

Safe Routes to School Mode-Share Analysis

July 2011

written by William J. DeCoursey, project managed by Edward J. O'Donnell



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Institute for Public Administration

School of Public Policy & Administration

College of Arts & Sciences

University of Delaware

in cooperation with the

Delaware Department of Transportation

and developed for the

Delaware Center for Transportation

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PREFACE

As the Director of the Institute for Public Administration (IPA) at the University of Delaware, I am pleased to provide this report, *Safe Routes to School – Mode-Share Analysis*. Like the nation, Delaware has seen soaring rates of overweight and obesity among its population. None, however, are as disturbing as the incidence in some of the state’s most vulnerable and affected populations—its school-aged children. While not the sole causality, physical activity (or lack thereof) has repeatedly been shown to have a significant correlation to body weight. Obviously, a brief walk to and from school five days a week would be a great first step. However, the Delaware Department of Transportation indicates that the overwhelming majority of the state’s students are either bused or driven to school. This report attempts to illustrate how Delaware’s elementary and middle school students who live close enough to walk get to and from school. It also attempts to determine which factors are most important to families in deciding whether or not to allow their children to avail themselves of this opportunity for physical activity. DelDOT has indicated it would like to use the results as a baseline to compare potential Safe Routes to School Projects across the state.

I would like to take this opportunity to thank the individuals and entities that cooperated on this project. The Delaware Department of Transportation was supportive of the project and assisted in holding a public forum on the topic on May 2011. Also, the Delaware Department of Education, the Wilmington Area Planning Council, the Dover/Kent Metropolitan Planning Organization, Nemours Health and Prevention Services, Delaware Greenways, and a number of the state’s school districts offered valuable feedback at the forum.

Policy Scientist Edward J. O’Donnell, AICP, directed the project. Policy Specialist/Planner William J. DeCoursey, AICP, oversaw the production of the report, coordinated meetings among transportation officials, and planned and led the forum. Graduate research assistants Claire M. Beck, Rachael R. Hurley, and Arthur F. Wicks III authored portions of the document. Associate Policy Scientist Tibor Toth, Ph.D., at the Center for Applied Demography and Survey Research, oversaw the administration of the survey instrument. Special thanks go to Assistant Policy Scientist Mark Deshon, who designed the forum webpage and provided editorial support for this report.

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The IPA project team gratefully acknowledges the professionals and colleagues who have been involved in this project and provided a broad spectrum of perspectives, particularly at the May 2011 forum. Their input contributed to a broader understanding of the issues, obstacles, and perceptions that shape how our state's families choose to allow their children to get to and from school.

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INTRODUCTION

Overview

Are walking or bicycling viable modes of transport for our state's school-aged children? What truly is a "safe route to school?" What does Delaware's Safe Routes to School (SRTS) program do? What can we learn from other states and regions that have begun to address the issue of allowing students to safely get to and from school? What does the survey data of students living within walking distance of school reveal for the state as a whole and for each of its counties? Finally, in terms of discussing and making sense of the data, what do school transportation officials, planners, health advocates, and school administrators feel is most relevant?

Problem Statement/Project Purpose

The nation, with Delaware being no exception, faces a number of pressing issues. Healthcare costs are spiraling out of control. Energy costs, particularly fossil fuels, have proven highly volatile and are inexorably trending higher. These, along with a number of other factors, have put state budgets under increasing pressure. Concurrently, America has been facing an obesity epidemic, which a preponderance of research concludes is a key driver of healthcare costs, second only to tobacco use. Unfortunately, Delaware's students constitute the norm rather than the exception. While a comprehensive accounting of the factors underlying obesity is beyond the scope of this report, it is clear that a number of things in the American lifestyle have changed in the past several decades. Though most born prior to 1940 and a goodly portion of the baby-boom generation will proudly recall "walking uphill in the snow to and from school," this is no longer the case for our state's students and, in many cases, was not for their parents either.

In response, many states began Safe Routes to School initiatives, designed to identify and mitigate barriers to students' ability to walk/cycle to school and increase incidence of walking and physical activity. In Delaware's SRTS program, participating schools poll their students pre- and post-intervention to determine any change in walking rates. However, there was no baseline for comparison. This project's purpose was to provide that baseline for the state and each county through analysis of survey data collected from parents of school-aged children living within walking distance of school. Understanding why parents would either allow or not allow their children to walk or bicycle to school was also an area of interest.

BACKGROUND

Safe Routes to School in Delaware

The Delaware Safe Routes to School (SRTS) Program was established September 10, 2002, by Senate Bill 353 of the 141st General Assembly of Delaware. This legislation authorized the Delaware Department of Transportation (DelDOT) to make SRTS grants available for bicycle and pedestrian safety programs, as well as for traffic-calming measures in the vicinity of schools (“2006 Program Guidelines”).

About three years later, the federal SRTS program was established under the “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users” (SAFETEA-LU). The Federal SRTS program aims to “enable and encourage children, including those with disabilities, to walk and bicycle to school; to make walking and bicycling to school safe and more appealing; and to facilitate the planning, development and implementation of projects that will improve safety, and reduce traffic, fuel consumption, and air pollution in the vicinity of schools” (SAFETEA-LU).

The Federal program distributes funds to state departments of transportation based on each state’s K-8 enrollment numbers. The state departments of transportation then distribute their funds to state, local, and regional agencies, and nonprofit organizations that submit project proposals meeting the program guidelines.

The Safe Routes to School Program was designed to address a variety of problems, including the decline in the number of children walking or bicycling to school, an ever-increasing amount of automobile traffic and congestion near schools, the environmental impacts of this traffic, and an increase in childhood obesity (“Talking Points”).

In Delaware specifically, SRTS programs could be used to lower the state’s cost of busing children to school. Public school transportation costs for the state increased by about 52 percent between Fiscal Years 2002 and 2008, and decreasing the number of children reliant on bus transportation could help to ease these costs (*Report to the Governor* 2). This could be done by funding infrastructure that makes walking or biking to school more safe and efficient and by creating educational programs that teach students about pedestrian and bicycle safety while encouraging them to use these methods to get to school.

SRTS programs must involve both infrastructure- and non-infrastructure related projects (SAFETEA-LU). Infrastructure projects could include crosswalk striping and sidewalk improvements, while non-infrastructure projects may involve education programs in schools and public awareness campaigns in the community.

The Trend Away from Walking

There is certainly room for debate as to why fewer and fewer students walk to school. Changing cultural values/norms, the structure and function of the contemporary family, daycare, and an evolving demographic composition of the nation may all play a role. Leaving the realm of sociology to experts in that field, from a land-use and transportation perspective, the most notable, nationwide transformation has certainly been the suburbanization of America.

This phenomenon, widely cited by academics, has been influenced by several historical events and practices, including the ready availability of home mortgages after WWII, the development of the Interstate Highway System, widespread use of Euclidean zoning, and, of course, the rise of the automobile age. Taken together, these factors have resulted in a nation in which most people are either unable or unwilling to get to school (or work, parks, grocery store, etc.) without the use of a car, bus, taxi or train.

Housing and Highways

Though suburban developments were certainly being built much earlier, the major boom in suburban building in the United States began shortly after the end of World War II. One of the contributing factors was the Federal Housing Authority's (FHA) mortgage-backing program that encouraged homeownership, especially for soldiers returning from the war (Beauregard 83).

The FHA also established guidelines that effectively subsidized certain types of suburban building. As more and more development was occurring outside of the city centers and more people were travelling by car, more roads were needed to connect people's homes with the places where they worked. By 1956, the Interstate Highway System had been authorized by President Eisenhower in order to accommodate increasing vehicle traffic and supplement the existing state highway systems. The government essentially encouraged what would later come to be known as "suburban sprawl" by building highways that connected suburbs with downtowns, diminishing the private costs of automobile operation and homeownership, funding infrastructure projects, and underfunding mass transit (Beauregard 83).

In simple terms, massive public investment resulted in easy (automotive) access to huge swaths of previously inaccessible lands for development. Simultaneous home-ownership programs, most notably the 30-year, fixed-rate mortgage, made a home in the country an attainable dream for a burgeoning middle class.

Land-Use and Zoning Practices

Another major reason suburban areas are not walkable is due to a history of Euclidean zoning practices. Gaining wide acceptance during the 1940s, zoning is used as the principal means of regulating land uses (Wickersham 27). Euclidean zoning, which divides plots of land into three distinct uses (residential, commercial, or industrial), is by far the most commonly practiced

zoning scheme. These three uses are generally seen as incompatible with one another and are, therefore, kept physically separate (Wickersham 27). While the value of not having a coal plant as a neighbor is clear, a somewhat unintended consequence was to separate homes from shops, which traditionally co-existed in urban environments.

Additionally, Euclidean practices restrict the use, size, and density of development on any particular piece of land. Intended to prevent overcrowding and unsanitary conditions, these provisions tended to favor and result in large, low-density, single-use areas. Taken together, by design, Americans incrementally were moving farther from one another and distancing themselves from their most common destinations.

Safety

In addition to prohibitive distances between children's homes and schools, suburbanization and an automobile-centric society have made it less safe for children to walk or bicycle to school. In a 2004 study conducted by the Centers for Disease Control and Prevention, parents of school-aged children reported that "traffic-related dangers" were a major barrier to allowing their children to walk to school ("Talking Points").

Parents also reported the danger of crime as another barrier, highlighting the fact that walking, as a form of transportation, is generally not considered safe anymore. The layout of suburban America, with its low density neighborhoods and car-oriented built environment, results in streets that are often unsafe for children to traverse either by walking or biking.

CASE STUDIES

Safe Routes to School (SRTS) is a federally funded program aimed at helping communities and schools create safe, walkable, and bikeable routes to school while also encouraging the student population to consider alternatives to driving or taking the bus on their way school. Many communities throughout the nation have used eight steps, suggested by the national SRTS literature, to implement SRTS: 1) bringing the right people together, 2) holding a kick-off meeting, 3) gathering information and identifying issues, 4) identifying solutions, 5) making a plan, 6) funding the program, 7) acting on the plan, and 8) evaluating the program, making needed improvements, and moving forward. These eight steps allow the SRTS program the ability to adjust to the needs of the community and offer a variety of options on how to create safe routes to school.

Marin County, California

Parents, teachers, school administrators and community members were concerned with the low percentage of students walking and biking to school and the high percentage of students arriving at school alone by car. The county has a fairly strong biking and outdoor mentality, with groups



advocating for increased physical activity among the school-aged youth. In 2000 the Marin County Bicycle Coalition received money from the National Highway Traffic Safety Administration to create a Safe Routes to School Program that could be followed nationally.

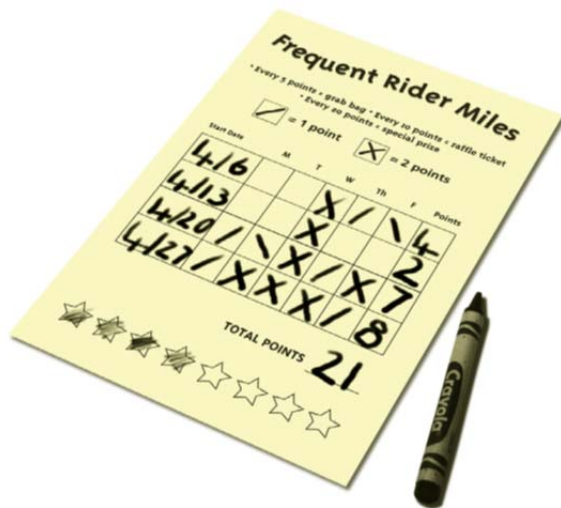
Gathering Data

An initial survey of the county was completed to set a baseline reading for the program. The county found that 73 percent of the students were being driven to school by their parents and the added cars on the road were causing 21 percent of the morning commute congestion.

Fourteen percent of the students were walking, 7 percent riding their bike, and only 6 percent taking the bus.

Programs

Marin County, Calif., has implemented several programs to increase walkability and bikeability. Walk or Wheelin' Wednesday encourages students to walk or take their bikes every Wednesday with their neighbors and friends. A Frequent Rider Miles contest provides students with pre-made punch cards, and every time a student walks, bikes, takes the bus, or carpool to school they can get their card punched and receive points. The students can then exchange their points for raffle tickets and enter a raffle at the end of the year to win prizes, including a new bike.



Other programs include Walk&Roll to School Days, the Golden Sneaker Award, Faith and Fantasia, the Pollution Punch Card, and SchoolPool¹.

Physical Changes

In addition to programs aimed at increasing walkability, the county has made physical changes to the area around the schools. These include curb extensions, ramps at intersections, new signs, and pavement markings. The schools have also created highly visible, raised crosswalks for safer

pedestrian movement. In areas where crosswalks already exist, where applicable, they have been repositioned to reduce the length. Pedestrian signal and warning lights have also been installed at crosswalks and around the schools to warn drivers about the presence of school children.

Assessing Results

The county has completed several surveys to measure the success of the programs and changes. At the end of the pilot program, the county measured a 57 percent increase in the number of children walking and biking and almost a 30 percent decrease in the number of children arriving alone by car for the schools that participated.² Another evaluation was done from 2006-2007, which found, during that time period, that students arriving alone by car had dropped 19 percent. That same survey found that 75 percent of the respondents were interested in carpooling and around 30 percent would allow their children to walk and bike to school if supervised.³

¹ <http://www.saferoutestoschools.org/forms.shtml>

² <http://www.saferoutestoschools.org/about.shtml#SuccessStory>

³ <http://www.saferoutestoschools.org/Pressroom/NewsletterPDFs/Spring2007.pdf>

Glendale, Arizona

The community of Glendale, near Phoenix, Ariz., is a newer community that was planned and built with walking trails and bike paths. Even with the physical connectivity of the community, driving was the main mode of transportation, and members of the community wanted that to change. They were concerned with the health of the younger community members. A group set out to raise awareness of their community's walkability and the importance of their environment.

They also wanted to reduce crime, traffic, and speeds around the schools, as well as spend important and valuable time with the children of the community.⁴



Identifying Problems

The SRTS program reached out to parents in the Phoenix area and asked them to participate in creating Safe Routes to School maps that could be used by other parents and the students when planning trips to school. During this process, the parents identified where sidewalks needed to be built or repaired in order to create continuous routes. The community was also concerned with congestion and speeding traffic in and around the schools.

Programs

In Glendale, the schools participate in Walk to School days and on special days, such as the national Walk to School day, have enlisted the help of honorary crossing guards such as the mascots for the NHL's Phoenix Coyotes and NFL's Arizona Cardinals.⁵ The communities have also successfully lobbied for doubled fines for violations, such as speeding, in school crossing areas.⁶

Around the State

Many other areas of the state have also participated in SRTS projects. The State Transportation Board approved funding for walking and biking programs to encourage and educate students, parents, and community members. Some of these programs are "Walk. Bike. Get Fit." from Coconino County, Avondale and Goodyear's "School Pedestrian and Bicycle Program," and Peoria's "Unified School District Walking Programs." Infrastructure changes, mainly dealing with sidewalk and crosswalk improvements, were also approved.⁷

⁴ <https://www.glendaleaz.com/education/2008walkbiketotoschoolday.cfm>

⁵ <http://www.activeliving.org/node/696>

⁶ http://www.glendaleaz.com/transportation/school_crossing_fines.cfm

⁷ http://mpd.azdot.gov/planning/srts_funded_projects.php

Washington, D.C.

The District Department of Transportation began implementing SRTS components, starting with education in 2003. Since then, over 3,000 students in the community



have learned about pedestrian and bicycle safety. DDOT has used some of the SRTS money to help pay for extra enforcement within school zones and build or complete sidewalks to make walking to school safer. In 2008 DDOT selected 13 pilot schools to complete comprehensive SRTS

evaluations. These schools will participate in education programs, walking and biking incentive programs, increased enforcement inside school zones, and the planning and possible implementation of roadway improvements.⁸

Waltham, Massachusetts

Parents and school officials were worried about the congestion around the school and the impact it could have on the safety of the students. For this reason, in 2006 the school decided to participate in SRTS. The school implemented two major programs: “Walking Wednesdays” and a walking school bus, done in coordination with MassRIDES. Along the route, parents volunteered as safety patrol officers to help ensure the students arrived to school



safely. The program began in the spring of 2006 with 21 percent of the students walking. In the fall of 2006, the percentage had increased to 56 percent. During that time the number of parent drop-offs and pick-ups had decreased as well.⁹

Conclusions

The Safe Routes to School program is utilized by schools and communities all over the country.

⁸ <http://ddot.dc.gov/ddot/cwp/view.asp?a=1245&q=643191>

⁹ http://www.saferoutesinfo.org/case_studies/pdfs/MA.waltham.pdf

Though the initiatives differ slightly, each has still reported a decrease in students being dropped off by car and an increase in students walking, biking, and taking the school bus. While the programs are varied, their goals remain consistent. They are worried about the national childhood-obesity epidemic and want to see the youth in their communities become more active. They are also concerned about the environmental impact and the congestion, in and around schools, due to cars dropping off students.

Through SRTS, communities have implemented programs, built infrastructure, received funding, and reached out to the public. The examples written about previously include:

- Programming
 - Surveys
 - Walk or Wheelin' Wednesday
 - Walk&Roll to School Days
 - Golden Sneaker Award
 - Faith and Fantasia
 - Pollution Punch Card
 - SchoolPool
 - Walk. Bike. Get Fit.
 - School Pedestrian and Bicycle Program
 - Unified School District Walking Program
 - Bike Safety Educational Program
 - Walking School Bus
- Infrastructure
 - Curb extensions
 - Ramps at intersections
 - New signs
 - Pavement markings
 - Installing bikeracks
 - Raised crosswalks
 - Repositioned crosswalks to reduce the length
 - Pedestrian signal and warning lights
- Public Outreach
 - Involving parents in identifying problems
 - Raising awareness through visible figures such as mascots
 - Increased enforcement within school zones
 - Parents and community members as crossing guards

As one can see, an element common to each of these initiatives was data collection. Some relied on first-hand observations and walkability tours. Others solicited qualitative feedback from parents, students, and other stakeholders. Some even quantified student mode-share through directly polling the students. In each case, establishing a baseline to improve upon was of paramount importance.

The following section of this report will detail Delaware's statewide efforts to establish its own mode-share baseline, detailing mode choice for families with an elementary or middle school student within the standard one-mile "walkable" distance.

SURVEY METHODOLOGY AND DATA COLLECTION

Sampling and Subjects

As previously discussed, a variety of factors may affect a child's mode choice to school, many of which lie outside the purview of those typically addressed by SRTS programs/interventions. For example, busing between districts, private and/or charter school enrollments, or prohibitive distances from home to school all likely affect mode choice.

This analysis attempts to minimize the influence of these "uncontrollable" factors by focusing on samples of students that, all things being equal, should be able to walk to and from school. The Delaware Administrative Code, Title 14 – Education, 1105 – School Transportation states in subsection 11.0 the following...

11.1 Transportation benefits shall be provided for pupils in grades K to 6 whose legal residences are one (1) mile or more from the public schools to which they would normally be assigned by the District administrations and for pupils in grades 7 to 12 whose legal residences are two (2) miles or more from the public schools to which they would normally be assigned by the District administrations. Requests for otherwise ineligible transportation benefits due to unique hazards shall be processed according to this regulation.¹⁰

Therefore, data collection was intentionally focused on students in the state's three counties that Department of Education data indicated lived within the state-mandated walking zone of an age-appropriate school. The intention being to establish a baseline for students for whom SRTS-style interventions could prove useful.

The Center for Applied Demography and Survey Research (CADSR) administered the survey developed by IPA. It indicated that responses from 400 students' families fitting the above parameters would have to be collected to yield statistically significant results. The survey was administered in the spring of 2010. Some 1,300 families ultimately responded.

¹⁰ Retrieved from <http://regulations.delaware.gov/AdminCode/title14/1100/1105.shtml>


The Survey Instrument

The survey comprised 15 questions. The full survey is available in the appendix of this document. Questions 13 and 14 (housing type and household income) were included for classification purposes only. Question 15 (comments) is referred to in as much as it shows trends and common concerns. However, due to a confidentiality agreement, they cannot be published individually. They have been provided to DeIDOT's SRTS Coordinator.

The first three questions determine the student's grade, sex, and school attended. Questions four and five determine mode choice to and from school and question six asks approximate distance.

Questions seven through 11 ask parents their opinion on some typical factors associated with walking—sidewalk coverage/condition, presence of crossing guards, their opinion on the route's safety, and their opinion on their child's school's encouragement or discouragement of walking or bicycling.

Question 12 asks parents to rate 16 factors—on a scale from most important to not at all important—concerning their judgment of how relevant each is in allowing or disallowing their child to walk or bicycle to school. They are—1) distance 2) convenience 3) time it takes to get to school 4) exercise/health benefits 5) availability of sidewalks 6) condition of sidewalks 7) availability of bike lanes 8) speed of traffic along route 9) amount of traffic along route 10) crossing guards 11) safety of intersections/crossings 12) violence or crime 13) encourages responsibility 14) weather or climate 15) other or more students walking and 16) afraid child will “play hookie.”

DELAWARE SAFE ROUTES TO SCHOOL - 2010v1		Page 1
 DELAWARE SAFE ROUTES TO SCHOOL 2010 How does your child get to school? Commissioned by the Delaware Department of Transportation		
INSTRUCTIONS Mail your completed form in the attached prepaid envelope to: University of Delaware CADSR - Graham Hall Newark, DE 19716		
PURPOSE – Results from the survey will be used to make it safe, convenient, and fun for children, within an appropriate distance, to walk or bike to school.		• Use either a pen or pencil when completing the questionnaire. • If you have any questions, contact the Center for Applied Demography & Survey Research at the University of Delaware by calling 302-831-3320.
PARTICIPATION – Your participation is voluntary. However, your responses are important in order to collect valid data about how children in Delaware get to and from school.		
SELECTED CHILD: please answer the questions below for a child in your household who is in grades 1 st -8 th and who has the NEXT birthday.		
1. In what grade is the selected child (1st-8th)? <input type="text"/> Indicate grade the child is in.		7. What percentage of the route from your home to the selected child's school has sidewalks? <input type="checkbox"/> 100% <input type="checkbox"/> 75% <input type="checkbox"/> 50% <input type="checkbox"/> 25% <input type="checkbox"/> None <input type="checkbox"/> Don't know
2. Is the selected child male or female? <input type="checkbox"/> Male <input type="checkbox"/> Female		
3. What is the name of the school the selected child attends? <input type="text"/> Name of school		8. In what condition would you say that the existing sidewalks are? <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor <input type="checkbox"/> Don't know <input type="checkbox"/> No sidewalks
4. On most days, how does the selected child get TO school? <input type="checkbox"/> Walk <input type="checkbox"/> Bike <input type="checkbox"/> School bus <input type="checkbox"/> Family vehicle (only with children from your family) <input type="checkbox"/> Carpool (riding with children from other families) <input type="checkbox"/> Public transit <input type="checkbox"/> Other (specify): <input type="text"/>		
5. On most days, how does the selected child get home FROM school? <input type="checkbox"/> Walk <input type="checkbox"/> Bike <input type="checkbox"/> School bus <input type="checkbox"/> Family vehicle (only with children from your family) <input type="checkbox"/> Carpool (riding with children from other families) <input type="checkbox"/> Public transit <input type="checkbox"/> Other (specify): <input type="text"/>		9. Are there crossing guards between your home and the selected child's school? <input type="checkbox"/> All Intersections <input type="checkbox"/> Most Intersections <input type="checkbox"/> Some Intersections <input type="checkbox"/> None <input type="checkbox"/> Don't know
6. Approximately how far is the selected child's school from your home? <input type="checkbox"/> Less than a ¼ mile <input type="checkbox"/> ¼ mile up to ½ mile <input type="checkbox"/> ½ mile up to 1 mile <input type="checkbox"/> 1 mile up to 2 miles <input type="checkbox"/> more than 2 miles (GO TO QUESTION 13) <input type="checkbox"/> Don't know/not sure		10. Do you agree or disagree that your child is/would be safe walking or bicycling to school? <input type="checkbox"/> Strongly Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Strongly Disagree <input type="checkbox"/> Don't know
11. In your opinion, how much does the selected child's school encourage or discourage walking and biking to/from school? <input type="checkbox"/> Strongly Encourage <input type="checkbox"/> Encourage <input type="checkbox"/> Neither Encourage nor Discourage <input type="checkbox"/> Discourage <input type="checkbox"/> Strongly Discourage <input type="checkbox"/> Don't know		

CONTINUE ON PAGE 2

In general, the first 11 questions were designed to ascertain the status and environs of the students surveyed. Question 12 was designed to determine and prioritize parents' perceptions and preferences.

SURVEY RESULTS

Q4. On most days, how does the selected child get TO school?

All Respondents

Less than 11 percent of respondents indicated their child walked to school. Less than one percent indicated cycling. It must be noted that 52.3 percent of respondents reported their child's school was over one mile away.

The majority of respondents indicated their child rode the bus to school (51.5%). Nearly a third (32.7%) said their child was driven in a family vehicle. Three percent are shown to have ridden in a carpool.

New Castle County

The state's most populated county, New Castle, returned percentages very much in keeping with the totals from all respondents. Rates of walking are nearly identical. Aside from accounting for over half (5/8) of all recorded cases of cycling to school, the only notable difference would seem to be marginally higher and correspondingly lower rates for school bus and family vehicle, respectively.

Kent County

Kent respondents indicated the highest incidence of walking to school (12.1%). Reported rates of busing (46.5%) were also significantly lower than that of statewide respondents or the other two counties. With comparable, nearly negligible, reported rates for carpool, cycling, and the only reported instance of public transit use, the family vehicle appears to make up most of the difference. Its figure of 36.4 percent is the highest reported rate.

Table 1 – Trip to School – All Respondents

Q4 How does selected child get to school? – All Respondents		
Mode	Frequency	Valid %
Walk	144	10.93
Bike	8	0.61
School bus	679	51.52
Family vehicle	431	32.70
Carpool	40	3.03
Public transit	1	0.08
Other	15	1.14
Total	1,318	100.00
1 Invalid response. 1 "Refused."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 2 – Trip to School – New Castle County

Q4 How does selected child get to school? – New Castle County		
Mode	Frequency	Valid %
Walk	44	10.50
Bike	5	1.20
School bus	227	53.90
Family vehicle	124	29.50
Carpool	16	3.80
Other	5	1.20
Total	421	100.00

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 3 – Trip to School – Kent County

Q4 How does selected child get to school? – Kent County		
Mode	Frequency	Valid %
Walk	59	12.50
Bike	2	0.40
School bus	220	46.50
Family vehicle	172	36.40
Carpool	12	2.50
Public transit	1	0.20
Other	7	1.50
Total	473	100.00

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 4 – Trip to School – Sussex County

Q4 How does selected child get to school? – Sussex County		
Mode	Frequency	Valid %
Walk	41	9.70
Bike	1	0.20
School bus	232	54.70
Family vehicle	135	31.80
Carpool	12	2.80
Other	3	0.70
Total	424	100.00
1 Invalid response. 1 "Refused."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Sussex County

At less than ten percent, Sussex respondents indicated the lowest rate of walking. At 54.7 percent, it also displays the highest rates of school bus to school. Incidence of family vehicle and carpool were generally comparable to that of the other two counties.

Conclusions

Taken together, there are no vast disparities on mode choice to school. From an advocacy point of view, Kent County scored best with the highest rates of walking and lowest rates of busing. This appears to be, at least in part, offset by modestly higher incidences of the family vehicle mode.

More telling, perhaps, is the dominance of the three most typical modes—school bus, family vehicle, and to a far lesser extent, walking. Bicycling was nearly non-existent. Nearly twice as many respondents chose “other!” Similarly, only one respondent out of 1,300+ reported using public transit.

Q5. On most days, how does the selected child get home FROM school?

All Respondents

Statewide, results showed a marginally higher rate of walking home from school as opposed to on the way to school. Reported rates of busing home from school were also nearly five points higher than the corresponding rate of busing to school.

The most notable difference concerning mode choice from, instead of to, school was a seven percent decline in the rate of family vehicle usage. As reported rates of cycling, carpooling, and public transit remained largely negligible, it is likely fair to conclude that students whose parents drove them to school in the morning are still at work or otherwise engaged when school lets out in the late afternoon. It would appear these students either walk or catch the bus home as an alternative. Feedback from the stakeholder group at the *May 2011 SRTS Mode Share Analysis forum* in Dover, Del., also felt that after-school activities could perhaps account for the varying rates.

New Castle County

Much as was the case with all respondents, New Castle County showed similar trends. Reported rates of walking increased several percent, while rates of family vehicle home from school dropped significantly. Unlike the reported overall rates, and those from the other two counties, reported incidence of busing was virtually unchanged.

Kent County

Again, reported rates of walking from school are marginally higher than those indicated for the walk to school (12.5% up to 14.6%). Also, the rate of busing was generally correspondingly higher to the reported decline in family vehicle ridership.

Table 5 – Trip from School – All Respondents

Q5 How does selected child get home from school? – All Respondents		
Mode	Frequency	Valid %
Walk	177	13.4
Bike	11	.8
School bus	742	56.3
Family vehicle	336	25.5
Carpool	27	2.0
Public transit	3	.2
Other	23	1.7
Total	1,319	100.0

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 6 – Trip from School – New Castle County

Q5 How does selected child get home from school? New Castle County		
Mode	Frequency	Valid %
Walk	62	14.7
Bike	6	1.4
School bus	228	54.0
Family vehicle	102	24.2
Carpool	13	3.1
Public transit	1	.2
Other	10	2.4
Total	422	100.0

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 7 – Trip from School – Kent County

Q5 How does selected child get home from school? – Kent County		
Mode	Frequency	Valid %
Walk	69	14.6
Bike	2	.4
School bus	253	53.5
Family vehicle	132	27.9
Carpool	9	1.9
Public transit	1	.2
Other	7	1.5
Total	473	100.0

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 8 – Trip from School – Sussex County

Q5 How does selected child get home from school? – Sussex County		
Mode	Frequency	Valid %
Walk	46	10.8
Bike	3	.7
School bus	261	61.6
Family vehicle	102	24.1
Carpool	5	1.2
Public transit	1	.2
Other	6	1.4
Total	424	100.0

Source – CADSR SRTS Mode-Share Survey, 5/10

Sussex County

Interestingly, Sussex showed an extremely modest (1%) increase in walking. Its rate of 61.6 percent busing home from school was the highest of the three counties. Like New Castle and Kent, it also showed a significant (7%) decrease in family vehicle home from school.

Conclusions

The differences in rates of mode share for trips home compared to those to school were quite consistent. Generally, walking and busing increased relative to a reportedly lower rate of transport by family vehicle. The only possible exceptions were the fractional change in rates of walking in Sussex and no discernible increase in rates of busing in New Castle County.

Q6. Approximately how far is the selected child's school from your home?

Table 9 – Distance to School – All Respondents

Q6 How far is school from your home? – All Respondents		
Distance	Frequency	Valid %
Less than 1/4 mile	156	12.2
1/4 mile up to 1/2 mile	213	16.7
1/2 mile up to 1 mile	240	18.8
1 mile up to 2 miles	311	24.3
more than 2 miles	358	28.0
Total	1278	100.0
41 Invalid responses. 33 "Don't know," 8 "Refused."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 10 – Distance to School – New Castle County

Q6 How far is school from your home? – New Castle County		
Distance	Frequency	Valid %
Less than 1/4 mile	44	10.9
1/4 mile up to 1/2 mile	61	15.1
1/2 mile up to 1 mile	63	15.6
1 mile up to 2 miles	96	23.8
more than 2 miles	140	34.7
Total	404	100.0
18 Invalid responses. 16 "Don't know," 2 "Refused."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Taking note of the survey attached in this document's appendix, one will note that question six is the last that all respondents are asked to respond to (excluding demographic classifiers and the opportunity to comment). This was done by design for several reasons. First, obviously, it would be infeasible to ask a parent whose child attends school six miles away to accurately estimate the responses to the questions that follow (sidewalks, crossing guards, safety, etc.) Second, it was hoped that narrowing the pool of respondents to those whose child lived within walking/cycling range would yield more telling and useful responses, particularly as they may relate to SRTS-style mitigations and programs.

All Respondents

Interestingly, despite the survey having been designed and delivered to families of school-aged children within a mile of an age-appropriate elementary or middle school, the majority of respondents seem to have indicated that their child does not attend the closest school. Over 52 percent responded that their child's school was over a mile away. Perhaps some parents overestimated the distance. Still, 28 percent indicated that their child's school was over two miles away, which was the most often response chosen.

From there, the results show an interesting progression as the distance trend continues. As the distance to school decreases, the percentage of respondents indicating they live there drops as well, showing just over 12 percent of respondents living within one-quarter mile.

New Castle County

Somewhat surprisingly, New Castle County, the state's most populated and densely developed, reported the highest rates for the trip to school being over one mile. Fully 58.5 percent of respondents indicated as much. The 34.7 percent response rate was nine and ten percentage points higher than the rates indicated for Kent and Sussex, the state's less-developed, more rural counties to the south, respectively. The reported rate for students living within one-quarter mile (10.9%) was also lowest among the counties. As to why this would be the case and its possible ramifications is a fascinating question, which, unfortunately, lies beyond the scope of this study. As mentioned earlier, the practice of busing between districts and private/charter school enrollments likely play a role. These policies' potential impact on physical activity and public health would be an interesting avenue for further research.

Kent County

From an advocate's perspective, Kent County showed the most favorable results in regards to distance to school from home. Its reported rate of 13.6 percent within one-quarter mile was the highest of the three counties. The same is true for its rate for one-quarter to one-half mile. The data show that Kent has the highest percentage of students living very close (>1/2 mile) to school.

Sussex County

Though none of its close-in response rates were abnormal, Sussex County is actually the only of the three counties to have reported a majority of students living within one mile of school (51.7%). Sussex County's indicated rates for one-half to one mile, one mile to two miles, and more than two miles were nearly identical.

Table 11 – Distance to School – Kent County

Q6 How far is school from your home? – Kent County		
Distance	Frequency	Valid %
Less than 1/4 mile	63	13.6
1/4 mile up to 1/2 mile	86	18.6
1/2 mile up to 1 mile	79	17.1
1 mile up to 2 miles	115	24.9
more than 2 miles	119	25.8
Total	462	100.0
11 Invalid responses. 8 "Don't know," 3 "Refused."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 12 – Distance to School – Sussex County

Q6 How far is school from your home? – Sussex County		
Distance	Frequency	Valid %
Less than 1/4 mile	49	11.9
1/4 mile up to 1/2 mile	66	16.0
1/2 mile up to 1 mile	98	23.8
1 mile up to 2 miles	100	24.3
more than 2 miles	99	24.0
Total	412	100.0
12 Invalid responses. 9 "Don't know," 3 "Refused."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Conclusions

Definitive conclusions are difficult to state with any confidence, given the number of variables—demographics, busing, development pattern, infrastructure—that exist among the counties. However, distance seems to play an important role. In New Castle County, 41.6 percent of students were shown to live within a mile and 10.5 percent reported walking. In Kent, 49.3 percent indicated living within a mile and 12.5 percent responded that they walk. However, in Sussex, the trend ends. Even with 51.7 percent of respondents indicating they live within a mile, only 9.7 percent reported they usually walk to school.

Q7. What percentage of the route from your home to the selected child's school has sidewalks?

As previously noted, question seven is the first (7-12) that respondents who indicated that their child lives beyond walking distance to school were asked to skip. The reader will notice a number of "invalid" responses noted at the bottom of the accompanying tables. Though a handful (as was occasionally seen in previous sections) of these are data-collection errors or illegible responses, the overwhelming majority are accounted for by respondents living beyond walking range who still answered the questions.

Table 13–Sidewalk Coverage–All Respondents

Q7 What % of route has sidewalks? – All Respondents			
Sidewalk Coverage	Frequency	Valid %	Cumulative %
100%	237	25.8	25.8
75%	190	20.7	46.5
50%	130	14.1	60.6
25%	188	20.5	81.1
None	174	18.9	100.0
Total	919	100.0	
400 Invalid responses. 40 "Don't know," 2 "Refused," 358 "System."			

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 14 – Sidewalk Coverage – New Castle County

Q7 What % of route has sidewalks? – New Castle County			
Sidewalk Coverage	Frequency	Valid %	Cumulative %
100%	95	35.6	35.6
75%	61	22.8	58.4
50%	39	14.6	73.0
25%	49	18.4	91.4
None	23	8.6	100.0
Total	267	100.0	
155 Invalid responses. 14 "Don't know," 1 "Refused," 140 "System."			

Source – CADSR SRTS Mode-Share Survey, 5/10

All Respondents

Keeping in mind that these responses are the estimates of laypeople, there appears to be a fairly even distribution of responses. Also, the questionnaire didn't ask respondents to give a technical assessment. For example, if there was a sidewalk on one side of the street all the way from one's home to their child's school, one individual may respond 100 percent coverage, while another

may respond to the same scenario as 50 percent coverage (only on one side of the street). This may have led to added variance. Though 46.5 percent of respondents indicated that at least 75 percent of the route had sidewalks, nearly 40 percent indicated that either only 25 percent of the route had walkways or that there were none at all. Remember also that these responses come solely from indicating their child attended a school within walking distance.

New Castle County

Respondents indicated that New Castle County had, by a considerable margin, the best sidewalk coverage. Better than a third of respondents indicated total coverage, and nearly 60 percent indicated at least 75 percent. Only one-quarter indicated 25 percent coverage or less.

Kent County

Kent was shown to be in the middle of the pack regarding sidewalk coverage. Nearly 48 percent of respondents indicated at least 75 percent coverage. However, almost 39 percent responded 25 percent coverage or none at all.

Sussex County

Sussex was clearly the outlier here. Barely a third of respondents felt walkways covered 75 percent or more of the route. A slim majority responded the route had 25 percent sidewalk coverage or none at all.

Conclusions

Definitive conclusions are again difficult to state. Though New Castle demonstrated superior sidewalk coverage, its rate of walking is slightly lower than Kent County's. On the other hand, Sussex's lack of sidewalks could explain one of the oddities noted earlier, that even with 51.7 percent of Sussex County respondents indicating they live within a mile, only 9.7 percent

Table 15 – Sidewalk Coverage – Kent County

Q7 What % of route has sidewalks? – Kent County			
Sidewalk Coverage	Frequency	Valid %	Cumulative %
100%	105	30.9	30.9
75%	57	16.8	47.6
50%	46	13.5	61.2
25%	61	17.9	79.1
None	71	20.9	100.0
Total	340	100.0	
133 Invalid responses. 13 "Don't know," 1 "Refused," 119 "System."			

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 16 – Sidewalk Coverage–Sussex County

Q7 What % of route has sidewalks? – Sussex County			
Sidewalk Coverage	Frequency	Valid %	Cumulative %
100%	37	11.9	11.9
75%	72	23.1	34.9
50%	45	14.4	49.4
25%	78	25.0	74.4
None	80	25.6	100.0
Total	312	100.0	
112 Invalid responses. 13 "Don't know," 99 "System."			

Source – CADSR SRTS Mode-Share Survey, 5/10

reported they usually walk to school. This poses another interesting question for possible future research. Is total sidewalk coverage an absolute necessity or is it more important to ensure there are not any glaring stretches of road without sidewalks at all?

Q8. What condition would you say that the existing sidewalks are in?

All Respondents

Generally speaking, respondents didn't appear to be overly concerned with the condition of sidewalks. The majority rated available sidewalks as excellent or good, and nearly 90 percent felt they were at least fair.

It should be noted that 171 individuals could not answer because they previously indicated their likely route had no sidewalks.

New Castle County

Despite having some of the oldest roads and sidewalks in the state, New Castle County ranked favorably in this regard. Less than seven percent of respondents classified the county's sidewalks as poor, and 60 percent felt they were either good or excellent. Again, 25 responses indicated a lack of sidewalks to rate on condition

Kent County

Like New Castle County, 60+ percent of Kent's respondents characterize its sidewalks as excellent or good. Some 25 respondents indicated there were no sidewalks along their child's route. Compared to New Castle County, Kent responses showed a slightly higher rate of poor sidewalks and a marginally smaller rate of fair sidewalks.

Sussex County

Sidewalk condition was indicated to be a concern (at least by way of comparison to all respondents) in Sussex County. Though "good" (39.3%) was the most common response, less than half (46.1%) felt the walkways were excellent or good. Sussex also had the highest response rates for fair (36.8%) and poor (17.1%) of any of the counties.

Table 17 – Sidewalk Condition – All Respondents

Q8 What condition are sidewalks in? – All Respondents		
Rating	Frequency	Valid %
Excellent	77	10.3
Good	341	45.6
Fair	249	33.3
Poor	80	10.7
Total	747	100.0
572 Invalid responses. 38 "Don't know," 5 "Refused," 171 "No sidewalks," 358 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 18 – Sidewalk Condition – New Castle County

Q8 What condition are sidewalks in? – New Castle County		
Rating	Frequency	Valid %
Excellent	28	11.6
Good	116	48.1
Fair	81	33.6
Poor	16	6.6
Total	241	100.0
181 Invalid responses. 14 "Don't know," 2 "Refused," 25 "No sidewalks," 140 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 19 – Sidewalk Condition–Kent County

Q8 What condition are sidewalks in? – Kent County		
Rating	Frequency	Valid %
Excellent	33	12.1
Good	133	48.9
Fair	82	30.1
Poor	24	8.8
Total	272	100.0
201 Invalid responses. 13 "Don't know," 1 "Refused," 68 "No sidewalks," 119 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 20–Sidewalk Condition–Sussex County

Q8 What condition are sidewalks in? – Sussex County		
Rating	Frequency	Valid %
Excellent	16	6.8
Good	92	39.3
Fair	86	36.8
Poor	40	17.1
Total	234	100.0
190 Invalid responses. 11 "Don't know," 2 "Refused," 78 "No sidewalks," 99 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Conclusions

An unanswered question, as of yet, is how important is sidewalk condition. To those with disabilities, the elderly, or the fit adult choosing where to walk for exercise, one can envision the walkways' condition playing a role. Is this also the case for, presumably, young, active, able school-aged children? After all, they have a set destination and a largely pre-determined route. Would cracks, bumps, and tree roots be a serious deterrent? Also, would the universal presence of pristinely conditioned walkways be adequate for students with mobility or other impairments?

Again, the distinctions are less than crystal-clear. Kent and New Castle County showed nearly identical rates regarding sidewalk condition; however, as noted earlier, Kent County's reported rate of walking is a full two percent higher than New Castle County's. Sussex's results were pronouncedly unfavorable, as compared to its northern neighbors, but it has a walking rate of less than one percent lower than that of New Castle County.

Q9. Are there crossing guards between your home and school?

Table 21 – Crossing Guards – All Respondents

Q9 Are there crossing guards – All Respondents		
Guards Present at....	Frequency	Valid %
All Intersections	54	6.0
Most Intersections	48	5.4
Some Intersections	321	35.8
None	473	52.8
Total	896	100.0
423 Invalid responses. 62 "Don't know," 3 "Refused," 358 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 22 – Crossing Guards – New Castle County

Q9 Are there crossing guards? – New Castle County		
Guards Present at....	Frequency	Valid %
All Intersections	38	14.2
Most Intersections	29	10.9
Some Intersections	111	41.6
None	89	33.3
Total	267	100.0
155 Invalid responses. 14 "Don't know," 1 "Refused," 140 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

All Respondents

Statewide, the total lack of crossing guards at any intersections was the majority response (52.8%). Crossing guards at some intersections followed (35.8%). Less than 12 percent of respondents felt there were crossing guards at most, if not all intersections.

New Castle County

New Castle was again the standout in terms of the presence of crossing guards. Over a quarter of respondents felt there were crossing guards at most, if not all intersections. The county was also the only one where the majority of respondents did not indicate there were no crossing guards at any intersections (33.3%).

Kent and Sussex Counties

Kent and Sussex virtually mirrored each other in this category, somewhat surprisingly, given that Kent County led all others in rates of walking and Sussex ranked last. Regardless, in both cases over 60 percent of respondents indicated there were no crossing guards at any of the intersections along their child's route. Roughly a third of respondents from either county felt there were guards at some intersections. Kent edged Sussex in regard to responses about crossing guards at all and most intersections, respectively.

Conclusions

Unfortunately, easy comparisons are again difficult to come by. Intuitively, one would expect the significantly higher reported rates of crossing guards (adult supervision), coupled with New Castle County's significant lead in the availability of sidewalks, to result in proportionally higher rates of walking and cycling.

For whatever reason, this has not proven to be the case. Moreover, the nearly identical responses from Kent County and Sussex County respondents present yet another conundrum.

How can the state's leader and its worst performer, in regard to walking, both yield such similarities unless the presence of crossing guards is entirely unimportant? Analysis and survey respondents' preferences (in the following section) suggest crossing guards are a key factor in one's decision whether or not to allow their child to walk to school. Clearly there is opportunity for further study here.

Does New Castle County have far more crossing guards than are really necessary, or does Kent have markedly too few and simply for want of 50 volunteers could see walking rates in the 20-30 percent range?

Q10. Do you agree or disagree that your child is/would be safe walking or bicycling to school?

Table 25 – Safe to Walk?–All Respondents

Q10 Would child be safe walking or bicycling to school? – All Respondents		
Sentiment	Frequency	Valid %
Strongly Agree	79	8.4
Somewhat Agree	195	20.6
Somewhat Disagree	138	14.6
Strongly Disagree	533	56.4
Total	945	100.0
374 Invalid responses. 14 "Don't know," 2 "Refused," 358 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 23 – Crossing Guards – Kent County

Q9 Are there crossing guards? – Kent County		
Guards Present at....	Frequency	Valid %
All Intersections	11	3.4
Most Intersections	12	3.7
Some Intersections	106	32.6
None	196	60.3
Total	325	100.0
148 Invalid responses. 27 "Don't know," 2 "Refused," 119 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 24 – Crossing Guards – Sussex County

Q9 Are there crossing guards - Sussex County		
Guards Present at....	Frequency	Valid %
All Intersections	5	1.6
Most Intersections	7	2.3
Some Intersections	104	34.2
None	188	61.8
Total	304	100
120 Invalid responses. 21 "Don't know," 99 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 26 – Safe to Walk? – New Castle County

Q10 Would child be safe walking or bicycling to school? – New Castle County		
Sentiment	Frequency	Valid %
Strongly Agree	35	12.4
Somewhat Agree	66	23.4
Somewhat Disagree	41	14.5
Strongly Disagree	140	49.6
Total	282	100.0
140 Invalid responses. 140 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

All Respondents

Overwhelmingly, survey respondents indicated they did not feel it was safe for their children to walk to school. In fact, a sizable majority (56.4%) strongly disagreed that their child would be safe. Only 28 percent somewhat or strongly agreed walking was a safe option.

New Castle County

New Castle was the only county in which a majority of respondents did not indicate a strong disagreement with the proposition of their child walking. Even so, roughly 64 percent either strongly or somewhat disagreed. Fully a third of respondents strongly or somewhat agreed that their child would be safe walking.

Kent County

Kent closely mirrored the results for all respondents. Nearly 60 percent strongly disagreed that walking was safe, while approximately 29 percent at least somewhat agreed.

Sussex County

Respondents' sentiment that walking would not be safe came across strongly in the Sussex results. Better than 59 percent strongly disagreed that walking would be safe, with nearly another 18 percent somewhat disagreeing. Three quarters of respondents felt walking was unsafe. Less than a quarter agreed or somewhat agreed their child is/would be safe walking.

Conclusions

Again, the data present a bit of a riddle. Though the clear trend is that parents don't feel as though their child would be safe walking, when compared to measured rates of walking the distinction is unclear. Respondents felt most at ease regarding walking in New Castle County. The greatest response rate for "strongly disagree" was sampled in Kent County, yet it showed the highest rates of walking.

Table 27 – Safe to Walk? – Kent County

Q10 Would child be safe walking or bicycling to school? – Kent County		
Sentiment	Frequency	Valid %
Strongly Agree	29	8.4
Somewhat Agree	70	20.3
Somewhat Disagree	41	11.9
Strongly Disagree	205	59.4
Total	345	100.0
128 Invalid responses. 7 "Don't know," 2, "Refused," 119 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 28 – Safe to Walk? – Sussex County

Q10 Would child be safe walking or bicycling to school? – Sussex County		
Sentiment	Frequency	Valid %
Strongly Agree	15	4.7
Somewhat Agree	59	18.6
Somewhat Disagree	56	17.6
Strongly Disagree	188	59.1
Total	318	100.0
106 Invalid responses. 7 "Don't know," 99 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Q11. In your opinion, how much does the selected child's school encourage or discourage walking and biking to/from school?

All Respondents

Though those who felt that their child's school discouraged walking/bicycling outnumbered respondents who felt such activities were encouraged; the overwhelming majority felt the school had a neutral position on the issue. It is also possible/likely that respondents were wholly unaware of their child's school's position.

New Castle County

Overall, respondents indicated marginally higher rates of their child's school encouraging or strongly encouraging walking and cycling and correspondingly lower rates of discouraging the practice. Even so, nearly 62 percent felt the school had no position on the issue

Kent County

Over 17 percent of Kent County respondents felt their child's school strongly discouraged walking or bicycling (the highest rate of the three counties). All told, over a quarter of respondents felt the practice was discouraged, again, the highest rate among the three counties. Like the others, over 60 percent felt their child's school had no position on the issue.

Sussex County

Sussex was notable for two reasons. First, only eight percent of respondents felt walking and biking were encouraged. Second, over 68 percent, more than two-thirds, felt their child's school had no position on the issue.

Table 29 – School's Position? – All Respondents

Q11 Does school encourage or discourage walking to school? – All Respondents		
School's Position	Frequency	Valid %
Strongly Encourage	30	5.1
Encourage	56	9.6
Neither Encourage or Discourage	374	63.8
Discourage	53	9.0
Strongly Discourage	73	12.5
Total	586	100.0
733 Invalid responses. 370 "Don't know," 5 "Refused," 358 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 30 – School's Position? – New Castle County

Q11 Does school encourage or discourage walking to school? – New Castle County		
School's Position	Frequency	Valid %
Strongly Encourage	15	8.5
Encourage	28	15.9
Neither Encourage or Discourage	109	61.9
Discourage	10	5.7
Strongly Discourage	14	8.0
Total	176	100.0
246 Invalid responses. 106 "Don't know," 140 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 31 – School's Position – Kent County

Q11 Does school encourage or discourage walking to school? – Kent County		
School's Position	Frequency	Valid %
Strongly Encourage	8	3.8
Encourage	19	9.0
Neither Encourage or Discourage	129	61.1
Discourage	19	9.0
Strongly Discourage	36	17.1
Total	211	100.0
262 Invalid responses. 141 "Don't know," 2 "Refused," 119 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Table 32 – School's Position – Sussex County

Q11 Does school encourage or discourage walking to school? – Sussex County		
School's Position	Frequency	Valid %
Strongly Encourage	7	3.5
Encourage	9	4.5
Neither Encourage or Discourage	136	68.3
Discourage	24	12.1
Strongly Discourage	23	11.6
Total	199	100.0
225 Invalid responses. 123 "Don't know," 3 "Refused," 99 "System."		

Source – CADSR SRTS Mode-Share Survey, 5/10

Conclusions

Obviously, there are a few possibilities to entertain here. It is possible that the overwhelming majority of schools in the state, in fact, have no position at all regarding students walking or bicycling to school. Still, this seems unlikely. Delaware has a fairly long-standing Safe Routes to School Program, an active planning community, and a number of high-profile physical-activity and healthy-eating initiatives, coalitions, and councils.

It's also possible that the parents/survey respondents were unaware of their schools best efforts to inform them of its policy on walking and cycling. Still, these respondents were willing to open and reply to a letter from the University of Delaware asking for survey input. One would expect they would also then open and read correspondence from their child's school. Or, perhaps the schools and districts have a policy encouraging walking/bicycling but have done too little to make it widely known. It seems unlikely that any but the most isolated schools on the busiest highways would actively discourage walking. In any event, it is probably safe to say that either parents aren't getting the newsletter, or the walking policy isn't a prominent part of it.

Overall Conclusions from Baseline Data

As mentioned previously, the stand-alone results from the three counties provide more questions than answers. In nearly every instance, New Castle County compared favorably to Kent and Sussex in what were thought to be key indicators. It ranked higher in the presence of sidewalks, the condition of sidewalks, the presence of crossing guards, parents' perception of safety, and in the schools position on encouraging walking. Kent ranked first in average shortest distance to school (49.3% within one-mile for Kent, 41.6% New Castle County).

Is distance then, by far and away, the most important factor? Possibly, but other factors may also be at play. Busing between districts is most prevalent in New Castle County. Kent County, while less populated, is more compactly settled, while Sussex appears to suffer from a serious lack of pedestrian infrastructure. These factors alone suggest a targeted study for each county may be the best way to control for these variables. The following section will discuss the results of question twelve—parents’ views on a menu of factors that may affect rates of walking.

Q12. How important are the following criteria for allowing or not allowing the selected child to walk or ride a bicycle to school?

Please refer to the appendix of this document if you wish to see the entire question and its layout. Five categories of importance are available for the respondent to choose (Most Important, Somewhat Important, Neutral, Not Very Important, and Not at All Important). Respondents were then asked to rank the following potential factors—1) Distance, 2) Convenience, 3) Time it takes to get to school, 4) Exercise/health benefits, 5) Availability of Sidewalks, 6) Condition of Sidewalks, 7) Availability of Bike Lanes, 8) Speed of Traffic Along Route, 9) Amount of Traffic Along Route, 10) Crossing Guards, 11) Safety of Intersections/Crossings, 12) Violence or Crime, 13) Encourages Responsibility, 14) Weather or Climate, 15) Other or More Students Walking, 16) Afraid child will “Play Hookie.”

Table 33 - Q.12. Most Important + Somewhat Important by factor by county percentages			
All Respondents	New Castle County	Kent County	Sussex County
Safe Intersection97.8	Safe Intersection.....98.6	Safe Intersection.....97.4	Safe Intersection.....97.5
Traffic, Amount.....95.6	Traffic, Speed.....95.4	Traffic, Amount.....96.3	Traffic, Amount.....96.0
Traffic, Speed.....95.5	Traffic, Amount.....93.9	Traffic, Speed.....95.4	Traffic, Speed.....95.6
Crossing Guard.....90.8	Crossing Guard.....93.2	Violence/Crime.....92.0	Sidewalk available....92.3
Sidewalk available....90.7	Violence/Crime.....90.2	Sidewalk available....89.9	Crossing Guard.....90.4
Violence/Crime.....90.2	Sidewalk available....89.9	Distance.....89.5	Violence/Crime.....88.3
Distance.....87.7	Distance.....89.2	Crossing Guard.....89.4	Weather.....85.2
Weather.....84.6	Weather.....83.4	Weather.....85.2	Distance.....84.3
Sidewalk condition...82.0	Sidewalk condition...81.6	Sidewalk condition...82.3	Sidewalk condition...82.2
Time to school.....79.2	Time to school.....80.4	Time to school.....79.7	Time to school.....77.7
Others walking.....76.9	Others walking.....76.9	Others walking.....79.0	Responsibility.....75.8
Responsibility.....73.8	Responsibility.....73.5	Responsibility.....72.1	Bike lanes.....75.0
Bike lanes.....71.2	Convenience.....72.0	Convenience.....70.4	Others walking.....74.7
Exercise.....70.2	Exercise.....70.7	Exercise.....69.6	Exercise.....70.4
Convenience.....69.9	Bike lanes.....70.1	Bike lanes.....68.7	Convenience.....67.6
Hookie.....23.0	Hookie.....22.7	Hookie.....22.5	Hookie.....23.5
Source – CADSR SRTS Mode-Share Survey, 5/10			

All Respondents

Though it's impossible to know for certain, it appears that parents were most concerned with their child's immediate physical well-being and not as moved by the opportunity for physical activity, socialization, convenience, or the distance their child would have to walk.

The Counties

The breakdown across county lines was nearly identical to the responses from the larger pool. Respondents from all three counties ranked security of intersections, amount of traffic, speed of traffic, as their top three concerns. Violence/crime was a top-five concern for New Castle and Kent and ranked sixth for Sussex. The availability of sidewalks was a top-five concern for Kent and Sussex and ranked sixth for New Castle. Crossing guards at intersections was a top-five concern for New Castle and Sussex, but ranked seventh in Kent. Distance to school, which earlier discussion suggested may be of some importance, had a mean ranking of seventh (7th in New Castle County, 6th in Kent County, and 8th in Sussex County). This is interesting as Kent's data showed its students to, on average, live closest, while Sussex's students live farthest away.

DATA ANALYSIS

Reviewing the baseline data for each county, though interesting, seemed to pose more questions than it answered. As was discussed previously, how is it that Kent County shows the highest rates of walking to school when New Castle County was shown to be superior in the presence of sidewalks, their condition, crossing guards at intersections, parents' perceptions of safety, and school advocacy for walking/cycling? In fact, the only factor in which Kent ranked higher than New Castle was the percentage of students within one mile of school (49.3% as compared to 41.6%). Even then, Sussex actually ranked first with 51.7 percent within one mile, though Kent had a higher proportion of students closer than one-half mile. Clear trends were not forthcoming.

Moreover, parents' sentiments did little to clarify as they, justifiably, seemed far more concerned with intersections, cars, and criminals than the rest. If one looks past the obvious parental concerns though, they will quickly see that the availability of sidewalks, presence of crossing guards, and even distance were in the respondents' minds, clearly far more than playing hookie, exercise, or bike lanes. It goes without saying that their experiences, perceptions, and personal feelings play an inestimable role.

Cross-Tabulations

Feelings aside, this section of the report attempts to get to the bottom of what factors really affect modal choice to school? Using all survey responses, cross-tabulations were performed on the responses for questions six through nine against reported modal choice (question four). Unfortunately, this analysis could only be run on the total pool (all respondents). Attempting to do so with county-level data yielded unacceptably low sample sizes. Simply put, if it were a television news poll, the plus/minus confidence interval would have been unacceptably/unusably high.

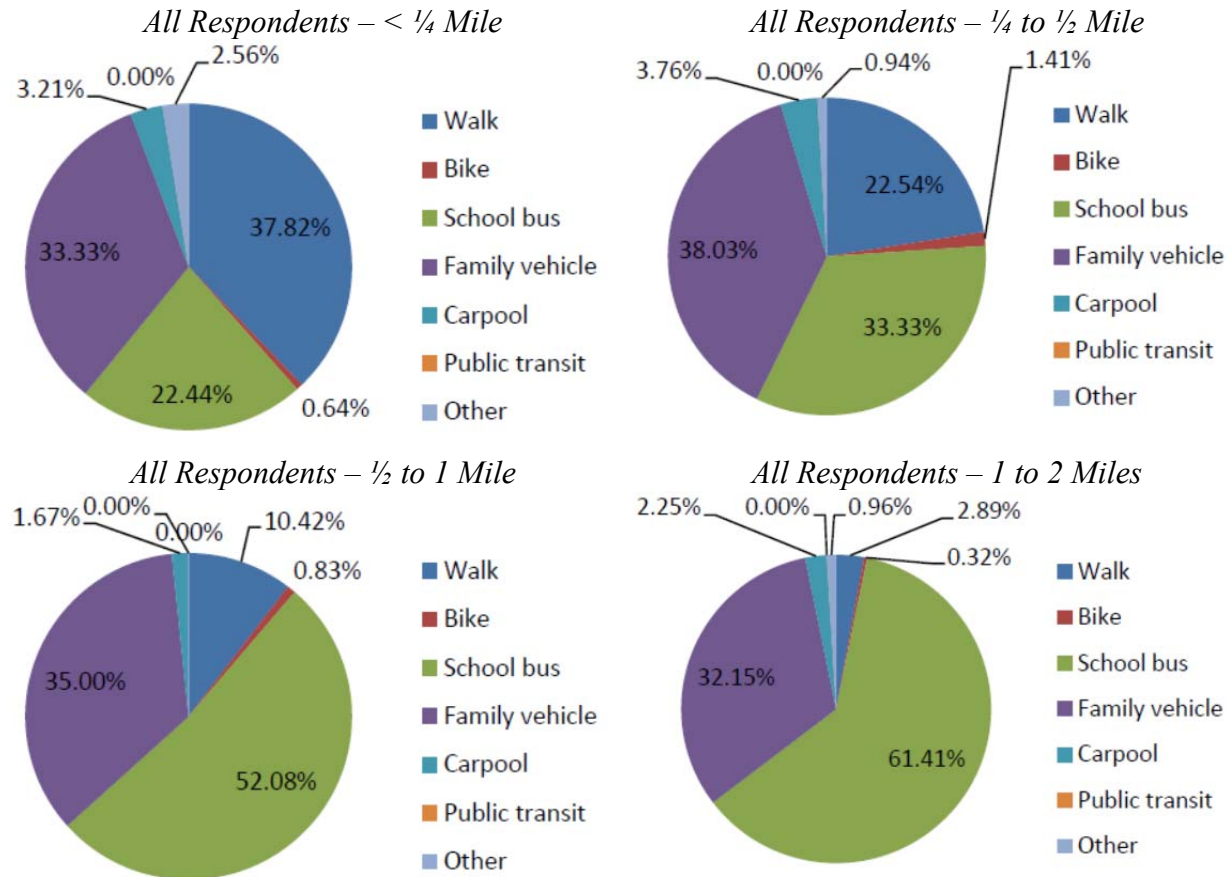
Cross-Tabulations, Distance, and Mode Choice

As was speculated earlier, distance does appear to be an important factor regarding mode choice. Within one-quarter mile, nearly 38 percent of respondents indicated that their child walked. This figure drops significantly (22.5%) in the one-quarter to one-half mile category. Interestingly, the rate of walking halves beyond one-half mile (10.4%) and falls to less than one percent at any distance beyond one mile, even though eighth-graders are allowed to walk these distances.

Also of note are busing and private-vehicle rates. Even within one-quarter mile, over 22 percent of respondents indicated that their child rode a school bus. How this could be the case is unclear. Perhaps these students are bused to other districts or may live on routes for which the state has

granted busing exemptions due to safety issues. Regardless, it seems a high rate given the reported distance at first glance.

Fig 1. – Crosstabs – Mode Choice by Reported Distance from School



< 1/4 Mile n=56, 1/4 mile to 1/2 mile n=213, 1/2 to 1 mile n=240, 1 mile to 2 miles n=311

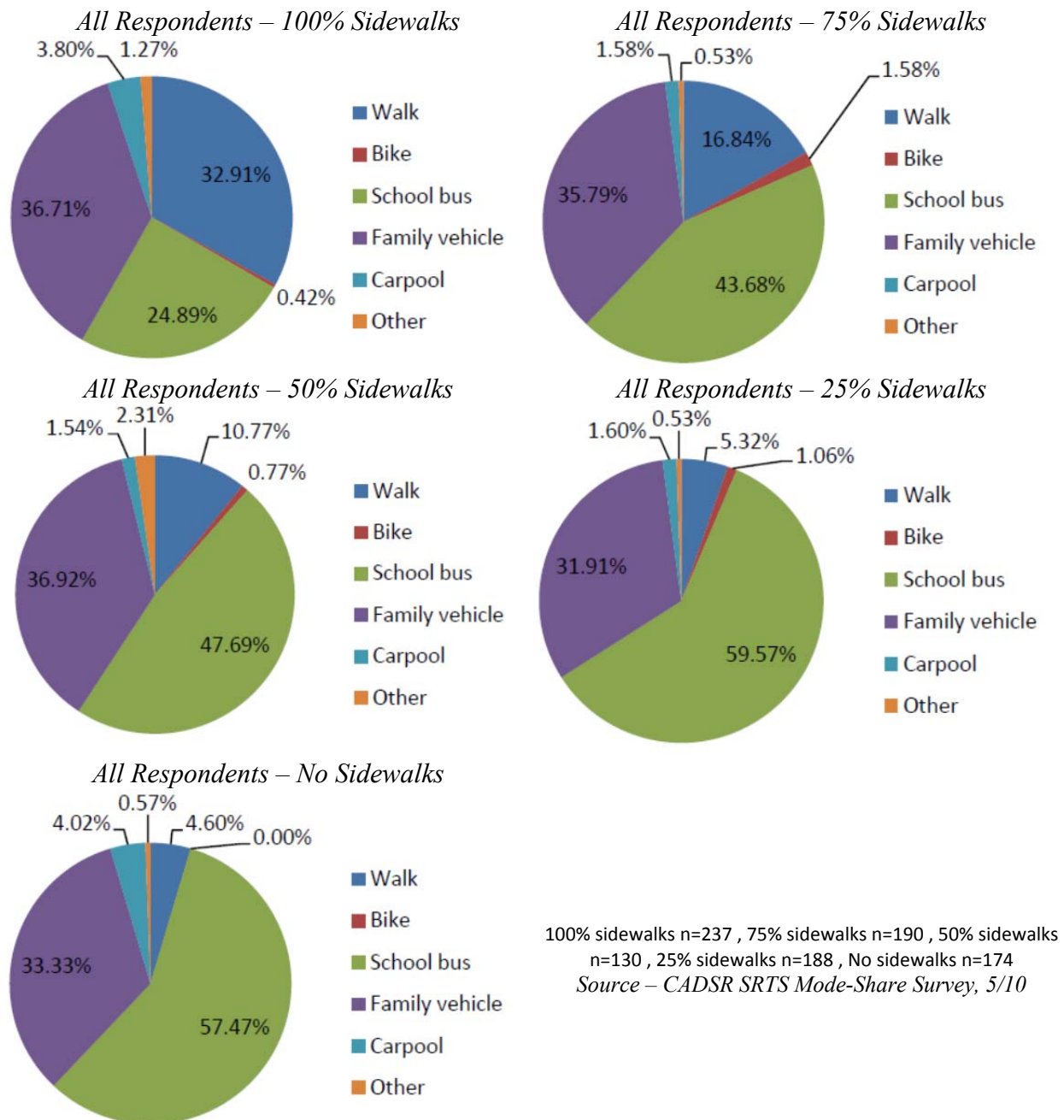
Source – CADSR SRTS Mode-Share Survey, 5/10

Busing rates continue to increase as does distance, passing 50 percent by the one-half to one-mile distance classification. Again, this was somewhat unexpected, as state code classifies this distance for walking. Family vehicle rates fluctuated somewhat, but generally accounted for roughly a third of all trips.

Crosstabs, Sidewalk Coverage, and Mode Choice

With 100-percent sidewalk coverage, the three main modes to school (bus, walk, family vehicle) are very nearly equal. Though the walking advocate may question why so much busing and driving occurs in these conditions, at the very least, full sidewalk coverage appears to allow for balance and modal choice.

Fig 2. – Crosstabs – Mode Choice by Reported Percentage of Sidewalk Coverage



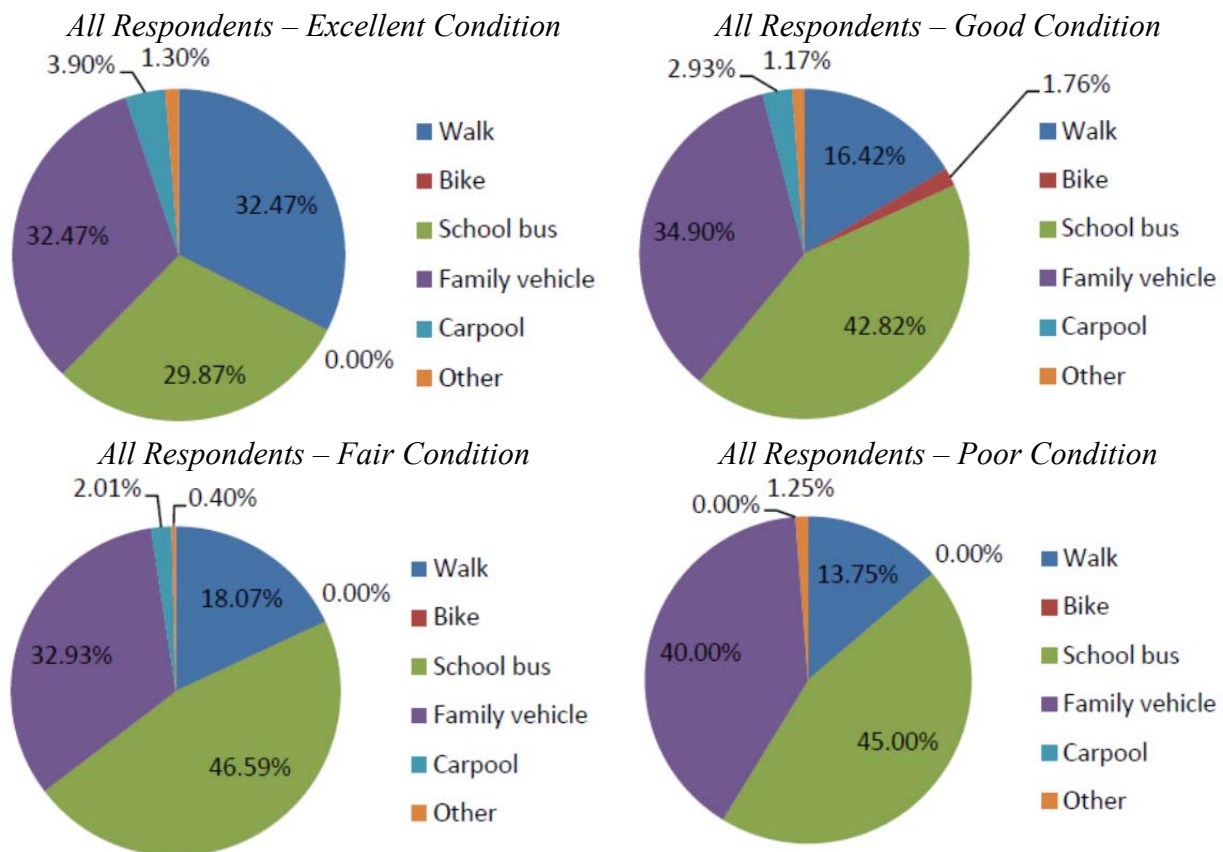
As with distance, walking rates diminish as the reported percentage of sidewalk coverage does as well. From a high of nearly one-third, the rate roughly halves (16.8%) at 75-percent sidewalk coverage. At 50-percent coverage walking rates decline to 10.8 percent and at 25-percent coverage drops to 5.3 percent. The recorded rate for children without access to any sidewalks was 4.6 percent.

Family vehicle rates are fairly constant across the range and appear to fluctuate given the busing rates. The busing rates, on the other hand, appear dramatically affected by sidewalk coverage.

With full sidewalk coverage, less than one-quarter of respondents reported using the school bus. At 75-percent coverage, the reported rate jumps to nearly 44 percent and continues to increase marginally, up to nearly 60 percent at 25-percent sidewalk coverage.

Crosstabs, Sidewalk Condition, and Mode Choice

Fig 3. – Crosstabs – Mode Choice by Reported Condition of Sidewalks



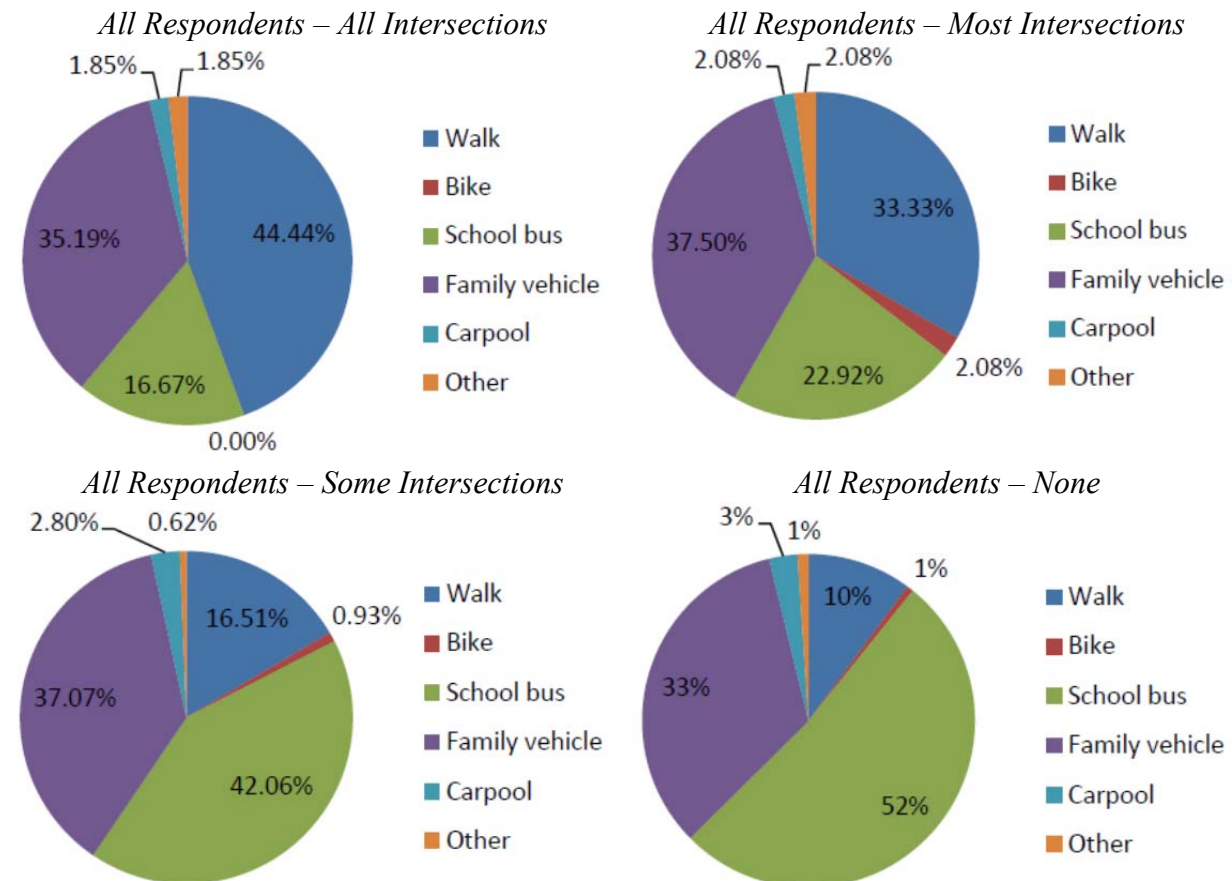
Excellent condition n=77 , Good condition n=341 , Fair condition n=249 , Poor condition n=80

Source – CADSR SRTS Mode-Share Survey, 5/10

Again, with sidewalk condition excellent, there appears to be good balance in modal choice. As was the case with distance and sidewalk availability, the best-case scenario yields favorable results, which quickly skew towards family vehicle/school bus as the walking environment worsens. From nearly a third walking with sidewalks in excellent condition, the walking rate roughly halves to 16.4 percent in the good condition classification. There does not appear to be a significant distinction between good and fair condition, but there is a drop to just below 14 percent when sidewalk condition is rated as poor. Family vehicle rates are fairly constant as long as the sidewalks are considered in better than poor condition. School bus rates appear most affected, jumping nearly 13 percent from excellent to good.

Crosstabs, Presence of Crossing Guards, and Mode Choice

Fig 4. – Crosstabs – Mode Choice by Reported Presence of Crossing Guards



All intersections n=54 , Most intersections n=48 , Some intersections n=321 , None n=473

Source – CADSR SRTS Mode-Share Survey, 5/10

The presence of crossing guards at all intersections yielded the highest recorded incidence of walking of any of the measured factors. Over 44 percent of respondents indicated their child walked to school when guards were present at all intersections. Also notable, a third of respondents indicated walking as a mode choice when guards were present at most intersections. Though it is clearly a decrease, it is a much less pronounced decline between the ideal condition and the favorable condition than was seen with distance, sidewalk availability, and sidewalk condition. The walking rate does roughly halve between the responses most and some intersections, respectively, and declines to only ten percent when no crossing guards are present. Family-vehicle rates remain fairly constant. However, busing rates appear to be very sensitive to the presence of crossing guards. With guards at all intersections, fewer than 17 percent of respondents reported their child rode the bus. This is the smallest percentage seen for any of the factors, followed by distance at 22.4 percent. Though impossible to know for certain, it may be that the presence of crossing guards, though important in its own right, also indicates the

presence of a school having a plan or strategy in place to facilitate walking. If this were proven to be the case, it would help to explain why fewer students in the walk-zone were being bused—likely because the school or district made a conscious decision not to bus most of the served students.

Conclusions

Definitively ranking the importance of the studied factors is difficult, as they most likely overlap in many cases. For example, a student living close to school is less likely to encounter huge gaps in the sidewalk infrastructure than another student living three-quarters of a mile away. Similarly, the student who lives closer is more likely, where crossing guards are present at all, to encounter fewer unguarded intersections than another living farther away.

Still, the data reveal some trends. First, under ideal conditions, walking is a very viable mode choice for any of the factors studied. In every instance (sidewalks everywhere, sidewalks in excellent condition, short distances to school, crossing guards at all intersections) walking to school accounted for at least a third of all trips. Secondly, walking rates appeared to fall sharply when conditions were less than ideal. Regarding sidewalk condition and availability, walking rates roughly halved between the ideal condition and the favorable one (100% sidewalk coverage to 75% and sidewalks in excellent as opposed to good condition). Between under one-quarter mile and one-quarter to one half mile, walking rates fell by roughly a third. Also, between crossing guards at all intersections and crossing guards at none, reported rates of walking fell to roughly a quarter of the rate for guards at all.

The data suggest that crossing guards and distance are the two most important factors. Still, these conclusions cannot be taken in isolation. Certainly proximity and the presence of crossing guard likely denote the availability of sidewalks in a least adequate condition. The walking rate for areas with crossing guards at all intersections was 44.4 percent; the walking rate for areas with no crossing guards was 10 percent, a difference of 34.4 percentage points.

The walking rate for students within one-quarter mile was 37.8 percent; beyond one-half mile it fell to 10.4 percent, a difference of 27.4 percentage points. Beyond a mile (2.9%) the difference is 34.9 percentage points, but this is beyond the walk zone for most elementary and middle-school aged children.

The presence of sidewalks saw a 28.3 percentage point differential between sidewalks everywhere and none at all. The condition of sidewalks declined 18.7 percentage points between excellent and poor condition. Taken together, the analyses suggest the condition of sidewalks, while important, was not of paramount concern. Crossing guards appear to heavily affect rates of walking. Moreover, the results show that the crossing-guard factor is the only possible

determinant studied that can still yield a walking rate of more than one-third under less than perfect conditions (guards at most intersections as opposed to all). Distance and the availability of sidewalks essentially tied for a close second.

All in all, the analysis suggests that parents are not unwilling to allow their children to walk to school under ideal circumstances. However, their willingness quickly dissipates as they face the prospect of having their child face any characteristics they deem unsafe. The following agglomeration of survey comments (question 15) prove illustrative.

SURVEY COMMENTS

Question 15 of the survey asked parents/guardians for any additional comments they may have. All told, some 369 took the opportunity. Their comments covered nearly every conceivable aspect of school transportation in Delaware. Because of a confidentiality agreement, their verbatim comments cannot be published. Many contain personal or locational information. However, they can be reported in aggregate.

To do so, all comments were read and classified as to subject. Many had more than one comment. Themes quickly became apparent, which were then tallied. For example, some of the most prevalent themes were “Sidewalk,” “Not Applicable,” “Crossing Guard,” “Sexual Offender,” “Crime,” “Traffic,” and “Distance.”

A comment may have read something like this: “I would never let my child walk to school with all the sexual predators in the neighborhood and way too many cars. It’s just not safe.” This is a fictional comment, but very representative of a number of real ones. In any event, this comment would have been tagged with “Sex Offender” and “Traffic.”

Another hypothetical example: “I wish they would have police officers ride on the buses with the students, and buses should have seat belts to be safer. Those drivers have enough to worry about.” This comment would be tagged “Not Applicable,” not because it is necessarily an invalid observation, but simply because it does not speak to mode choice. The vast majority of not-applicable comments were, generally speaking, specific complaints as to why the respondent’s child either a) has to walk to school or b) has to endure the bus ride. The remainder offered other political priorities some respondents felt were more important to address with what they perceived to be government money. Regardless of the University’s opinion or classification of respondents’ comments, all were forwarded to DelDOT for its consideration.

All told, 30 themes emerged, many related to one another. The comments tended to give reasons why a particular parent did not allow his/her child to walk and enumerate one or more reasons. A smaller portion explained why the respondent’s child was allowed to or encouraged to walk, similarly listing reasons why. Others were more generalized, sweeping statements, detailing why the respondent did or did not feel walking and/or biking was a viable or prudent option.

Comment Themes

Sidewalk Availability

This theme was mentioned 59 times. While most comments with this tag specifically mentioned sidewalks, some others—making note of there being no good route and it being too dangerous to walk in the street—were also included.

Not Applicable

Fifty-nine comments fell into this classification, as explained above. No comments that made any mention of any factor relating to mode choice to school were given this classification. Only those that made wholly unrelated statements were classified as not applicable. For example, a hypothetical comment saying, “This country has enough problems that we don’t need to be worried about this. School bus drivers should be paid more and drug tested, and there aren’t any sidewalks anyways,” would still be tagged as sidewalk, not as not applicable.

Crossing Guards

Respondents noted crossing guards as an important factor 51 times. The majority of these were to point out that the respondent’s child would be allowed to walk if there were more crossing guards, or to mention that their presence allows the child to walk safely. A smaller percentage complained that their area’s crossing guards started too late, finished too early, were inattentive, or were more preoccupied with directing traffic than watching for students. Two or three comments noting how a police officer does or used to watch a certain intersection were also included in this category.

Sex Offender/Sexual Predator

Mentioned 39 times, this was one of the few themes that tended to be the respondent’s main concern, whereas most others were mentioned in series. A number of parents simply felt that times had changed, were aware of locally registered sex offenders, and felt it unwise to allow their child to walk to school for fear they would be the victim of a sex crime.

Crime

Crime was mentioned 38 times, nearly always as a reason for not allowing a child to walk. Parents often cited concerns over abduction, or violence directed specifically at children. If no specific mention of sexual abuse/predation was made, it was classified simply as crime. A minority of these comments made reference to bad neighborhoods or unsafe areas through which students would have to pass while walking to school. Concern over high-crime areas was also classified as crime.

Traffic

Another key concern of respondents was the amount of traffic near the school or along their child’s route. Mentioned 35 times, traffic tended to be mentioned in a laundry list of concerns, such as, “There are no crossing guards, and there is too much traffic for a six-year-old.” This designation was given when responses indicated they were concerned with the volume of traffic. Those concerned with speed, enforcement, or the nature of traffic behavior were classified under traffic speed (to follow).

Distance

Distance was a somewhat ambiguous classification to apply uniformly. It was noted 32 times, but in a variety of contexts. Several respondents noted that their child's school was many miles away. More often, respondents commented that their child's school was less than a mile away, but that they felt that it was still too far, usually given a number of other factors. Others stated their child lived close enough to walk and that they would like him/her to be able to, but there were no sidewalks, or a busy highway to cross, or a nearby sex offender.

Child's Age

This concern was noted 27 times, often along with other concerns, but sometimes alone. Some respondents flatly argued that children under a certain age should never be left unsupervised. Others anticipated their child maturing to the point where they would be comfortable with them walking to school in the future. Several proudly stated that their grade-school children were able to walk to school with no issues.

Danger

Danger was another comment that tended to stand alone and was mentioned 24 times. This classification was given to any comment where the respondent noted a lack of safety or simply stated that walking was too dangerous, but failed to articulate what they felt the source of the lack of safety or danger was.

Speed of Traffic

This concern was noted 23 times. Though not excluding the volume of traffic, this classification was given to comments that specifically made mention of poor speed enforcement, walking routes (or lack thereof) along highways with a higher travel speed than local roads, or concerns over inexperienced/irresponsible (typically high school student) drivers operating in the area of the elementary school during student intake/dismissal.

Adult Supervision/Presence

This concern was mentioned 22 times in a variety of contexts. Most often, the respondent indicated he/she felt that children should be supervised by an adult. Some of these comments alluded to crossing guards or police officers but did not specifically mention them. Others noted walking with their child or only allowing their child to walk with another student and his/her parent. One mention was made to a walking school bus.

Highway

Highways were mentioned 20 times, almost always as a reason the respondent's child was not allowed to walk to school. The majority of cases made reference to a major highway the student would have to cross to get to school. A few others discussed their community's layout (typically a community with a state or federal highway as its main street or bisecting it) and noted that their

student would have to walk along these roads. A lack of sidewalks, crossing guards, narrow shoulders, and speed of traffic were typical accompanying concerns.

Weather

Weather was mentioned 16 times, always as a reason the respondent's child did not walk, or why the parent wished they didn't have to. Heat and rain were mentioned, but snow was the main concern, both for its effect on the child and in relation to traffic safety. This concern somewhat dovetailed with sidewalk condition/maintenance (to follow).

Other Students

The presence or absence of other students walking was mentioned 16 times. Akin to the adult supervision or crossing-guard concerns, these respondents were most concerned with children walking alone. The general feeling was that groups are better. Some parents indicated they allow their child to walk when others are doing the same. A few others lamented that they lived on the periphery of the walking range and that their child had to walk alone. A number cited what they felt were inequities in the busing-fee system employed in some parts of the state and felt their child suffered social isolation due to their inability to afford the fee.

School Choice

School choice was always given as a reason the child does not walk/bike, almost always due to the distance of the school into the family's chosen school. Though almost all respondents in this classification made specific mention of school choice, students who traveled to programs for gifted students or the children of teachers that attended their parent's school were also included. One respondent indicated their child attended private school.

Student Disability

This concern was noted 12 times as a reason not to walk. In roughly half of the cases, the respondent indicated his/her child's condition was serious enough to warrant a bus waiver. The remainder indicated they drove their children, typically describing their child as having ADD, ADHD, or simply being too "hyper" and unpredictable to be allowed to walk or cycle.

Bike Lanes

Nine respondents' comments noted a lack of bicycle lanes or inadequate shoulders as reasons their child could not bicycle to school.

Dangerous Intersections

Eight respondents' comments noted the presence of one or more intersections they deemed to be too hazardous to allow their children to cross on their own.

Sidewalk Condition

Eight comments indicated that the sidewalks were overgrown with weeds or bushes or were excessively cracked and uneven. Others commented that after snow events, they were impassable.

Bullying

Eight respondents commented they feared their child was/would be bullied if allowed to walk to school.

Other Concerns

Five respondents either encouraged or wished their children could walk for the physical activity benefits. Four felt walking was important as it encouraged their children to be responsible. Four noted that their child was bused or driven because his/her school actively discouraged walking or cycling to school. Four responses were unintelligible. Two responses indicated that their child's mode choice to school was due to family and/or work schedule issues. Two felt walking was the most convenient mode. One respondent noted that the school's layout (which only provided walking paths and access to the building via a busy street) precluded safe walking. One respondent indicated his/her child was driven to school because he/she did not like to walk. Another respondent simply stated they did not like students walking. Lastly, one expressed confidence his/her child would never play hookie.

Comment Conclusions

Out of 369 comments there were 482 relevant keywords/themes (excluding those not-applicable or unintelligible). While a statistical analysis is infeasible as the comments were disaggregated from the survey results and individual forms, it is still possible to take a broad view of the themes, which have been roughly broken down into 1) Physical Concerns, 2) Social Concerns, 3) Miscellaneous/Uncontrollable, 4) Social Benefits, and 5) Programmatic.

Physical Concerns

Sidewalk Availability, Crossing Guards, Traffic, Distance, Speed of Traffic, Highway, Bike Lanes, Dangerous Intersections, and Sidewalk Condition/Maintenance

These factors comprise 51 percent of the valid concerns noted in question 15.

Social Concerns

Sex Offender/Predator, Crime, Child's Age, Danger, Adult Supervision/Presence, Other Students, Bullying, and Family/Work Issues

These factors comprise 36.5 percent of the valid concerns noted in question 15.

Social Benefits

Exercise/Physical Activity, Responsibility, Convenience

These factors comprise two percent of the valid concerns noted in question 15.

Miscellaneous/Uncontrollable

Weather, School Choice, Student Disability, Student Doesn't Like, I Don't Like, No Hookie

These factors comprise 9.3 percent of valid concerns noted in question 15.

Programmatic

School Discourages Walking/Cycling, School Infrastructure Poorly Designed

These factors comprise one percent of the valid concerns noted in question 15.

Though much was made regarding social concerns, the distillation of respondents' comments seem to make clear that they are very, likely more, concerned with the physical threats and barriers their children may face walking or bicycling to school. A slim majority cited these physical factors in the comment section.

This is not to at all discount respondents' social concerns, particularly as they relate to all types of crime, danger, adult supervision, other students, and bullying. Well over a third of respondents indicated these were important factors. It's also important to note that the distinction between the two categories is not hard and fast. For example, crossing guards could be looked upon as adult supervision or as mitigation for physical shortcomings in the walking environment.

The response to the likely social benefits of walking was somewhat underwhelming, and it is hard to see how any SRTS-style intervention could effectively tackle the miscellaneous concerns. Even so, what is becoming clear from the comment analysis, crosstabs, and baseline data is that, under favorable circumstances, many respondents would be willing to allow their child to walk/cycle to school. Also apparent is that there is no singular solution. Pristine sidewalks and bike paths may help but will not assuage parents concerned about their young child walking through a high-crime area alone. Similarly, walking school buses or increased police patrols are unlikely to convince skeptical parents to allow their child to walk on the shoulder of a busy highway with no sidewalks.

The next section of this report details invaluable feedback the Institute for Public Administration was able to gather from in-state practitioners, planners, and stakeholders at its May 2011 Safe Routes to School Mode-Share Analysis workshop.

SRTS MODE-SHARE ANALYSIS WORKSHOP

In May of 2011, the Institute for Public Administration and DelDOT hosted a Safe Routes to School Mode-Share Analysis Workshop at the University of Delaware's Paradee Center in Dover, Del. The workshop's agenda and a list of attendees are attached in this document's appendix.

Nearly 30 district administrators, transportation supervisors, DelDOT staff, metropolitan planning organization planners, and health/walkability advocates attended. The group was given an update on the state of the SRTS program in Delaware by DelDOT's SRTS Coordinator Sarah Coakley, AICP. The group was then shown the results detailed in the previous sections of this document. Following a lively feedback/Q&A session, Lynn Widdowson (Capital School District) briefed the group on her efforts, successes, and obstacles in administering and growing a district-level Safe Routes to School initiative. The DelDOT and IPA PowerPoint presentations are available at www.ipa.udel.edu/transportation/srts. A written summary of Mrs. Widdowson's presentation (along with an abbreviated transcript of the Q&A and attendees' written comments) are also available in the appendix.

Stakeholder Feedback

The group's discussion began generally with a number of procedural, programmatic, and resource-related questions for DelDOT's SRTS Coordinator, Sarah Coakley, AICP. After briefing the group on the technical requirements and grant procedures associated with her program, she initiated the group's discussion into the wider relevance of SRTS and the survey results presented by noting that the majority of SRTS funds are utilized to retrofit the walkable infrastructure of older schools.

Following a brief explanation from IPA regarding the highlights, themes, and statistical limitations of the survey, the group busied itself trying to digest and make sense of the data presented.

Making Sense of Kent County Data

An obvious question posed to the group, and referenced a number of times in this document, is how Kent County was able to show the highest rates of walking to school despite New Castle County ranking higher in nearly all of what were thought to be key indicators. Kent only ranked higher in the distance to school indicator(see baseline data section).

DelDOT planners speculated the sociological possibility that Kent County still has a small-town feel, suggesting parents may not be as hesitant to allow their children to walk in what they perceive to be a safe area. The Dover/Kent MPO suggested Kent County's favorable land-use

and population density may account for the findings. It suggested the presence of strong, as opposed to sprawling, town centers coupled with centrally located schools may play a role. Capital School District representatives agreed, again noting a sense of community possibly unique to Kent County and referenced a school budget referendum where citizens without school-aged children (who often oppose increases in taxes for schools) supported the budget. DelDOT also suggested a demographic component, noting that New Castle and Sussex Counties have a higher percentage of empty-nesters and/or retirees that may oppose, or have opposed, increased spending on schools and walking infrastructure. Seaford School District posited that the rural makeup of Kent and Sussex, as opposed to New Castle County, could account for the differential. Delaware Greenways insightfully commented that New Castle County's higher prevalence of private and charter schools may well account for at least part of the difference seen in reported rates of walking. Kent-specific variables aside, the group focused mainly on Kent County's favorable pattern of land use and development, which became a topic of discussion unto itself.

Land Use and Development

While participants were very interested in sociological reasons for walking or not walking, in the long view, most felt that thoughtful land use, future growth, and school design and siting were important concerns. Turning to a statewide perspective, the group quickly identified the State Strategies for Policies and Spending, produced by the Delaware Office of State Planning Coordination. The strategies can be viewed online at stateplanning.delaware.gov/strategies/.

DelDOT explained that the strategies are an agglomeration of all the approved land-use and infrastructure plans in the state that also take into account a wide variety of social and demographic factors to determine where state-funded investments can most efficiently be made. Of course, this includes schools. The DelDOT planner explained that the strategies do encourage schools to be built in or near existing or planned neighborhoods and that the development community also favors such an approach as it makes new home construction more marketable. However, he also noted that sometimes said initiatives are not welcome by existing or potential property owners who do not want kids on their sidewalks or in front of their homes.

A Delaware Department of Education representative added that the DOE does not approve new school construction plans unless the schools are appropriately located and are planned with pedestrian/bicycle connectivity in mind. While by no means a *fait accompli*, the group seemed satisfied the state was moving in the right direction, particularly when reminded by DelDOT of the Delaware Senate's Concurrent Resolution #13 regarding Complete Streets and a number of other similar initiatives in recent years. The issue of private schools' conformance with the State Strategies for Policies and Spending was briefly discussed. DelDOT and DOE representatives informed the group that private schools are not as heavily regulated, with regard to location, but can still make use of SRTS funds.

School's Position on Walking/Cycling

Another noteworthy takeaway from the survey that the group discussed was the miniscule proportion of respondents who felt that their child's school encouraged its students to walk or bike. The group was quite frank in this regard. While they acknowledged that most schools and districts had a nominal program to encourage walking in place, few were full-throated, prominent campaigns. A DOE representative posited that the survey results may, in fact, be skewed simply by parents' perceptions or general apathy toward the subject. Others, however, offered that the somewhat muted outreach/promotion of walking to school was, at its heart, a liability issue. Mrs. Coakley explained that DelDOT's SRTS program does not conduct a great deal of statewide publicity or outreach, instead working at the school level with partners to bolster awareness.

Crossing Guards and Highways

An issue brought up by a representative of Colonial School District, and quickly shared by the group, was the prevalence and impassability of any number of highways in and around schools and their adjoining neighborhoods. This prompted an around-the-table accounting of having too few crossing guards or not being able to afford more, as at least three stakeholder members shared similar stories. A DOE representative suggested a potentially useful new area of research—a comprehensive review of intersections near schools with crossing guards or other traffic-control devices and those without in order to identify and prioritize areas for improvement. A DOE representative recounted an attempt at Fairview school to implement a walking school bus program (akin to a crossing guard who walks with a group of students to school) but noted that there were not enough parent volunteers willing to commit to the program. Another DOE representative who suggested the hiring of more crossing guards as a stop-gap or momentum-building solution was informed that SRTS funds cannot be used to fund crossing guards. With the onus clearly falling back to community members whom the group felt to be largely apathetic, the discussion turned to parental attitudes and the changing values of contemporary American society.

Are Sidewalks and Bike Lanes the Answer?

The discussion's transition to parental attitudes and changing societal norms was sparked by the question of whether or not a highly favorable walking environment, by itself, stood to improve rates of walking and bicycling. Aside from the possible caveat of ubiquitous crossing guards, the group's consensus was definitively no. Though the group conceded that such amenities as sidewalks and bike lanes could not hurt, they in no way indicated they felt these deficiencies were the root cause. The group did not discuss bike lanes at length, mainly pointing out that getting parents comfortable with their children walking was clearly the first hurdle. A representative of Colonial School District provided the group with an example of why walkability was not a key factor. Discussing an unnamed school in the district that is located

between two large neighborhoods, he described a climate in which almost none of the area parents allowed their child to walk.

Parental Concern and Societal Norms

The group vigorously discussed their views that changing perceptions of fear, affluence, responsibility, and “normal” were key factors in the pronounced modal shift seen in decades past. A DOE representative began the exchange by noting that he did not feel sidewalks alone would bring drastic results. His conclusion was that parents perceived walking as dangerous and that this fear would have to be diminished before great gains could be expected. The comment about an indistinct but “perceived” danger was shown as somewhat the case in the previous section of this document, in which a significant number of written comments referenced an unarticulated danger or lack of safety the respondents associated with walking.

A DelDOT representative added that, for parents, the definition of safety has changed and is no longer nearly as much about bumps and scrapes from a bike accident, or the eventuality of being struck by a car. She and the group agreed that parents now feel an overriding obligation to secure their children from criminals, particularly sexual predators. A Seaford School District representative offered that she had received numerous inquiries and comments from parents regarding registered sex offenders in their neighborhood and that it was a key reason they would not allow their children to walk. A representative from Lake Forest School District agreed and offered a similar story. A DelDOT representative added his observation that the new norm of the two-income family may have made parents more hesitant to allow their children to walk because if there is a problem, neither would be close enough to be in a position to offer immediate help. The issue of two-income households was also discussed in terms of daycare and fewer students walking because they wouldn’t be allowed to walk home and spend hours alone.

Having discussed parental fear, the group moved on to what it described as parental apathy, lack of involvement, preference for convenience and predictability, and disinclination to allow their child to be seen as “one of those kids who has to walk.” A Capital School District representative offered weather conditions as a possible factor. While the group did not disagree, it clearly laid the responsibility at the feet of parents and families. A DOE representative volunteered that driving children to school offered parents greater convenience and peace of mind. A Seaford School District representative added she felt it was partially a socio-economic/status issue and that students felt it un-cool to walk. This sentiment was seconded by a DOE rep, commenting that, as a nation, America has attained a sufficient level of wealth such that most will seek alternatives to cycling or walking. The group also discussed the notion that Americans have become somewhat lethargic, risk averse, and disinclined to tolerate even minimal discomfort. Anecdotally, a Dover/Kent MPO representative referenced an exchange she had once had with a mother who drove her child one-half block to school because she felt it was too cold.

Searching for political/societal solutions in the near term, the group was somewhat skeptical. Several noted that the parents who had the free time to volunteer and be involved in the community and school were typically not those without cars. A DelDOT representative aptly concluded the discussion by exhorting the group to envision solutions for using a SRTS program in a way that would involve all children, particularly those with lesser means.

OPPORTUNITIES FOR FURTHER RESEARCH

As intended, this research project has provided DelDOT with baseline rates for modal choice to and from school statewide and for each of the three counties. Unfortunately, the initial hope that concrete factors determining rates of walking and cycling could be quantified has proven illusory.

In dealing with such a complex and emotionally charged issue, it may be the case that a broad statistical analysis is of limited utility. Certainly, this exercise has uncovered apparent, but difficult to pin down, cultural, physical, demographic, and programmatic differences among the counties, which may well affect modal choice.

Moreover, the apparent divide (apparent in every phase of the study) between the provision of physical infrastructure and connectivity and the less-clear-cut obstacle of how to address or mitigate parental fear or disdain of healthy modal choices is clearly indicated. While the standard SRTS protocol calls for student polling regarding mode choice at participating schools, it lacks an insight into causality (almost always a product of parental decision-making). A qualitative undertaking to get to the root of parental concerns (focus groups or moderated group discussion) may be in order.

Of course, Delaware has been involved in walking/cycling advocacy for many years, and many remarkable successes have been documented. Moreover, in many cases modal-split data was recorded pre- and post-intervention. Without reinventing the wheel, a series of in-depth case studies on successful programs in Delaware, controlling for demographic, socioeconomic, private/charter school enrollment, and school choice could also be illuminating.

Either or both approaches could be used to outline a “Minimum Level of Service” for SRTS, or school construction in the state in general. A study could endeavor to detail how many crossing guards, how wide of a sidewalk, what barriers are too hazardous, and what programs have proven useful. The design of elementary and middle schools could also be a fruitful area of research as some preliminary data, comments, and observations suggest school design often focuses on security to the exclusion of access and walkability.

Also, as it has been largely untried, the likely outcomes/effect of a state-level marketing campaign/walkability initiative aimed at reluctant parents could be studied using successful campaigns in other states as a template. Lastly, an analysis of school district feeder patterns could be looked into, if only to insure students are being assigned to the closest school.

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APPENDICES

Appendix A – Delaware Safe Routes to School 2010 – How Does Your Child Get to School – Survey Instrument

Appendix B – May 19, 2011, Safe Routes to School/"Mode-Share Analysis Workshop Agenda

Appendix C – Workshop Attendees

Discussion Notes

Notes from Presentation by Lynn Widdowson, "SRTS on a District-Level"

Written Comments from Attendees

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DELAWARE SAFE ROUTES TO SCHOOL 2010

How does your child get to school?

Commissioned by the Delaware Department of Transportation

INSTRUCTIONS

Mail your completed form in the attached prepaid envelope to:

University of Delaware
CADSR - Graham Hall
Newark, DE 19716

- Use either a pen or pencil when completing the questionnaire.
- If you have any questions, contact the **Center for Applied Demography & Survey Research** at the **University of Delaware** by calling **302-831-3320**.

PURPOSE – Results from the survey will be used to make it safe, convenient, and fun for children, within an appropriate distance, to walk or bike to school.

PARTICIPATION – Your participation is voluntary. However, your responses are important in order to collect valid data about how children in Delaware get to and from school.

SELECTED CHILD: please answer the questions below for a child in your household who is in grades 1st-8th and who has the NEXT birthday.

1. In what grade is the selected child (1st-8th)?

Indicate grade the child is in.

2. Is the selected child male or female?

- 1 ☐ Male
2 ☐ Female

3. What is the name of the school the selected child attends?

Name of school

4. On most days, how does the selected child get TO school?

- 1 ☐ Walk
2 ☐ Bike
3 ☐ School bus
4 ☐ Family vehicle (only with children from your family)
5 ☐ Carpool (riding with children from other families)
6 ☐ Public transit
7 ☐ Other (specify):

5. On most days, how does the selected child get home FROM school?

- 1 ☐ Walk
2 ☐ Bike
3 ☐ School bus
4 ☐ Family vehicle (only with children from your family)
5 ☐ Carpool (riding with children from other families)
6 ☐ Public transit
7 ☐ Other (specify):

6. Approximately how far is the selected child's school from your home?

- 1 ☐ Less than a ¼ mile
2 ☐ ¼ mile up to ½ mile
3 ☐ ½ mile up to 1 mile
4 ☐ 1 mile up to 2 miles
5 ☐ more than 2 miles (GO TO QUESTION 13)
6 ☐ Don't know/not sure

7. What percentage of the route from your home to the selected child's school has sidewalks?

- 1 ☐ 100%
2 ☐ 75%
3 ☐ 50%
4 ☐ 25%
5 ☐ None
6 ☐ Don't know

8. In what condition would you say that the existing sidewalks are?

- 1 ☐ Excellent
2 ☐ Good
3 ☐ Fair
4 ☐ Poor
5 ☐ Don't know
6 ☐ No sidewalks

9. Are there crossing guards between your home and the selected child's school?

- 1 ☐ All Intersections
2 ☐ Most Intersections
3 ☐ Some Intersections
4 ☐ None
5 ☐ Don't know

10. Do you agree or disagree that your child is/would be safe walking or bicycling to school?

- 1 ☐ Strongly Agree
2 ☐ Somewhat Agree
3 ☐ Somewhat Disagree
4 ☐ Strongly Disagree
5 ☐ Don't know

11. In your opinion, how much does the selected child's school encourage or discourage walking and biking to/from school?

- 1 ☐ Strongly Encourage
2 ☐ Encourage
3 ☐ Neither Encourage nor Discourage
4 ☐ Discourage
5 ☐ Strongly Discourage
6 ☐ Don't know

12. How important are the following criteria for allowing or not allowing the selected child to walk or ride a bicycle to school? (please check only one box for each row)

	Most Important	Somewhat Important	Neutral	Not Very Important	Not at all Important
1 Distance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Convenience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Time it takes to get to school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Exercise/health benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Availability of Sidewalks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Condition of Sidewalks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Availability of Bike Lanes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Speed of traffic along route	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Amount of traffic along route	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Crossing guards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 Safety of intersections/crossings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 Violence or crime	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 Encourages responsibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 Weather or climate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15 Other or more students walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 Afraid child will 'play hookie'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. What type of housing do you live in? (for classification purposes only)

- 1 ☐ Apartment building
 2 ☐ Duplex, Townhouse, or Condominium
 3 ☐ Mobile home or Trailer
 4 ☐ Single family house detached from any other house
 5 ☐ Other (specify): _____

14. What is your annual household income? (for classification purposes only)

- 1 ☐ under \$20,000
 2 ☐ \$20,000 to less than \$35,000
 3 ☐ \$35,000 to less than \$50,000
 4 ☐ \$50,000 to less than \$75,000
 5 ☐ \$75,000 or more

15. If you have any comments, please feel free to include them in the space provided below.

Thank you for completing the Delaware Safe Routes to School Survey.

Return the completed form to:

University of Delaware, CADSR, Graham Hall, Newark, DE 19716

APPENDIX B

Safe Routes to School – Mode/Share Analysis Project Workshop Agenda

Thursday, May 19, 2011

9 a.m. – Noon

University of Delaware Paradee Center

Dover, Del.

9:00 a.m. – 9:30 a.m.	Registration/Sign-In Continental Breakfast	
9:30 a.m. – 9:40 a.m.	Introductions Overview of Workshop Review Agenda	
9:40 a.m. – 10:10 a.m.	Safe Routes to School Program Overview and Update	Sarah Coakley, AICP DelDOT SRTS Coordinator
10:10 a.m. – 10:50 a.m.	Mode Share Analysis How Do Delaware's Students Get to School?	B.J. DeCoursey, AICP IPA, University of Delaware
10:50 a.m. – 11:00 a.m.	Break	
11:00 a.m. – 11:40 a.m.	Discussion Group Feedback – What Do the Numbers Tell Us? Strategies for the Future?	Group
11:40 a.m. – Noon	SRTS on a District Level Experiences from the Field	Lynn Widdowson Supervisor, Student Support Services, Capital School District
Adjourn		

APPENDIX C

Workshop Attendees

Meeting Date: May 19, 2011 – 9:00 am – 12:00 noon

Place/Room: Paradee Center, University of Delaware, Dover, Delaware

Attendees:

Hud Athey	Milford School District
Marco Boyce	DelDOT Planning
Sarah Coakley	DelDOT Planning
Lee Dean	Delaware Department of Education
William DeCoursey	IPA, University of Delaware
Mark Eastburn	DelDOT Planning
Karen Gilbert	Colonial School District
Donald Hartwig	Colonial School District
Kate Layton	Dover/Kent County MPO
John Marinucci	Delaware Department of Education
Barbara Meredith	Brandywine School District
Susan Messick	Seaford School District
Vanessa Moore	Cape Henlopen School District
Randi Novakoff	WILMAPCO
Kim O'Malley	Delaware State Fire School
Jamie Powers	Nemours Health & Prevention
Mollie Raley	DelDOT Transportation Solutions
Ralph Reeb	DelDOT Planning
John Shwed	Laurel School District
Richard Sinegar	DelDOT Planning
Andrea Trabelsi	Delaware Greenways
Mike Tyndell	Lake Forest School District
Arthur Wicks	IPA, University of Delaware
Lynn Widdowson	Capital School District
Juanita Wieczoreck	Dover/Kent County MPO

Discussion Notes

Safe Routes to School Program (SRTS) Overview and Update – Sarah Coakley

John Marinucci – Delaware Department of Education

- Can SRTS funding be applied to a new school construction project if pedestrian/bicycling facilities are integrated into design

Sarah Coakley – DelDOT SRTS Coordinator

- SRTS funding cannot be applied to new school construction projects
- Schools are required to include pedestrian/bicycling facilities in new school designs
- After construction is completed, school can apply for SRTS funding to finish connections between school property and surrounding neighborhoods

John Shwed – Laurel School District

- Is SRTS funding predominantly used to improve connections to neighborhoods

Sarah Coakley – DelDOT SRTS Coordinator

- A lot of funding is used to improve pedestrian/bicycling facilities at older schools that do not have appropriate facilities

John Marinucci – Delaware Department of Education

- Can SRTS funding be applied to school properties that do not have ADA compliant sidewalks

Sarah Coakley – DelDOT SRTS Coordinator

- Yes

John Shwed – Laurel School District

- Who can apply for SRTS funds

Sarah Coakley – DelDOT SRTS Coordinator

- Many entities can apply for SRTS funding including municipalities and school districts

Kate Layton – Dover/Kent County MPO

- What or where are the biggest gaps or needs that SRTS have identified

Sarah Coakley – DelDOT SRTS Coordinator

- Older schools need the most work to retrofit
- Older schools tend to be in more urban areas: more expensive and challenging to retrofit (less Right-of-Way, greater population density, etc.)

Mollie Raley – DelDOT Transportation Solutions

- What is the prioritization process for administering SRTS funding

Sarah Coakley – DelDOT SRTS Coordinator

- SRTS funding is distributed on a first come, first serve basis
- Each school is allowed one project

John Marinucci – Delaware Department of Education

- If a school needs \$250,000 in SRTS repairs/construction, can the school apply for \$150,000 in Year 1 and apply for the remaining funds in Year 2 or Year 3

Sarah Coakley – DelDOT SRTS Coordinator

- School could reapply for funding, but so far there has only been enough funding for one project per school
- Good to reapply so that we are aware of the additional need
- There are other funding opportunities available to be used in tandem with SRTS funding. For example, Transportation Enhancement funds.

Mode-Share Analysis – B.J. DeCoursey

Jamie Powers – Nemours Health & Prevention Services

- Why are you unable to provide a grade-by-grade breakdown even though it is a question on the survey

B.J. DeCoursey – IPA, University of Delaware

- There were not enough respondents to the survey to assure statistical reliability

Juanita Wiczoreck – Dover/Kent County MPO

- Did the survey data indicate which age group of children had the most respondents

B.J. DeCoursey – IPA, University of Delaware

- Survey did not ask for age of children

Susan Messick – Seaford School District

- The difference in busing data may be due to the fact that Kent and Sussex County are much more rural than New Castle County

Mollie Raley – DelDOT Transportation Solutions

- The difference between number of children bused to school and bused from school may be due to children not going directly home after school (after school programs, sports, day care, etc.)

Donald Hartwig – Colonial School District

- One issue that affects our number of walkers is that there are schools with major highways within a 1 mile radius
- It is impossible for children to cross these roads safely

B.J. DeCoursey – IPA, University of Delaware

- Question to group: Are pristine sidewalks that important to increase walkers
- What attention is given to providing facilities for walkers with special needs

John Marinucci – Delaware Department of Education

- Do not believe that good sidewalks will vastly improve number of walkers
- It is a societal issue that prevents children from walking: perceived danger

Donald Hartwig – Colonial School District

- Walk-ability is not the main factor affecting number of walkers
- For example, a school in Colonial School District is located in the center of two large neighborhoods
- Almost no one lets their children walk to this school

Mollie Raley – DelDOT Transportation Solutions

- For parents, safety means protecting their children from criminals and sexual predators

Susan Messick – Seaford School District

- I receive lots of comments from parents concerning sexual predators living in their neighborhood
- This information stops parents from allowing their children to walk to school

John Marinucci – Delaware Department of Education

- Regarding survey information about crossing guards, shouldn't we look at the overall picture
- Need to look at number of intersections with crossing guards and number of intersections with other control devices

John Shwed – Laurel School District

- We only have crossing guards one intersection out from the school property

- Cannot afford more crossing guards

Susan Messick – Seaford School District

- The city of Seaford provides us with one crossing guard and that's it
- Concerning perceived safety, parents may have answered in a way that could enact change
- For example, may answer that neighborhood is extremely unsafe, hoping that this will result in increased safety, police patrols in the area
- Concerning encouraging students to walk: schools are afraid to do this, because if an incident happens, the school might get sued
- It's an issue of liability

John Marinucci – Delaware Department of Education

- Concerning encouraging students to walk: this survey result may be skewed by perception
- For example, plans for a new school are not approved unless located in the appropriate growth zones
- New schools are planned with connectivity in mind to encourage walking

Ralph Reeb – DelDOT Planning

- Initially, county planning identifies growth zones
- Often times, schools are built near neighborhoods and developers encourage this
- This in itself presents walk-ability issues (i.e. property owners who do not want kids on their sidewalk/property)
- Safety is a bigger issue if both parents work. Parents are afraid to allow children to walk if they will be too far away to help

B.J. DeCoursey – IPA, University of Delaware

- What percentage of SRTS funds is spent on infrastructure
- Is money spent on outreach

Sarah Coakley – DelDOT SRTS Coordinator

- Roughly 80% of funding is spent on infrastructure
- Not much state-wide outreach is done
- Conducted at the school level to inform parents/community

Barbara Meredith – Brandywine School District

- The data isn't showing an increase in family vehicle transportation to school, but is showing an increase in bus ridership

Mollie Raley – DelDOT Transportation Solutions

- Do the State Strategies for Policy and Spending apply to private schools

John Marinucci – Delaware Department of Education

- Private schools do not have to adhere to all guidelines

Mollie Raley – DelDOT Transportation Solutions

- Private schools have an impact of land-use patterns and can use SRTS funds, but do not have to adhere to these guidelines

Ralph Reeb – DelDOT Planning

- Concerning complete streets: all new streets are built as complete streets
- Senate Concurrent Resolution #13 requests that the complete streets policy be expanded to existing roads

Group Discussion

Mike Tyndell – Lake Forest School District

- The major problem with increasing walkers is parental fear

Vanessa Moore – Cape Henlopen School District

- Parents may also be worried that kids won't get to school on time if they walk

Lee Dean – Delaware Department of Education

- Driving children to school is easier and more convenient for most parents
- Easy to drop children off on way to work and not have to worry

Susan Messick – Seaford School District

- Driving children to school is a socio-economic issue
- If parents have means to drive children to school, they will do so

John Marinucci – Delaware Department of Education

- As a society, most people have enough wealth to seek transportation modes other than bicycling or walking

Susan Messick – Seaford School District

- To children, it is not “cool” to ride the bus
- Parents will drive children to school if they can

Richard Sinegar – DelDOT Planning

- Parents are not taking responsibility with this issue
- If parents are uncomfortable with kids walking to school, then they should escort children to school

Kate Layton – Dover/Kent County MPO

- Laziness is a major issue
- For example, discussion with a parent revealed that she had driven kids half a block because it was too cold outside to walk

Andrea Trabelsi – Delaware Greenways

- Should SRTS program be used as an opportunity to reach out to parents and get them more involved

Susan Messick – Seaford School District

- Parents are not involved with their children

Ralph Reeb – DelDOT Planning

- The small percentage that is actively involved with their children and their school are not necessarily those without cars. Many involved parents may be wealthy and can afford time to be involved
- The issue is how do we use program in a way that involves all children, especially those who cannot afford other modes of transportation

Mike Tyndell – Lake Forest School District

- A major issue is the lack of trust that adults have for other adults
- Fearful of predators, criminals, and other drivers
- Need to have societal shift that will diminish this fear

B.J. DeCoursey – IPA, University of Delaware

- Let's discuss the long term view of SRTS
- It's frustrating that changes can't be made instantaneously
- What incremental actions can be taken to affect change

Lee Dean – Delaware Department of Education

- At Fairview, we tried to implement a program with parent-led walking school buses
- Could not find enough parents willing to commit to the walking school bus project
- Another issue is parents who drive children to school very early on their way to work

Marco Boyce – DelDOT Planning

- From a long view perspective, we need to change land use planning to better walking/bicycling connectivity

John Marinucci – Delaware Department of Education

- This is what the Strategies for State Policies and Spending are supposed to promote
- New schools must be built in growth zones
- Increasing funding to hire more crossing guards may be a good short term solution

Sarah Coakley – DelDOT SRTS Coordinator

- SRTS funding cannot be used to fund a position

Lynn Widdowson – Capital School District

- Attendance is an issue tied to walking
- If weather is bad, attendance of walkers drops
- Schools have to use buses to pick up walkers during inclement weather

John Marinucci – Delaware Department of Education

- Discussion of his research on the effect of walk boundaries on attendance and achievement
- Did not find correlation between walk boundary distance and achievement at school
- Highest GPA associated with those who drive to school or receive a ride to school
- Second highest achieving group was bus riders
- Third highest achieve group was walkers
- Driver/Rider group had lowest attendance rate

Marco Boyce – DelDOT Planning

- Kent County still has a small town “feel” and this may explain survey trends in Kent County

Juanita Wiczoreck – Dover/Kent County MPO

- Kent County still has strong town centers
- County has centrally located schools in or near town

Lynn Widdowson – Capital School District

- Kent County still has a sense of community
- For example, during discussion of referendum there were people who do not have children in school there in support of the referendum
- “Our kids need that school”

Ralph Reeb – DelDOT Planning

- There is also the retirement factor
- New Castle and Sussex counties have large retiree populations
- Do not want to have additional their tax dollars spent on schools

John Shwed – Laurel School District

- Any initiative that adds sidewalks or improves connectivity is a good effort to pursue

Andrea Trabelsi – Delaware Greenways

- Concerning differences between survey trends in New Castle County and Kent County: New Castle County has more private and charter schools

Notes from Presentation by Lynn Widdowson – SRTS on a District Level

Lynn Widdowson, Supervisor of Student Support Services in the Capital School District, provided an overview of SRTS efforts within the Capital School District. Ms. Widdowson discussed specific projects/events and the challenges that arose in each situation. Challenges that the district has faced regarding SRTS initiatives include addressing safety concerns associated with increased walkers, connectivity issues with surrounding neighborhoods and high traffic roadways within the walk boundary. Ms. Widdowson also described several successful outcomes from SRTS efforts. For example, Capital School District initiated a Walk to School Week and used high school ROTC volunteers to escort walkers.

Juanita Wieczorek – Dover/Kent County MPO

- Did the Walk to School Week generate any permanent walking school buses

Lynn Widdowson – Capital School District

- No, but the initiative did generate additional walkers
- Outreach reminded parents/grandparents of walking to school as an option for their children

Written Comments From Attendees

Workshop Attendees were asked to submit comments, concerns or inquiries in writing.

Dover/Kent County MPO

- Have to reassure parents that it's safe – crime statistics?
- Put in more crosswalks and hire more crossing guards
- Be sure all land-use jurisdictions have sidewalk policies, not just DelDOT
- Do parents drive children v. ride school bus because of how early students have to get on the bus?
- Children under 9 need supervision because they cannot judge vehicular speed

Unidentified #1

- Why aren't kids walking?
 - Fear
 - From schools on responsibility
 - Safety (drugs, predators, infrastructure)
 - Convenience (Laziness)
 - Helicopter parents
 - Money to implement infrastructure
- Suggestions
 - Showing kids and parents a route kids can take to walk or bike to/from school. Maybe use GPS or Google Maps, show where home is in relation to school and what roads they can take to get there and back efficiently and safely
 - Change rules in Safe Routes funding use to include guards

Mike Tyndell – Lake Forest School District

- Reasons students do not walk
 - Parental fears
 - Traffic
 - Sex offenders

- Bullying
- Lack of trust of others in community and on buses
- Convenience for Parents
- Gratifying Their Kids' Wants
 - Kids want to be driven to school (status), not ride bus or walk

Unidentified #2

- Parents are concerned about safety of their children – either because of “predators”, drug dealers or traffic concerns (child getting hit by a car)
- Weather conditions – parents and kids don’t want to deal with rain, puddles, snow
- Convenience for parents – easier to drive child to school then worry or take more time to walk

Susan Messick – Seaford School District

- Societal – If parents have the means, they take kids to school
- Socio-economic – status determines walkers
- Need to focus on making it safer for walkers – not increasing numbers

Vanessa Moore – Cape Henlopen School District

- Parents do not want to take the responsibility to assist
- High traffic resort area
- Subdivisions

John Shwed – Laurel School District

- Parents concerned about safety, including sexual predators
- Parental convenience because of work or day schedules
- Socio-economic reasons – people who have financial means will drive kids to school. Low economic kids will have to walk or ride bus

Unidentified #3 – DelDOT

- “Safety” is more than just transportation facilities (fear of predators)
- Improvements to existing pedestrian and bicycle infrastructure is needed to encourage program, including (A) closing sidewalk gaps, (B) crosswalks, (C) ADA compliant curb ramps, (D) signage, (E) lights, etc.
- Coordination of plans, programs and funding sources that support SRTS is essential, especially for funding.

John Marinucci – Delaware Department of Education

- Safety – all parents are concerned about child’s safety
- Socio-economic – as a society, we have sufficient “wealth” to seek more advanced modes of transportation
- Political reality – folks seek convenience and will push representation to support same

Unidentified #4

- Need to focus on building complete sidewalk networks within ½ mile of existing schools first. Then go on to other roads.
- Need schools to have bike facilities where kids can lock their bike and it is covered from the weather and protected from vandalism and thieves.

Richard Sinegar – DelDOT Planning

- Safety concerns – safety and speed on roadways
- Social cultural concerns – parents need to be involved
- Sexual predator locations – safety of children when it comes to sexual predators

Marco Boyce – DelDOT Planning

- The manner in which we've chosen to develop and settle the land since WWII is the prime reason why it's so difficult to get children to walk to school. Bigger, wider roads to facilitate movement of people to and from their increasingly remote subdivisions create barriers to walking and biking, particularly when the vehicular mode is given such high priority. Thus a change in the pattern of land development and roadway design is required in order to lessen the perception and reality of a lack of safety at intersections and along roadways.

Andrea Trabelsi – Delaware Greenways

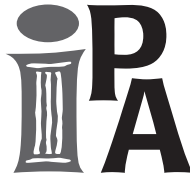
- Most important factor to encouraging walking/cycling
 - Educate the parents about walking/cycling and the importance/relationship to ensuring child's health
- Why is bicycling to school nearly non-existent in this state?
 - Lack of off-road trails, lack of parents that bicycle
- What programs/policies need to be changed or created?
 - ???
- Political realities
 - Long term, land use related
- Research that still needs to be done:
 - Look at different socio-economic segments of the community to determine what their concerns/habits are and how to best assist/encourage them to walk/bike

Barbara Meredith – Brandywine School District

- Parents perceptions and needs override the need for student exercise
 - Parental – time constraints
 - Depiction of safety concerns
- Socioeconomic variables
- Improve infrastructure to ensure safety

Lee Dean – Delaware Department of Education

- Attitudes of parents



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