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Johnson County Area Trail Survey

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Field Problems in Planning 102:210
Graduate Program in Urban and Regional Planning
The University of Iowa
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Field Problems in Planning 102:210
Instructor & Advisor: Kelly Clifton
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This project was completed in fulfillment of the 102:210 Field Problems in Planning, a graduation requirement within the Masters program in Urban and Regional Planning at the University of Iowa. The project group composed, of Michelle Coacher, Christina Dudek, and Mary Gute, worked under the guidance of John Yapp to produce a comprehensive trail study for the Johnson County Council of Governments (JCCOG).
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EXECUTIVE SUMMARY

JCCOG has long believed that trails are an asset to residents in the County, specifically that area residents benefit from the recreation and transportation opportunities trails provide. However, no concrete empirical evidence to support this belief has been previously collected. Through the completion of this study, JCCOG hoped to gain the evidence to support their belief as well as to better understand the area residents’ perceptions of trails.

Two primary data collection methods were used in this project. First, an extensive literature review was completed outlining government and public support for trails, trails as a transportation alternative, safety and design issues, and community benefits. To obtain data relevant to local perceptions of trails, a mail survey was completed. Three trails were chosen for this study: the Iowa River Corridor Trail, the Willow Creek Trail, and the North Ridge Trail. These trails were selected according to four criteria: housing type, trail destination, trail construction, and length. The survey was sent to residents living in neighborhoods adjacent to trails.

The residents were asked to answer questions regarding three primary topics: transportation, property values, and safety issues. Findings of the survey indicated that:

- Trail use is seasonal.
- Improved connectivity would increase trail usage.
- Respondents are unsure of the impact of trails on property value.
- Trails were not a major factor in determining residential location.
- Area trails were rated very safe or safe overall, however, a majority of respondents also believe improvements can be made to improve trail safety.

This report concludes with two primary recommendations. First, JCCOG should focus on regional trail development, specifically improving trail connectivity. JCCOG should coordinate with Johnson County communities to ensure all local trails are maintained at a secure
level. Second, safety measures, including trail lighting, policing, and better maintenance, should be integrated in existing trails and included in all future trail developments. To reach optimal levels of safety and comprehensive trail development, it is essential to include citizen participation in trail planning process.
CHAPTER 1: INTRODUCTION

The impetus for this project is twofold. First, the Johnson County Council of Governments (JCCOG) holds the belief that trails are an asset to residents of the County. Specifically, it has felt that trails have a positive impact on quality of life, property values, and the overall transportation system of the community. However, JCCOG has had no concrete evidence to support their belief. Second, JCCOG wishes to gain a better understanding of how area residents think about and use trails. Having a better understanding of why and how residents use trails will allow planners to provide informed answers when questioned by the public and policy makers about the need for expansion of the community trail system and will allow JCCOG staff to make better decisions when planning trail projects.

The County’s commitment to providing green spaces, of which trails are considered part of, is exemplified in one community’s Neighborhood Open Space Plan, which states:

Public neighborhood open space serves the public interest by providing opportunities for active recreation and play as well as places for relaxation and passive pleasure. Neighborhood open space is considered a vital part of a community and often serves as a focal point of neighborhood activity. Attractive open space enhances and preserves private property values, and serves the immediate and future needs of area residents in the same way as other capital improvements… (City of Iowa City, 1989).

Currently many types of trails exist in the County. Several of the trails are designed for only recreational uses, such as hiking, and are primarily covered with woodchips. The trails in the Coralville Reservoir and Lake MacBride parks are examples of this type of trail. Other trails are paved or have a limestone base. These are multiple use trails designed for various recreational activities and commuting. The three trails examined in this report, the Iowa River Corridor, the Willow Creek, and the North Ridge Trails, are good examples of multiple use trails, as is the Hoover Nature Trail on the southeast side of Solon.
Trail building efforts have increased in the County, particularly during the past five years, a trend that is expected to continue. A map of the County's current and proposed trail system is in Appendix A. The County recently installed paved shoulders, just north of Hills on Sand Road and has plans to install paved shoulders on Mehaffey Bridge Road, northeast of North Liberty over the next two years. In the summer of 2001 a portion of the Dubuque Street Trail between the north Iowa City limits and West Overlook Road is being reconstructed. Many of the newer residential neighborhoods have also created a trail system as part of a planned development.

The client for this project is the JCCOG Transportation Planning Division. John Yapp, Assistant Transportation Planner for JCCOG, is the official contact for our group. After viewing the results of a report entitled “Omaha Recreational Trails: Their Use and Effect on Property Values and Public Safety” (June, 2000), which examined the residential perceptions of trails within Omaha, Nebraska, JCCOG decided to initiate a similar study in the Iowa City area. It was requested that we examine the following issues:

- Are trails perceived as an asset to the community?
- Are trails viewed as a part of the overall transportation system?
- Are trails perceived as positively affecting property values?
- Do residents feel safe on trails?
- How do the perceptions of Iowa City, Coralville, and North Liberty residents compare to residents of other communities?
- What policies are recommended for trail design?

In order to answer these questions, we examined the perceptions of trails through an extensive literature review and a mail survey of residents living near three local trails. The specific issues examined include the frequency and types of trail usage; the perceived impact of trails on property values; the perceived level of safety on trails; the level to which trails contribute to quality of life; and the impact of trails on the Iowa City, Coralville, and North Liberty transportation systems. The results of the survey and the literature review are
summarized in the pages below. We used this information to make several policy recommendations to JCCOG, which will aid them in their future trail planning.
CHAPTER 2: LITERATURE REVIEW

Introduction

Trails provide benefits to both users and non-users in many ways, including providing a means for people to exercise and enjoy outdoor recreational activities, encouraging economic development through trail-related businesses, protecting open-space, providing a sense of place, and providing a way to utilize alternative forms of transportation (Moore and Thomas, 1998). There is a great deal of literature touting the ways in which trails positively impact people’s lives. However, there are many reasons that keep people from using trails to their fullest potential.

This section of the report reviews the literature related to trails, specifically the positive impacts on people’s lives and the factors that keep people from using trails more often. The information presented in this section was used as the basis in designing the survey instrument that was sent out to nearly 500 residents in Iowa City and Coralville in an attempt to obtain the perceptions local residents have regarding the regional trail system. The research team chose to focus on issues related to how trails impact individual quality of life; how trails fit into the overall transportation system in a region; how individuals perceive the impact of trails on property and home values; and how safe individuals feel on trails.

Governmental and Public Support for Trails

Completion of the U.S. interstate highway system combined with the growing awareness that suburban sprawl creates an increasing amount of automobile-dependence led to a major change in federal transportation policy in the 1990s (Moore and Thomas, 1998). Two transportation Acts, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and
the Transportation Equity Act for the 21st Century (TEA-21) of 1998, included money for transportation projects beyond roadway building and repair (STPP, 2000). Through these two Acts, Congress dedicated $6.4 billion for Transportation Enhancements (TE) to states for investments that “can help people create transportation-related resources that provide a host of benefits to their area” (NTEC, 2000). TE funds allow local communities to have a say in how transportation system will look in their community, which includes building trails in many cases (Kellam, 1998).

ISTEA and TEA-21 have led to major changes in how funds are allocated for transportation projects. The Surface Transportation Policy Project’s (STPP) report, Changing Direction: Federal Transportation Spending in the 1990s notes that “Federal spending data show the states have invested more heavily than ever before in offering their residents transportation choices. Funding for bike paths and lanes, sidewalks, and other facilities for walkers and cyclists exploded, growing from $7 million in 1990 to $222 million in 1999” (STPP, 2000).

While the federal government has shown increasing support for trails over the past decade, studies show that the American public is generally as supportive of trails as well. In 1992 and 1995 Rodale Press commissioned Harris to carry out studies entitled Pathways for People I and II. These studies consistently found that, “…70 percent of the nation’s adults want local transportation planning to incorporate accommodations for bicycling, walking and running into the public infrastructure. More than 55 percent support increased funding for pathway development in their community” (NBPC, 1995).

While the public is generally supportive of trails for recreational use, there are still few Americans who actually choose to bicycle or walk for at least a portion of their trips instead of
relying on an automobile. The issue is not that Americans do not walk or bicycle. As demonstrated by the 1990 Nationwide Personal Transportation Survey (NPTS), approximately 131 million Americans frequently bicycle or walk for the purpose of exercise, sport, recreation, or relaxation and enjoying the outdoors. However, very few Americans walk or bicycle for transportation in their daily tasks such as commuting to work or traveling to shop or socialize. Recent figures reported in the Bureau of Transportation Statistic’s 1999 Transportation Statistics Annual Report note that:

Most passenger trips (nearly 90 percent of daily trips and 92 percent of miles traveled) are made in automobiles or other private motorized vehicles... The share for other modes was considerably smaller--bicycling and walking accounted for 6.5 percent of local trips and 0.5 percent of miles, and transit’s share was about 4 percent of trips and 3 percent of miles (USDOT-BTS, 1999).

The fact that about half of the American public does walk or bicycle for some other reason than travel does indicate that these transportation forms do have potential to serve as a means to meet at least a portion of individual travel needs (USDOT-FHWA, 1994 and NBPC, 1996). The 1990 NPTS also provides support for the view that there is some potential for increasing the walking and bicycling shares of trips. The 1990 NPTS showed that more than 25 percent of all trips were less than one mile; 40 percent of trips were less than 2 miles; nearly 50 percent were less than three miles; and over 60 percent were less than 5 miles (USDOT-FHWA, 1994). These figures indicate people do take many short trips that could potentially be converted from automobile to bicycle or walking trips. While people may not be able to walk or bicycle to work, the remaining automobile trips that are not commuting trips (such as performing errands or visiting friends) could potentially be replaced (USDOT-FHWA, 1994). The proceeding section discusses some possible explanations as to why bicycling and walking are not used more frequently for meeting individual transportation needs.
Reasons Individuals Choose Cars over Walking and Bicycling

There are many reasons people choose to travel by automobile rather than walking or bicycling. The Federal Highway Administration case study entitled, *Reasons Why Bicycling and Walking Are and Are Not Being Used More Extensively as Travel Modes*, concluded factors leading individuals to choose travel modes other than walking or bicycling can be broken down into three categories: initial considerations, trip barriers, and destination barriers (USDOT-FHWA, 1992).

*Initial Considerations*

The first broad category is called “initial considerations.” This covers considerations an individual makes when deciding what transportation mode to take to a destination. One barrier to increasing the walking and bicycling mode shares is that the public generally does not even seriously consider these forms as viable modes of travel. Other initial considerations that play into mode choice include distance to destination; time considerations; individual attitudes and values\(^1\); safety concerns; individual physical considerations; and situational constraints\(^2\) (USDOT-FHWA, 1994).

*Trip Barriers*

The second major category of reasons why people do not utilize walking or bicycling on a more extensive scale is “trip barriers.” These are barriers that discourage or prohibit individuals from walking or bicycling. One trip barrier is that walking or bicycling is a real or

\(^1\)“People may choose not to bicycle or walk because they perceive these activities as ‘uncool,’ as children’s activities, or as socially inappropriate for those who can afford a car” (USDOT-FHWA, 1994).

\(^2\) Some situational constraints might include “needing a car at work, having to transport items that are heavy or bulky, and needing to drop off children at day-care” (USDOT-FHWA, 1994).
perceived threat to personal safety and health. Traveling in automobile traffic as a pedestrian or bicyclist can indeed prove dangerous for individuals.

Other factors inhibiting walking and bicycling are barriers to access and linkage. Theoretically, trails “...connect people with the land and with the places they want to visit and use. Properly located trails make it possible for people to commute to work, travel to shopping areas, schools, parks, and other destinations safely under their own power” (Moore and Thomas, 1998). However, many trails are designed and built on an ad hoc basis rather than as part of an entire, regional trail system. Additionally, trails are often built without considering the fact that they are a part of the overall transportation system, rather than just a trail system. Because of these reasons, many trails are not well integrated into the overall transportation system in the region and are thus difficult for individuals to use for normal transportation needs. Trails, “...that do not connect neighborhoods to shopping areas or downtown businesses may never achieve their intended purpose of increasing use of non-motorized travel modes” (USDOT-FHWA, 1994). Lastly, environmental factors (e.g. “hilly terrain, extreme temperatures, high humidity, and frequent or heavy rainfall”) can act as a barrier discouraging or preventing individuals from walking or bicycling (USDOT-FHWA, 1994).

Destination Barriers

The third major category of reasons why people do not utilize walking or bicycling on a more extensive scale is “destination barriers.” These are conditions related to characteristics at the destination end of the trip. Some destination barriers include lack of safe and secure places to park bicycles; lack of shower and changing facilities at the destination; and lack of support from employers and co-workers (USDOT-FHWA, 1994).
It is important to have an understanding of how and why people choose to travel by particular modes of transportation if there is to be a successful effort at encouraging individuals to transfer at least a portion of their automobile trips over to bicycling and walking. Knowing what keeps people from walking or bicycling can help those designing and planning trails better meet the needs of those who potentially would use trails in greater numbers.

Safety and Design Issues of Trails

As mentioned earlier, a real or perceived threat to personal security and health is a major barrier that keeps people from walking or bicycling more frequently. Trail safety issues can be broken down into two separate topics. The first topic is threats of personal security and property crime. The second is threats of accidents resulting from poor trail design or conflicts with other types of trail users. Below is a brief discussion regarding existing literature on these topics.

Crime on Trails

The perception of individual safety on trails and the safety of residents living near trails is frequently discussed in trail literature. Trails are frequently mislabeled as violent locations. The Pathways for People II survey exemplified this perception by showing that 62 percent of women and 42 percent of men would be encouraged to walk more often if crime were not a factor (NBPC, 1996).

While many people have a fear of crime that keeps them from using trails, “...in reality crime on trails occurs no more frequently than in any other public place” (NBPC, 1996). Numerous studies have shown that the presence of trails is not related to increases in crime
(Schneider, 2000). A Rails-to-Trails Conservancy survey of rail-trail managers in urban, suburban, and rural areas found that of 372 trails included in the study, "...only eleven rail-trails in 1995 and ten rail-trails in 1996...had experienced any type of major crime" (Tracy and Morris, 1998). This figure is even more significant when considering that the 372 trails represented in this survey cover approximately 7,000 miles and serve an estimated 45 million individuals each year (Tracy and Morris, 1998).

The findings of the RTC survey are similar to crime studies done on other trails. A study done on the Burke-Gilman Trail in Seattle, WA, found that the existence of the trail "had no discernable effect on crime rates experienced by residents who live adjacent to the trail" and "Trespassing has not been a problem for residents living adjacent to the Burke-Gilman Trail" (Lagerwey and Puncochar, 1998). A National Park Service study in Iowa, Florida, and California found that those property owners living near a rail-trail experienced few problems from the existence of the trail.

Most of the adjacent property owners reported that rates of vandalism, burglary and trespassing had remained the same or decreased since the opening of the trail. The majority of property owners interviewed in the National Park Service study reported that living near a trail was better than they expected and also better than living near unused rail corridors (Tracy and Morris, 1998).

It is important to not discount residential perceptions of trails as unsafe places even though empirical data shows that this fear is largely unfounded. The perceptions that individuals are unsafe while on trails and that property located near trails will be more prone to property crimes all increase the level of animosity towards trails in neighborhoods and communities. This prevents even the most well designed and beautifully landscaped trails from being a community

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3 For the purposes of this discussion, crimes against trails users include major crimes against individuals (e.g. "mugging, assault, rape and murder) and minor crimes against property (e.g. graffiti, littering, sign damage, motorized trail use, trespassing and break-ins to adjacent property") (Tracy and Morris, 1998).
benefit. While the RTC study and other studies have shown that crime specifically on rail-trails is rare, the perception of being a victim of crime on trails “is nonetheless a legitimate concern for residents and trail users and should be treated accordingly” (Tracy and Morris, 1998). Several suggestions for improving the perception of safety on trails are given in the Discussion and Recommendations portion of this report.

Conflicts with Other Trail Users & Poor Trail Design

The other types of safety issues that are commonly cited as a reason individuals do not use trails are conflicts with other users and poor design, including inadequate maintenance of the trails. A 1991 Harris Poll reported that 53 percent of respondents would sometimes commute to work by bicycle and 59 percent would walk more often, if safe, secure, and separate designated paths or walkways existed (NBPC, 1996). Traveling in automobile traffic as a pedestrian or bicyclist can indeed prove dangerous for individuals.

According to Parks and Recreation magazine, conflicts on trails result when users with different needs and striving for different experiences interfere or come in contact with one another. Conflict with other users is described as a growing problem on many trails, which is often compounded by trail design flaws and crowded conditions (Moore, 1998). The most commonly reported conflicts are between hikers and bikers, although incidents involving in-line skaters, cross-country skiers, and dogs are also frequently reported (Moore, 1998).

Conflict amongst users was exemplified in a rails-trails survey in Iowa, Florida, and California that found the most common answers to the question “What things did you least like about the trail?” involved the behavior of bicyclists. Specifically, respondents found many bicyclists to be inconsiderate, riding two-abreast, going to fast, and passing without warning
(Moore, 1994). Besides a basic conflict between use types, reckless behavior and poor judgment are often sources of problems.

While the previous sections focused on some of the real and perceived problems related to trails, trails are still viewed very positively by many individuals. The next section reviews the many positive impacts trails are credited with bringing to neighborhoods and communities.

Community Benefits of Trails

As discussed above, there are many reasons that keep people from using trails. However, trails are generally perceived as valuable assets in communities. Generally, the more community members use trails, the better they understand the benefits and want more trails to be built. For instance, The 1990 Iowa Statewide Recreational Trails Plan found:

…high levels of participation in trail activities--90 % of respondents indicated that they had used local trails for walking an average of 90 times during 1998. High levels of support were expressed for continued trail development near home, especially multi-use trails for bicycling and pedestrian activities (Iowa Trails, 2000).

A Place to Exercise

One benefit of trails is that they provide a means to exercise. Providing ready access to places where individuals can exercise is important in combating the American battle with excessive body weight. A recent study by the American Medical Association (AMA) has shown that a sedentary lifestyle is the greatest health threat to Americans after smoking (Iowa Trails, 2000). Trail use could act as a method to alter sedentary lifestyles that negatively affect individual health.

 Trails also offer a place to enjoy recreational activities, get outdoors, and appreciate nature. Roger Moore and Thomas D. Ross state, “Trails provide all the myriad personal and
social benefits generated by participation in outdoor recreation, such as improved health and fitness, relaxation, challenge and adventure, family togetherness, and an increased awareness of nature” (1998).

*Environmental Benefits*

Many communities use trails as a method to preserve open space (Trails and Greenway Clearinghouse, 2001). Trails can help decrease air pollution from cars, act as a flood control measure, preserve watersheds, or create buffers from urban areas (Moore & Ross, 1998). Trails also assist in efforts to preserve biodiversity and habitat protection from urban development (Moore & Ross, 1998).

As mentioned in an earlier section, trails also offer a means to utilize alternative forms of transportation such as walking or bicycling. Trails that connect to places of destination such as school, work, the grocery store, or the post office allow people to travel without depending on automobiles. The use of trails as transportation can lower the number of vehicles on the street, which ultimately lowers air pollution levels. Trails also provide a safe place, away from traffic in which children and adults can travel (Moore & Ross, 1998).

*Public Space*

Trails provide a public space or realm that is generally believed to act as a community development enhancement. Trails promote social interaction in an informal setting “and can be a source of neighborhood, community, and regional pride. Trails and greenways are becoming the new ‘front porches’ of many communities” (Moore and Ross, 1998 and American City and County, 2000). As people increase the amount they use trails, they become familiar with people
in their neighborhood and community. This sense of place can bring people together on issues and events elsewhere in the community.

**Economic Growth**

Some argue that trails can promote a community’s economic growth by fostering businesses along its length. For example, Moore and Ross state: “Trail users (especially visitors from out of town) spend money that boosts local economies. Trails and greenways have generally proven to be amenities that increase nearby private property values and consequently raise tax revenues” (Moore & Ross, 1998). One example of a trail spurring economic growth is the Heritage Rail Trail in York County, Pennsylvania where businesses such as bicycle shops, restaurants, and stores have located near or on trails to accommodate users (NTEC, 2000).

**Impact Property Values**

Studies have also shown that trails can increase property values and thus increase tax revenues for communities (Moore & Ross, 1998). While studies attempting to show a link between trails and impacts on property values are subjective in nature and the findings of the perceived impact of trails on property values may not be applied from one trail to another, some studies have shown that trails do not have negative impacts on property located adjacent to or near trails and may even have a positive impact (Lagerwey and Puncochar, 1988).

A study conducted on the Burke-Gilman Trail in Seattle, WA, indicated that residents and real estate agents generally believed the location of a home immediately adjacent to a trail did not have a significant impact on the value of the home. This same study found that residents and real estate agents believed that homes near, but not adjacent to trails, would sell at higher
prices due to their proximity to a trail (Lagerwey and Puncochar, 1988). The Office of Planning in Seattle stated:

The survey of real estate agents revealed that property near, but not immediately adjacent to the trail, sells for an average of 6 percent more. The survey of homeowners indicated that approximately 60 percent of those interviewed believed that being adjacent the trail would either make their home sell for more or have no effect on selling price (National Park Service, 1995).

A similar survey in Minnesota revealed that a 61 percent of homeowners noted an increase in property values due to the location of the trail near their home (National Park Service, 1995). The findings of the survey stated, “New owners felt the trail had more positive effect on adjacent property values then did continuing owners. Appraisers and real estate agents claimed that the trails were a positive selling point for suburban residential property” (National Park Service, 1995).

Studies showing increased property values have also been conducted in Wisconsin and Colorado. In Brown County Wisconsin a 1998 study of property values showed that “…lots adjacent to the trail sold faster and for an average of nine percent more than similar property not located next to the trail” (Schneider, 2000). A similar study performed in Denver, Colorado stated that, “…73 percent of real estate agents believe that homes adjacent to trails are easier to sell” (Schneider, 2000).

Lastly, in 1995 the Urban Land Institute commissioned a study that was performed by American Lives, Inc. Homebuyers were asked to rank 39 features that they would consider when purchasing a home. The study showed, “Of the 39 features that 1994 buyers defined as crucial in persuading them to buy in a particular new community, ‘plenty of hiking and biking paths’ ranked third” (Lukei, 1997). Due to the demand of trails in communities, and especially
near neighborhoods and homes, the creation of trails can increase property values. Trails are considered an extra amenity and many property owners see them as improvements to their home (Schneider, 2000).

Conclusion

As exemplified by the studies summarized above, the American public has indicated that they are supportive of trails. However, most Americans only use trails for recreational purposes. Over the past decade, the federal government has shown its support for alternative modes of travel, including trails, through the passage of ISTEA and TEA-21. However, the level at which walking and bicycling are used for transportation purposes is still extremely low.

Individuals are discouraged or prohibited from walking or bicycling for a variety of reasons. First, individuals may not feel safe traveling on a bicycle or on foot in the presence of automobile traffic. Second, there are often times breaks in pedestrian and bicycle infrastructure that serve as barriers which keep people from using modes of transportation other than the automobile. Third, the lack of adequate facilities such as bicycle parking, showers, and changing areas at an individual's final destination may keep them from bicycling or walking. Lastly, many individuals fear traveling on trails where walkers and bicyclists would be safest from the threat of automobiles. Individuals fear the incidence of crime on trails as well as accidents resulting from conflicts with other trail users.

While most Americans do not use trails to meet their transportation needs, it is clear that they are viewed as positive assets throughout the Country. Trails offer places to exercise, enjoy recreational activities, and mingle with other members of the community. Trails are viewed as having the potential to reduce automobile trips, thereby decreasing air pollution and traffic congestion. Certain types of trails are also viewed as having a positive impact on an area's
economy by promoting businesses that serve trail users. Lastly, trails are more frequently viewed as an amenity home owners look for when purchasing property.

Given that the federal government has set out a policy agenda to support alternative forms of transportation and that most Americans view trails in a positive light, it seems that one obvious way to achieve the goal of increased pedestrian and bicycle trips would be to expand trail systems to allow for safe transportation. Many of the fears Americans currently have towards trails could potentially be ameliorated by improved access and linkage, improved trail design, and the placement of safety features.

The major issues outlined in this literature review were used as the basis in preparing the survey instrument that was sent out to residents of Johnson County. It was expected that Johnson County residents’ perceptions regarding trails would mirror those perceptions presented in the literature review. In particular, we believed our survey would reveal that the major issue keeping more Johnson County residents from using trails to meet transportation needs is the lack of a seamless trail system whereby residents can use trails to get to major destinations such as the University of Iowa, the University Hospital and Clinics, the City of Coralville.

The remainder of this report discusses the research that was performed to determine how residents of the Iowa City region use trails as well as the perceptions residents have regarding trail safety and impact on property values. The next section of the report discusses the methodology that was used to choose trail segments and details how the survey was administrated.
CHAPTER 3: METHODOLOGY

This section describes the data collection method that was used to obtain Johnson County residents’ perception of local trails. Specifically, this section describes the criteria we used to choose the trails included in the study, description of the survey instrument, and survey administration.

Survey Method

A mail survey, shown in Appendix B, was our primary data collection method for this study. We selected this method for four primary reasons. First, a mail survey allowed us to contact a large number of people. Second, we wanted to gather the opinions of both users and non-users of local trails. Third, mail surveys do not have as strict a time constraint for their completion as do other methods and consequently more easily allow for both open-ended questions and more thoughtful answers. Finally, we wanted to survey household trail use, rather than individual trail use. Completing the survey at home seemed the most logical way to achieve this result, since it allowed the respondent to consult with other members of their household.

We could have selected a door-to-door survey or an on-trail intercept survey as our primary data collection method, but we found several problems with both of these methods. The hazards of door-to-door surveys include the surveyor’s potential to bias the respondent’s answer, the limited time the surveyor has the respondent’s attention, and the time of year the survey was completed (winter). The time of year was also a factor for not selecting an on-trail survey. Other reasons included its bias towards trail users and the fear that the user may not live in an adjacent neighborhood.
Trail and Sample Determination

Our primary task, after determining our method of study, was to determine our study area and sample. This required us to first establish the criteria for selecting the study trails, and then to actually select the trails based on these criteria. Once our study area was determined, we had to select which streets, and then which addresses would be included in the sample.

Trail Determination

We established four criteria for selecting the study trails. The four criteria we chose were housing type, trail destination, trail construction, and length. We partially modeled our criteria after Donald Greer’s “Omaha Recreational Trails” project. Greer chose “old versus new housing,” “short versus long trail length,” and “connect to system vs. not yet connected” as his trail selection criteria (Greer, 2000). Since his study and ours were similarly focused, we also selected the latter two criteria. However, we opted to modify his housing criterion to focus on various types of housing, for example multi-family vs. single family. Finally, to better understand the impacts of trails on property values of nearby residential parcels, we selected retrofitted trails versus ones planned as a part of a development as a criterion.

The housing criterion has two components, type and value. First, it describes the housing type as single family, duplex, condominium, or apartment. The second part of this variable was not used in selecting the study trails, but was used to code the surveys prior to their mailing. It will be discussed in further detail below, but this variable rates the structure according to the total assessed value of the property (value of structure and land) as low, medium, and high. Housing type was selected as a criterion because it allowed us to obtain data from neighborhoods with varied backgrounds.
Trail destination was the second selection criterion. For the purpose of this study, a “connecting” trail described a trail connecting specific destinations, such as a neighborhood to a grocery store or to a school. If the trail did not exhibit such characteristics it was labeled as a non-connecting trail. This variable was chosen because JCCOG is particularly interested in the impacts of trails on the transportation system, specifically the level at which area residents use trails for meeting transportation needs.

The third criterion we selected was trail construction. This refers to whether the trail was developed as part of a planned project or if it was retrofitted to the area. This criterion was selected because the manner in which a trail is constructed could have an impact on residents’ perception of it. How and when the trail was constructed could also affect property values.

The final criterion is length and it describes the trail as short, medium, or long. For this study we described a short trail as being three miles or less in length, a medium length trail as being greater than three miles, but less than five, and a long trail as greater than five miles in length. We selected trail length as a criterion because of its link to transportation issues, particularly to the use of trails as commuting routes.

Using these criteria, three trails were selected as part of the project study area. The trails are located in Iowa City, Coralville, and North Liberty. See Appendix C for background information on these communities and Appendix D for a map of the trails and their surrounding environs. The first trail is the Iowa River Corridor Trail, specifically the section beginning in City Park (Iowa City) and ending in Coralville. The housing type is single family with medium to high property values. The majority of this trail was retrofitted to the area. The current total length of the trail is six miles, although another seven miles are planned. It connects the residents from several neighborhoods to City Park and to the Highway 6, Coralville strip.
The second trail is the Willow Creek Trail in west Iowa City. The trail runs from Highway 6 and Aber Avenue through Willow Creek Park, past West High School to Hunters Run Park. The housing type is a mix between single-family homes and duplexes of medium property value. The trail was planned as part of the Walden Hills development and connects to West High School and Walden Place, a commercial center containing a grocery store, some restaurants, a laundry mat, and a credit union. The Willow Creek Trail is two and a half miles long.

The third trail is the North Ridge Trail, beginning in Coralville near Coral Ridge Mall and ending in North Liberty. This trail is five miles long, three miles in Coralville and two in North Liberty. Low and medium assessed value single-family homes, duplexes, and apartment buildings are located near this trail. The trail connects several neighborhoods to the Coral Ridge Mall and has sections that were planned and others that were retrofitted. A summary of this information is illustrated in Table 3.1.

<table>
<thead>
<tr>
<th>Table 3.1: Selected Trails</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Iowa River Corridor Trail</strong></td>
</tr>
<tr>
<td><strong>Housing Type</strong></td>
</tr>
<tr>
<td><strong>Trail Destination</strong></td>
</tr>
<tr>
<td><strong>Trail Construction</strong></td>
</tr>
<tr>
<td><strong>Length</strong></td>
</tr>
<tr>
<td><strong>Location</strong></td>
</tr>
</tbody>
</table>

JCCOG has conducted several trail counts on the three study trails over the last few years. The most recent trail counts were done in 2000 for the North Ridge and Willow Creek Trails and in 1998 for the Iowa River Corridor Trail. Users were divided into three categories:
pedestrians, bicyclists, and skaters (includes in-line and roller). The results of these counts are illustrated in Table 3.2.

<p>| Table 3.2: Weekday Trail Counts |
|---------------------|------|------|------|------|</p>
<table>
<thead>
<tr>
<th>Pedestrian</th>
<th>Bicyclists</th>
<th>Skaters</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa River Corridor Trail</td>
<td>184</td>
<td>176</td>
<td>12</td>
</tr>
<tr>
<td>Willow Creek Trail</td>
<td>396</td>
<td>126</td>
<td>26</td>
</tr>
<tr>
<td>North Ridge Trail</td>
<td>79</td>
<td>236</td>
<td>18</td>
</tr>
</tbody>
</table>

The Iowa River Corridor Trail count was completed on a Tuesday at Crandic Park between 7 a.m. and 8 p.m. Roughly one-half of the users during the morning and afternoon commuting times were commuters to either work or school. Users were considered commuters if they were dressed in work attire and/or were carrying packs or briefcases. The Willow Creek Trail count was completed on a Wednesday between 7:45 a.m. and 8 p.m. The majority of the users on this day appeared to be using the trail for recreation purposes or for access to Willow Creek Park, which was the location for the count. The North Ridge count was also completed on a Wednesday between 8 a.m. and 8 p.m. The traffic on the trail was reportedly spread throughout the day, however, the heaviest traffic was in the evening. The report did not detail the types of users. The count was taken from the portion of the trail in central North Liberty.

Sample Determination

The sample for the mail survey was determined using maps of the neighborhoods surrounding the three study trails. We first selected streets adjacent to the trails and then expanded the study area, up to one mile on either side of the trails, to ensure a large enough base from which we would later randomly select our sample. The addresses of potential survey participants were gathered using the Iowa City community's reverse address directory. The sample addresses were selected from the total potential addresses using a random number table.
and by selecting every second address until 167 were selected from each of the three trails to ensure equal representation of our three study areas.

Survey Instrument

We created our survey based on JCCOG’s suggested focus areas, the ideas of client contact John Yapp, and the topics highlighted in our literature review. Given these inputs we narrowed the survey's scope to cover three primary issues: transportation, property values, and safety/maintenance. The final issues are combined because they are often causally interrelated, as our literature review illustrated. Each of these sections contained at least two questions. Again, a complete copy of the survey is in Appendix B.

The section dealing with transportation issues also examines household usage of local trails. Specifically this section examined the frequency of use, distance of the most frequently used trail from place of residence, the reasons for trail use (recreation, exercise, commute), how the trail is used (walking, bicycle, wheelchair), and finally what factors would increase usage. This last question was asked to obtain community input on how the local trails could be improved.

The second section focused on property values. It was designed to gather data on households' perception of how the nearby location of a community trail affected property values, as well as how the location of the trails impacted the households’ residential choice. This is the smallest section of the survey, with only two questions.

The final section of the survey examined safety and maintenance issues. Given the critical link of safety to trail usage, we viewed this section as a key to our analysis of local trails. It tested the respondents' perception on both personal security and physical safety on trails and asked for suggestions to improve safety. As with the final transportation question, the purpose of
this latter question was also used to gather community input to aid us in our policy recommendations to JCCOG.

Three of the survey's questions did not fall into one of the main areas of focus. The survey began with a question to gather household size, since our analysis is based on household data. The second question asked for the trail located nearest to the respondent's place of residence. This was asked to test the respondent's knowledge of the local trail system. The final question of the survey was an open-ended question, which asked for general comments and allowed respondents to expand on their answers. A copy of the comments can be found in Appendix E.

Survey Administration

The property value section of the survey was quite small, so to fully encompass this issue into our study we divided our surveys according to each address' total assessed property value (the second housing component) prior to mailing. We determined the total assessed value for each address in our sample through information from the Iowa City and Johnson County Assessment Offices. Natural breaks divided the data into three value ranges; $109,999 or less, $110,000 to $169,999, and over $170,000 or low, medium, or high total assessed value, respectively. Multi-family apartments and duplexes were not included in these ranges because in the Assessment Office files these were listed under the entire structures' value, rather than by unit. Multi-family, therefore, became a separate category. The surveys in each category were color coded for identification prior to being mailed, gray for multi-family, blue for low, green for middle, and yellow for high. Table 3.3 illustrates the number of surveys sent out in each value range.
We expected a 30% response rate. To ensure this response rate we included a letter written by John Yapp on behalf of JCCOG detailing the purpose of the survey, who to contact for questions, and the mail-in deadline. A copy of this letter is in Appendix B. Respondents were given ten days to complete the survey, however, we did accept about twenty surveys that arrived after the deadline.

In total, we mailed 486 surveys. Our original sample size was 501 (167 addresses from each trail), however, 15 addresses were discarded because of incomplete information. We received 144 (30%) completed surveys. The majority of the surveys completed were from the middle-income category; we received 57 completed surveys out of the 171 sent out in this category. Respondents from the high assessed property value range returned 47 surveys, while 34 were returned from low assessed property values. Only 6 surveys were received from multi-family respondents out of the 67 that were mailed.

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Middle</th>
<th>High</th>
<th>Multi-family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed</td>
<td>34</td>
<td>57</td>
<td>47</td>
<td>6</td>
</tr>
<tr>
<td>Total Sent</td>
<td>136</td>
<td>171</td>
<td>110</td>
<td>67</td>
</tr>
<tr>
<td>Percentage</td>
<td>25.0%</td>
<td>33.3%</td>
<td>42.7%</td>
<td>8.9%</td>
</tr>
</tbody>
</table>

Given these response rates, our results are skewed toward the perception of households living in residences with high and middle total assessed values or a value greater than $110,000. This breaks down to a ratio of 2.6 surveys from the higher two value ranges for every one survey from the multi-family and lowest assessed value range. The following section details the results of the survey.
CHAPTER 4: SURVEY FINDINGS

This section examines each question and the responses of the survey to determine overall trends in answers by respondents. It is important to note that questions one through three will not be discussed in this section due to the open-end nature of the questions. The responses of these questions can be viewed in the Appendix F. However, questions four through fourteen of the survey are discussed. This section will state the question, show the results based on response, discuss other comments written in the margin regarding the question, and then look at the overall trends in respondents answers.

Question 4: “Where is the trail most frequently used by members of your household?”

As shown in Table 4.1, the majority of respondents reported that they live either adjacent to or within walking distance (i.e. within the respondents neighborhood) of the trail. Fewer than 3% of the respondents reported the closest hard-surfaced trail is located outside of their neighborhood. This answer is important because it represents that a trail is close to people’s homes, and thus is available for the respondents’ use.
Table 4.1: Nearest Trail to Survey Respondents

<table>
<thead>
<tr>
<th></th>
<th># of Respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjacent to Home</td>
<td>58</td>
<td>41.4%</td>
</tr>
<tr>
<td>Within neighborhood</td>
<td>78</td>
<td>55.7%</td>
</tr>
<tr>
<td>(walking distance)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside Neighborhood</td>
<td>4</td>
<td>2.9%</td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>100%</td>
</tr>
</tbody>
</table>

Question 5: "For what reasons do members of your household use trails?"

Survey respondents were asked why, and how they used trails. They were also able to write in other uses in addition to those that were listed. The responses of the 138 individuals who answered this question are displayed in Figure 4.1.

Figure 4.1: Reasons Respondents Use Trails

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise (n = 129)</td>
<td>89.9</td>
</tr>
<tr>
<td>Recreation (n = 99)</td>
<td>71.1</td>
</tr>
<tr>
<td>Travel to Activities (n = 53)</td>
<td>23.9</td>
</tr>
<tr>
<td>Commute (n = 19)</td>
<td>13.8</td>
</tr>
<tr>
<td>Other (n = 10)</td>
<td>7.2</td>
</tr>
</tbody>
</table>

It is important to note that the respondents were allowed to circle more than one reason for trail use. The majority of respondents indicated they use local trails for exercising or recreational purposes. Nearly 14% of respondents use trails for commuting to work or school, and nearly 24% use trails for traveling to non-work or non-school activities. Just over 7% of
respondents noted they use trails for reasons other than those listed on the survey including: picnics, people watching, and bird watching. Overall this data shows that most people use the trails for exercise or recreational purposes.

Table 4.2 shows the data broken down into total assessed property values. In all ranges a majority of the respondents stated that they use the trail for exercise and recreation. However, it is important to note that 22.7% (10 respondents) of the high category use the trail for commuting, 11.8% (4 respondents) of the low category, and only 8.9% (5 respondents) in the middle category. The results also show that a larger portion of respondents in the multi family (25%) and lowest category (14.7%) use the trails for traveling to activities other than work and school. However, it is important to note that only six multifamily households responded. Additionally, a chi-square test showed that there is not a correlation between households with different property values and how they use trails.

<table>
<thead>
<tr>
<th></th>
<th>Recreation</th>
<th>Exercise</th>
<th>Commute to work or school</th>
<th>Travel to activities other than work and school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi</td>
<td>75.0%</td>
<td>75.0%</td>
<td>0.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Low</td>
<td>67.6%</td>
<td>91.2%</td>
<td>11.8%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Middle</td>
<td>76.8%</td>
<td>89.3%</td>
<td>8.9%</td>
<td>3.6%</td>
</tr>
<tr>
<td>High</td>
<td>68.2%</td>
<td>90.9%</td>
<td>22.7%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

Question 6: "How does your household use the trail?"

Of the 140 individuals who answered this question, 125 responded they walk on trails and over two-thirds responded they use trails for bicycling. These and other trail uses are shown in Figure 4.3. An additional eight activities for which survey respondents use trails that were not listed on the survey include: cross-country skiing; avoiding streets, cars; people watching; and
walking with walker. Again it is important to note that the respondents were able to choose more than one activity. In general, a majority of the respondents surveyed use the trail for activities such as walking and bicycling.

**Figure 4.3: Activities on Local Trails**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk (n=125)</td>
<td>89.3</td>
</tr>
<tr>
<td>Bicycle (n=99)</td>
<td>66.4</td>
</tr>
<tr>
<td>Run/Jog (n=57)</td>
<td>40.7</td>
</tr>
<tr>
<td>Walk Dog (n=47)</td>
<td>33.6</td>
</tr>
<tr>
<td>Scoot Kids (n=35)</td>
<td>25</td>
</tr>
<tr>
<td>Other (n=8)</td>
<td>21.4</td>
</tr>
<tr>
<td>Wheelchair (n=1)</td>
<td>5.7</td>
</tr>
</tbody>
</table>

**Question 7: “What factors would increase your household’s usage of the trail?”**

When asked what factors would increase household trail usage respondents were allowed to circle all applicable factors. Of the 139 respondents who answered this question, “improved connectivity of trail system (getting from one trail to another trail)” received the most support with 71 people marking this factor. “Better trail connections between home and various destinations (e.g. grocery, post office, etc.)” also received over 50 responses. The breakdown of responses is shown in Figure 4.4.

29
There were several open-ended responses that people indicated would increase their use of trails. These responses are given below along with the number of people who suggested this other response:

**Trail Amenities**
- Bathrooms (3)
- Water fountains (1)
- List distance at different sections of trail for exercise (1)
- Benches along trails (1)
- Garbage cans along trails (1)

**Maintenance Issues**
- Snow removal (4)
- Better general maintenance (2)

**Trail Design Issues**
- Softer surfaces (soft/dirt trails for running are easier on the legs/knees) (3)
- Hard surface or black top trail (1)
- Better lighting after dark (3)
- Fewer steep hills (1)
- Under or overpass in Coralville at First Avenue and Mormon Trek (1)
- Direct access to North Ridge Park (1)

**Animal Issues**
- Enforcement of animal leash laws (2)
- Enforce the picking up of dogs feces to make for a more sanitary condition (2)
- Enforce the picking up of dogs feces to make for a more sanitary condition (2)

Miscellaneous
- Stop city and private vehicles from using trails as if it's a street (1)
- Post signs on all trails with rules especially in and around PARK areas (1)
- Place post barriers at the beginning of trails to stop vehicles from entering (1)

Survey respondents were given the opportunity to write in any additional comments at the end of the survey. Several of the comments related to this question. The comments primarily focused on three major topics including the design of the trail, safety of trails, and maintenance on trails. Many of the comments regarding the design of the trails were about the connectivity of trails to one another and to places. For example, one respondent replied:

Need trail connection to UIHC to encourage bicycle community. Can't get there safely from Coralville.

Other respondents commented on the lack of connectivity between Iowa City and Coralville trails, and the lack of trails connecting to destinations or places. Other respondent stated:

...the more connected the trails, the more they seemed to be used; and the prospect of more linked trails is most welcome!

Other design issues mentioned are putting in water fountains along trail, and replacing hard surface trails to wood chips. These and all other comments made on the surveys can be found in Appendix E.

Overall this data shows that 51.1% of respondents would use trails more if connectivity of trails to each other was improved and 37.4% stated that better connections between home and various destinations would also increase trail usage. However, a high percentage of other factors also influence trail usage.
Question 8 & Question 9: "Did the trail nearest you home influence your decision to live there?" & "How do you believe the trail nearest you impacted the overall price or rent of your home?"

One of JCCOG’s main objectives in performing this survey was to determine the public perception regarding how trails affect property values. In the survey two questions were asked relating to property values. One asking the respondent to rate the influence the trail had on the decision to live in their home. The other if they believe the trail nearest their home impacts the overall price or rent.

The data shows that of the 140 respondents, 61% answered that the location of the trail near their home did not influence the decision to live there. However, 28% of the respondents stated that the trail mildly influenced their decision. This data can be seen in Figure 4.5.

![Figure 4.5: Trails Influence in Purchasing Home](image_url)

Analysis of the second question shows that 50 (35%) of the 142 respondents believe that the trail nearest their home increases the price or rent. Thirty percent of residents feel the trail had no effect on the price or rent of their home. Thirty-four percent of the respondents did not know how trails impact prices and only one respondent stated that the trail near their home decreased the price (See Figure 4.6).
As shown in Table 4.3, 83% of residents who live in multi-family units stated that the trail was not a factor in their decision to rent their home and 67% believe the trail has no effect on the overall price of their rent. Similarly, a majority (64%) of the respondents in the lowest category stated that the existence of a trail near their home was not a factor in their decision to live there. Though, 38% of the respondents in the low category feel that the location of the trail increases the overall price of their home.

<table>
<thead>
<tr>
<th>Property Value</th>
<th>Strongly Influenced</th>
<th>Mildly Influenced</th>
<th>Not a factor</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi</td>
<td>0.0%</td>
<td>16.7%</td>
<td>83.3%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Low</td>
<td>6.1%</td>
<td>30.3%</td>
<td>63.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Middle</td>
<td>10.7%</td>
<td>32.1%</td>
<td>57.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>High</td>
<td>11.1%</td>
<td>22.2%</td>
<td>62.2%</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

Respondents of the middle category also stated the trail did not influence the decision to purchase their home. Specifically, the data shows that 57% of the respondents in the middle category stated that the trail was not a factor in the decision to buy their home. Thirty-three percent of the respondents in the middle category do believe that the trail positively effects the
overall price of their home. However, 33% of these respondents also stated that the do not know how the location of the trail near their home impacts overall price.

Of those surveyed in the high category, 62% of the respondents stated that the trail nearest their home was not a factor in the decision to live there. Similarly, respondents of the middle category 37% feel that the location of the trail near their home increases the price. Yet, 35% of these respondents do not know how the trail impacts property values and 28% of the respondents feel that the location of the trail had no effect on the overall price of their home. A chi-square was run on both property value questions. The results show that there is not a relationship between household property value and choice of residential location. Additionally the results showed there is not a correlation between household property value and perception of trail impact on housing prices or rent.

| Table 4.4: Perception of Trail Impact on Housing Prices by Property Value |
|-----------------------------------------------|-----------------|-------------|-------------|-------------|
| Increase Price | No Effect | Decreased Price | Do Not Know |
| Multi          | 16.7%     | 66.7%        | 0.0%        | 16.7%       |
| Low            | 38.2%     | 26.5%        | 0.0%        | 35.3%       |
| Middle         | 33.3%     | 29.8%        | 1.8%        | 33.3%       |
| High           | 37.0%     | 28.3%        | 0.0%        | 34.8%       |

Overall the data shows that the majority of respondents in multi-family, low, middle, and high categories feel that the trail was not a factor in their decision to live there. It should be noted that many respondents commented that they moved into their present home prior to the construction of the trail nearest their home. The data also shows that overall, most respondents are unsure of the impact of price on their home. While most people of low, middle, and high categories stated that the location of the trail does increase the overall price of their home, a similar number of respondent in the middle and high categories stated that they are unsure how
the trail impacts the overall home price. Most respondents in multi-family units stated that the trail near there home has no effect on rent levels.

Question 10 "In general, how safe do members of your household feel on local trails?"

An overwhelming majority (88%) of survey respondents answered that members of their household feel very safe or safe on local trails, as illustrated in Figure 4.5 below.

Figure 4.5: Perceived Trail Safety

Despite the positive evaluation of trail safety, numerous respondents qualified their answer to this question. The most frequent comment, even by those who responded that they feel very safe or safe when using local trails, was that they feel safer on the local trails during the day. Other respondents commented that they feel safer in summer months or when accompanied by a dog. Conversely, dogs, specifically unleashed or unsupervised dogs, decreased the level of perceived safety for a few respondents. Many respondents feel that the dog leash law is not well enforced. For example, one respondent stated: "Many people let their dogs run loose and when I need to use my wheelchair I feel vulnerable—Some dogs from the neighborhood run loose
without anyone being around—They bark and chase me!!! I am scared because I am defenseless.”

The lack of lighting on trails was noted by some respondents (4). For example, one respondent states, “Could use more streetlights after dark for safety reasons.” Other respondents felt the trails are not protected from automobiles. For instance, one respondent says “place post barriers at the beginning of trails to stop vehicles from entering”. While another respondent stated, “Need for bigger, brighter crossing lights at major road crossings to warn cars. Also slightly longer crossing time.” Overall a majority of the respondents stated that they feel very safe or safe on the trails, while a low percentage of respondents stated that they felt unsafe and no respondents stated they felt very unsafe.

Question 11: “What measures would improve the safety of trail users?”

When asked what measures would improve the safety of trail users, 25 out of 137 respondents or 18% answered that no extra measures are needed. Lights (47%), telephones (36%), and increased policing (26%) were the most popular suggestions, although design improvements and better enforcement of trail rules were also selected. This is illustrated in Figure 4.6. It is important to note that respondents were able to circle up to three responses.
Relating to trail design, several respondents emphasized their desire for additional lighting on trails, not only in this question, but throughout the entire survey. However, two respondents specifically expressed concern that increased trail lighting would disturb or be a nuisance to the residents living adjacent to trails. They suggested low lighting or lights along the edge of the trail to ensure that only the path is illuminated. Other improvement measures suggested by the respondents include a camera in the I-80 trail underpass, more at-grade trail and roadway intersections, increased maintenance of landscaping, and wider trails.

Overall, lighting was the most popular response to increases safety on trails. However many respondents also felt that emergency telephones and more frequent policing would also improve the safety conditions on the trails.

Question 12: “If any members of your household have ever had an accident on a local trail, why? Besides personal security, the survey attempted to evaluate the physical safety of the trail users. Respondents were asked if any members of their household had ever had an accident on
any of the local trails and why. Over 80% (108) answered that no member of their household had ever had an accident on a local trail. Of those who responded that an accident had occurred (33), 7% cited pets as the impetus of the accident. Four percent believed that etiquette, or lack thereof, was to blame. One respondent reported that he or she was almost hit by a biker who was listening to headphones. Another 3% cited poor lighting as the cause of their accident. The most popular write-in response was poor trail maintenance (6 respondents), as seen in Figure 4.7. Specifically respondents cited poor trail surfaces, mud, flooding, and gravel. One comment described several situations where the respondent and her husband have had several near collisions with joggers and bikers who are trying to avoid branches at the entrance to the Iowa River Corridor River Trail. Overall the results show that a majority (81.2%) stated they have never had an incident or accident on the trails, while a small percentage of respondents stated that there have been accidents due to pets, lighting, and maintenance.

Figure 4.7: Causes of Accidents

<table>
<thead>
<tr>
<th>Percent</th>
<th>100</th>
<th>80</th>
<th>60</th>
<th>40</th>
<th>20</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>No incident/accident (n = 108)</td>
<td>81.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (n = 11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pets (n = 9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etiquette (n = 5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Lighting (n = 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vandalism (n = 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conflict with other users (n = 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited visibility (n = 0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Question 13: “Please rate the maintenance of the trail nearest your home.”

Respondents were asked to rate the maintenance of the trail nearest their home. Forty-eight percent of those who responded to the question rated the maintenance as good, while 38% thought it was very good. Out of 140 respondents, 5 (4%) rated the trail’s maintenance as poor or very poor and 9 (6%) responded that it is average, see Figure 4.8. However, many of the respondents qualified their answers. The most common responses were related to winter maintenance. Two responses praised the timeliness of winter plowing; however, the majority of the responses were less favorable. Other maintenance issues include mud, flooding, and landscaping.

Figure 4.8: Perceptions of Trail Maintenance

In the final comment section, eight respondents wrote that the trails should be better maintained year round. Comments regarding the mowing grass around trails, plowing of trails, trimming shrubs and trees around trails, and the sweeping of trails were popular comments among the respondents. For example, some of the comments included:

The tree branches and large bushes at the Manor Drive entrance to the trail need to be cut back at least twice during the season. We’ve had many near misses with joggers and other cyclists trying to avoid getting whacked in the face with branches.
I really like having a nearby trail for rollerblading. My only problem is when there’s lots of leaves and sticks on the trail. It would be great if these could be swept off.

A majority of the respondents feel the trails are well-maintained, however, some stated that better year round maintenance is necessary.

**Question 14: “Other Comments”**

This question allowed respondents to write down general comments on the trail system in the Johnson County Area. A majority of the comments were positive, including such comments as:

- We love the park and the trails. We live on the trail and think its wonderful to see it used by the families (and their pets)
- I really enjoy this trail (Willow Creek) – I look forward to coming home from work and walking on it.
- We love family bike rides on trail we would like to see more bike trails.

Other comments mentioned how trails improve the quality life, are great for exercise, and provide an alternative to dangerous streets. Many people mention that they hope there is a continued development of trails in the community. Other popular comments and suggestions related to design, safety, and maintenance topics. A complete list of the comments can be found in Appendix E.
CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

This section provides a deeper analysis of the survey results based on the three main sections of the survey, transportation, property values, and safety. We conclude this paper with several policy recommendations based on the results of this survey and the findings of the literature review.

Discussion of Results

The results of the survey clearly indicate that trails are an important asset to residents of Johnson County. “We need more trails!” was not an uncommon comment from respondents. The responses of the survey also highlight several important issues, which will aid JCCOG in its future policies and decisions regarding trails. The following briefly summarizes the key results of the trail survey in each major section.

Transportation

According to respondents, trail usage is seasonal. A large number of residents do not use the local trail system during winter months. The results show the primary impetus for trail usage is exercise, followed by recreational use. Only a minority use local trails to meet transportation needs (for commuting to work/school or to go to a specific destination). A majority of respondents reported that trail usage would increase with improvements in connectivity (“better trail connections between home and various destinations”).

It is possible that the responses of these questions are closely linked. First, exercise related activities are often moved indoors during inclement weather. This could explain why a large number of respondents reported lower or no trail use during winter months. Second, the
fact that residents see a deficiency in trail connectivity could explain why more respondents do not use trails for transportation.

Property Values

Overall, the surveyed households were unsure how property values are impacted by the location of trails. The responses were fairly evenly split between increasing the price of their home, having no impact, and not being sure, although the responses did lean slightly towards the belief that trail location increased the price. This uncertainty was probably due to the fact that in most situations the trail was in place before the current residents moved in. However, it was clear that the location of a local trail was not a major influence in the households’ residential location decision. The local trails are enjoyed by surrounding residents, but are perceived as just another amenity, and not a necessity.

Safety

The majority of users, according to survey results, do not feel personally or physically threatened on trails, however, this is not an absolute. The survey results show that the perception of safety frequently declines at night, during the winter, or when the user is alone. Trail safety could be improved, according to a majority of responding households, by an increase in lighting along the trails. Several other improvement suggestions were given, but it is clear that not every suggestion can be acted upon and not everyone will be completely satisfied. The perception of safety is very dependent upon individual state of mind. This does not mean that trail managers cannot act to help improve residents’ perceptions; in fact only 18% of the survey respondents believe that no measures were need to improve the safety of Johnson County trails.
Policy Recommendations

After careful analysis of the literature review and survey results, we have developed several recommendations for JCCOG to consider in their future trail planning.

Regional Trail Development

While the presence of good trails can encourage people to walk or bicycle short distances, good trail planning is essential if people are actually going to use trails in high numbers. Comprehensive, regional trail plans have the potential to greatly assist in building regional trail networks. This method is more effective in creating trails networks than when trails are planned individually without consideration of how they fit into the overall transportation system (NBPC, 1995). Below are some suggestions for creating a successful regional trail plan:

- Use community participation to determine what local residents would like form their trails system.
- View trails as a part of community or regional transportation system and attempt to repair, expand, or build trails “at the same time as roads and utility corridors…(and) paying special attention to river corridors as potential recreational greenways” (Moore and Thomas, 1998).
- Use trails as a means to connect people to places and other people. Some places which trails might connect to include “recreation areas, schools, offices, shopping centers, and local attractions” (Moore and Thomas, 1998).
- Ensure trails connect to one another--“To be effective transportation routes, trails must be connected to each other, be continuous within each corridor, be developed in areas that serve transportation origins and destinations, and be prioritized for development to serve the most immediate needs first” (NBPC, 1995).

JCCOG does have a Regional Trail Map (Appendix A) that presents proposed and existing trails, however, there is not a comprehensive plan that details how current and proposed trails can be linked to each other and to major destinations.
Comments received on the survey revealed that local residents perceive two of the largest breaks in the Johnson County trail system on the Iowa River Corridor Trail. The intersection of First Avenue/Mormon Trek and Highway 6 in Coralville and the intersection of Rocky Shore Drive and Highway 6 in Iowa City were stated numerous times as breaks in the trail system. The First Avenue/Mormon Trek and Highway 6 is a major barrier to those attempting to traverse from Iowa City to Coralville and vice versa. The intersection of Rocky Shore Drive and Highway 6 also serves as a major barrier to those trying to get to the University of Iowa Hospital and Clinics and to the University of Iowa Softball Complex. These two breaks in the Iowa River Corridor Trail present barriers to major destinations and prevent people from fully utilizing the trail for transportation. If JCCOG wishes to expand the level at which local residents use trails as a means of transportation, these two intersections should receive top priority for pedestrian and bicyclist improvements.

_Improving Safety_

While only a very small number of survey respondents indicated they feel unsafe on local trails, a number of respondents qualified their responses by saying they did not feel safe after dark or during certain times of the year and only 18% of respondents feel that no safety improvements were necessary on trails. Even though there do not appear to be major safety issues on local trails, that does not mean residential perceptions of trails as unsafe places should be discounted. If local residents feel unsafe on trails or believe that the placement of a trail near their home will negatively impact property values, it will be difficult to gain public support for an expansion of the trail system. Additionally, perceptions of unsafe trails keep people from using to the fullest potential. Because of these reasons, the following section outlines several safety considerations that could be implemented as the local trail system is expanded.
We suggest three primary methods for increasing both the real and perceived safety of trail users, local ownership, active management, and trail design, as described by the National Bicycle and Pedestrian Clearinghouse (NBPC). First, local neighborhood “ownership” of a trail involves community policing activities. Trails are safer when monitoring takes place, but an additional benefit can also occur, namely a higher level of respect on the part of users for the trail itself and surrounding properties (NBPC, 1996). The results of the survey would support such policing efforts; 26 percent of survey respondents believe that increased policing would increase safety on local trails.

The second method to improve trail safety is active management on the part of those responsible for the trail, for example, planning departments, park and recreation divisions, state and federal agencies. The problems resulting from poor design and management include lack of lighting, narrow trails, limited sight distance, flooding, snow or ice build-up, worn surfaces, and inadequate trail access. The results of these problems include collisions between users, damaged personal equipment, isolated segments, and inadequately lit areas. Active management is critical in preventing needless accidents and to indicate to users and potential abusers that the trail is monitored (NBPC, 2000; Schneider 2000; and Moore 1994). While the majority of survey respondents feel that trail maintenance is very good or good, many also suggested specific maintenance improvements.

Active maintenance specifically includes mowing, trash pickup, plowing, and tree or bush trimming (NBPC, 2000, Schneider 2000, and Moore 1994). Tod Schneider, in Parks and Recreation, suggests that a “safety zone” of at least 10 feet be maintained on either side of a trail. He writes, “thick brush or solid fences restrict natural surveillance while providing criminals with someplace to hide. This raises the risk of victimization, and, in fact, clearly has played a
role in greenway area crimes” (Schneider, 2000). Additionally, ensuring clean and well-maintained trails will increase the feelings of community ownership. As previously mention, this sense of ownership may reduce incidents of minor crimes, including graffiti (Tracy and Morris, 1998).

Finally, numerous design features can enhance personal security. First, trail width must be adequate to allow various uses. NBPC suggests that the trail “treadway” should be at least 10 feet wide, allowing bicyclists, skaters, walker, and runners to coexist and pass without conflict (NBPC, 1995). Second, providing separate trailheads for different uses and for crowded segments can prevent congestion and accidents. Third, trail design can include speed control measures to regulate trail travel. These include varying trail surface, terrain, and multiple, but not sharp, turns. This can especially be useful for trails with both bicyclists and walkers, however, it is important that these measures only be used in situations where they will not cause or create other hazards (Moore, 1994).

Signs and lighting are two of the most frequently mentioned design aspects that strongly influence safety. Signs, as mentioned above, are useful for detailing trail conditions, level difficulty, as well as for logging personal recreational mileage, directions, telephones, trail exits, and cross streets. Clear marking of addresses along trails is especially useful to describe an injured, sick or lost users’ location when contacting emergency services for assistance. It will also allow police or planning agencies to compile and monitor accurate statistics on occurrences and location of trail crimes (Schneider, 2000).

The existence of trail lighting can significantly impact safety, particularly personal security. This belief was mirrored in the results of our survey. While some believe that not providing lighting will discourage users from walking on potentially dangerous paths at night,
maintenance, brush removal, and drainage after heavy rains. Active management will also serve to improve the perceived levels of safety and potentially increase trail usage. Other safety improvements, including design features such as lighting, should also remain on the priority list.

While this study provides JCCOG with a broad overview of regional trail issues, there is room for additional research. In the future JCCOG should consider completing similar types of surveys of both trail users and non-users, but also of community businesses to determine both the perceived economic and transportation benefit of trails and realtors to obtain a better insight into how trails impact property values. JCCOG should ensure that community participation is a part of the trail planning process. This can be accomplished through focus groups or *charettes*, which gather the opinions of specific community groups representing recreational interests, women, and the disabled.
APPENDIX B: LETTER & MAIL SURVEY
February 16, 2001

Survey regarding local trail system

Dear Resident:

The Johnson County Council of Governments (JCCOG) is working with students from the University of Iowa's Department of Urban and Regional Planning to study how local trails affect transportation choices and quality-of-life issues. Specifically, we are studying hard-surfaced multi-use trails such as the Iowa River Corridor Trail, the Willow Creek Trail, and the North Ridge-North Liberty Trail. The results of the survey will give local governments valuable information as future trails are planned and designed.

Please take a few minutes to fill out the enclosed survey, and return it in the enclosed postage-paid envelope. The survey can also be faxed to John Yapp, fax 356-5009, and comments can be e-mailed to john-yapp@iowa-city.org. Thanks you in advance for your help in improving the area's trail system.

Sincerely,

John Yapp
Assistant Transportation Planner
Area Trail Survey

1. Number of people in your household _____

2. What is the closest hard-surfaced trail to your home? ____________________________________________

3. How many times per week does a member of your household use a trail in the Johnson County area? _____

4. Where is the trail most frequently used by members of your household located?
   a. Adjacent to my home
   b. Within my neighborhood (within walking distance of my home)
   c. Located outside of my neighborhood

5. For what reasons do members of your household use trails? (Please circle all that apply.)
   a. Recreation
   b. Exercise
   c. Commute to work or school
   d. Travel to activities/locations other than work or school
   e. Other ____________________________________________

6. How does your household use the trail? (Please circle all that apply.)
   a. Walk
   b. Run/jog
   c. Bicycle
   d. Skateboard/rollerblade/scooter
   e. Dog walking
   f. Strolling children
   g. Wheelchair
   h. Other ____________________________________________

7. What factors would increase your household’s usage of trails? (Please circle all that apply.)
   a. Availability of shower facilities at work or school
   b. Improved connectivity of trail system (getting from one trail to another trail)
   c. Better trail connections between home and various destinations (e.g., grocery, post office, etc.)
   d. Improved trail signage (e.g., trail markers)
   e. Improved traffic control for pedestrians/bicyclists where trails intersect with streets
   f. No factors would increase trail usage
   g. Other ____________________________________________

8. Did the trail nearest your home influence your decision to live there?
   a. Strongly influenced
   b. Mildly influenced
   c. Not a factor
   d. Undecided

9. How do you believe the trail nearest you impacted the overall price or rent of your home?
   a. Increased price
   b. No effect
   c. Decreased price
   d. Do not know
10. In general, how safe do members of your household feel on local trails?
   a. Very safe
   b. Safe
   c. No opinion
   d. Unsafe
   e. Very unsafe

11. What measures would improve the safety of trail users? (circle up to 3)
   a. No extra measures necessary
   b. Trail exits
   c. Emergency telephones
   d. Enforceable trail rules
   e. Trail design improvements
   f. Lighting improvements
   g. More frequent policing
   h. Other __________________________

12. If any members of your household have ever had an accident on a local trail, why?
   a. No incidents or accidents experienced
   b. Conflict with another trail user
   c. Poor lighting
   d. Limited visibility
   e. Incident with unleashed/unsupervised pets
   f. Poor trail etiquette by other trail users
   g. Vandalism affecting use of trail
   h. Other __________________________

13. Please rate the maintenance of the trail nearest your home.
   a. Very good
   b. Good
   c. Average
   d. Poor
   e. Very poor
   f. Do not know

14. Other comments

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

Thank you for taking the time to complete this survey. Please return it in the enclosed envelope. If you have any additional comments or questions, I can be reached at 356-5247, or email john-yapp@iowa-city.org.

John Yapp, Assistant Transportation Planner
### APPENDIX C: DEMOGRAPHIC AND ECONOMIC BACKGROUND INFORMATION ON STUDY AREAS

Table C.1: Population of Study Areas (2000 U.S. Census)

<table>
<thead>
<tr>
<th>Population</th>
<th>Iowa City</th>
<th>Coralville</th>
<th>North Liberty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>62,200</td>
<td>15,123</td>
<td>5,367</td>
</tr>
</tbody>
</table>

Table C.2: Income of Households (1990 U.S. Census Data)

<table>
<thead>
<tr>
<th></th>
<th>Iowa City</th>
<th>Coralville</th>
<th>North Liberty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $5,000</td>
<td>1,765</td>
<td>192</td>
<td>56</td>
</tr>
<tr>
<td>$5,000 to $9,999</td>
<td>2,722</td>
<td>439</td>
<td>95</td>
</tr>
<tr>
<td>$10,000 to $14,999</td>
<td>2,552</td>
<td>504</td>
<td>66</td>
</tr>
<tr>
<td>$15,000 to $24,999</td>
<td>4,092</td>
<td>954</td>
<td>298</td>
</tr>
<tr>
<td>$25,000 to $34,999</td>
<td>3,033</td>
<td>948</td>
<td>211</td>
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<tr>
<td>$35,000 to $49,999</td>
<td>2,953</td>
<td>803</td>
<td>233</td>
</tr>
<tr>
<td>$50,000 to $74,999</td>
<td>2,894</td>
<td>578</td>
<td>147</td>
</tr>
<tr>
<td>$75,000 to $99,999</td>
<td>915</td>
<td>134</td>
<td>16</td>
</tr>
<tr>
<td>$100,000 to $149,999</td>
<td>610</td>
<td>47</td>
<td>0</td>
</tr>
<tr>
<td>$150,000 or more</td>
<td>428</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td><strong>Median household income</strong></td>
<td><strong>$24,565</strong></td>
<td><strong>$26,599</strong></td>
<td><strong>$27,091</strong></td>
</tr>
</tbody>
</table>

Table C.3: Transportation to Work (1990 U.S. Census Data)

<table>
<thead>
<tr>
<th></th>
<th>Iowa City</th>
<th>Coralville</th>
<th>North Liberty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers 16 years +</td>
<td>32,580</td>
<td>6,268</td>
<td>1,704</td>
</tr>
<tr>
<td>Drove Alone</td>
<td>51.70%</td>
<td>72.80%</td>
<td>77.20%</td>
</tr>
<tr>
<td>Carpools</td>
<td>11.90%</td>
<td>12.20%</td>
<td>18%</td>
</tr>
<tr>
<td>Using Public Transit</td>
<td>10.20%</td>
<td>10.10%</td>
<td>0.90%</td>
</tr>
<tr>
<td>Using Other Means</td>
<td>3.30%</td>
<td>0%</td>
<td>0.50%</td>
</tr>
<tr>
<td>Walked or work from home</td>
<td>22.90%</td>
<td>4.40%</td>
<td>3.30%</td>
</tr>
<tr>
<td><strong>Mean Travel Time to Work (minutes)</strong></td>
<td><strong>14.6</strong></td>
<td><strong>16.1</strong></td>
<td><strong>19.6</strong></td>
</tr>
</tbody>
</table>
Table C.4: Educational Attainment (1990 U.S. Census Data)

<table>
<thead>
<tr>
<th></th>
<th>Iowa City</th>
<th>Coralville</th>
<th>North Liberty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons 25 years and older</td>
<td>29,537</td>
<td>6,663</td>
<td>1,678</td>
</tr>
<tr>
<td>Less than 9th grade</td>
<td>772</td>
<td>314</td>
<td>56</td>
</tr>
<tr>
<td>9th-12th grade, no diploma</td>
<td>1,035</td>
<td>292</td>
<td>180</td>
</tr>
<tr>
<td>High School graduate</td>
<td>4,846</td>
<td>1,208</td>
<td>454</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>5,069</td>
<td>1,274</td>
<td>378</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>1,967</td>
<td>617</td>
<td>176</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>8,146</td>
<td>1,835</td>
<td>383</td>
</tr>
<tr>
<td>Graduate or Professional Degree</td>
<td>7,702</td>
<td>1,123</td>
<td>51</td>
</tr>
</tbody>
</table>

Table C.5: Housing Occupancy Statistics (1990 U.S. Census Data)

<table>
<thead>
<tr>
<th></th>
<th>Iowa City</th>
<th>Coralville</th>
<th>North Liberty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupied Housing Units</td>
<td>21,951</td>
<td>4,605</td>
<td>1,128</td>
</tr>
<tr>
<td>Owner Occupied</td>
<td>9,823</td>
<td>1,745</td>
<td>810</td>
</tr>
<tr>
<td>Renter Occupied</td>
<td>12,128</td>
<td>2,860</td>
<td>318</td>
</tr>
</tbody>
</table>

Table C.6: Value of Owner Occupied Housing Units (1990 U.S. Census Data)

<table>
<thead>
<tr>
<th></th>
<th>Iowa City</th>
<th>Coralville</th>
<th>North Liberty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specified Owner Occupied Units</td>
<td>7,996</td>
<td>1,275</td>
<td>467</td>
</tr>
<tr>
<td>Less than $50,000</td>
<td>674</td>
<td>121</td>
<td>53</td>
</tr>
<tr>
<td>$50,000 to $99,999</td>
<td>5,139</td>
<td>935</td>
<td>388</td>
</tr>
<tr>
<td>$100,000 to $149,999</td>
<td>1,471</td>
<td>172</td>
<td>21</td>
</tr>
<tr>
<td>$150,000 to $199,999</td>
<td>462</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>$200,000 to $299,999</td>
<td>212</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>$300,000 or more</td>
<td>38</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Median (dollars)</td>
<td>$79,000</td>
<td>$73,200</td>
<td>$63,600</td>
</tr>
</tbody>
</table>
Table C.7: Gross Rent\(^1\) (1990 U.S. Census Data)

<table>
<thead>
<tr>
<th>Specified Renter Occupied Units</th>
<th>Iowa City</th>
<th>Coralville</th>
<th>North Liberty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $200</td>
<td>12,095</td>
<td>2,860</td>
<td>351</td>
</tr>
<tr>
<td>$200 to $299</td>
<td>723</td>
<td>67</td>
<td>15</td>
</tr>
<tr>
<td>$300 to $499</td>
<td>1,600</td>
<td>300</td>
<td>62</td>
</tr>
<tr>
<td>$500 to $749</td>
<td>5,906</td>
<td>1,877</td>
<td>222</td>
</tr>
<tr>
<td>$750 to $999</td>
<td>2,940</td>
<td>555</td>
<td>43</td>
</tr>
<tr>
<td>$1,000 or more</td>
<td>593</td>
<td>29</td>
<td>0</td>
</tr>
<tr>
<td>No cash rent</td>
<td>136</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Median (dollars)</td>
<td>$414</td>
<td>$415</td>
<td>$409</td>
</tr>
</tbody>
</table>

\(^1\) Gross Rent refers to rent plus the costs of utilities.
APPENDIX D: MAPS OF STUDY TRAILS
APPENDIX E: COMMENTS

3. How many times per week does a member of your household use a trail?

- Most days
- Nice weather: 5-6x
- In summer
- Summer/fall only
- Winter rarely, spring, summer, and fall 4x
- 7x in summer
- 3-4 spr/sum/fal
- Spring-fall 5x
- 5 in summer
- Daily in summer, never in winter
- 3-4
- 5-7 in summer
- Not often
- 1-2
- Varies, in the summer 4
- Winter 0, summer 3
- Less then 1
- 1 to 2
- 2-5
- 0 during winter, 1-2 summer
- Everyday in summer, spring and fall
- 3-4 excluding winter
- 1 to 3
- 2 during spring, summer, and fall
- 7 in nice weather
- 2 to 4 winter excluded
- 3 to 4 during summer
- 3 in winter, 5 to 6 in summer, spring and fall
- 5 when it doesn’t have snow on it
- Daily
- 1 – 2
- 1 to 2
- Everyday several times
- Daily
- 6+
- 5 to 6 summer
- 3 summer
- Daily in good weather
- 2-5
- 5-10
- Summer ~1-3 times/week
- Winter ~ 1-3 times/month
- Daily in good weather; no winter use
- 2-3
- 2-4
- <1
- 5 depending on weather
- Several (daily)
- 2-4 (nice weather)
- 5-6
- at least seven
- 3 or 4 during warmer months
- 1-2
- Erratic; perhaps 2-3 times/week in good weather; 1 times in snowish conditions
- 5-7
- Everyday
- 2-3

5. For what reasons do members of your household use trails? (Other-unless indicated)
- Access to park/playground
- Walking to Coral Ridge Mall
- Play yard
- Walk dog with neighbor
- Commutes to work at Oakdale and travels to coral ridge mall
- Picnics
- Walk dog
- Walking the dog
- Stroll with baby and dog
- Walk the dog
- Walk dogs
- Walking the dog
- Exercise dog
- Watch people using the trail
- Ice cream at Dane’s Dairy
- Bird watching; enjoyment; bagels
- Walk the dogs

6. How does your household use the trail?
- Cross country ski
- Get away from street, cars, etc.
• Walks with neighbor who walks dog
• Used to, would live to walk outdoors, did for years
• We don’t use any
• People watcher
• Walk to neighborhood shopping, West High events, friends houses
• Walk to Dane’s Dairy
• X-country ski
• Walk to mall
• Walk with walker

7. What factors would increase your household’s usage of trails? (Other-unless indicated)
• Bathrooms
• Maintenance (snow removal)
• Less paved surfaces (soft/dirt trails for running are easier on the legs/knees)
• Bathrooms at North Ridge Park and basketball courts
• Better lighting after dark
• Don’t know why trail stops at holiday rd
• Lights
• No factors would increase use in winter
• Snow removal in winter
• Plow snow from trail in winter
• List distance at different sections of trail for exercise. Example—around lakes in Minnesota they list how far you have gone and an exercise you can do. It would be nice to have a sign showing the distance around Northridge Park Lake.
• Need to just take time to use it.
• I have small children and in our area its too hilly for them on bike
• Weather
• Water fountains
• Better road and sidewalk conditions
• None of these- look at lighting and sidewalk/road maintenance on the other side
• Bathrooms near trail
• Enforcement of “all dog must be on leash”
• Stop city and private vehicles from using trails as if it’s a street
• Strongly enforce the dog leash law
• Enforce the picking up of your dogs feces to make for a more sanitary condition
• Post signs on all trails with rules especially in and around PARK areas
• Place post barriers at the beginning of trails to stop vehicles from entering
• Better maintenance of trails
• Under or overpass in Coralville at First Avenue and Mormon Trek
• Hard surface or black top trail
• Benches for seniors and others along the trail
• More trails in scenic areas close to IC. Would have liked even more park trails! Moved here from Ann Arbor, MI—very disappointing to say the least.
• Access to North Ridge Park—direct access
• More motivation to exercise; warmer winters
• Garbage cans, a few places along the trails would be nice
• Have signs reminding people to pick up after dogs. It has gotten so—-bad I don’t use it much any more.
• Snow removal during winter months! We love to walk in winter, too!
• Softer surface!

8. Did the trail nearest your home influence your decision to live there?
• Trail came after purchase, but would influence decision
• Not a factor, but a great perk
• I was here long before the trail (d/n answer)
• Not here when moved
• Home was purchased before the trail was made
• Decision made before trail
• Trail was not there at that time
• We were here first
• No
• Was not there when we bought
• Increase price if tennis courts and shelter are built at North Ridge Park
• We were here first
• Answered not a factor—“Not there when we moved in.”
• Answered, not a factor—“Because weren’t many trails anywhere when we moved to current household.”
• Walking to work was a major factor.
• This question was not answered, however, this Northridge respondent wrote, We were here before the trail. Would not purchase home with trail adjacent in the future. Privacy has lessened, noise increased.
• Answered not a factor—“we were here before the trail”
• Answered not a factor—“here before trail”
• Answered not a factor—“didn’t exist”
• Answered not a factor—“No side walk when I moved here—better then people from all over didn’t come to walk their dogs. Almost a health hazard now.”
• Answered not a factor—“came after”
• This question was not answered, however, this IRC respondent wrote, The river made a difference—the trail was a bonus.

9. How do you believe the trail nearest you impacted the overall price or rent of your home?
• I would think but don't know
• I am a realtor—no
• Depends on whether Coralville decides to maintain green area around the trail
• Answered increased price—“Although on our last tax assessment our land value decreased while our home value increased. Doesn’t make sense.”
• Answered increased price—"This respondent also indicated that the trail along with Kiwanis Park impacted price."
• Answered no effect—"I hope. Taxes are high enough."
• This question was not answered, however, this respondent wrote, "Increase tax assessment much more than selling price."

10. **In general how safe do members of your household feel on local trails?**
• Sometimes feel safe, other remote areas don't feel safe
• Very safe in daytime with others/dog, safe at evening with others/dog, very unsafe after dark
• Certain areas more safe then others
• Safe during day
• Lights need to be installed in the park (City Park) for jogging at night. Also the trees in the backyards of the Normandy Homes need to be trimmed back. We've had branches in our faces many times when riding bikes.
• It depends summer-unsafe, winter safe
• My opinions have changed since Coralville has planted wildflowers--will have to wait and see—Previously--very safe

11. **What extra measures would improve the safety of trail users**
• Don't like the big hills right before a street intersection – kids safety
• Bike lane/stroll lane
• Regulation of speedy drivers
• Mowing tall grass next to trail
• Make wider
• With the wildflowers and unkept areas I am not sure
• Reminder to clean up after dog waste
• A camera in the tunnel under the I-80. There's a phone, but I feel much safer when I see a bike-patrol officer. A camera would also deter unsafe behavior, loitering, etc.
• Answered other (this was the 4th response...we said to only circle 3), pave or blacktop
• Answered g. more frequent policing and wrote "at dusk and evenings" next to it
• Next to the measures we had on the survey, this respondent added, "there are: unleashed pets, motorized vehicles, teens in wooded area smoking/drinking, speeding cyclists."
• Next to other, "Better, safer major intersection crossings."
• This respondent answered no extra measures necessary. Next to the Emergency telephone and the Lighting improvements, this respondent wrote "No!"
• Next to lighting improvements, this respondent wrote "low lights so as not to disturb those living on trail"
• Answered safe and added, "along road (Normandy-Rocky Shore) almost anytime. Wouldn't use trail that runs parallel with Hwy. #6 West.
• Other—greater policy accountability

12. **If any members of your household have ever had an accident on a local trail, why?**
• Trail surface was bad
• Personal- balance problem- fell
• Water, mud at the bottom of some parts, may not be able to help that
• Almost run over by biker wearing headphones
• Why are races allowed to spray paint arrows and other messages on the trail? It looks terrible. Couldn’t they use removable staked signs?
• Other—slipped on mud carried onto trails by city trucks
• Other—Squeezed by a car at Burlington crossing. Wrecked a bike wheel
• Other—loose gravel that is part of Willow Creek Trail in Kiwanis Park. It would be better if that part was paved like the rest of the trails.
• Other—between N. ridge and Oakdale the hill is extremely steep! At the bottom there is poor drainage—making it nasty to bike thru a puddle or walk thru it.
• Other—“biking and encountered gravel piles on road”
• Other—telephone pole adjacent to (or in) trail caught bike pedal

13. Please rate the maintenance of the trail nearest your home?
• Very good + - excellent
• Under I-80 to/from North Ridge/Coral Ridge Mall gets muddy after big rains
• Good-except in the winter, when they are never ever plowed
• Maintenance on trail
• Trail is very good, Coralville does a POOR job with the weeds around the trail in Coralville
• Better than our streets in the winter time
• Major repairs need to be completed from Manor Drive and Normandy to Park Road. The street is heavily used from spring until fall with joggers, rollerblades, bikes, and wheelchair bikes. There are so many potholes and jagged raised cracks that everyone uses the middle of the street. I’m talking about Manor drive and Normandy to Park Rd. This is unsafe when combined with motorists.
• Good except in the winter
• Respondent answered very good and wrote, “the trail is often plowed during the winter before the streets are”
• Answered good and added “except @ railroad crossing behind Heartland Inn and entrance to Crandic Park.”
• Circled both good & average “broken glass bottle on trail never removed”

14. Comments
• I really appreciate having the trail so close and it’s wonderful for walking, jogging, and biking. I love getting on my bike at North Ridge and biking to North Liberty and back. Have even used other area for cross-country skiing. Would be nice to expand to include winter ski trails.
• The more trails the better. It is difficult to enjoy bicycling n dangerous streets.
• Need trail connection to UIHC to encourage bicycle commuting. Can’t get there safely from Coralville.
• Enjoy Willow Creek trail immensely. It is very well maintained. Walk/run/jog with neighbor spring-fall. Would like to learn to cross country ski and then would cross
country ski on trails in winter. Beautiful landscaping. Could use more streetlights after
dark for safety reasons.

- Need a paved surface connecting trail at Willow Creek Park with sidewalk to Cambria
  Court.
- We love the park and the trails. We live on the trail and think it’s wonderful to see it
  used by the families (and their pets). The moon usually lights the trail sufficiently and
  there’s less shadows than bright, artificial lights. I would hate lights in the park for the
  trail-maybe little lights that just illuminate the path would be acceptable.
- My comments are basically irrelevant now. My husband and I enjoyed the park for years
  and have seen no need for improvement.
- Love the trails – a water fountain along the trail would be good
- We don’t walk for enough to use trail. But we think they are great for people that can use
  them.
- The trail in Coralville is very good. We love it, with 2 little kids it is great. We bought a
  new house we are moving into in July, and we made sure it was close to the bike path
- Once my kids are bigger and can manage the hills better, I think we will use the trails
  more. Now we go to North Park where it’s relatively flat and practice riding bicycles
  because they can control their bicycles better.
- Trails are great but in town sidewalks (Coralville) do not have safe cross walks for street
  crossing on a bike with a trailer. Need to improve Coralville system to connect to City
  and I.C North Ridge trail to Oakdale is too hilly for many people to use.
- Funding of trails should be helped by those who use it. Taxes are high enough
- I feel neighbors around the trail should be given the option to mow up to the trail if they
  so desire.
- I really enjoy the Willow Creek trail because the asphalt surface is so much better for
  running than the hard concrete sidewalk. The surrounding park also makes each run very
  enjoyable. It’s an real asset to the neighborhood.
- Many residents appealed to Coralville Rec office because of the “green” area around the
  trail and adjacent to other lawns was a large weed field. Not sure the status of this issue.
- I really enjoy this trail (Willow Creek) – I look forward to coming home from work and
  walking on it.
- Our family likes to walk and also to photograph nature and architecture. More trails in
  Iowa City and the close environs would be nice, especially if there were safe connections
  from trail to trail and /or definite procedures (written and posted) for crossing busy
  highways. Example, to connect the trail along the IA River to the trail along the softball
  fields.
- It would be nice if all the trail in the park (south ridge) would be plowed, no just one part.
- Use of trails goes up greatly with warmer weather
- The tree branches and large bushes at the Manor Drive entrance to the trail need to be cut
  back at least twice during the season. We’ve had many near misses with joggers and
  other cyclists trying to avoid getting whacked in the face with branches. Thanks for
  sending the survey.
- We need more trails!
- It is wonderful to have trail out to the girls softball diamond. However, a cross over
  bridge is very important at the corner of riverside and Burlington. There are untrimmed
shrubs – no shoulder. When I am going south – bikers from the other direction do not see me coming. The light is short to get across 4 lanes of traffic so bikers are coming very fast. I was nearly run in front of a semi by another biker!

- I really like having a nearby trail for rollerblading. My only problem is when there’s lots of leaves and sticks on the trail. It would be great if these could be swept off.
- The maintenance was excellent when the neighborhood was taking care of it- Coralville never did a good job and that is why we started doing it. Now with the wildflowers we will have to wait and see
- Sorry I am late the trail survey but every time I think of what Coralville has done to our neighborhood trail system I get very angry. We live north of the interstate in Coralville and the trail system is right behind our home. Most of the residents along this portion of the trail have maintained the grass and trail system since the city put the trail in. It was beautiful area of green grass and open space. All of us pitched in and did the mowing and weeding because it was part of our neighborhood. Coralville decided we needed wild flowers along the trail and despite our protests went ahead and killed the grass and planted wildflowers. I have nothing against wild flowers in general but this is a residential area of the trail. Now to get to the trail I have to go around the block not out my backyard. We will have weeds, allergy problems and rodents despite what Coralville park people say. Coralville cannot properly maintain this area to get it started properly as they could not even keep the trail maintained before, that is why the neighbors started this project. Please listen to the people along the trails. We are the ones who have to live there.
- We usually ride our bikes on the street because trails are not connected for longer distances.
- see question #7—these comments were put there
- Completing the trail along the Iowa River through Coralville would be helpful. More trails to the East side of town would be nice. Allowing bikes to use downtown sidewalks has not caused accidents on University sidewalks. The street downtown are truly dangerous for cyclists.
- We totally enjoy all the trails in Iowa City. Would love to see them connect up together. More bike trails to downtown Iowa City would be great—a much safer and more convenient way to bike w/o road traffic.
- We do not need any more, cost too great for few people per 1,000.
- The safer pedestrian and biker access to get to the trails, and the more connected the trails, the more they seem to be used. The trails at Willow Creek Park are very popular and well used, and show how popular trails are when available. A focus on trails v. vehicle traffic is a great direction for Iowa City.
- Just do not partner with “Iowa CHILD.” We can have good trails and conservation w/o that absurdity.
- Take a trip to Ann Arbor—check out Gallup Park & trail system surrounding it! As well as dirt trails in Arboretum next to Medical Center—if you ever get the chance! We miss them terrible. Also lived in Seattle, WA for a year—they have wonderful Burke- Gilman Trail.
- “Trails are fine, as long as they aren’t in your backyard.”
• In the winter when we run after work, coming home through Willow Park it is extremely
dark. Otherwise we love it! A trail that leads to Dane’s Dairy, what more could you ask
for??!!
• Need for bigger, brighter crossing lights at major road crossings to warn cars. Also
slightly longer crossing time. We appreciate being included in survey.
• Drainage needs to be improved in low-lying areas. Please don’t put up a bunch of lights
or large sighs. These are supposed to be nature trails—not pedestrian streets.
• The city didn’t shove the sidewalk between the last house on Teg Dr. to the Kiwanis
parking lot. This section of the sidewalk was added last year at the urging of neighbor. It
should have been included in the initial plans, but it wasn’t.
• Please create a off leash dog park! We’ve been to many wonderful parks across the
US—from New York to San Diego—we’ve even been to 2 dog beaches! Some how the
Midwest is really unprogressive in this area. Many new dogparks are being developed in
the Midwest. Johnson County should get in the game! Feel free to contact us about out
experiences with dog parks that are responsibly run vs. the crackpot’s who want to have
every park 100% off leash. Jayne of Steve 319-339-1749.
• Trails needed for quality of life.
• Hickory Hill Park trails are a soggy mess. We prefer to hike cross-country on the
peninsula between the Iowa River and I-80.
• “delighted with the usage by all age groups; the increase in the #s of trails; bike trails
separate from motor vehicles”
• The biggest problem with the Iowa River Corridor Trail is that it is so short. The second
biggest problem is that most of the trees along the trail have died.
• Snow removal this winter has been very good and allowed for good use of the trail.
• “Natural ??? of the surrounding areas makes the trail more enjoyable. However,
moving a small strip on the edge of the trail make it more user friendly (snakes etc.). It is
so much nicer to walk on our trail than the neighborhood sidewalks. We love it!
• I suggest that hard surfaces be replaced with wooden chips. This would be particularly
helpful to people with bad arches.
• Occasional homeless people on I.R. Corridor trail—stretch between Rocky Shore Drive
and Coralville. Sometimes we feel unsafe.
• The prospect of more linked trails is most welcome!
• Connecting the trail West of West High to Coralville would be great!
• Trail use depends on time of year, so questions #3 is misleading. Bike trail on north
Dubuque to reservoir is poorly maintained causing most bicycles to use road. With
Solon, West Branch, Hills, Amana and other small towns so close by, Johnson County
should have an integrated trail system.
• We love family bike rides on trail we would like to see more bike trails—like Cedar Falls
bike trails in their state park wonderful place for family biking.
• We think we are lucky our town has placed an emphasis on nature and exercising safely
in our neighborhood esp. for our children.
APPENDIX F: SUMMARY OF SURVEY FINDINGS

Question 1: “Number of people in your household.”

The surveys were completed according to household behavior, meaning that the respondent was not to answer question based on his/her perceptions but on the entire household. The results showed that the average household size of the respondents was 2.69.

Question 2: “What is the closest hard-surface trail to your home?”

There were 121 usable responses to this question. Apparently several people were confused by this question as several respondents entered the distance of their home from the nearest hard-surfaced trail (e.g. 2 blocks or 1/2 mile). Other people left the questions blank. Below is a breakdown of the trail nearest to the 121 respondents’ homes.

<table>
<thead>
<tr>
<th>Trail</th>
<th># of Respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willow Creek</td>
<td>35</td>
<td>28.9%</td>
</tr>
<tr>
<td>Iowa River Corridor</td>
<td>39</td>
<td>32.2%</td>
</tr>
<tr>
<td>North Ridge</td>
<td>47</td>
<td>38.8%</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Question 3: “How many times per week does a members of your household use a trail in the Johnson County area?”

Upon reviewing responses for this question, it was determined that there were some problems with the wording of the question. Therefore, an average number of times a household uses a trail cannot be provided based on the information received from the survey.

Rather than providing a concrete number of times per week a household used a trail, several respondents answered with things such as, “most days” or “often.” Additionally, many people entered ranges (e.g. 2-4 times per week) which further complicated trying to come up with an average.

There were also 23 responses that indicated trail usage is dependent on the season of the year. For example, some respondents answered they use the trail “daily in summer, never in winter.” The responses from this question indicate that trail usage is affected a great deal by season. Many people indicated they did not use the trail in winters or in inclement weather and others indicated they used trails only in spring, summer, and fall.

Question 4: “Where is the trail most frequently used by members of your household?”

As shown in Table F.2, the majority of respondents reported that they live either adjacent to or within walking distance (i.e. within the respondents neighborhood) of the trail. Fewer than 3% of the respondents reported the closest hard-surfaced trail is located outside of their neighborhood.
Table F.2: Nearest Trail to Survey Respondents

<table>
<thead>
<tr>
<th></th>
<th># of Respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjacent to Home</td>
<td>58</td>
<td>41.4%</td>
</tr>
<tr>
<td>Within neighborhood (walking distance)</td>
<td>78</td>
<td>55.7%</td>
</tr>
<tr>
<td>Outside Neighborhood</td>
<td>4</td>
<td>2.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>140</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Question 5:** “For what reasons do members of your household use trails?”

The majority of respondents indicated they use local trails for exercising or recreational purposes. Nearly 14% of respondents use trails for commuting to work or school, and nearly 24% use trails for traveling to non-work or non-school activities. Just over 7% of respondents noted they use trails for reasons other than those listed on the survey including: picnics, people watching, and bird watching. Overall this data shows that most people using the trails for exercise or recreational purposes.

![Figure F.1: Reasons Respondents Use Trails](image)

Table F.3 shows the data broken down into total assessed property values. In all ranges a majority of the respondents stated that they use the trail for exercise and recreation. However, it is important to note that 22.7% (10 respondents) of the high category use the trail for commuting, 11.8% (4 respondents) of the low category, and only 8.9% (5 respondents) in the middle category. The results also show that a larger portion of respondents in the multi family (25%) and lowest category (14.7%) use the trails for traveling to other activities than work and school.
Table F.3: Reasons Respondents Use Trails by Property Values

<table>
<thead>
<tr>
<th></th>
<th>Recreation</th>
<th>Exercise</th>
<th>Commute to work or school</th>
<th>Travel to other activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi</td>
<td>75.0%</td>
<td>75.0%</td>
<td>0.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Low</td>
<td>67.6%</td>
<td>91.2%</td>
<td>11.8%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Middle</td>
<td>76.8%</td>
<td>89.3%</td>
<td>8.9%</td>
<td>3.6%</td>
</tr>
<tr>
<td>High</td>
<td>68.2%</td>
<td>90.9%</td>
<td>22.7%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

Question 6: “How does your household use the trail?”

Of the 140 individuals who answered this question, 125 responded they walk on trails and over two-thirds responded they use trails for bicycling. These and other trail uses are shown below in Figure F.2. Additional activities for which survey respondents use trails that were not listed on the survey include: cross-country skiing; avoiding streets, cars, etc.; people watching; and walking with a walker.

![Figure F.2: Activities on Local Trails](image)

Question 7: “What factors would increase your household’s usage of the trail?”

Of the 139 respondents who answered this question, “improved connectivity of trail system (getting from one trail to another trail)” received the most support with 71 people marking this factor. “Better trail connections between home and various destinations (e.g. grocery, post office, etc.)” also received over 50 responses. The breakdown of responses is shown in Figure F.3

66
Question 8 & Question 9: “Did the trail nearest you home influence your decision to live there?” & “How do you believe the trail nearest you impacted the overall price or rent of your home?”

The data shows that of the 140 respondents, 61% answered that the location of the trail near their home did not influence their decision to live there. However, 28% of the respondents stated that the trail mildly influenced their decision. This data can be seen in Figure F.4.

Analysis of the second question shows that 50 (35%) of the 142 respondents believe that the trail nearest their home increases the price or rent. Thirty percent of residents feel the trail had no effect on the price or rent of their home. Thirty-four percent of the respondents did not know
how trails impact prices and only one respondent stated that the trail near their home decreased the price (See Figure F.5).

![Figure F.5: Perception of Trail Impact on Housing Prices](image)

As shown in Table F.4, 83% of residents who live in multi-family units stated that the trail was not a factor in their decision to live in their home and 67% believe the trail has no effect on the overall price of their rent. Similarly, a majority (64%) of the respondents in the lowest category stated that the existence of a trail near their home was not a factor in their decision to live there. Though, 38% of the respondents in the low category feel that the location of the trail increases the overall price of their home.

<table>
<thead>
<tr>
<th>Table F.4: Trails Influence on Purchase of Home by Property Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Multi</td>
</tr>
<tr>
<td>Low</td>
</tr>
<tr>
<td>Middle</td>
</tr>
<tr>
<td>High</td>
</tr>
</tbody>
</table>

Respondents of the middle category also stated the trail did not influence their decision to purchase their home. Specifically, the data shows that 57% of the respondents in the middle category stated that the trail was not a factor in their decision to buy their home. Thirty-three percent of the respondents in the middle category do believe that the trail positively affects the overall price of their home. However, 33% of these respondents also stated that the do not know how the location of the trail near their home impacts overall price.

Of those surveyed in the high category, 62% of the respondents stated that the trail nearest their home was not a factor in their decision to live there. Similarly, respondents of the middle
category 37% feel that the location of the trail near their home increases the price. Yet, 35% of these respondents do not know how the trail impacts property values and 28% of the respondents feel that the location of the trail had no effect on the overall price of their home.

| Table F.5: Perception of Trail Impact on Housing Prices by Property Value |
|--------------------------|------------------|------------------|------------------|------------------|
|                         | Increase Price  | No Effect        | Decreased Price  | Do Not Know      |
| Multi                   | 16.7%            | 66.7%            | 0.0%             | 16.7%            |
| Low                     | 38.2%            | 26.5%            | 0.0%             | 35.3%            |
| Middle                  | 33.3%            | 29.8%            | 1.8%             | 33.3%            |
| High                    | 37.0%            | 28.3%            | 0.0%             | 34.8%            |

Question 10 “In general, how safe do members of your household feel on local trails?”

An overwhelming majority (88%) of survey respondents answered that members of their household feel very safe or safe on local trails, as illustrated in Figure F.6 below.

![Figure F.6: Perceived Trail Safety](image)

Question 11: “What measures would improve the safety of trail users?”

When asked what measures would improve the safety of trail users, 25 out of 137 respondents or 18% answered that no extra measures are needed. Lights (47%), telephones (36%), and increased policing (26%) were the most popular suggestions, although design improvements and better enforcement of trail rules were also selected. This is illustrated in Figure F.7.
Figure F.7: Trail Safety Improvements

Question 12: "If any members of your household have ever had an accident on a local trail, why?"

Over 80% (108) answered that no member of their household had ever had an accident on a local trail. Of those who responded that an accident had occurred (33), 7% cited pets as the impetus of the accident. Four percent believed that etiquette, or lack thereof, was to blame. One respondent reported that he or she was almost hit by a biker who was listening to headphones. Another 3% cited poor lighting as the cause of their accident. The most popular write-in response was poor trail maintenance (6 respondents). As seen in figure F.8.

Figure F.8: Causes of Accidents
Question 13: “Please rate the maintenance of the trail nearest your home.”

Forty-eight percent of those who responded to the question rated the maintenance as good, while 38% thought it was very good. Out of 140 respondents, five (4%) rated the trail’s maintenance as poor or very poor and nine (6%) responded that it is average. See Figure F.9. However, many of the respondents qualified their answers. The most common responses were related to winter maintenance. Two responses praised the timeliness of winter plowing; however, the majority of the responses were less favorable. Other maintenance issues include mud, flooding, and landscaping.

![Figure F.9: Perceptions of Trail Maintenance](image)

Question 14: “Other Comments”

This question allowed respondents to write down general comments on the trail system in the Johnson County Area. A majority of the comments were positive, including such comments as:

We love the park and the trails. We live on the trail and think its wonderful to see it used by the families (and their pets)

I really enjoy this trail (Willow Creek) – I look forward to coming home from work and walking on it.

We love family bike rides on trail we would like to see more bike trails.

Other comments mentioned how trails improve the quality life, are great for exercise, and provide an alternative to dangerous streets. Many people mention that they hope that there is a continued development of trails in the community. Other popular comments and suggestions related to design, safety, and maintenance topics. An entire listing of the comments can be found in Appendix E.


Iowa City, City of. 1989. Iowa City Open Space Plan. Iowa City, IA.


