Kent State University's Sustainable Transportation Initiative
Final Report

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What is Sustainable Transportation?

This past year we embarked on a study of sustainable transportation options in and around Kent State University's campus, including much of the city of Kent itself. Kent's most recent Comprehensive Plan attempted to develop a model for the city that incorporated sustainability at every possible juncture (City of Kent 2004). Moreover, the Plan specifically highlighted transportation planning as a major aspect of future sustainability. This paper reports on the work that we conducted last year to assess the existing levels of transportation sustainability in and around Kent State University's campus, the usage of existing facilities, and the attitudes of students towards sustainable transportation.

The notion of "sustainability" reflects a basic strategy of any community planning; that physical development and redevelopment sustain and enhance the community's long-term social, environmental and economic well-being. Within the past several years, there has been a growing realization that economic, public health, and environmental concerns must be addressed in sustainable fashion if communities in northeast Ohio region are to grow and succeed. People are drawn to those areas that exhibit a high degree of sustainability and may shy away from places where economic decisions occur without regard to any sustainable outcome. Smart growth has been touted as a way to develop businesses and residences while reducing the overall environmental footprint and promoting strong and healthy neighborhoods (Duany et al. 2001). Increasingly, cities have looked at creating sustainable comprehensive plans to foster economic growth, protect the environment, and foster healthy lifestyles and communities (see City of Kent 2004).

One such practice lies in the development of a more sustainable transportation system. Just as sustainable development seeks to increase economic growth without sacrificing the principles of a healthy environment and a strong community, so sustainable transportation seeks to enhance mobility in support of economic development, while at the same time promoting a healthier environment, a healthier community and healthier behaviors. The problems that many American towns and cities have experienced in regard to obesity rates can be traced to a lack of sustainable transportation systems. Daily exercise is a well-known remedy for obesity, but the simple act of walking and bicycling can be made burdensome by the lack of appropriate facilities. In fact, studies have shown that the least pedestrian friendly communities are often those with the highest obesity rates (McCann and Ewing 2003), and obesity in Ohio is a growing problem (Horton 2007). A truly sustainable transportation policy would attempt to increase the movement of people by walking, bicycling, and mass transit, while decreasing the number of trips undertaken by automobiles.

Sustainable Transportation around Campus

Sustainability has emerged as an important aspect of designing University campuses and in the surrounding areas (Norton et al. 2007; Toor and Havlick 2004). In Ohio, the Strickland administration has recently called for more energy efficient university settings (State of Ohio 2007). The document produced by the Northeast Ohio Research Consortium entitled *Taking Steps toward Sustainability Higher Education in Northeast*

Ohio (2004) argues that higher education institutions must assume a leadership role in creating a sustainable future for the communities in which they reside.

This is particularly true when examining transportation patterns. According to Norton et al. (2007, 1) "current sustainability initiatives tend to ignore the broader environmental, social, and equity implications of the consumption patterns resulting from the relationships between transportation options and land-use patterns on and around a campus." Most campuses have been designed as pedestrian campuses but are caught by a culture that encourages driving at every opportunity. This puts more pressure on campus officials to develop parking lots, increase the size and number of roadways, and neglect the type of infrastructure that would encourage nonvehicular transportation.

Universities are uniquely capable of influencing travel behavior (Millard-Ball, et al. 2004). Land use, infrastructure, and facility siting decisions can promote walking or bicycling, the location parking facilities at the edge, and the development of a university bus system (Ellis 2003; Tolley 1996). The situation at Kent State University is complicated by the fact that it is the third largest university in the state of Ohio. When classes are in session, the population of the university equals the population of Kent City itself and is by far the community's major traffic generator.

Sustainable Transportation and Economic Development

Transportation has an impact on many aspects of community life. One of these lies in economic development. The city of Kent has embarked on a program to improve the economic viability of the downtown Kent area. They are trying to increase the number of commercial outlets, restaurants, and other services available in downtown Kent, and this requires an expansion of the customer base. The nearby presence of Kent State University has the potential to create that additional demand for goods and services downtown. In addition, increasing numbers of pedestrians and bicyclists can reaffirm a sense of place, as the community develops at a more human scale. However, many students, faculty and staff from Kent State University do not generally travel downtown even though it is less than a mile away from the campus and could provide a close, walkable destination.

Transportation decisions from the last several decades have discouraged students, staff and faculty from walking or bicycling from campus to other parts of the community. Due in part to State and Federal funding protocols, the city's transportation system seemed to focus on roadway capacity improvements without sufficient regard to community impacts. Barriers have been created that limit the ability of students, staff and faculty to walk and bicycle from campus to other parts of the community, including downtown areas (City of Kent 2004). Today, both town and university leaders have professed a desire to work together to try to improve overall economic development. Likewise, residents of the city, in a series of community meetings, indicated that they are most interested in making Kent more pedestrian friendly and in managing traffic systems in a sustainable way (City of Kent 2004).

The City of Kent and Kent State University provides an excellent laboratory for ascertaining how sustainable transportation can contribute to more livable communities. Despite its stated desire to be a residential and pedestrian oriented campus, the need for parking and the volume of traffic in and around Kent State has outstripped student and staff growth; over the years, Kent State has developed into an increasingly automobile oriented campus. Moreover, it has experienced greater problems of congestion and become less connected to the surrounding community.

This study seeks to develop an empirical understanding of the current situation and then to uncover ways to encourage more non-vehicular traffic within the campus and between the campus and the surrounding community. The benefits of this shift could include less energy consumption, decreased pollution, and a revitalization of Kent's economically depressed downtown.

Project Components and Personnel

The Sustainable Transportation Initiative consisted of five distinct components that were aided by specific personnel. The PI, Dave Kaplan, was involved in each component.

1. Inventory and Development of Interactive Map. We inventoried all of the infrastructure and facilities that encourage or hinder non-automotive traffic. This included all pathways, all street crossings, bike facilities, sidewalk and bikeway interruptions, and bus stops. From this, we created a map in Arc View that includes these elements.

Key Personnel: **Gregg Bowser**, Graduate Assistant in Geography, primarily responsible for developing this map in Arc View as well as collecting information on transportation facilities. Gregg also took several photographs.
Samantha Hoover, undergraduate assistant, responsible for collecting information on transportation facilities

2. Measurement of non-vehicular traffic. During the Fall 2007 and Spring 2008 semesters, we examined the degree of non-vehicular traffic at key intersections leading into Kent State. This consisted of both pedestrian traffic and bicycle traffic. These data were counted at the same basic time of day and then added to spreadsheets and maps.

Key Personnel: **Gregg Bowser** and **Samantha Hoover** were both involved in acquiring these data.

3. Survey and Focus Group of Kent State Students. In late Spring 2008 we developed and distributed a web based survey that concentrated on how people are using campus transportation, how they are traveling across campus, how they travel between campus and the surrounding community, and their attitudes towards sustainable transportation. In early Fall 2008, we assembled a focus group that helped us develop a better understanding of student attitudes.

Key Personnel: **Gregg Bowser** helped to develop the survey.
Mike Dunbar, graduate student in Geography, helped to interpret some of the survey questions, calculate some variables and assist with the focus group.

4. Attitudes of Downtown Kent Merchants. In Spring 2008, we interviewed many available downtown Kent merchants to determine their need for customers from Kent State University and the importance of \transportation in getting students to come to their stores.

Key Personnel: **Jera Oliver**, Political Science student, conducted the interviews with downtown merchants.

5. Assessment of Sustainable Transportation Potential in Kent. In February 2008, we brought over **Spenser Havlick**, one of the countries foremost authorities on sustainable

transportation, to look over the situation in Kent, speak with campus and community leaders, give a talk to the public, and participate in several discussions.

Key Personnel: **Tom Clapper**, Director of Transportation Services at Kent State University, was instrumental in organizing Dr. Havlick's visit. He was assisted by **Elaine Ramhoff**, Transportation Services administrative secretary.

Future Work: While the project is officially completed, there is still more to be done. I have already presented some of the findings to the Transportation Advisory Committee. In Spring 2009, I expect to present our findings to community and campus leaders. I still hope to link the completed report to the OTC and Kent State University web sites.

Inventory of Sustainable Transportation Infrastructure and Facilities

One of the primary objectives of this study was an effort to get a sense of what sorts of facilities and infrastructure might facilitate and impede sustainable transportation. Our specification of sustainable transportation in this case was straightforward, including walking, bicycling, and bus transit. Facilities refer to bike racks and bus stops whereas infrastructure refers to sidewalks, bicycle paths, crosswalks, median islands, and bus routes.

Before producing the overall map, we went out and inventoried all of the items listed above. This inventory was conducted within the boundaries of Kent State's main campus at Kent (outlying areas like the KSU airport were not considered), the parts of Kent adjacent to campus, and an area of land stretching from the west of campus to the downtown and bounded by the Cuyahoga River. Much of the transportation information was gathered through field work and simply walking the area. The information was gathered over several months and encompassed several different factors related to sustainable transportation. Most of the elements were marked on a university directory map that served as the keystone of the field research using distinctive colors, and then later inputted into the Arc Map workspace.

To create the map itself, a pair of AutoCAD DWG files provided by Kent State's architect's office serves as the foundation for the project map: one detailing the buildings and pathways of the campus, and the other detailing the immediate area surrounding the university. These maps were brought together in Arc Map and aligned using GIS data. Due to limitations inherent in the project's computer hardware, the shapefiles were passed over in favor of a simple DWG "snapshot" that captured all the information required for the project in an unalterable format. This element serves as a backdrop, with any alterations or additions made to the map handled natively within Arc Map.

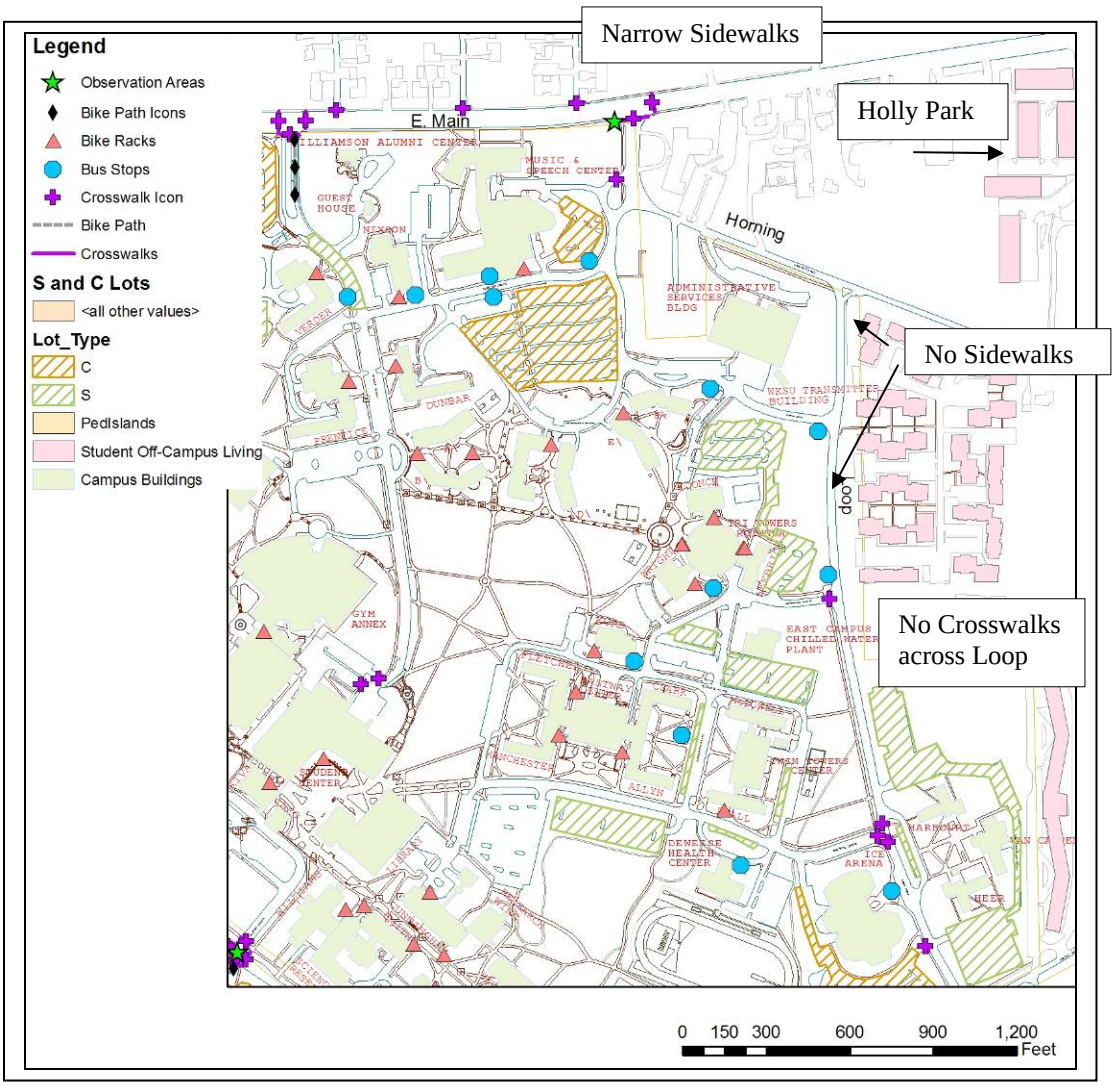
Elements that were considered to be "pathways" (such as bike lanes and crosswalks) were represented through both icons and lines, while "points" (bus stops, bike racks) were represented with only icons. Campus buildings, off-campus student apartments and dormitories, and pedestrian islands were also added as polygons. Finally, student parking facilities were also added to the map. This information was gathered during the field observation as well as through the campus's Parking Services. For the purposes of the study the C and S lots, which are reserved for commuting students and resident students respectively, were the ones that were highlighted.

The following maps are excerpts of the overall Arc View map, and help illustrate some of the issues involved.

Map 1. North Loop Road and East Main.

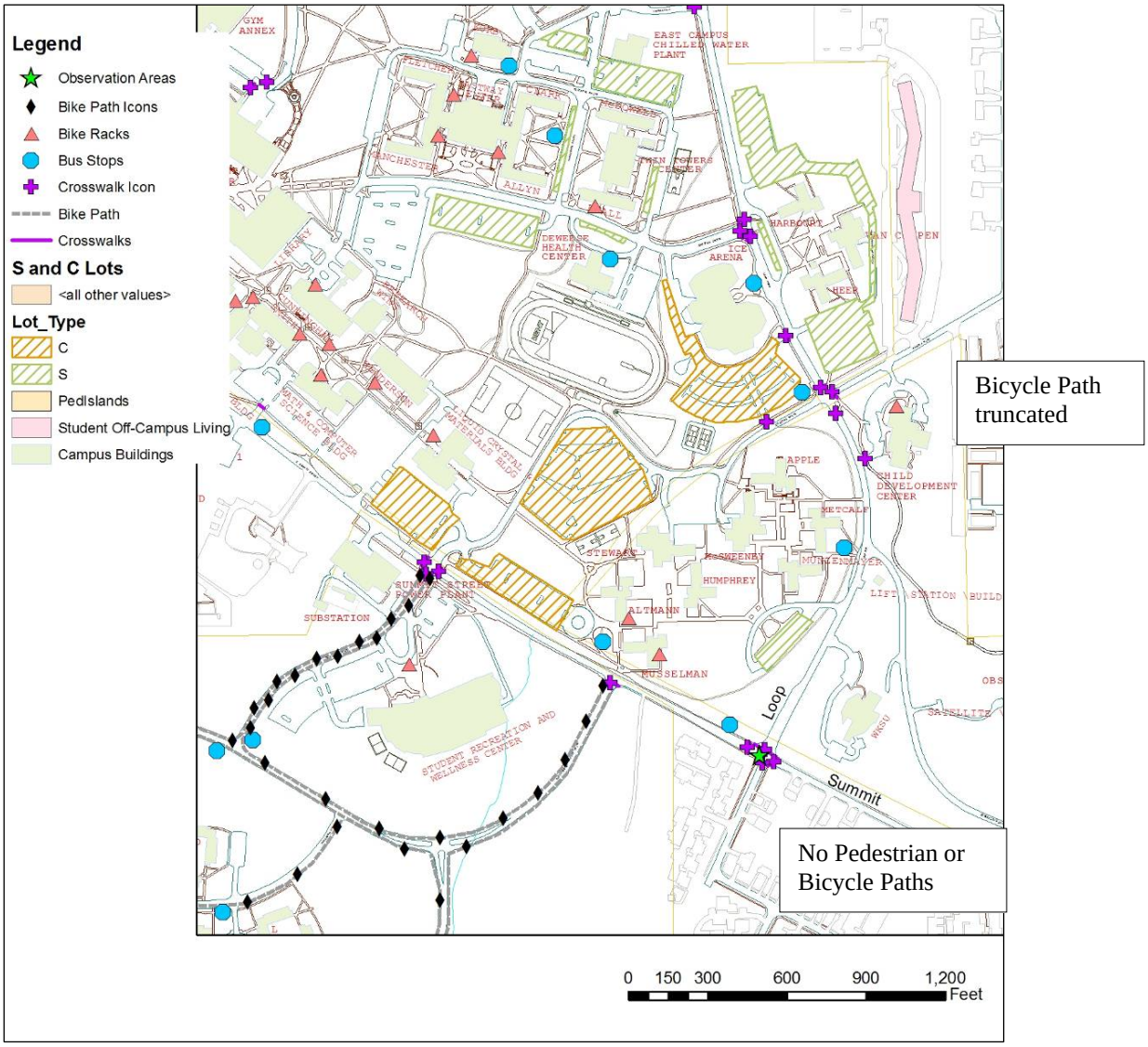
The eastern boundary of Kent State displays some of the more significant impediments to sustainable transportation. Loop Road divides the campus from the community and just to the east there are a number of important apartment complexes. Loop Road itself has a sidewalk, but only along one side and only in parts (sidewalk interruptions are prevalent). There is also some room for bicycles, but this is interrupted near the southern corner Crosswalks are not plentiful across Loop Road, requiring considerable detours to cross safely. There is no pedestrian access from the nearby Holly Park complex. There are bus facilities along this corridor.

Further east, the portion of East Main Street that is within Kent City includes sidewalks. However, these sidewalks are narrow, directly adjacent to fast moving traffic, and are not well shoveled in the wintertime (there are often huge snow piles from businesses shoveling out their parking lots and driveways). Beyond Kent, in Franklin Township, there are no sidewalks at all.



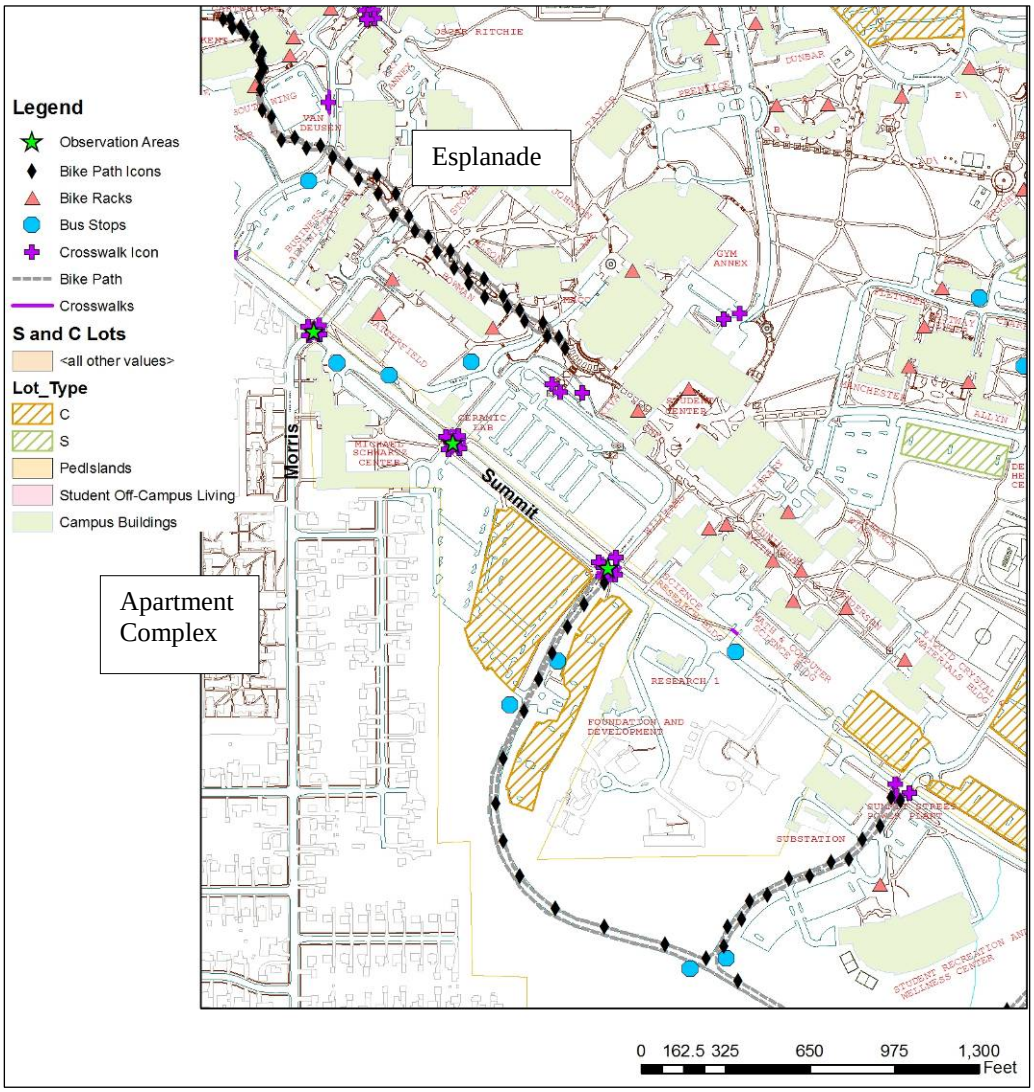
Map 2. South Loop Road and Summit

The southeastern intersection of Loop and Summit streets has no sidewalk points of access. While there are crosswalks across Summit Street and Loop, they are spaced fairly widely apart. There are also intermittent bike paths along this stretch: some streets enjoy wonderful bike paths, but these are interrupted making it awkward to use for any real commuting.



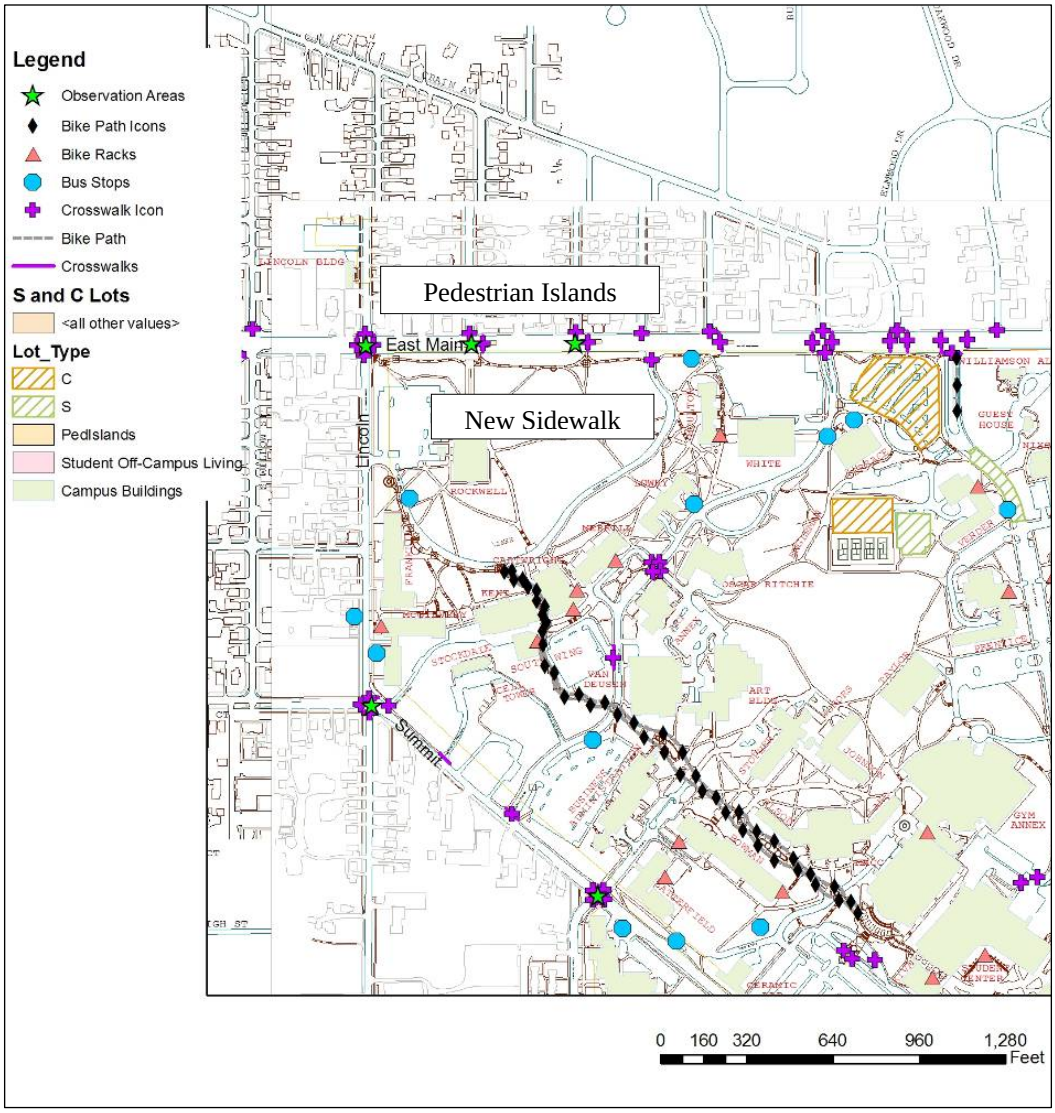
Map 3. Mid-Summit Street and South Campus.

Summit Street includes university buildings on both its north and south sides. It also includes a number of parking lots, particularly on the south side. For this reason, there is a fair amount of crossing that takes place, particularly at both East and West Risman. South of the intersection of Summit and Morris is a large apartment complex that students often come from. Because of its proximity to many important campus buildings, and the good sidewalk system, many students walk from this complex to classes. Bicycling on Morris is also relatively easy and so students can connect from there to the Esplanade. Crosswalks are distributed regularly across Summit at this segment.



Map 4. East Main Street and Lincoln.

East Main Street is a five lane road, with Kent State University campus on the southern side and mixed residential and commercial facilities on the northern edge. Both sides include sidewalks of varying quality, although there is no good place for bicycling except on the sidewalk itself. Automobile traffic flows right up against the curb with a posted speed limit of 35 miles per hour. Recently, two pedestrian improvements were made. The Kent State University sidewalk was re-constructed and is now wider and further from the flow of traffic. Three pedestrian islands were constructed and landscaped in the center lane of East Main Street. This has made crossing this street much easier.



Measurement of Non-Vehicular Traffic

Most transportation studies provide measurements of vehicular traffic. Our studies from 2001 through 2004 also include such counts (Kaplan 2004). It is much rarer to get a good evaluation of non-vehicular traffic, however, specifically of bicycles and pedestrians. Measuring this type of traffic involves a few issues.

1) Particularly with walkers, the trick is to separate out individuals who are walking short distances – e.g. from their automobile in parking lots or from building to building – and those who are running/walking for recreation or fitness. (With bicyclists there is less of a challenge, since recreational bikers on city streets are almost impossible to distinguish from commuters.) For this reason, we conducted our counts at intersections on the campus boundaries, as opposed to walk and bikeways internal to the campus. Kent State University just developed a new Esplanade, for example, that runs roughly east to west through the campus. Most indications are that this has been quite successful in spurring more bicycle/walking. However, because of its location, it is nearly impossible to disentangle different types of traffic on the Esplanade.

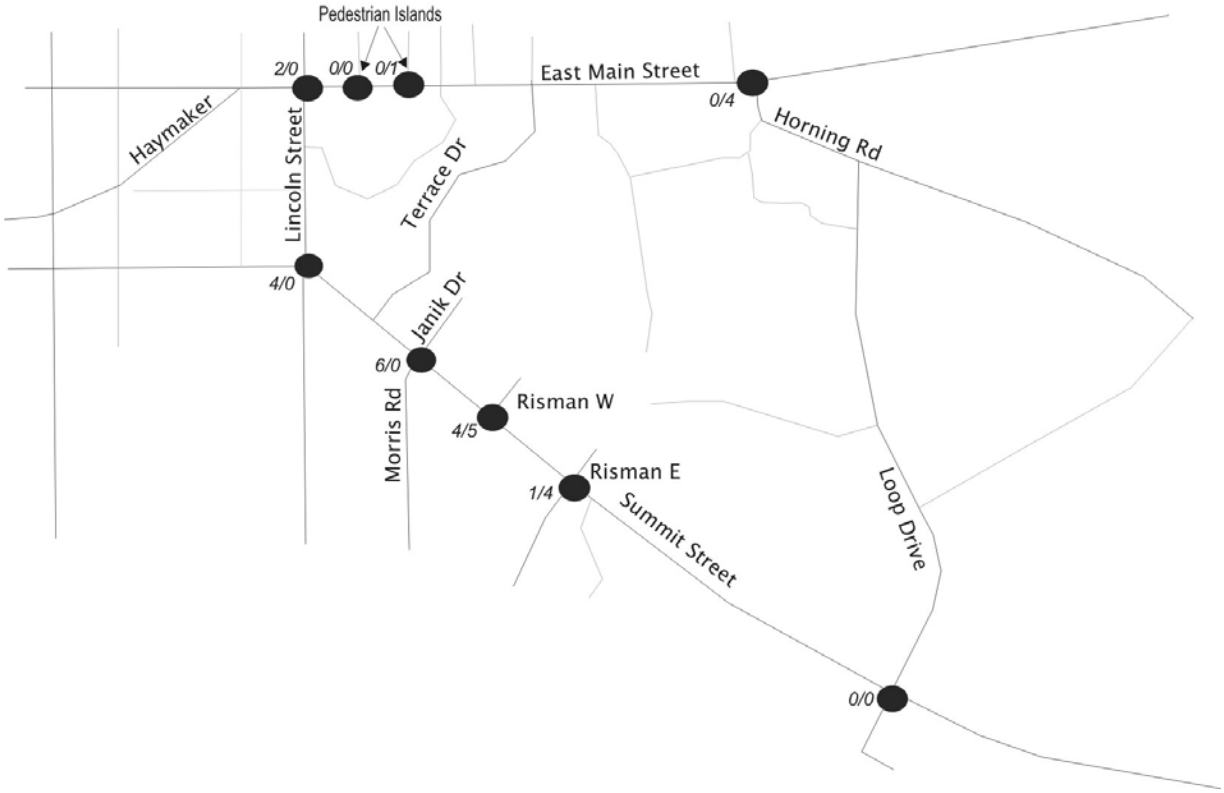
2) Both biking and walking are heavily influenced by the weather conditions. Since these vary day by day and even within the day, we could not obtain comparisons where the weather was held constant. We did avoid rainy or snowy days and counting was done in November, early December, and May 1st. Appendix 1 contains our resulting spreadsheet that shows weather conditions, automobile traffic conditions, and field notes.

3) In counting any kind of traffic, especially campus related traffic, it is critical to get the right time of year, the right day of the week, and the right time of day. For this reason, we felt it necessary to count during the semester, and preferably late in the semester when transportation patterns have been much better established. We avoided Fridays, and we counted in mid-morning and in the early part of the afternoon in order to try and capture the bulk of student commuting.

We were also interested in the relationship between automobile and non-vehicular traffic. How well pedestrians and bicyclists obeyed the rules of the road and how automobiles reacted to sharing the road. These are shown in the field notes.

Bicycling Intersection Counts

First Number AM/ Second Number PM



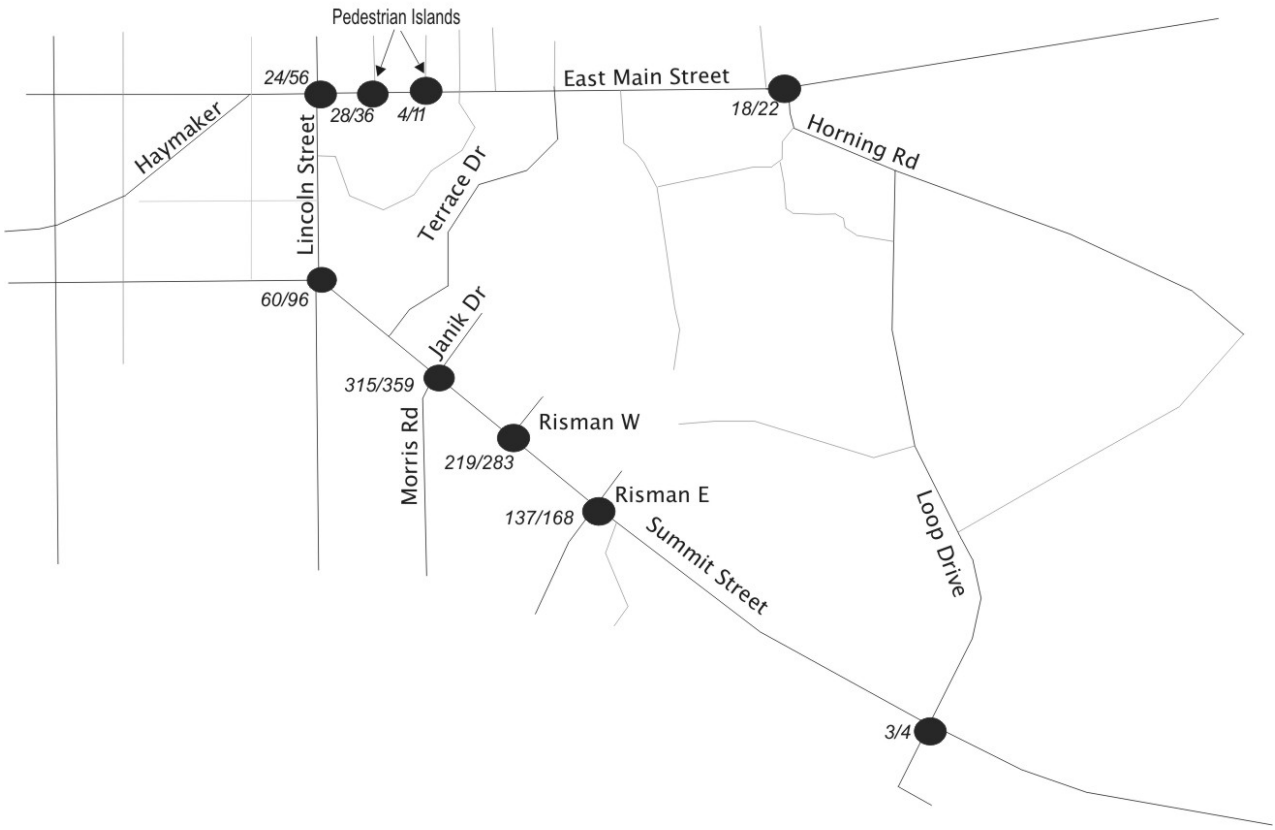
From examining the counts, it is clear that bicycle activity is a minuscule part of campus commuting. During the 18 hours of counting, only 40 bicycles were observed. These ranged from a low of zero bicycles observed (for seven of the intervals), to a high of eight and six bicycles observed for two periods at the same intersection. The map of bike traffic shows that most comes from the south. Negligible amounts of bicycle traffic were observed coming from the north of the east. This could reflect safety concerns.

Very few recreational joggers were observed.

Pedestrian activity varied considerably by location. Overall, 1853 pedestrians were counted over the 18 hours, with an average of 103 per hour or nearly two per minute. The variations between places were high, however, ranging from 3 or 4 walkers (in an hour!) to well over 300 per hour at one intersection. One interesting finding is that the volume of walkers varied significantly between intersections but not so much by time of day at the same intersections. Intersections with heavy traffic in the morning also demonstrated heavy traffic in the afternoon.

Pedestrian Intersection Counts

First Number AM/ Second Number PM



What accounts for the variation? We were concerned about the confounding effect of nearby parking lots. At two intersections, at the corners of Summit Street and Risman East and Risman West, a great deal of the foot traffic was likely made up of people crossing over from commuter lots. Elsewhere, parking lots did not seem to have such a heavy influence.

The intersection with the heaviest pedestrian activity, on the corner of Summit and Morris, is likely impacted by the presence of a major apartment complex nearby. Many students in this complex choose to walk to the university and save on parking permits. Our other research activities also suggest the importance of nearby residences as a way to promote non-vehicular traffic. Likewise, the corner of Lincoln and Summit shows more pedestrian traffic, mostly between classes.

The map demonstrates very low levels of pedestrian activity at the intersection of Loop and Summit. This intersection is proximate to some apartments and to other places where you might expect to see some traffic. Yet while automobile traffic in this are is

robust, pedestrian traffic is nearly nonexistent (and bicycle traffic is nonexistent). The day that the counts were taken was a mild one. But the field notes show that the intersection is on a busy road that could discourage anything but car travel. There were twice as many cars observed leaving the apartments, almost always with a single occupant. Also observed were poor sidewalks and a lack of good crosswalks.

Further north, on the corner of East Main (SR 59) and Horning, there is more pedestrian traffic, but still quite low given the proximity of this intersection to apartment complexes, university buildings, and restaurants. The field notes indicate that most people were crossing Horning, probably coming from the apartment complexes and restaurants down the street. The quality of the sidewalk at this point is quite poor, and tends to be blocked by snow during the wintertime.

Across East Main Street and north of the campus are a number of nice residences, some apartments, and several fast food restaurants, a bar, and a coffee shop. This would seem to be a prime area for pedestrian activity. But East Main is a difficult street to cross. It has five lanes and auto traffic is faster than the posted speed limit of 35 miles per hour (already quite fast for an urban street). A few years ago, three pedestrian islands were built in part of the central lane. These have made it easier for people to cross. This is important since the field notes indicate that "traffic does not stop for pedestrians." This leads many walkers to cross in the middle of the street, between crosswalks. Most do not cross at all and decide to drive instead. There is more foot traffic at the intersection of Lincoln and East Main, especially in the early afternoon. Still it is lower than might be expected. One aspect to note: the weather during this day was cold, snowy, and windy. This could dampen traffic. The higher counts at Lincoln and Summit took place during better weather,

Counting is a useful exercise in determining the geographic areas where sustainable transportation may be enhanced. Weather variations do present some problems with consistency, so future counts should try to minimize these if at all possible.

Survey of Kent State Students

This project sought to understand student behavior and attitudes towards sustainable transportation. When school is in session, the Kent City roughly doubles in size and the university operates as the largest generator of traffic. This traffic can be divided into four components:

1. Traffic that would be there regardless of the university.
2. Traffic generated by faculty and staff, which tends to follow more regular workplace rhythms.
3. Traffic generated by students that are commuting between school, work, and home.
4. Internal traffic if students moving from class to class or to east, shop, and recreate.

Students are by far the largest population group at Kent State. Previous research has demonstrated that each additional student enrolled increases daily traffic along the key corridor of Summit Street by 0.4 automobiles.

In April 2008, we conducted a survey (see appendix 2 for a copy). We used a web-based survey for three reasons. First and foremost, this type of survey cuts costs considerably and made it possible to reach a lot more students. Telephone surveys can cost nearly 30 times as much. Previous comparisons between the same questions asked by web and phone indicated that there was not too great a difference in the responses. Second, unlike the general population, each student has access to email and the internet. So there is no problem of a large number of people (e.g. elderly or poor) who are left out. Third, the web survey allowed us to ask more questions, which would be tiresome in a phone interview. A mail survey would have suffered from the instability of many student addresses, a low response rate, and a long delay time. So this was never considered.

Overall, the web survey conducted in April was answered by a total of 668 students, broken down pretty evenly by class, although graduate students are underrepresented. The division by age is also good, and while women are overrepresented in the survey, they are also a large majority of the Kent State University student body.

Age	Frequency	Percent
18	53	7.9
19	171	25.6
20	133	19.9
21	109	16.3
22	79	11.8
23-30	75	11.2
30+	48	7.2

Class rank	Frequency	Percent
freshman	161	24.1
sophomore	175	26.2
junior	145	21.7
senior	178	26.6
graduate	9	1.3

Gender	Frequency	Percent
female	462	69.2
male	206	30.8

Kent State University is primarily a residential university, but one that draws most often students from within a 100 mile radius. A large number of surveyed students live within residence halls. A smaller proportion, about one out of seven, live with their parents in Kent or a nearby town. Of the rest, most live in apartments within Kent. A little over one-third of students live outside of Kent. Of these, most live within 15 miles.

Student Location	Frequency	Percent
Residence Hall	293	44.5
In Kent	157	23.9
Outside Kent	114	17.3
Parent in Kent	9	1.4
Parent Outside Kent	85	12.9

Distance for students living outside Kent	
Up to 5 mi.	0%
6 to 10 mi.	37%
11 to 15 mi	26%
16 to 20 mi.	7%
21 to 25 mi.	6%
26 to 50 mi.	21%
More than 51 mi.	3%

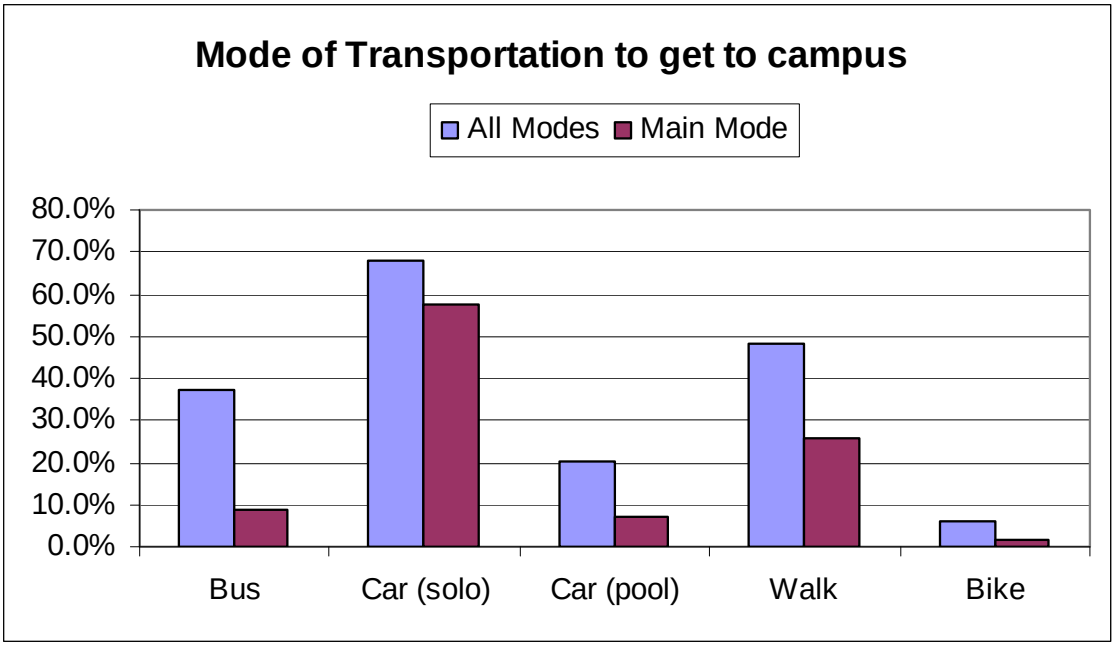
The next table shows the extent to which the student population owns or has access to automobiles and the types of parking permits they have. The majority of students have access to a car and so are not reliant on other modes of transportation. Among these students, most own some form of parking permit. The many students who live outside of campus but often in nearby apartment complexes obtain a parking permit of some type. It should be noted here that the survey results differ from official data acquired from Parking Services at Kent State University. According to them, during the 2007-2008 academic year, only 52% of all matriculated students purchased a parking permit. This survey indicates a much higher percentage claiming to own a permit, but could be skewed by students who have made alternative arrangements in other parking lots, like church parking lots.

Access to Car?	
Yes	86%
No	14%

Permit Type (among those who have cars)				
None	Commuter	Resident	Stadium	Other
14%	42%	20%	16%	8%

Choice of Transportation Mode

The following graphs show the responses to some key questions regarding transportation modes. We made sure to ask about which modes students use at various times, and which is their primary mode of transportation. Single occupancy automobiles are clearly the main mode of transportation, used primarily by nearly 60 percent of all students. This is followed by walkers, students taking the bus, students who car pool and bikers. At the same, many more students report taking the bus occasionally and nearly half of all students walk at times.



The choice of mode depends on where students live. A few key observations can be made based on the following three graphs.

1) Walking is the most popular mode among students who live in the residence halls. More students in these residences are also more willing to take the bus.

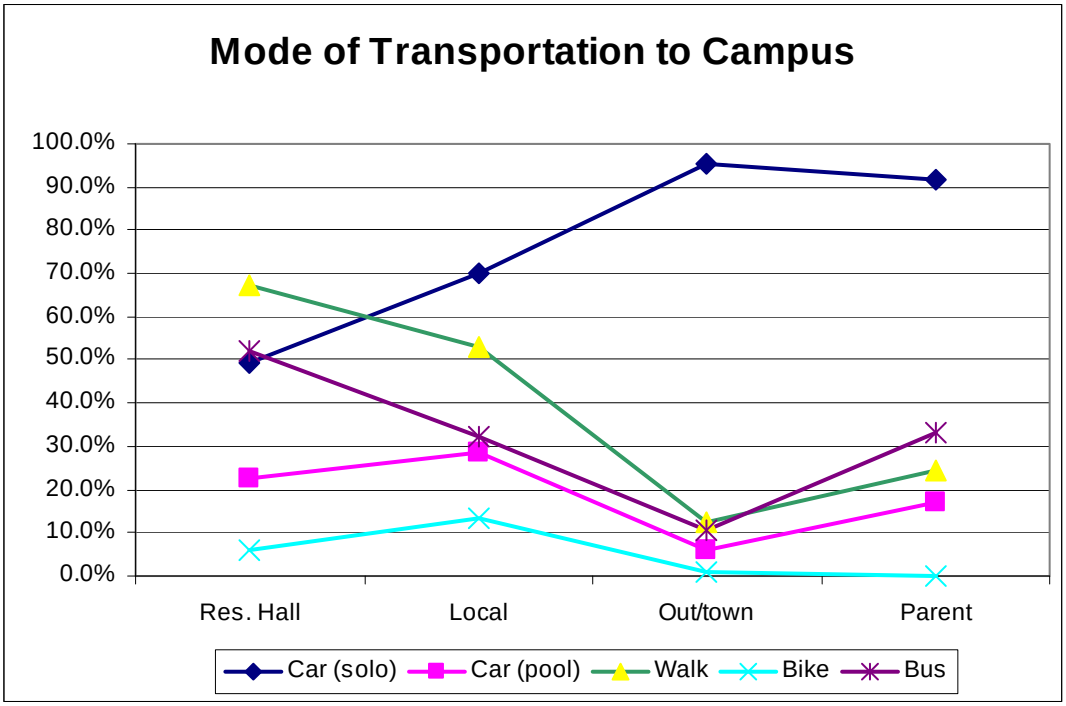
2) At the same time, students in residence halls walk to their classes, but they drive whenever they go off campus. Kent State University is perceived as a good place for

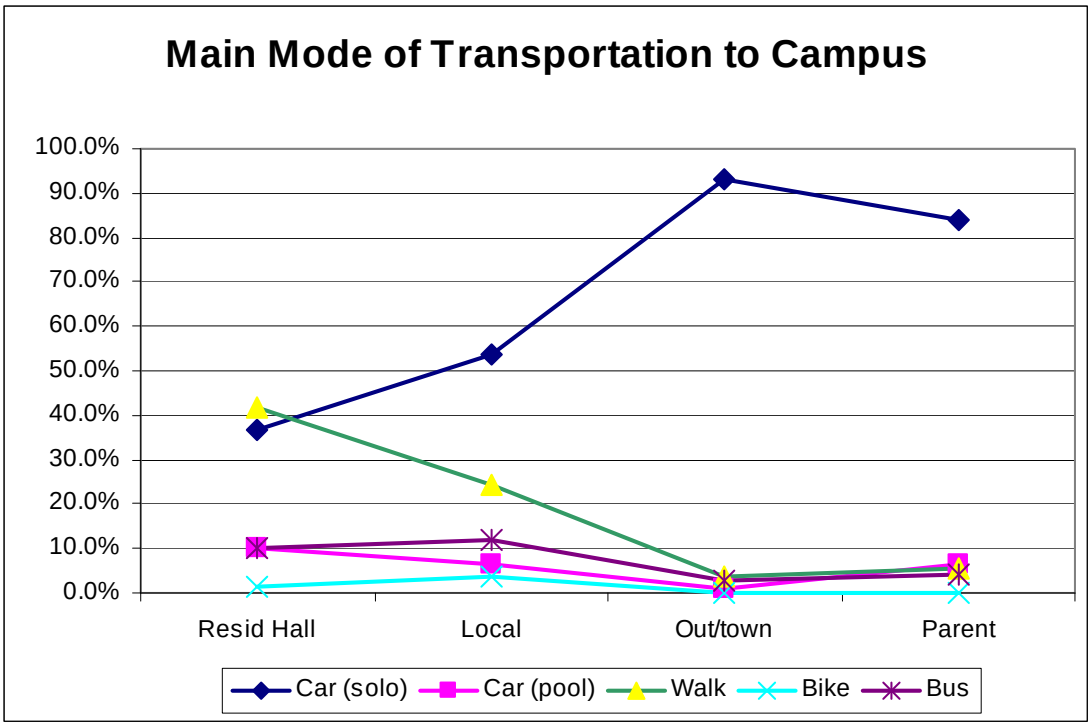
walking, but there is little outside of campus that students are likely to walk to. This is true also of busing and bicycling.

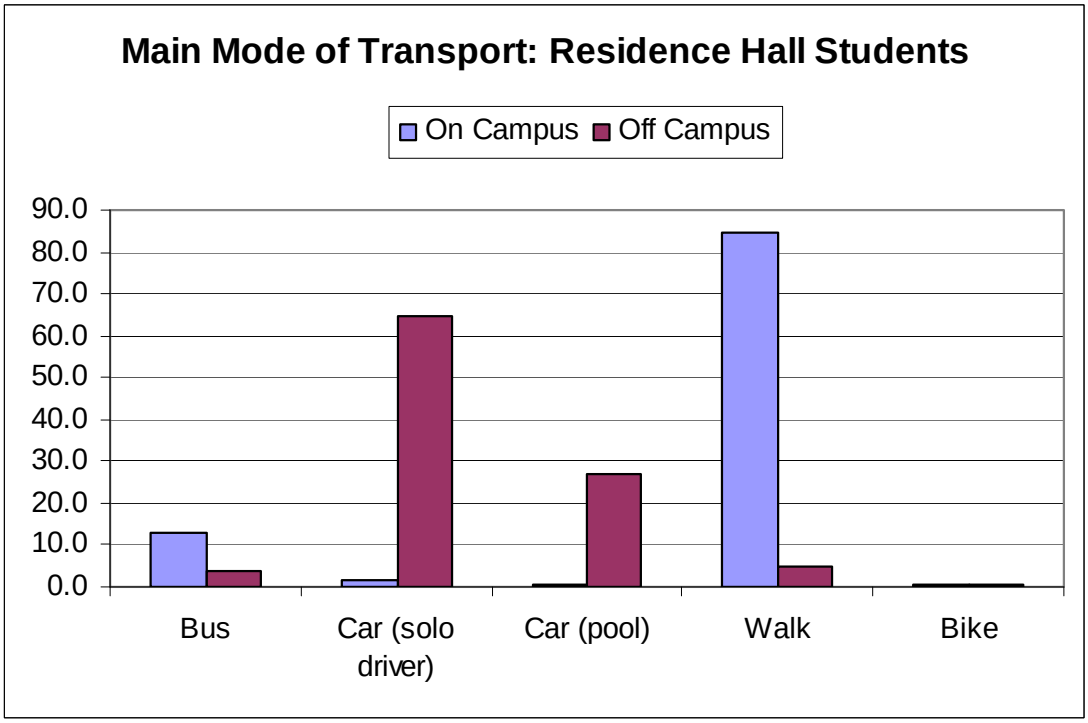
3) For students who live out of town or with parents (most of whom are out of town), driving is the norm. Solo driving accounts for about 90% of all student traffic among this group. This number would undoubtedly be higher except that the boundaries of the city are fairly close to the eastern edge of the campus, with several student apartments located in Franklin Township.

4) The potential for a modal shift probably lies among students who live in Kent but outside Kent State University. This population does mostly drive solo, but half walk some times, and nearly one-third sometimes take the bus while a substantial percentage also sometimes car pool. This could be a more practical population to convert to sustainable transportation than students from out-of-town.

5) Reported bicycle usage is extremely low across the board. Very few Kent State University students use bicycles even occasionally. Students who live off campus, but in Kent, are the most likely to use bicycles sometimes (13%) but less than 4% of local students list bicycles as the main mode of transportation. This contrasts with many other campuses across the country, many with more challenging weather and/or terrain conditions.







Choosing Sustainable Transportation

We used some of the survey results to delve deeper into why students do not utilize sustainable transportation. First, we asked about walking. While about half of all students walk sometimes, this still seems rather paltry. The next table asks for those

students who live within a mile why they do not walk to school. Inclement or cold weather is cited as the most significant factor. There is also a perception that walking requires more time. Since it takes less than 20 minutes to walk a mile, this may or may not be true, depending on how long it takes to park a car and walk from there. Inconvenience can cover the fact that many students work, and several have children, and so walking is not seen to be a practical option. "Physical limitations" is self explanatory and many of the "other" responses come from students who live beyond a mile or who do indeed walk. Given our project, we were most interested in the number of students who cited physical factors that make walking unpleasant. About one out of six mention the absence of sidewalks and/or streets that are too busy for comfortable walking.

If you are within a mile or so of campus, what prevents you from walking to school? (Check all that apply)

	Frequency	Percent
Weather	343	51.3%
Not enough time	290	43.4%
Inconvenience	178	26.6%
Lack of walkways/busy streets	114	17.1%
Physical limitations	28	4.2%
Other	198	29.6%

Turning now to bicycle usage, we asked first whether each respondent owned a bicycle. Most students do not, but a fair proportion of students do own one. This could be a function of student interest in using bicycles for transportation. Next we asked about conditions or attitudes that might prevent students at a middle distance (3-5 miles) from biking to school. Of all the things that prevent students from biking, weather emerged as the key factor. In preparation for that, we also asked what would be the impediments in good weather. Many students answered not enough time, though less so than with walking. Inconvenience, likely for many of the same concerns as with walking, occupied an important place. As with walking, physical limitations also played a role among some students.

The issue we were most interested was how much the physical environment seemed to impede biking. One out of five students mentioned a lack of good bikeways and streets that are too busy for biking. One out of six students mentioned safety concerns, which could be taken to mean fear of getting into an accident on a busy street without bicycle lanes. As we saw in our analysis of sustainable transportation infrastructure, the infrastructure for bicycling needs a lot of improvement. There is a nice bicycle network proposed, but it is still incomplete and cannot cover a number of places where commuting bikers would need to go. Bicyclers encounter a lot of difficulty in trying to navigate regular city streets. Many of these are simply not set up to include bike traffic on the side. The attitudes of motorists have also been mentioned, since many seem to doubt whether bicyclists belong on the street. The issue of storage was also raised. While there are many bike racks, sometimes they are not available where students want them to be. For some students, they are worried about their expensive bikes being stolen.

More secure, covered bike shelters have been proposed, although theses are fairly expensive.

Do you own a working bicycle?

	Frequency	Percent
yes	269	40.3
no	398	59.7

If you are within 3-5 miles of campus, what prevents you from biking to school? (Check all that apply)

	Normally		Good Weather	
	Frequency	Percent	Frequency	Percent
Weather	264	39.5%		
Not enough time	200	29.9%	198	29.6%
Inconvenience	160	24.0%	160	24.0%
Lack of bikeways/busy streets	138	20.7%	138	20.7%
Safety concerns	129	19.3%	114	17.1%
No good storage	95	14.2%	94	14.1%
Physical limitations	41	6.1%	37	5.5%
Other	268	40.1%	289	43.3%

The next table reports on an open ended question which asked students to comment on what the city and university could do to facilitate walking and biking. Infrastructure topped the list: sidewalks, bike paths, street lights, and crosswalks. Several people also pointed out the problems of snow removal, especially since bikers often feel they have to travel on sidewalks for safety. Improving bike facilities could mean better storage, but students also mentioned bike maintenance facilities and a place to get bikes at little or no cost. Some campuses have initiated these types of programs with success.

What can Kent and Kent State do to make it attractive for students to walk or bicycle to campus?

More/Better Sidewalks	102
More Bike Paths/lanes	74
Better Snow/Ice Removal	49
Street Lights and Crossing	42
Improve Bike Facilities	40
Beautify Campus/City	16
Incentives	12

We also asked students about their experience in taking a bus. Many students are familiar with the bus service; several rely on it as their main mode of transportation. This is borne out by the following table. Nearly 25% of students indicate they take a bus at least every other day. For students who are living with their parents, either inside or outside Kent, that percentage is a great deal higher. Perhaps this is a result of previous familiarity with the bus system or spottier access to vehicles. Students living by

themselves outside of Kent are the least likely to use the bus: 61% of such students never ride it.

How often do you take a campus bus?

	Frequency	Percent
never	237	35.5
once or twice a month	139	20.8
once or twice a week	133	19.9
every day or two	68	10.2
more than once a day	91	13.6

The reasons describing why students do not take the bus vary. For about one-third, it is simply that there is no bus near home. This is a big response among these who live outside of town. Various schedule issues (being on time, unreliable, or not fitting into the student's schedule, not understanding schedule) were also indicated. Some of these – especially the concerns with reliability – might be addressed with better communication and technology. A small percentage of students report that they simply do not like buses.

If you drive to campus, what prevents you from taking a bus instead? (Check all that apply)

	Frequency	Percent
No service near home	221	33.1%
Worry about being on time	137	20.5%
Infrequent/unreliable	114	17.1%
Not fit my schedule	70	10.5%
Don't like buses	59	8.8%
Don't understand schedule	46	6.9%
Buses too full	21	3.1%

Focus Group Summary

In September 2008, we held a focus group of students. We initially intended to hold two groups, but given the attendance, we thought a single group would make for a livelier discussion. The detailed minutes of the focus group are in appendix 3. This section reports a simple summary of additional information uncovered during this session.

Students were recruited based on 1) an answer to a question in the survey and 2) students who had expressed an interest to me or some of my assistants. A total of 12 students participated. Mike Dunbar, a graduate student in geography, helped to coordinate the group, took down notes, and wrote up the minutes in appendix 3. Most of the students were seniors and all but three lived in Kent but not at the university. The students were skewed in one other way: most of them believed strongly in the value of sustainable transportation and a much larger proportion than typical did not use automobiles as the main mode of transportation. At the same time, we were able to obtain several useful bits of information from this focus group that helped to reveal some of the impediments experienced by walkers and bicyclists.

One point that was stressed repeatedly by the bicyclists was the difficulty experienced on the major walking/biking corridor, the Esplanade. One of the main frustrations was that, while the Esplanade is divided into a walking path and two bike lanes on the side, walkers tend to occupy the bike lanes and make it hazardous for bicyclists. Another frustration was that these bike lanes are sometimes blocked by trash cans.

Additional concerns were raised in regard to the lack of bike lanes off of campus. This makes it difficult to ride a bicycle on city streets. At the same time, adults are not supposed to ride on the sidewalk. For bicyclists, this situation causes safety problems fro themselves and for pedestrians that they encounter.

There were some problems expressed about the design of bike racks. Participants did not like the wavy design, and a couple people mentioned that there were not enough bike racks. Students liked the idea of bike racks on buses and a bike kiosk.

As far as walking, there were several intrepid pedestrians among the group who regularly walked two miles. The concerns they expressed involved first. crossing certain busy streets without good crosswalks or signal lights. This was especially true of Summit Street crossing. The pedestrian islands on Main Street were given high marks. The students all agreed that uncleared snow was a major impediment in the winter. Sidewalks were also cited for being in a general stated of disrepair. In general the respondents liked the idea of additional pedestrian bridges.

Students did generally praise the bus system, although they felt that signage and scheduling could be improved. A better website for PARTA was also discussed. None of the students carpooled regularly, but felt that the university could do more to create greater information and incentives for carpoolers, such as an on-line ride share program and preferred parking spots.

Attitudes of Students and Merchants to Shopping Downtown

As an additional aspect of our study, we decided that it may be appropriate to survey some of the merchants in downtown Kent to assess their reliance on customer traffic from Kent State University, and the role that transportation and accessibility might play in all of this.

The following is a table developed from our survey of student attitudes. We asked what the city and university could do to encourage students to shop downtown. The responses were open-ended and then categorized. Many students mentioned a need for greater shopping choices, especially when it came to having different kinds of stores available. Within this category, some students expressed a desire that more merchants accept the student Flashcards or the dining plan and offer specials targeted at students. Students felt that many merchants should advertise more widely among the student community. Many students mentioned transportation in their responses to this question as well. This was particularly apparent in what they saw as a need to improve bus, biking, and pedestrian facilities making it easier to get downtown. Improving safety and beauty also was mentioned. Many of these issues are now being tackled by Main Street Kent, but they do provide a sense of how students currently feel.

What can Kent and Kent State do to encourage students to frequent nearby and downtown businesses?	
More Student Shopping Choices and Options	92
Improve Bus Service	51
Improve Bike Facilities/Access	49
Improve Sidewalks/Crosswalks	48
Improve Safety and Beautify	38
More Advertisement	24
Better Parking	10

Jera Oliver, a graduate student in the Center for Public Administration and Public Policy, conducted the interviews. By far, bars are the businesses with the largest student following in downtown Kent. We made sure not to include these in our survey because they are not in any danger and they rely on different traffic patterns (although we did interview the proprietor of Professors Pub, which offers a range of items in addition to alcohol.

The following tables summarize our interviews.

		Importance			
Business	**KSU promotion**	**Student Traffic**	**Other University**	**% Student**	**Try to attract students?**
The Works (gifts)	too little	huge	profs, alumni, special events	50%	Donations w/ student groups
Last exit Books	too little	minimal	visitors, alumni, poetry related	10%	Word of mouth
Annie's Almost Anything	nothing	some	some	5%	no
Natural Foods Co-Op	too little	increasing	faculty, some alumni	20%	Trying more promoting
Backerei (bakery)	enough	not much now	profs, alumni	10-15%	Flashcard
Lasso the Moon (gifts)	too little	low (prices too high)		50%	Stater ads, price some affordable items
Spinmore records	too little	some	some	15%	advertise occasionally
Professor's Pub	enough	extremely important		80%	Stater ads, posters
Woodsy's (music)	in between too little and enough	very important	very important	don’t know	Open mics, ads
The Comp BS	doesn't know	small		10%	in the past, but gave up
Anthony's café and cake	too little	very important	some faculty	10-15%	tries hard, Stater ads but not working

From this first table, it is clear the variation in how much businesses rely on the student market. Many of them do try to attract students with various promotions, although they expressed some frustration with the results of their efforts. There was a general feeling that Kent State University did not do enough to promote the local businesses.

Business	**Role of transportation**	**How can transport help downtown?**
The Works	cars -- other modes when weather is good	parking not a big issue. Need more bike racks
Last exit Books	foot traffic	bike trails (but greater need for more stores)
Annie's Almost Anything	cars, events, foot traffic	need more traffic tickets and signs, need better job clearing sidewalk
Natural Foods Co-Op	Tend to walk or drive	University promotions and more parking
Backerei	cars and walking -- does not see buses	More parking
Lasso the Moon	does not see buses, students walk, locals drive	need a bus to run at night after bars, Frats are a problem
Spinmore records	cars	more parking, maybe a deck
Professor's Pub	foot traffic	More parking
Woodsy's	Tend to walk or drive, see improvement in buses	
The Comp BS	cars and walking	does not see parking as a problem
Anthony's café and cake	downtown too far for students without car, public transportation	don't know

We were particularly interested in their attitudes towards transportation. Here the responses were mixed in terms of what the merchants were seeking. A fair number of people do walk downtown, or at least walk around downtown after parking somewhere. So foot traffic continues to be important. The merchants are also situated in such a way as to rely on foot traffic as people stop in to see what is available. Main Street Kent, an association that has been established to improve the downtown shopping experience, is working to enhance walkability and the connection between the downtown merchants and the university.

Assessment of Sustainable Transportation Potential in Kent

As part of this sustainable transportation initiative, we invited Dr. Spenser Havlick, to visit Kent and Kent State in early February 2008. Dr. Havlick is a professor at Colorado University at Boulder and served on the City Council of Boulder for twenty years. Our decision to select Dr. Havlick came about because both Dave Kaplan and Tom Clapper had attended a Transportation Demand Management workshop in Boulder in January 2007, organized by Dr. Havlick. We were also familiar with his published work on sustainable transportation, especially his book *Transportation for Sustainable Campus Communities* (Island Press).

The following list summarizes Dr. Havlick's agenda while at Kent.

February 7th

- Breakfast with some key city and university officials. This meeting served primarily to make introductions between some key players.
- Tour of the city with Kent's Service Director. Dr. Havlick got an opportunity to see Kent's particular circumstances.
- Lunch with Kent's City Manager, Director of Main Street Kent, and some other city leaders.
- Focus Group/Dinner: Including several Kent City Councilors, City Officials (Planner, Engineer), and other city and university leaders
- Public Talk: Foundations of a Joint Transportation Master Plan
  Dr. Havlick spoke about transportation master plans involving campuses and their surrounding community. The discussion included alternative modes of transportation, transit and pedestrian/bicycle improvements, transportation demand management. Neighborhood preservation was also discussed.
  The attendance at this public talk was outstanding. Nearly every city councilor attended, many university officials responsible for operations were also present, and a number of people from around the community showed up. There was a great deal of discussion afterwards.

February 8th

- Wrap-Up Luncheon Meeting included Kent State's Vice President for Administration, Head Architect, Chief of Police, Kent's City Manager, Kent's Service Director, Safety Director, City Engineer, Economic Development Director, and other city and university leaders.
  The point of this meeting was to allow Dr. Havlick to offer an assessment of sustainable transportation at Kent and Kent State and to offer some suggestions on how to improve facilitate a shift from solo automobile driving to more walking, bicycling, and transit. The discussion was informative and lively, with a great deal of interest on how this could be accomplished.

Summary of Findings

Several findings emerged from this study. Among the most significant are the following:

- Solo automobile commuting still prevails among students at Kent State University. Students report some experience with the bus system, and walking is also common as a mode of commuting, but the majority rely on driving.
- The main exceptions to this trend are students who live in residence halls, who are more likely to walk. Nearly all students who live outside of Kent drive solo. Within Kent, there is more of a modal mix but driving still predominates.
- Our inventory of the Kent State University campus and the surrounding areas demonstrate varied levels of sustainable transportation opportunities. There are many good facilities and infrastructure within the campus itself, highlighted by the east-west Esplanade. But the connections between campus and the surrounding community are weak. In several spots, especially towards the eastern edge of the campus, there are no sidewalks, inadequate crossing opportunities, and interrupted bicycle lanes.
- This weakness in sustainable infrastructure is confirmed by actual bicycle and pedestrian traffic patterns. Pedestrian traffic across the western part of Summit Street is relatively heavy, but it is very light across Horning/Main and Summit/Loop. The new pedestrian islands on East Main were remarked on favorably, although there is not as much pedestrian traffic there as might be expected.
- Bicycle usage is weak across the board. There is little observed traffic, and few students report using bicycles. Members of the focus group also pointed to the lack of regard for bicycles among both drivers and pedestrians.
- In reporting on student attitudes towards sustainable transportation, many students seem reluctant to walk, bike or bus based on time, scheduling issues, and overall inconvenience. Students point also to busy streets, lack of snow removal and safety concerns (especially with bicycles).
- There are variations in the extent to which downtown Kent businesses rely on student traffic. There was a general feeling that Kent State University could do more to promote local businesses to its students.

References

Balsas, Carlos (2003). Sustainable transportation planning on college campuses. *Transport Policy* 10, 35-40

City of Kent (2004). *Bicentennial Plan*.

Cottrell, Wayne and Dharminder Pal (2003). Evaluation of pedestrian data needs and collection efforts. *Proceedings, 82nd Annual Meeting of the Transportation Research Board*.

Duany, Andres, Elizabeth Plater-Zyberk, and Jeff Speck 2001. *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream*. New York: North Point Press.

Ellis, E. 2003. Getting around campus. *American School and University*, May 1, 2003.

Horton, J. 2007. Living Larger in Ohio. *Cleveland Plain Dealer*, August 28, p. A-1.

Kaplan, David (2004) *Annual Report of the Joint Traffic Study*.

Kaplan, David H. and Thomas Clapper 2007. Traffic Congestion on a University Campus: A Consideration of Unconventional Remedies to Nontraditional Transportation Patterns. *Planning for Higher Education.* 36(1): 28–39.

McCann, Barbara A. and Reid Ewing 2003. *Measuring the Health Effects of Sprawl: A National Analysis of Physical Activity, Obesity and Chronic Disease*. Surface Transportation Policy Project, September 2003.

Millard-Ball, A., P. Siegman, and J. Tumlin. 2004. Solving campus parking shortages: New solutions for an old problem. *Planning for Higher Education* 33 (1): 30-43.

Miller, I (2001). *Transportation on College and University Campuses: A Synthesis of Transit Practices*. Washington, DC: National Academy Press.

Northeast Ohio Research Consortium. 2004 *Taking Steps toward Sustainability Higher Education in Northeast Ohio*

Northeast Ohio Research Consortium. 2007 *Goals and Objectives*

Norton, Richard K., Andrew Brix, Trevor Brydon, Elijah Davidian, Keely Dinse, and Sanjeev Vidyarthi. 2007. Transforming the University Campus into a Sustainable Community. *Planning for Higher Education.* 35(4): 22–39.

Pucher, J. and L. Dijkstra (2000). Making walking and cycling safer: lessons from Europe. *Transportation Quarterly* 54, 25-50,

Shannon, Tya, Billie Giles-Corti, Terri Pikora, Max Bulsara, Trevor Shilton, and Fiona Bull (2006). Active commuting in a University setting: assessing commuting habits potential for modal change. *Transport Policy* 13, 242-253.

State of Ohio. 2007. Office of the Governor, Executive Order 2007 – 02S

Tolley, R. 1996. Green campuses: Cutting the environmental cost of commuting. *Journal of Transportation Geography* 4(3): 213-217.

Toor, Will (2003). The road less traveled: sustainable transportation for campuses. *Planning for Higher Education*, 31, 131-141.

Toor, Will and Spenser Havlick, (2004). *Transportation and Sustainable Campus Communities: Issues, Examples, Solutions*. Washington, DC: Island Press.

Appendix 1: Spreadsheet of Counts

Site	Date	Time	Weather	Vehicle Traffic Density	Pedestrian	Jogger/ Recreation	Biker	Comments/Observations
E SUMMIT STREET/RISMAN WEST (near Michael Schwartz)	5/1/2008	9:30-10:30 am	Low 50s, cool breeze, cloudy	Medium	219	0	4	
		12:30-1:30 pm	Mid 50s, still, very cloudy	Heavy	283	0	5	People tend to ignore actual crosswalks if they are out of their way. Many people seem to be coming from or returning to commuter lot.
E SUMMIT STREET/RISMAN EAST (near Research 1)	5/1/2008	9:30-10:30 am	Low 50s, cool breeze, cloudy	Medium	137	0	1	
		12:30-1:30 pm	Mid 50s, still, very cloudy	Heavy	168	0	4	
MAIN STREET AND LINCOLN INTERSECTION	12/5/2007	9:30-10:30 am	Mid 20s, cold, snowy, low wind	Heavy	34	0	1	Bikes on road despite heavy traffic. Well defined crosswalks compared to other locations. Constant foot traffic.
		12:15-1:15 pm	Mid 20s, cold, snowy, low wind	Heavy	56	2	2	Foot traffic thinned out around 12:45pm. More "spurt" oriented than earlier count.
PEDESTRIAN ISLAND E MAIN (in front Rockwell Hall)	12/5/2007	9:30-10:30 am	Mid 20s, cold, snowy, low wind	Heavy	28	0	0	Traffic does not stop for pedestrians. Some walkers cross mid-street, ignoring crosswalk.
		12:15-1:15 pm	Mid 20s, cold, snowy, low wind	Heavy	36	0	0	Pedestrians often must wait several minutes to cross.
PEDESTRIAN ISLAND E MAIN (near Sherman Rd)	12/5/2007	9:30-10:30 am	Mid 20s, cold, snowy, low wind	Heavy	4	0	0	Very few pedestrians.
		12:15-1:15 pm	Mid 20s, cold, snowy, low wind	Heavy	11	0	1	

Site	Date	Time	Weather	Vehicle Traffic Density	Pedestrian	Jogger/ Recreation	Biker	Comments/Observations
SUMMIT AND JANIK/MORRIS INTERSECTION (near Business Building)		9:30-10:30 am	Mid 30s, sunny, windy, brisk	Heavy	315	0	8	Many mid-street crossers, most dense foot traffic entering Business building and Satterfield
	11/19/2007	12:15-1:15 pm	Low 40s, partly sunny, windy, cool	Heavy	359	0	6	
E MAIN AND HORNING INTERSECTION	11/19/2007	9:30-10:30 am	Very cold, partly cloudy	Very Heavy	18	2	0	Very busy 4-lane rd. Most people from the direction of Arby's, probably from apt complex down the hill. More people crossed over Horning than Main. Many headed for Music & Speech. More leaving campus during lunchtime.
	11/19/2007	12:30-1:30 pm	Cold	Extremely Heavy	22	2	0	
SUMMIT AND LINCOLN INTERSECTION		9:30-10:30 am	Mid 50s, cool, damp, dreary, windy	Heavy	60	1	4	Many walkers cross mid-street, between cars, not at intersection or crosswalks. Very few people between class times.
	11/14/2007	12:30-1:30 pm	Low 60s, cloudy, some sun, windy	Heavy	96	1	4	
LOOP AND SUMMIT INTERSECTION	11/14/2007	9:30-10:30 am	Wet, gray, mild	Heavy	3	0	0	Far away from class buildings and on very busy road. May discourage anything but car travel. About twice as many cars left the apartments, almost always with a single occupant. Apts with garages, residence halls, poor crosswalks.
	11/14/2007	12:30-1:30 pm	Clear, damp, mild	Heavy	4	0	0	

Appendix 2: Survey Questions (about 30 simple questions)

This is a survey to determine your choices regarding transportation and parking. It will help us assess ways to improve transportation around this campus.

The survey consists of 30 questions, most of which are very simple to answer. We do not expect that it should take you more than 10 minutes of your time.

What is your age? _____

What is your class rank?
Freshman
Sophomore
Junior
Senior
Graduate Student

What is your gender?
Female
Male

Do you own or have a car available to use around Kent?
Yes
No

Where do you live while attending Kent State?
Residence Hall, Building name _____
If within Kent, street name or apartment complex name _____
If beyond Kent, name of town you live in _____
Parent Residence in Kent: Street _____
Parent Residence outside Kent: Town _____

What parking permit do you own?
Don't own a parking permit
Commuter permit
Resident permit
Stadium permit
Other permit _____

What modes of transportation do you use to get to campus? (check all that apply)
Bus
Car (solo driver)
Carpool or passenger in another's car
Walk
Bike

What is your *main* mode of transportation to campus (use more often than others)?
Bus
Car (solo driver)
Carpool or passenger in another's car
Walk
Bike

If you are a resident hall student, what is your main mode *on* campus, (e.g. going to class, to student center, etc)?
Bus
Car (solo driver)
Carpool or passenger in another's car
Walk
Bike

If you are a resident hall student, what is your main mode *off* campus?
Bus
Car (solo driver)
Carpool or passenger in another's car
Walk
Bike

If you are within a mile or so of campus, what prevents you from walking to school? (Check all that apply)
Weather conditions
Not enough time
Lack of walkways and busy streets
Physical limitations
Inconvenience
Other _____

Do you own a working bicycle?
Yes
No

If you are within 3-5 miles of campus, what prevents you from biking to school? (Check all that apply)
Weather conditions
Not enough time
Lack of walkways and busy streets
Safety concerns
Physical limitations
Inconvenience
No good place to "park" bicycle
Other _____

If you are within 3-5 miles of campus, what prevents you from biking to school in good weather? (Check all that apply)
Not enough time
Lack of walkways and busy streets
Safety concerns
Physical limitations
Inconvenience
No good place to "park" bicycle
Other _____

How often do you take a campus bus?
Never
Once or twice a month
Once or twice a week
Every day or two
More than once a day

If you drive to campus, what prevents you from taking a bus instead? (Check all that apply)
No service near home/apartment
Don't know or understand the bus schedule
Infrequent service/ unreliable service
Schedule does not fit my needs
Worry about getting to the right place on time
Buses too full
Don't like buses

Do you have a job?
No
Part time under 10 hours a week
Part time 10-20 hours a week
More than 20 hours a week

If you work, where is your job located?
On campus
Near campus (within a half mile)
Off campus in Kent
Outside Kent – Where? _____

If you work, what is your *main* mode of transportation to work (use more often than others)?
Bus
Car (solo driver)
Carpool or passenger in another's car
Walk
Bike

Would you be willing to pay an additional $100 a year for parking for the convenience of a parking deck close by?
Yes
No

If parking permits cost an additional $100 a year, how would you change your commuting patterns?
No Change
I'd carpool
I'd find another place to park
I'd walk or bike
I'd ride the bus
Reconsider attending KSU

If it saved you half off of the cost of an annual parking permit, what sort of flexible parking arrangements do you think you would utilize? (Check all that apply)
Carpooling
Night and weekend parking hours only
Parking in distant lots
More metered parking
Other _____

If it saved you half off of a parking permit that cost an additional $100 a year, what sort of flexible parking arrangements do you think you would utilize? (Check all that apply)
Carpooling
Night and weekend parking hours only
Parking in distant lots
More metered parking
Other _____

What (if anything) can the City of Kent and Kent State do to make it attractive for students to walk or bicycle to campus?
_____
_____

How can Kent State make it more attractive for students to walk or bicycle within campus?
_____
_____

How often do you now shop or dine in nearby businesses in the downtown area (excepting bars)?
Never
Rarely
Occasionally (once a week or so)
Often (a few times a week)

About what proportion of the time would you get downtown by bus?
All the time
Most of the time
Half the time
Only some of the time
Never drive

About what proportion of the time would you get downtown by walking or bicycle?
All the time
Most of the time
Half the time
Only some of the time
Never drive

What (if anything) can the city of Kent and Kent State do to make it attractive for students to frequent nearby businesses and downtown (excepting bars)?

_____

_____

What (if anything) can the city of Kent and Kent State do to make it attractive for students to walk or bicycle to local businesses (including bars)?

_____

_____

If you would be willing to participate in a focus group, please leave your name and email below:

Name _____

Email _____

Appendix 3: Sustainable Transportation Focus Group, Sept. 16, 2008

Basic Information

- Class Rank

Seniors:	9
Juniors:	3
Sophomores:	0
Freshman:	0

- Where are you from?

B -	Cincinnati
J1 -	Wellington, OH
J2 -	Warrensville Heights, OH
R -	Diamond, OH
J3 -	Elyria, OH
H -	Shalersville, OH
S -	Salem, OH
E -	Hudson, OH
C -	Pittsburgh
T -	Cedar Rapids, IA
M -	Cincinnati
J4-	Akron, OH

- Where do you live now?

B -	Kent, OH
J1 -	Kent, OH
J2 -	Kent, OH
R -	Kent, OH
J3 -	Kent, OH
H -	Shalersville, OH
S -	Kent, OH
E -	Kent, OH
C -	Kent, OH
T -	Akron, OH
M -	Kent, OH
J4-	Akron, OH

- Why do you live there?

B - Close to campus and downtown
J1 - Found inexpensive apt. through friend
J2 - Close to campus
R - On bus line
J3 - Close enough to walk
H - Less expensive with parents
S - Close to campus
E - On bus line and can bike
C - Close to campus, can bike to class
T - Between husband's job and her school
M - On campus, share with friend/roommate
J4- Less expensive with parents

- What do you think about housing in Kent?

J1 - Found inexpensive apt. by chance
S - Moved several times, hates driving
T - Too expensive in Kent

- What do you think about new Kent housing?

J2 - New apartments are too expensive
R - A lot of two bedroom apartments but hard to find bigger for his family
C - Disliked dorm noise, found new place and gas bill was much too expensive, moved into older place
B - Too expensive, lives in a housing co-op, there are three in Kent and much less expensive
J1 - Was in 3 bedroom. But was $875/mo.
S - Heating bill was too high, hard to share with other students, University Inn West was best option in Kent

- Do you stay on campus during the weekends?

J4. - No, too dead
M - Too dead
E - Sometimes
J2 - Stays on campus, international students here too
B - Noticed her neighbors that are students stay in Kent for the weekend

- Do you have a car available?

B - No car, doesn't want one
M - Never owned a car, mom comes from Cincinnati for ride
Everyone Else - Yes

- Do you have a parking permit?

A few said yes.

- Where do you park you car?

B - Bikes, no car, Summit always backed-up
J1 - Car at apartment, rides/walk to campus, too much traffic on Summit
J2 - Where she lives
J3 - No permit, would rather walk, permit too expensive
E - Parks at local church for a donation of $60/semester, angry with drivers that block intersection at peak driving times
C - Had permit once, not worth the cost
T - Parks in "C" lot but believes it is too expensive
J4- Park on campus, believe people who live close should not be able to buy permit

- How do you get to class?

J1 - Bikes
J2 - Takes bus and also drives bus
J3 - Walks
H - Drives
C - Bikes
M - Walks
J4- Drives

- What are some impediments to Biking?

C - Bike lane is a “joke”, too many people in it and once you ride off edge of path into grass its difficult to get back onto path

J4 - Too many people in bike lane

J2 - Too many people and she didn’t know what/where it was when starting at Kent, people chain bikes to stair handrails

J1 - Need to improve signs, has gotten worse, avoids riding bike on campus Esplanade, and uses streets around campus, bottleneck at the student center. Bike rack design is poor (for wavy racks), can only use end spot if available,

E - Lack of bike racks, people chain bikes to handicap ramps

- Are there any safety issues regarding biking around campus?

C - Bike lanes end too quickly, construction on Main St.

B - Illegal to ride on sidewalk in Kent if you’re over 12, you are screamed at by drivers when on the road

J1 - Tries to take as much space on the road as a car for his own safety. Bike lanes need to be better designed and maybe additional lanes added.

- Are there safety concerns related to walking?

E – Esplanade has made walking better

J2 - She doesn’t feel safe at crossing, especially crossing Terrace

T - Also believes it’s hard to cross Terrace. In the winter snow is plowed onto spots in the “C” lot and people park wherever they want.

S – In the winter there is too much snow on the sidewalks, more people drive on snowy days

J3 - Snow on Summit sidewalks is not removed

All - Agreed lighting and safety phones were very good

- What distance is walkable?

B - Two miles
J4. - 20 minutes
J1 - 30 minutes
J2 - distance not an issue, it's transporting, such as groceries, that limits distance
J3 - 30 minutes
H - Anywhere on campus
C - 15 minutes
S - Campus

- Do you walk to downtown Kent?

J3 - Walks from campus
J1 - Walks from Campus regularly

- What could be done to facilitate walking?

J1 - Crossing lights are too far apart, times of day matter, sidewalks need more maintenance
E - Likes crossing islands, uses current ones daily, need one on Summit
S – Runs across the road wherever she can
B – Sidewalks are in disrepair and you can trip easily
T - More visible crosswalks, people turn without looking for pedestrians

- Would a pedestrian bridge facilitate walking?

J1 - Likes bridge over 261 but wishes it was somewhere more practical, one needed at Haymaker and Main
J2 - Better than using a crosswalk, would keep people flowing, would be to avoid people darting out into traffic while driving her bus
E – One needed over Haymaker
C – One needed to Michael Schwartz building/commuter lot

Bus Riding and Carpooling

- Do you carpool?

  C - Carpools a little, would possibly more often if there were preferred parking spots for carpoolers
  S - Kent needs an on-line ride share program

- Do you take the bus?

  T - Loves the bus, has bad knee and can't walk far, have great rates, wishes it was easier from Akron
  E - Fan of the bus, believe people don't know where it goes, poor signage, need maps
  J2 - Has been added to the new sign crew to add signs to bus stops
  J1 - PARTA has poor website, doesn't know what bus it is that is stopping when it arrives

- What could be done to encourage better transportation?

  E - A parking lot should be built next to Dubois Bookstore in the empty lot.
  C - Hard to improve, too many environmental and health issues
  J2 - Bike racks on all of the busses would help

- Would a bike kiosk improve biking on campus?

  T - Yes, Campus needs to be more bike friendly
  J3 - Need more bike paths
  C - Likes kiosk idea, maybe offer bike safety class, repairs, decks for parking
  J1 - Has to take bike to bus in snow, likes the kiosk idea