide safe access to the entire city?
- 8. Do you believe that city administrators are focused more on vehicular traffic or pedestrian traffic? Why do you feel that way?
- 9. Would an increase in pedestrian-driven infrastructure increase your desire to walk or cycle the city? Why or why not?

Appendix C: Pedestrian Safety and City Access Survey

Directions: Complete the following survey by selecting the choice that best describes your answer to the questions.

- 5 Completely Agree
- 4 Agree
- 3 I do not Agree or Disagree
- 2 Disagree
 1 Completely Dis

1 – Completely Disagree				
The city has enough sidewalk coverage				
1	2	3	4	5
The sidewalks are safe for pedestrians and cyclists				
1	2	3	4	5
Pedestrians and cyclists have the same access to the city as automobile commuters				
1	2	3	4	5
The sidewalks in the city are well-kept and maintained				
1	2	3	4	5
The city administration is concerned about pedestrian and cyclist safety				
1	2	3	4	5
The city administration is concerned about pedestrian and cyclist ease of access				
throughout the city				
1	2	3	4	5
The city administration is doing enough to protect pedestrians and cyclists				
1	2	3	4	5
The city administration is doing enough to construct and maintain sidewalks				
1	2	3	4	5
Increasing sidewalk coverage would increase my desire to walk or cycle				
1	2	3	4	5
Increasing sidewalk coverage would benefit the city's economy				
1	2	3	4	5