Ogden USD 383 SAFE ROUTES TO SCHOOL PLAN

Phase 1 Report

Flint Hills MPO

Original Report by

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engineers · scientists · planners

BACKGROUND

This project was initiated to assist the City of Manhattan and Unified School District (USD) 383 in developing a Safe Routes to School (SRTS) Phase 1 Plan; and subsequently assisting with a Phase 2 funding submittal. As an amendment to the original project, the City of Ogden has initiated its own process of developing a SRTS plan and is subsequently pursuing funding to implement its findings.

SRTS is a federally funded program administered by the Kansas Department of Transportation (KDOT) that strives to create a safe environment for children to walk and bike to school. SRTS incorporates the "5 Es" into all activities: Education, Encouragement, Enforcement, Engineering, and Evaluation. The SRTS Plan develops a program that identifies, encourages, and educates students and parents about active transportation and the preferred routes to walk or bike to USD 383 elementary schools. The ultimate goal of the SRTS program will be to:

- Improve education initiatives to foster a safer environment for children to walk and bicycle to school;
- Encourage initiatives to change social-behavioral;
- Implement enforcement strategies to alter motorists' behaviors;
- Improve route conditions through a combination of traffic calming techniques;
- Improve sidewalk conditions, signage, and roadway striping; and
- Continuously evaluate the program and make changes as needed to make the program more effective.

PLAN OF ACTION

A SRTS project team was developed to oversee the creation of the Ogden-specific SRTS plan. The team consisted of individuals from the Flint Hills Metropolitan Planning Organization (FHMPO), Flint Hills Regional Council (FHRC), Ogden Elementary School School, and the City of Ogden. Site visits were conducted to identify the current state of the school and the surrounding area conditions. The City of Ogden will contract with a licensed Engineer/Engineering Firm to assist with the engineering component of the plan.

The FHMPO coordinated meetings with Ogden Elementary School School principal and staff and the Parent-Teacher Association (PTA). A community open house was also held for the public, allowing citizens an opportunity to ask questions and become more familiar with the program, including:

- Dismissal and arrival processes
- Crossing guard information
- Before and after school programs
- Attendance
- Busing procedures
- Expected parent participation

Recommendations were developed internally by the SRTS team. This allowed for Ogden's unique needs to be addressed, while building upon the existing City of Manhattan Phase 1 Report to allow for uniformity and compatibility across USD 383 schools. Cost estimates were developed for selected and can be found in the "Budget" section.

EDUCATION AND ENCOURAGEMENT

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The overarching goal of a SRTS education campaign is to teach bicyclists, pedestrians, and motorists about all components of transportation. This includes safety, environmental impact, and the overall effect transportation can have on health and overall well-being.

Current research on active transportation suggests that educational and encouragement campaigns are integral to the survival of a SRTS program. James Sallis, (University of California, San Diego) has intensely studied active transportation and the built environment. He suggests that physical environmental changes are not sufficient to change behavior. To change an individual's mode of travel, education and encouragement needs to occur. This is even more important where the environment is poorly designed for biking and walking to school.

Just as each school environment in USD 383 is different, so should be the approach used for each of the education and encouragement campaigns. This section will provide an overview of the educational and encouragement programs from a structural perspective for Ogden. This report is to assess Ogden Elementary School School's environment and develop a unique approach for the social, physical, and administrative environments.

Goal 1: Create a structure that provides long-term sustainability of a SRTS plan

It is important that Ogden Elementary School School students, parents, and teachers feel that the Safe Routes to School program is supported by the school board, high-level administrators, and City staff. To facilitate a top-down approach, structural changes should be made, where necessary. The first suggested recommendation is to identify a single individual with the responsibility of coordinating the Safe Routes to School program and implementing the SRTS Plan. An individual with marketing, public health, and behavioral experience is ideal. As it is unlikely that Ogden Elementary School School has the resources to hire an individual to fulfill these duties, it is recommended that several people/organizations work together. At the time of writing this report, a City of Ogden staff member is currently a full-time committee member on the USD 383 SRTS committee. This person serves as an ideal coordinator for Ogden to work with the rest of the school district. In addition, this City employee should continue to work with a member from the FHMPO and an administrator from Ogden Elementary School School to ensure all needs are met.

Following Phase I of the USD 383 SRTS planning process in Manhattan, a standing SRTS committee was created and meets monthly to facilitate SRTS on a district-wide level. This committee is tasked with implementing the SRTS Plan. It is important the SRTS Committee consists of individuals representing a variety of organizations and agencies. So far, the representatives include each elementary school in Manhattan, USD 383 administration, City of Ogden, City of Manhattan Public Works Department, Manhattan Bicycle & Pedestrian Advisory Committee, Riley County Police Department (RCPD), Riley County Health Department, FHMPO, and Kansas State University.

Representation from several different agencies will bring a variety of perspectives to the group. For example, the Riley County Police Department plays an important enforcement role in the program planning and

implementation of the Plan. RCPD has a unique perspective on travel behavior and provided valuable insight during the development of the SRTS Plan for Manhattan. However, that insight will also be valuable in the future as the program develops. Additionally, the Riley County Health Department employs a health educator who is trained in techniques used to facilitate behavior change. This knowledge and experience may be useful as the SRTS program evolves to meet the changing social, political, and administrative environments.

Data on the relationship between physical activity and educational attainment is robust and comprehensive. Research shows that children who engage in physical activity typically demonstrate higher test scores, have greater levels of concentration, and are more likely to graduate from high school. In order to make physical activity a higher priority, social and administrative environments need to be changed. To provide long-term sustainability and commitment to the SRTS program, it is important to identify someone at Ogden Elementary School School to serve as a SRTS liaison for the school and lead the program at the school-level. This liaison, whether a teacher, administrator, or parent, should have an interest in or recognize the importance of SRTS. They should have a working knowledge of what may or may not work for the school. The SRTS school liaison will serve as a member of the SRTS standing committee and provide insight into the site-specific needs of their individual school. The SRTS school liaison should find ways to educate and encourage walking and biking to school.

The SRTS Coordinator and committee should bring in outside expertise to train the committee, school staff, and volunteers to implement the program. The SRTS Coordinator should recruit presenters to teach effective SRTS strategies or new approaches to implementation. Committee members, school liaisons, and others involved in the SRTS program should take advantage of the many health and wellness conferences held in the Manhattan area each year, many of which are free or relatively inexpensive. This “train the trainer” approach allows for cost effective dissemination of information and ideas among all of those involved in implementing the SRTS program.

Goal 2: Increase the educational opportunities for students, parents, and teachers regarding walking and biking to school

For SRTS to succeed, it must be an integral part of the first few days of the school year. Large- scale implementation of the program should be conducted to teach children the best ways to walk and bike to school; to establish walking school busses and bike trains; to curb the effects of vehicular transportation on active transit; and mitigate any other concerns by parents. Before the semester begins, systems for promoting walking and biking to school—like walking school busses or bike trains— should be in place to encourage children to use an alternative mode of transportation. The success of both approaches requires a partnership between the schools and the parents to encourage children to walk or bike, but also to recruit parents to serve as volunteers to “pick-up” children on the way to school. During the first few days of school, all children should attend training, called a “bike rodeo”, organized by RCPD officers, local bike advocates, and community staff. The bike rodeo will allow kids to learn the rules of the road, safe commuting guidelines, and the benefits of active transportation. Additionally, children should be provided the resources to teach their parents about the benefits of active commuting. Meanwhile, it is necessary parents review material regarding pick-up and drop-off of children at the school. This encourages children to increase physical activity and self-efficacy, while also creating a safe environment for children walking and biking to school. Lastly, parents should be able to

give feedback and receive education on any other concerns that they might have regarding allowing their child to walk or bike to school.

During discussions among the Parent-Teacher Organizations (PTO) and school administrators, one issue highlighted was the safety concerns of the vehicular transportation. Parents should be educated on local laws (e.g. three feet passing law for bicyclists) and ways to be safe around the schools. The SRTS Coordinator will develop material (print, social media, video, etc.) that educates motorists on appropriate motor vehicle use near children.

Additionally, the SRTS Committee should work with USD 383 to develop a curriculum that is in line with the SRTS program. The Bike Safety & Awareness Program (BSAP) being considered by USD 383 is a perfect example of this. This program teaches fifth and sixth graders how to ride a bicycle safely and confidently; the "rules of the road" as they relate to sharing a road with motor vehicles; traffic sign identification; and intersection navigation. The lasting impact of the program will not only educate the students as they ride their bikes as minors, but also when they choose to drive and how they share the road with the bicyclists in the future. In addition, the program will inform students of local and neighborhood trail and exercise options, increasing both student and parental understanding of SRTS options.

Goal 3: Encourage children to walk and bike to school

Reward programs are often cited as one of the reasons that individuals begin to change physical activity behaviors. Initiation of physical activity is well studied and research shows that individuals, especially children, engage in a behavior that is positively reinforced. The SRTS Coordinator could develop a "Mileage Club," "Walk Off", or other program that provides reinforcement by creating a positive social environment that facilitates that behavior. Additionally, awards could be given to individuals and/or groups in various categories, to be defined by the organizers.

Organizers could reinforce the beginning of the year programming by celebrating when an individual or group reaches established benchmarks. Additionally, events like International Walk to School Day should be recognized. This is also an opportunity for RCPD to educate motorists on appropriate driving behavior to safely accommodate those walking and biking.

Safe walking/riding programs should be initiated to mitigate safety concerns. These programs can be walking school busses or bike trains. The Ogden Elementary School School Liason should organize volunteers to help walk or bike students to school. After school, an adult would meet the students at the school and walk or bike with them back to their homes. While this takes considerable volunteer resources, it mitigates most concerns of safety. If the design of the neighborhood allows, a neighborhood watch program could be initiated during the hours before and after school when students are commuting. By providing a point of contact at the school, parents and Ogden residents are much more likely to call with concerns about suspicious behavior.

A large-scale community driving awareness campaign could be facilitated to encourage safety. RCPD should strictly enforce the reduced speed limit near schools and at typical commuting times. Additionally, public service announcements regarding safe driving behaviors should be presented on the local television station.

The City of Ogden and Ogden Elementary School School administration could host "Safe Commuting Month" in September, which should highlight safe behaviors for all modes of traffic.

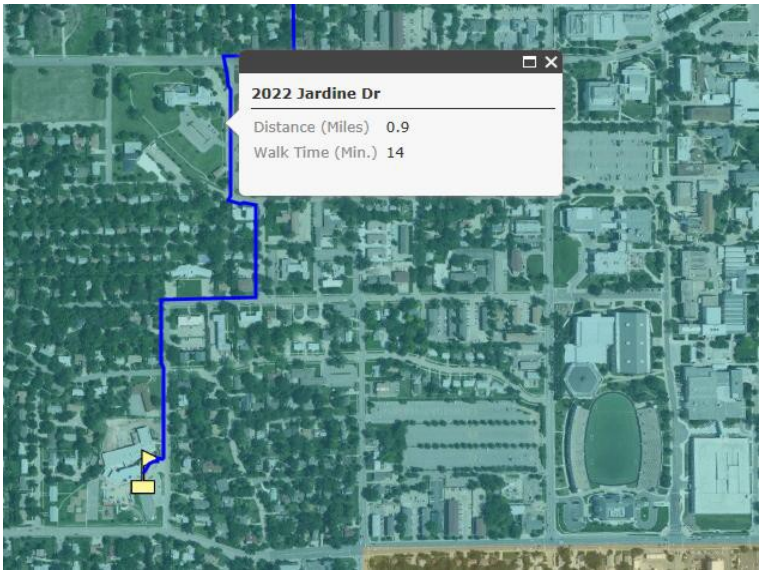
During meetings in Manhattan between PTOs and school administrators, multiple education and encouragement strategies were discussed. A few of them included: walking school buses, interclass and district-wide competition, recess or other incentives, buddy systems, bike rodeos, safety classes, and issuing bike licenses to students passing safety courses to provide a sense of ownership. These ideas may not be as effective at some USD 383 schools due to geographic restraints, but they are recommended for use at Ogden Elementary School School. In addition, a USD 383-wide end-of-year bike ride/race celebration event should be created.

Evaluation of the education and encouragement sections of the SRTS Plan will be conducted by process, as well as outcome evaluation. The SRTS Coordinator will write a yearly report outlining the process of the program and the current outcomes. The SRTS Committee should review this report and develop an action plan for the following year. Additionally, a strategic plan outlining five-year goals and objectives should be conducted at appropriate intervals. While the overarching goal of increasing walking and biking to school will remain the same, the strategy will respond to changing social, political, and physical environments.

FURTHER ENCOURAGEMENT TOOLS

Along with the joint meetings between PTOs and school administrators, the City of Manhattan and RCPD were consulted regarding addressing concerns for the Manhattan area schools of USD 383. One result of these discussions was an interactive webmap, created by the City of Manhattan. The webmap can be used for SRTS trip planning and can be extended district-wide to incorporate Ogden. This application would allow schools, parents, and students to open the webmap, enter their home address, and then see a "recommended" route to school. In addition to a line showing the route, a pop-up window provides the distance (to the tenth of a mile) as well as the estimated walk time (at 18 minutes a mile). All addresses within a two-mile radius of each school would be included in the data. The webmap builds on the City of Ogden and Riley County's GIS data and web services, and could be updated yearly to allow changes in school attendance boundaries, new addresses, and new pedestrian/bike infrastructure. Routing is determined by variables including pedestrian infrastructure (sidewalks, crosswalks, crossing guards, traffic signals, etc.), high traffic areas, and geographic restrictions. The value of this application is that anyone, anywhere, on any device can find their home or location, and then their end point. The prototype of the webmap can be seen Figure 1.

Figure 1: SRTS Webmap



In addition to the online mapping application, hard copy maps would be available for Ogden Elementary School School, and if desired, any home address (derived from same GIS datasets as the online map). The City of Manhattan GIS staff has researched many different hard copy SRTS maps used throughout the country and developed their own hardcopy maps based upon their research. This map template could be used in Ogden.

Ogden Elementary SchoolBeyond the mapping of data, the City of Ogden's GIS data should be used in the following ways: 1) Managing infrastructure gaps and issues, as well as areas to focus improvement; 2) The routing analysis for SRTS should be used to find key locations for walking school bus gathering points and routes; and 3) Collection and analysis of current and future walking/biking counts, as well as how infrastructure and programs effect change.

Table 1: Education and Enforcement Budget

Education and Encouragement Budget - District Wide					
Item	**Description**	**Bid Quantity**	**Units**	**Unit Price**	**Total**
1	Conference and Seminar SRTS Team Training				
	Conference	2	EA	$300.00	$600.00
	Airfare	2	EA	$600.00	$1,200.00
	Lodging	2	EA	$500.00	$1,000.00
	Meals	1	LS	$500.00	$500.00
2	GIS Software Development	80	Hrs	$25.00	$2,000.00
	GIS Yearly Update	40	Hrs	By FHMPO	$0.00
3	Start Up Marketing Material (Maps, Brochures, Banners, Bike Licenses, etc.)	1	LS	$1,000.00	$1,000.00
4	BSAP: Year 1				
	Trailer - New (16ft)	1	EA	$3,700.00	$3,700.00
	Trailer Fixtures & Tools	1	EA	$391.00	$391.00
	Bikes - Specialized	30	EA	$400.00	$12,000.00
	Set of Bike Tools	1	EA	$100.00	$100.00
	Bike Pump	1	Ea	$50.00	$50.00
	Training - travel	435	Miles	$0.54	$234.90
	Training - Per Diem	10	EA	$25.00	$250.00
	Training - Hotel	1	EA	$200.00	$200.00
	Maintenance - Standard (2x year)	30	EA	$60.00	$1,800.00
	Maintenance - Exceptional	30	EA	$10.00	$300.00
	Curriculum Materials & Printing	1	EA	$300.00	$300.00
5	BSAP: Year 2				
	Maintenance - Standard (2x year)	30	EA	$60.00	$1,800.00
	Maintenance - Exceptional	30	EA	$10.00	$300.00
	Training - travel	260	EA	$0.54	$140.40

	Training - Hotel	1	EA	$200.00	$200.00
	Curriculum Materials & Printing	1	EA	$300.00	$300.00
6	BSAP: Year 3				
	Maintenance - Standard (2x year)	30	EA	$60.00	$1,800.00
	Maintenance - Exceptional	30	EA	$10.00	$300.00
	Training - travel	260	EA	$0.54	$140.40
	Training - Hotel	1	EA	$200.00	$200.00
	Curriculum Materials & Printing	1	EA	$300.00	$300.00
7	BSAP: Year 4				
	Maintenance - Standard (2x year)	30	EA	$60.00	$1,800.00
	Maintenance - Exceptional	30	EA	$10.00	$300.00
	Training - travel	260	EA	$0.54	$140.40
	Training - Hotel	1	EA	$200.00	$200.00
	Curriculum Materials & Printing	1	EA	$300.00	$300.00
8	BSAP: Year 5				
	Maintenance - Standard (2x year)	30	EA	$60.00	$1,800.00
	Maintenance - Exceptional	30	EA	$10.00	$300.00
	Training - travel	260	EA	$0.54	$140.40
	Training - Hotel	1	EA	$200.00	$200.00
	Curriculum Materials & Printing	1	EA	$300.00	$300.00
	TOTAL ESTIMATED COST OF SRTS START UP				**$36,587.50**

ENFORCEMENT

ENFORCEMENT

As during the Safe Routes to School phase one planning in Manhattan, the Riley County Police Department (RCPD) attended meetings in Ogden, expressing its concerns, and offering guidance and support for the SRTS Plan. Several meetings among the Ogden SRTS planning team were held to discuss the current conditions and ideas to create a safer environment.

Existing Conditions

Currently, USD 383 has a good relationship with RCPD. At the request of the schools, RCPD attends numerous speaking engagements throughout the school year. In previous years, RCPD also provided crossing guards at some of the schools, but have ended this program due to budget constraints. If traffic complaints are received surrounding a specific school, they will patrol the area to help alleviate the issue.

RCPD uses an innovative Laser Point Initiative (LPI) when patrolling. LPI is an attempt to prevent crime before it has been committed. By using sophisticated crime and data statistical analysis, officers can move to locations based on pattern analysis to prevent and respond immediately to potential criminal activity. It has been very effective in reducing crime in Riley County and been shown to reduce RCPD expenditures. This novel technology is currently being used to prevent criminal activity across the county.

USD 383 is also currently subscribed to a mass notification service known as the NE KANSAS Notification System. When a call comes in that is determined as an immediate potential danger to the schools or nearby locations, RCPD immediately puts out an alert through the NE KANSAS Notification System. The school and everyone subscribed are immediately contacted and appropriate measures are taken. Anyone in the community may sign up for this safety alert system.

One concern highlighted is the shift rotation for RCPD. The rotation occurs every morning around 7:20 AM and every afternoon around 2:45 PM, similar to commuting patterns for school-aged children. Generally, the shift change may take 30 minutes due to the fact all officers do not change shifts at the exact same time. Overall, the impact may be minimal but there is concern on the ability to monitor the schools on a consistent basis. It was determined due to the number of schools within Manhattan and Ogden that assigning patrols to each school every day would be unfeasible and an unneeded resource. It was also determined that due to the minimal amount of crime within the city, RCPD could respond instantly if needed.

As briefly discussed in the education and encouragement sections, enforcement is a crucial part of the SRTS program. The school district should continue its partnership with RCPD.

Goal 1: Reduce the occurrence of vehicular violations near schools

RCPD should work to actively prevent vehicular violations near schools. To alleviate traffic violations and speeders, a number of mitigation tools could be used. These tools include: increased traffic patrols near schools, mobile speed cameras, environmental change, speed indication signs, and other potential alternatives. Other SRTS programs across the nation have used excess funds from citations to further support additional components of their SRTS program.

Ogden's main street, Riley Avenue, serves as the only direct connection between Fort Riley Military Installation and Ogden, averaging over 11,000 vehicles per day (KDOT 2016, Flow Map).. In contrast to this east-west vehicular traffic, Riley Avenue effectively serves as a wall for many of the students that live north of the road, creating both real and perceived danger for pedestrians and bicyclists. The wide (95 foot) roadway, coupled with the high average daily traffic, and vehicle speeds, hinders students from walking and biking to school.

To address these concerns, in 2013 the City of Ogden, upon receiving funding through the KDOT Traffic Engineering Assistance Program (TEAP), worked with Parsons Brinckerhoff to conduct a pedestrian study. The report, "Pedestrian Crossings at Six Intersections near Ogden Elementary School School", outlines many aspects of the physical environment. The report, which should serve as a reference for all future engineering studies, can be found in the attachment section of this document. The study focused on traditional engineering methods of traffic counts, crash analysis, speed analysis, and gap study. Low, medium, and high-cost recommendations were created for each of the key intersections. Some issues have been identified with the report, for example, the speed counts were conducted during off-peak hours and therefore do not align with the traffic counts and pedestrian movements associated TEAP report reveals that 52% of vehicles travel at 31 mph or greater, with multiple driving at 40+ mph. RCPD should focus on enforcement of high speeds vehicles along the Riley Ave corridor.

To aid RCPD in curbing higher speeds and increasing safety for students walking and biking to school, RCPD in conjunction with the City of Ogden is working to install a 20mph School Zone along Riley Avenue. The two-block zone will be centered around the key crossing at Walnut Street. Despite the noted lack of regular resources for school zone enforcement, RCPD has committed to patrol the new zone as resources permit.

Several of the low and medium cost recommendations from the KDOT Traffic Engineering Assistance Program report have been implemented in part. One particular example is the Better Block Program Ogden implemented along Riley Avenue in October 2016. The project came to fruition through a joint effort between the FHMPO, an urban design class from the College of Architecture Planning and Design at K-State, and the City of Ogden. The City and FHMPO worked with the K-State students to re-envision Riley Avenue to create a much more pedestrian-friendly and visually appealing corridor. In conjunction with Ogden's fall festival, OgFest, the City used temporary and low-cost materials to demonstrate a variety of strategies for improving the safety and streetscape of Riley Avenue. The Better Block Project featured pocket parks, turning lanes, bike lanes, and bulbouts. The temporary setup allowed residents to visualize and experience potential changes aimed to improve the pedestrian experience. The project was looked at so favorably that the City is looking to permanently implement elements from the installation. Some of the improvements have already

been permanently implemented including restriping to allow for a center turn lane and the addition of barricades to discourage U-turns mid-block.

To elicit behavior change near all schools, a "school patrol program" should be established district-wide. For each elementary school, a set patrol would be coordinated several times during the school year. Notice of the patrol would be published in the school newsletters and local paper, as suggested. Multiple officers would be in the vicinity of the school and specifically target drivers for vehicular citations for cell phone usage, speeding, unfastened seat belts, and other potential moving violations. In order to evaluate the success of this program the evaluation will include additional pre- and post-auditing of the school environment. Prior to releasing the program publicly, surveys around the school will be conducted to tally people seen using cell phones, not wearing seat belts, etc. The same post-auditing will happen after the program is conducted.

Goal 2: Reduce the perception of crime near schools

Based upon survey results, one of the largest parental concerns is the potential of child abduction. RCPD, USD 383, and the community should work together to educate the public on crime in Ogden. One resource currently underutilized is a system RCPD uses called Raids Online. Raids Online is a public database used by many police departments across the nation where community members can see every report filed across the city; from violent crimes to traffic incidents. Anyone with an email address can sign up to receive notification if a particular crime occurs within a specific distance from an inputted address. Raids Online is updated daily by RCPD.

The Laser Point Initiative (LPI) technology, as discussed earilier, has been statistically proven to prevent crime across the city in a more effective manner than traditional random patrolling. Modifying the LPI calculation to weight the areas where children walk and bike to elementary schools higher than other areas, was considered by Manhattan. This would ensure that officers are available and respond faster to crime near schools. However, as Manhattan is one of the safer communities in the country, it was determined that the RCPD has the resources to be present at multiple calls in a timely manner. This is expected to be the same for Ogden.

Crime prevention can also be enhanced through environmental design. Training is available for professionals in community development, design, planning, and law enforcement. The program is called "SafeGrowth" and is a course in safe design and crime prevention through environmental design (CPTED). The participants learn CPTED principles and team-building as they learn to tackle real-life problems in their community. Participants gain skills at implementing and sustaining community safety initiatives in the field. The program discusses resource limitations, policy issues, political resistance, and other obstacles.

ENFORCEMENT BUDGET

Table 2: Enforcement Budget - District-wide

Enforcement Budget - District-wide

Item	Description	Bid Quantity	Units	Unit Price	Total
1	Traffic Violation Mitigation				
	Speed Indication Signs	4	EA	$5,000.00	$20,000.00
	Point-of-Decision Prompts	16	EA	$200.00	$3,200.00
2	Patrol Program				
	4 Officers	60	Hrs	$150.00	$9,000.00
3	Safegrowth				
	On Site Training				
		1	LS	$20,000.00	$20,000.00
	TOTAL ESTIMATED COST OF SRTS START UP				**$52,200.00**

Education, Encouragement, and Enforcement Summary

To successfully implement the most effective SRTS program, coordination and district-wide policy is necessary to create a structured foundation. It is suggested that an individual from a local agency be tasked with leading the SRTS program, while a member from USD 383, the City of Ogden and/or the Bicycle & Pedestrian Advisory Committee, RCPD, Riley County Health Department, and Kansas State University be appointed to the SRTS Committee. These representatives will become the SRTS team, providing a foundation for community and district-wide coordination.

Each individual school in USD 383 is different due to geographic constraints, local infrastructure, parent involvement, and other variables. Therefore, the structured approach below provides necessary stepping blocks and initiatives that each school should implement initially and modify accordingly to assess needs at each school. The table that follows includes initiatives for four of the five Es (Education, Encouragement, Enforcement, and Evaluation) at the eight Manhattan schools studied. The table chronologically presents items that should be conducted as this plan is implemented. It also suggests a timeframe for implementation and identifies the federal outcome addressed. The initiates of the final “E,” (Engineering) are discussed in the engineering section, Phase I Engineering Study.

Table 3: Education, Encouragement, and Enforcement Summary

CURRENT CONDITION	ACTIVITY	TARGET POPULATION	IMPLEMENTATION DATE	PERSONS RESPONSIBLE	BUDGET	*5 Es	FEDERAL OUTCOME ADDRESSED
Limited District Wide Coordination	Appoint a Health & Wellness Representative for each school for coordination and policy implementation.	USD 383 & Parents	April 2016	USD 383 School Board	USD 383 In-Kind	ED EN EF	Organized policies to Encourage, Educate, and Enforce SRTS
Limited knowledge, training and ideas to provide guidance and leadership for SRTS	Bring in an experienced speaker that helps communities successfully implement SRTS programs	USD 383 Health and Wellness Members & Community	July 2016	USD 383 & Health and Wellness Committee	USD 383 In-Kind	ED EN	How to successfully implement a SRTS program
Limited parent participation	Health and Wellness Representative attend PTO, Site Council meeting to encourage and provide methods to increase walking and biking.	Parents	September 2016 & March 2017	Health & Wellness Committee & PTO, Site Council	USD 383 In-Kind	ED EN	Get parents and community involved and increase walking and biking
Students walk home after school in fall and spring	Parent Orientation at beginning of year. Encourage walking and biking. Share Safe Routes	Parents	August 2016	Principal	USD 383 In-Kind	ED EN	More Children walking and biking to school
Students walk home after school in fall and spring	Site Council Meeting to get parents involved. Set up Walking School Buses, buddy systems, and incentives to walk and bike.	Parents	August 2016	Health & Wellness Committee	USD 383 In-Kind	ED EN	Get parents and community involved and increase walking and biking
Students walk home after school in fall and spring	Beginning of year school assembly sharing the safe routes to school program	K-5 Students	August 2016	Principal	USD 383 In-Kind	ED EN	Increased bike, pedestrian and traffic safety
Students walk home after school in fall and spring	Newsletter article about safe routes	K-5 Students & Parents	August 2016 & April 2017	Principal	USD 383 In-Kind	ED EN	Encouragement of healthy and active lifestyles

Unsafe student walking and biking behaviors	RCPD visits school to educate safety and danger concerns. Issue “bike licensees” after completion of a short test	K-5 Students	2016-2017 School Year	Principal	USD 383 In-Kind	ED EN EF	Improved community security, awareness, personal ownership
Unsafe student walking and biking behaviors	RCPD visits school to educate safety and danger concerns. Issue “bike licensees” after completion of a short test	K-5 Students	2016-2017 School Year	Principal	USD 383 In-Kind	ED EN EF	Improved community security, awareness, personal ownership
Local traffic speeding through school zones.	Purchase a speed indication sign that can be utilized between schools.	Local Community	2016-2017 School Year	USD 383 City of Manhattan	USD 383 City of Manhattan	EF	Decrease localized speeding
Limited information on recommended safe routes	Develop interactive GIS website that shows recommended routes from any location based on safety and infrastructure.	Parents & K-5 Students & Community	2016-2017 School Year	USD 383 City of Manhattan	USD 383 City of Manhattan	ED EN	Provide and recommend safe routes to increase walking and biking
Limited community and district events	Coordinate with the City during bike week and hold city wide “bike rodeos” to increase public awareness and pedestrian safety.	Community	2016-2017 School Year	USD 383 City of Manhattan RCPD Bicycle & Ped	USD 383 City of Manhattan RCPD	ED EN EF	Provide community awareness and interaction
Need for 2016-2017 data.	Conduct SRTS Surveys	K-5 Students	Fall 2016 Spring 2016	Classroom Teachers	USD 383 In-Kind	EV	Increased community involvement

Plans to Successfully Implement the SRTS program using the “5 Es Initiatives” ED-Education | EN-Encouragement | EF-Enforcement | EV-Evaluation

ENGINEERING

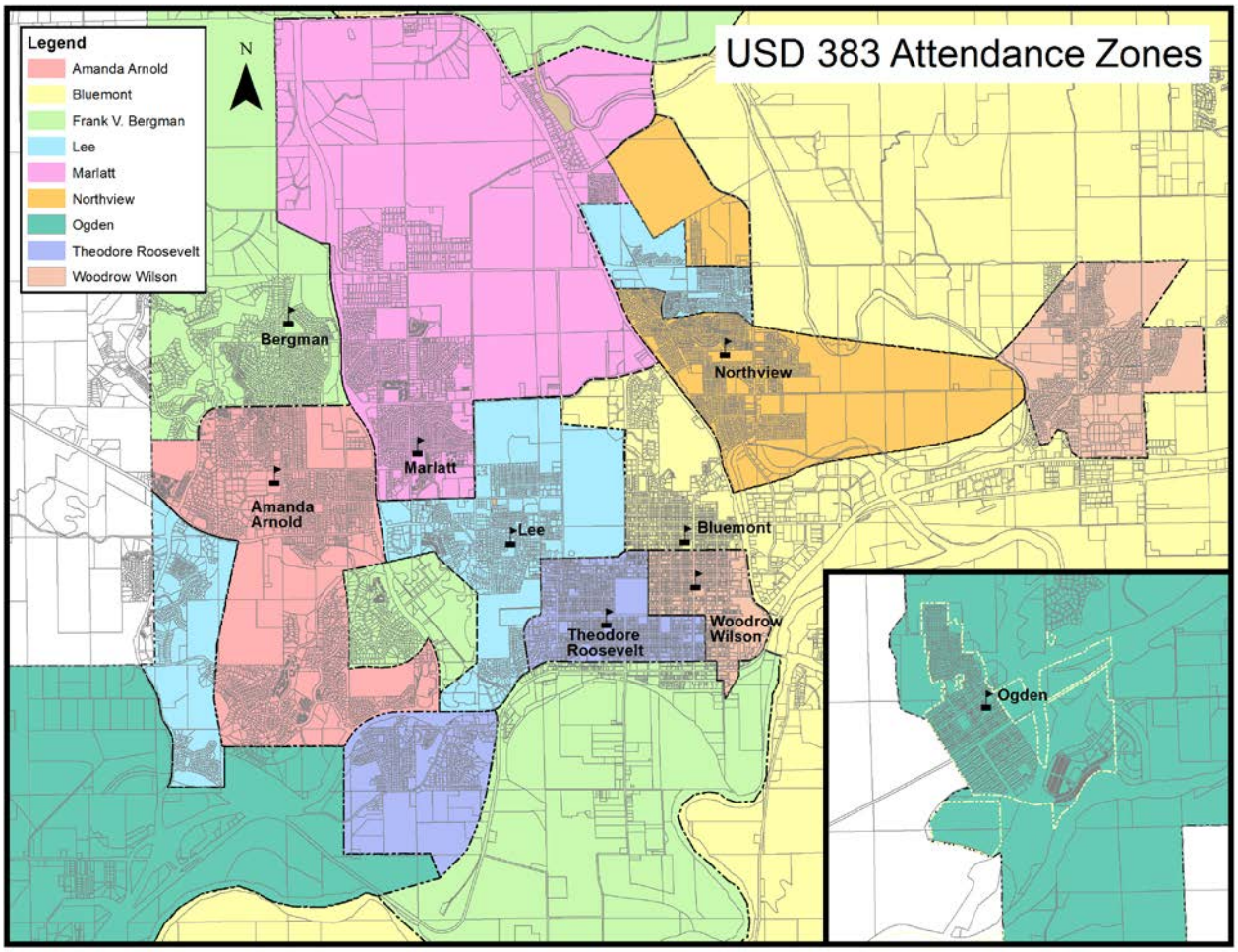
USD 383 INFORMATION/BACKGROUND

Ogden Elementary School is one of nine schools within Manhattan-Ogden USD 383, a school district that serves 3,515 students from kindergarten through sixth grade (KSDE 2017). USD 383 has been successful in maintaining traditional, neighborhood schools. Ogden Elementary School

The City of Ogden and USD 383 are working together to address walkability and biking opportunities within the City. Ogden Elementary School School employs a crossing guard for morning and afternoon crossing periods. The crossing guard is stationed at the Walnut Street crossing of Riley Avenue, the key crossing for students living north of Riley Avenue. Ogden has many sidewalk gaps, some in key locations, that need to be filled to create a safer walking and bicycling environment.

By cataloging and prioritizing issues and improvements, and facilitating education and encouragement within schools to mitigate issues, a Safe Routes to School program is likely to be highly effective in Ogden. On average throughout USD 383, 71% of children live within two miles of their school. Parents largely report environmental concerns that can be mitigated with engineering as the primary concern. to allow their child to actively commute to school. Additionally, there have been national and state-wide initiatives focused around health, wellness, and active transportation. Safe Routes to School helps to facilitate a more active lifestyle.

Figure 2: USD 383 Attendance Zones Overview Map



OGDEN ELEMENTARY SCHOOL

The enrollment at Ogden Elementary School is around 226 students in 2016-17. Of these, 74% are low socio-economic status, 30% with disabilities, 31% minority, and 30% belonging to a military family. Of the 1,295 residential addresses within the attendance zone of Ogden Elementary School, 90 percent (1,196 addresses) are within a two-mile radius of the school; therefore, excluded from busing requirements and allowing for walking and biking as a viable option. Surveys completed by parents of fourth graders indicate that 52 percent of students living within a two-mile radius walk or bike to school and 55 percent walk or bike home on a typical day. Ogden Elementary School has the highest percentages of children walking and biking of all of the USD 383 schools. The school is bounded by Elm Street to the east, 14th Street to the north, Walnut Street to the west, and 13th Street to the south. However, one block to the northwest is a four-lane arterial, Riley Avenue, with an average daily traffic (ADT) of 11,200 vehicles per day (KDOT 2016). This creates an obstacle for students living north of Riley Avenue. While the number of students living within the attendance zone of Ogden Elementary varies year-to-year, there are on average 430 residential addresses, constituting 33 percent of all residences within the Ogden attendance zone. The Ogden Community Center and a park are located one block to the southwest of the school, but there are no sidewalks along 13th Avenue that connect

the elementary school and this public space.

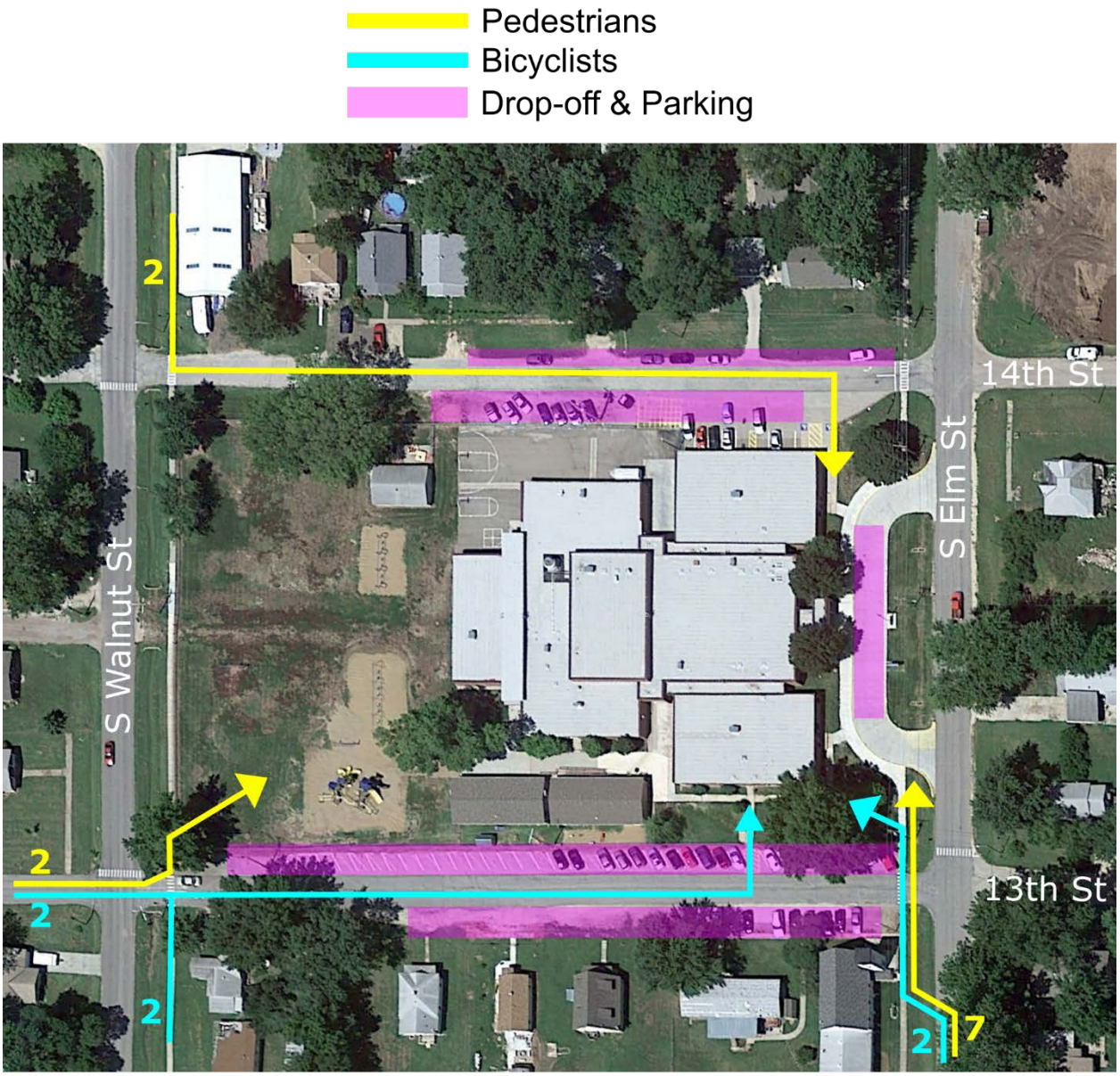
Existing Circulation and Conditions

A field investigation was conducted in March of 2017 to observe pedestrian and traffic movements; Figure 3. This data was included with anecdotal data provided during meetings with school administrators and PTOs to provide existing circulation patterns. Faculty parking is provided on the north and south sides of the school (14th & 13th Streets, respectively). The pick-up and drop-off area is located on the east side of Ogden Elementary School on S. Elm Street. A drop-off and pick-up drive is located off of S. Elm Street on a one-way lot with the entrance on the north and exit on the south. Both cars and buses are permitted to use the drop-off area.

Specific observations:

- A majority of students arrived at school via personal vehicle, with the one-way drop-off area .serving the most students. In addition, one bus used the drop-off area.
- Six children were observed riding their bicycle to school; with a total of 7 bikes in the rack.
- Only two students crossed Riley Avenue.
- Students walked/rode in the streets due to no sidewalks, but immediately transferred to sidewalks where available. Several students walked in the grass/ditch to avoid any possible conflict with on-coming vehicles on the roadway. A clear 'desire' path (dirt path) is visible on the eastside of S. Elm Street between 12th & 13th Streets.
- Students dropped off at 13th Street must walk in the street to access one of the two entrances to the school grounds.
- Several parking spaces encroach on crosswalks, leaving zero visibility of the sidewalk as the vehicle exits the parking space.
- Figure 3 highlights the observed movement of students.

Figure 3: Map of Observed Student Movements



There is no crossing guard present around the school grounds. Students who are dropped off in the northbound lane of S. Elm Street are required to cross the street wherever they can, as there is no sidewalk on the eastside of S. Elm Street to allow students to access existing crosswalks at 14th & 13th Street.

RECOMMENDATIONS

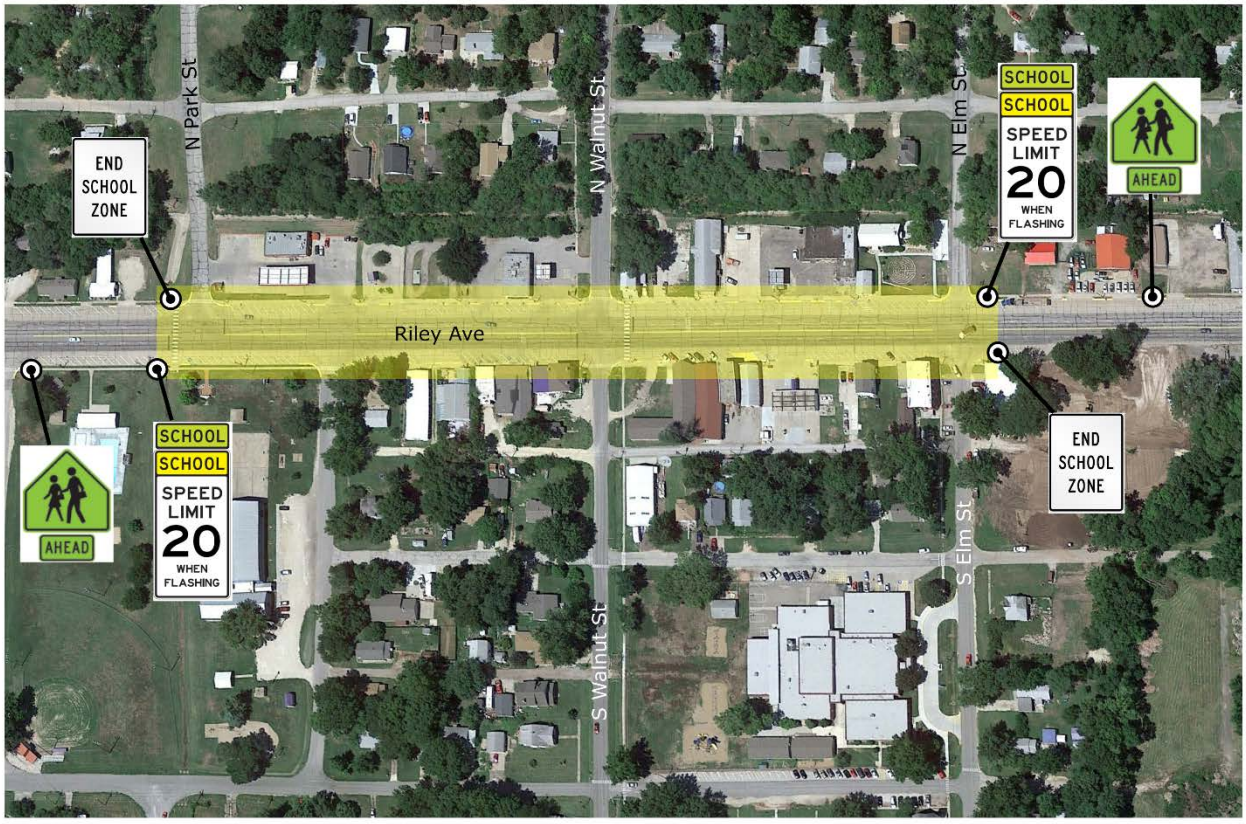
Signage

- Additional crosswalk warning signs are required at the intersection of S Walnut Street and 13th Street. Each crosswalk should have advanced warning signs and signs directly at the crosswalk, complying with the Manual of Uniform Traffic Control Devices (MUTCD). All signs shall have a fluorescent yellow-green background with a black legend and border. All signage shall conform

to the most current version of the MUTCD.

- With the installation of the speed zone on Riley Avenue (from Park Street to Elm Street) existing signage will need to be moved/altered to meet MUTCD specifications. Details of this project can be found in Figure 6, below.
- With the installation of concrete curb extensions along Riley Avenue, the existing signage will need to be moved/altered to meet MUTCD specifications, and allow additional visibility for drivers.

Figure 4: Proposed School Zone along Riley Avenue



Pavement Markings

- It is recommended that at each signed crossing location pavement markings be in accordance with MUTCD. The City of Ogden should continue to routinely inspect and maintain pavement markings at all signed crosswalks. Any new crosswalks should be marked accordingly during construction.

Sidewalks

- A sidewalk is recommended along the north side of 13th Street from S. Walnut Street to S. Elm Street. This location serves several purposes; staff parking, student drop-off and pick-up, and a main route for students walking/biking to/from school. This sidewalk will prevent students and staff from having to walk/bike in the street where vehicles travel, park, and reverse. The removal of the most eastern parking stall (near Elm Street) is recommended, as parked vehicles are immediately adjacent to the crosswalk of 13th Street. Vehicles backing up to exit the parking stall have no visibility of the crosswalk. There are two options for this sidewalk,

which are depicted in Figure 7:

- Opt 1: Utilize existing pavement by pushing vehicle parking stall five feet south. Install concrete curb stops at each parking space, creating a hard barrier between vehicles and pedestrians. Re-stripe the parking stalls. Pavement markings and sidewalk striping should be installed where needed.
- Opt 2: Create a raised standard sidewalk by removing five feet of existing concrete along the whole block (S. Walnut Street to S. Elm Street). Install curb and gutter and a raised sidewalk. Re-strip parking stalls.

Figure 5: Ogden Elementary School 13th Street Sidewalk

- A sidewalk is recommended along the south side of 14th Street from S. Walnut Street to S. Elm Street. This location serves several purposes; staff parking, student drop-off and pick-up, and a main route for students walking/biking to/from school. This sidewalk will prevent students and staff from having to walk/bike in the street where vehicles travel, park, and reverse. The removal of the parking spot located where the school building and fenced playground meet is recommended to accommodate the sidewalk. See Figure 8 for details.

Figure 6: 14th Street Sidewalk Map

- A sidewalk is recommended along the north side of 13th Street from S. Oak Street to S. Walnut Street. This location connects Ogden Elementary School with the Ogden Community Center, Ogden Public Library, a park, and many residences west of the school. During a site visit to the school, it was noted that a large number of students who walked/biked to school along 13th Street were forced to walk/ride in the street. This sidewalk would remove children from the street.
- A sidewalk is recommended along the entirety of N. Park Street. This sidewalk would connect the many residences north of Riley Avenue to Ogden Elementary School, Ogden Community Center, Ogden Public Library, and a park. Currently, no sidewalk exists along this segment of roadway and students are forced to walk in the street. N. Park Street rises steeply from Riley Avenue before making a tight turn. This area has a history of high speed traffic. The location of the southbound stop sign just north of the curve (approximately 315 feet north of 16th Street) does not meet traffic regulation standards and should be removed. However, as there is no sidewalk, the stop sign was installed to slow traffic on the steep curve, to increase student safety. A sidewalk along N. Park Street would allow for the elimination of this stop sign. Due to cost, this project has been split into two phases; phase one being more critical.
- A sidewalk is recommended along N. Walnut Street from 16th Street to Appaloosa Trail. This sidewalk would connect directly connect Ogden Elementary School to the neighborhoods north of Riley Avenue. Walnut Street is the location of the USD 383 crossing guard and is the main

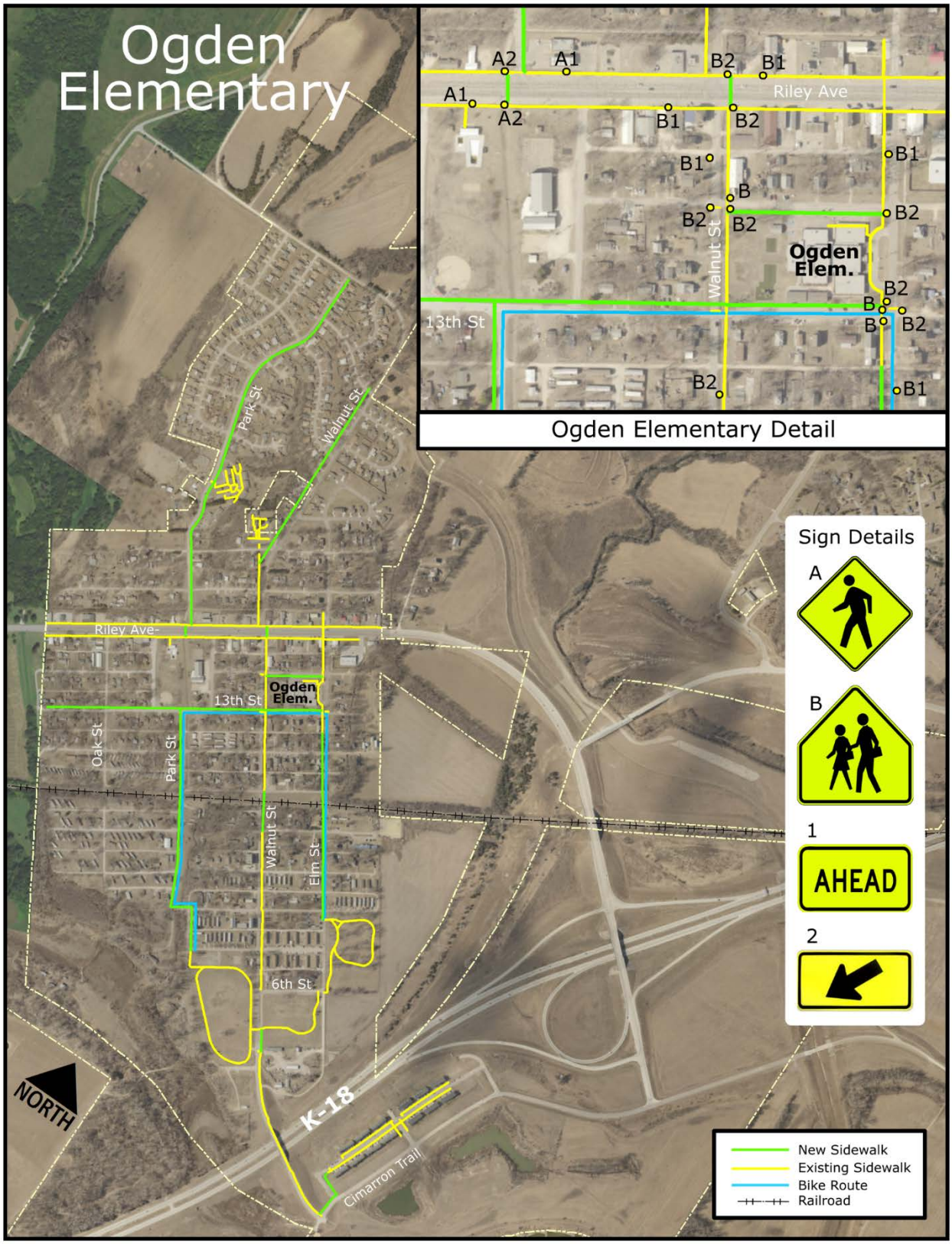
route for student traffic to/from school. At 16th Street, the sidewalk would connect with the existing sidewalk connecting to Riley Avenue. Due cost, this project has been split into two phases; phase one being more critical.

- A sidewalk is recommended along S. Elm Street from 8th Street to 12th Street. This sidewalk would connect Ogden Elementary School to the neighborhoods south of the school, as well as the park along Riley Avenue and trails at the southern end of S. Elm Street. During the site visit, it was noted that a large number of students who walked/biked to school via S. Elm Street were forced to walk/ride in the street. This sidewalk would remove children from the street.
- A sidewalk is recommended along S. Walnut Street from just north (approximately 135 feet) north of 4th Street to the existing trail in the city park. This connection would allow students from the Cimarron Trail and Saddle Horn Trail neighborhood to walk to school safely (in conjunction with the proposed Cimarron Trail and Saddle Horn Trial sidewalks).
- A sidewalk is recommended along S. Park Street from 7th Street to 13th Street. This sidewalk would allow students living on the southwest side of Ogden to walk to school safely in conjunction with the proposed 13th Street sidewalk. In addition, this sidewalk would connect two city parks.
- A sidewalk is recommended along Cimarron Trail and Saddle Horn Trail from S. Walnut Street to the existing sidewalks on Saddle Horn Trail. This project, in conjunction with the proposed S. Walnut Street sidewalk would allow students to safely walk to school.

Other

- Railroad crossing improvements are recommended at S. Elm Street, S. Walnut Street, and S. Park Street, per the Kansas Department of Transportation (KDOT) Traffic Engineering Assistance Program (TEAP). See Appendix.
- Pedestrian crossings are recommended at S. Elm Street, S. Walnut Street, and S. Park Street railroad crossings. In addition, the existing roadway crossings should also be considered for repair. The Traffic Engineering Assistance Program (TEAP) provided an in depth analysis and recommendations were made for all three crossings. Railroad crossing specific sections of the report can be found in the Appendix.

Figure 7: Map of Sidewalk Improvements



ENGINEERING BUDGET

Table 4: Engineering Budget for Ogden

Engineering Budget - Ogden						
Item	**Description**		**Bid Quantity**	**Units**	**Unit Price**	**Total**
1	13th St Sidewalk					
		Mobilization	1	EA	$4,000.00	$4,000.00
		Clearing & Grading	1	EA	$5,000.00	$5,000.00
		Concrete (1,800' x 5')	1000	SY	$50.00	$50,000.00
		Culverts (CMP)	8	EA	$1,500.00	$12,000.00
		Contingency (15%)				$10,650.00
2	N Park St Sidewalk - Ph 2					
		Mobilization	1	EA	$4,000.00	$4,000.00
		Clearing & Grading	1	EA	$5,000.00	$5,000.00
		Concrete (1,550' x 5')	875	SY	$50.00	$43,750.00
		Ramps	10	EA	$1,000.00	$10,000.00
		Contingency (15%)				$9,412.50
3	N Walnut St Sidewalk - Ph 2					
		Mobilization	1	EA	$4,000.00	$4,000.00
		Clearing & Grading	1	EA	$5,000.00	$5,000.00
		Concrete (1,550' x 5')	875	SY	$50.00	$43,750.00
		Ramps	10	EA	$1,000.00	$10,000.00
		Contingency (15%)				$9,412.50
4	S Elm Sidewalk					
		Mobilization	1	EA	$2,500.00	$2,500.00
		Clearing & Grading	1	EA	$2,000.00	$2,000.00
		Concrete (1350' x 5')	750	SY	$50.00	$37,500.00
		Culverts (CMP)	2	EA	$1,000.00	$2,000.00
		Contingency (15%)				$6,600.00
5	S Park St Sidewalk					
		Mobilization	1	EA	$2,500.00	$2,500.00
		Clearing & Grading	1	EA	$500.00	$500.00
		Concrete (1400' x 5')	780	SY	$50.00	$39,000.00
		Contingency (15%)				$6,300.00
6	S Walnut Sidewalk					
		Mobilization	1	EA	$500.00	$500.00
		Clearing & Grading	1	EA	$500.00	$500.00
		Concrete (200' x 5')	115	SY	$50.00	$5,750.00
		Contingency (15%)				$1,012.50

7	Saddlehorn Rd Sidewalk					
		Mobilization	1	EA	$1,300.00	$1,300.00
		Clearing & Grading	1	EA	$2,500.00	$2,500.00
		Concrete (425' x 5')	240	SY	$50.00	$12,000.00
		Ramps	3	EA	$1,000.00	$3,000.00
		Contingency (15%)				$2,820.00
8	Riley Ave School Zone					
		Set of Flashing Beacons	1	EA	$15,000.00	$15,000.00
		School Zone Signs	2	EA	$175.00	$350.00
		Supplemental Signs	4	EA	$75.00	$300.00
		End School Zone Signs	2	EA	$175.00	$350.00
		Contingency (15%)				$2,400.00
9	Ogden Elem Sidewalk - 13th St (Opt 1)					
		Mobilization	1	EA	$500.00	$500.00
		Curb Stops - Concrete	38	EA	$100.00	$3,800.00
		Striping (Sidewalk)	500	LF	$2.00	$1,000.00
		Stirping (parking spaces)	800	LF	$2.00	$1,600.00
		Contingency (15%)				$1,035.00
10	Ogden Elem Sidewalk - 13th St (Opt 2)					
		Mobilization	1	EA	$2,000.00	$2,000.00
		Pavement Removal	60	CY	$20.00	$1,200.00
		Curb & Gutter	500	LF	$20.00	$10,000.00
		Concrete (500' x 5')	300	SY	$50.00	$15,000.00
		Contingency (15%)				$4,230.00
11	Ogden Elem Sidewalk - 14th St					
		Mobilization	1	EA	$500.00	$500.00
		Curb Stops - Concrete	23	EA	$100.00	$2,300.00
		Striping (Sidewalk)	270	LF	$2.00	$540.00
		Stirping (parking spaces)	600	LF	$2.00	$1,200.00
		Concrete (190' x 5')	110	LF	$50.00	$5,500.00
		Contingency (15%)				$1,506.00
12	S Walnut St Railroad Crossing (TEAP report)					
		Medium-Cost Recommendation	1	EA	9,800.00	9,800.00
		High-Cost Recommendation	1	EA	117,700.00	117,700.00
13	S Elm St Railroad Crossing (TEAP report)					
		High-Cost Recommendation	1	EA	107,300.00	107,300.00

TOTAL ESTIMATED COST OF CONSTRUCTION: Low-cost options	**$509,238.50**
TOTAL ESTIMATED COST OF CONSTRUCTION: High-cost options	**641,633.50**

* NOTE: Awaiting cost estimates on the following projects:

1. Curb Extensions: Riley Ave @ Elm St
2. Curb Extensions: Riley Ave @ Walnut
3. Curb Extensions: Riley Ave @ Park
4. N Park St Sidewalk - Ph 1
5. N Walnut St Sidewalk - Ph 1
6. S Park St Railroad Crossing: TEAP does not address sidewalk

EVALUATION

EVALUATION

The Original Phase 1 Report for USD 383 was conducted by Hyung Jin Kim, Ph.D. and Katie Heinrich, Ph.D., assistant professors at Kansas State University. They received a University Small Research Grant from Kansas State University in 2013, to conduct the proposed Phase 1 study and complete data collection associated with the project. The study demonstrates support from the University, the City of Manhattan, the State, and the school district for the SRTS program in Manhattan, Kansas. A copy of the 2013 survey, background, aims, methodologies, data collection, data analysis, and results can be found in the City of Manhattan Safe Routes to School report.

- In February of 2017, the FHMPO, with permission from the original researchers, distributed the survey to the parents of all fourth graders in Ogden Elementary School. A few unrelated or location specific sub-questions were removed; however, the survey maintains the key elements, allowing for comparison of Ogden to other elementary schools.

The augmented Ogden survey and completed results can be found in the Appendix. Please note that question number order was maintained, with the Ogden survey having 19 questions in total (as opposed to 21 in the Manhattan survey).

Phase 1 Results

Parent surveys were sent home with the 27 fourth-grade students at Ogden Elementary School. Sixteen parents participated, for a 59.3% response rate. The following descriptive statistics summarize the survey findings:

School Travel

- For the trip to school, most children were driven in a private car (43.5%), followed by walking with friends (21.7%), walking alone (13%), or biking (13%). Some respondents marked more than once choice for this question.
- When traveling from school to home, 36.4% of students traveled via a private car while another 36.4 % walk with friends. Other modes of going from school to home included walk alone (9.1%) and bike (9.1%). Similar to the question pertaining to trip to school, some parents marked more than one choice for this question.
- Parents notated that it took 10 minutes on average to travel to school. Withholding the highest and lowest total from the survey responses, the average time to travel to school totaled eight minutes.
- A high percentage of parents (81.3%) felt their children lived close enough to walk to school.
- The school bus service was not provided for 87.5% of children.
- Only 31% of parents had volunteered at their child's school.

Environmental Barrier

- The most common land uses located along the routes to school include a playground (37.5%) and vacant lot (37.5%). Other common land uses include a park (31.5%), walking path or trail (31.3%), convenience store (25%), small retail/business (25%), and community/youth center (25%).
- Children were likely to encouter railways on their trip to school (37.5%), but other

obstructions include intersections without a painted crosswalk (25%), intersections without street signals or stop signs (18.8%), and roads with busy traffic (18.8%).

- Twenty percent of students did not have sidewalks along their way to school while 66.7% had sidewalks on some or very few streets. Only 13.3% had sidewalks on most or all streets.
- Of the sidewalks that did exist, 69.3% of parents disagreed, either somewhat or strongly, that the sidewalks were well maintained.
- 43.8%of participants agreed it was convenient to walk to school, including 31.3% who strongly agreed with that notion. Meanwhile, 37.5% disagreed it was convenient to walk to school, including 25% who strongly disagreed.
- The biggest safety concern for parents about their child walking to school, by an overwhelming response, was their child may be hit by a car (93.8%). Other safety concerns were their child could be taken or hurt by a stranger (68.8% somewhat or strongly agreed) or may be attacked by stray dogs (68.8% somewhat or strongly agreed).
- Conversely, 62.5% of parents strongly disagreed a safety concern for their child walking to school was he or she may get lost.

Health and Physical Activity

- The most frequently reported health condition was ADHD (25%), followed by asthma (8.3%) and depression (8.3%).
- During a usual weekday, a majority of children (53.3%) spent 60 minutes or less per day in sedentary/screen time: Screen time is one type of sedentary behavior and includes watching television, using a computer, or playing video games, when not working or studying. The American Academy of Pediatrics recommends limiting screen time to no more than two hours a day.
- Most parents (64.3%) reported that their child spends more than 60 minutes playing outdoors on a usual weekday: National guidelines require children to complete 60 minutes of physical activity each day (U.S. Department of Health and Human Services. *2008 Physical Activity Guidelines for Americans.* Atlanta, GA: Centers for Disease Control and Prevention; 2008).
- Parents indicated that their children were most likely to play outside at least once a week in their yard at home (87.5%, n=14) or in neighborhood streets (43.8%, n=7).

Participants' Socioeconomic Status and Characteristics

- Parents were asked to provide basic demographic information for the child who brought the survey home. The overall sample was a majority female (62.5%).
- The majority of children were white, non-Hispanic (62.5%, n=10).
- Free and reduced-price lunches are often used as an indicator of lower socio-economic status (SES). Nearly two-thirds of parents (64.3%, n=14) reported their child qualifies for these school lunch programs.
- Adults living in the household with the child included mothers (75%, n=12), fathers (68.8%, n=11), grandmothers (6.3%, n=1) and others (25%, n=4).
- At least one of those adults was available to walk their child to or from school in 40% of respondents.

Future Study

- A third of participants indicated that they were interested in participating in similar studies/activities in the future (33.3%).

Table 5: Evaluation Budget -District-wide

Evaluation Budget – District Wide					
Item	**Description**	**Bid Quantity**	**Units**	**Unit Price**	**Total**
	General				
1	Personnel (Student Workers)				
	Survey Delivery and Collecting	8	Hrs	$12.00	$96.00
	School Environment Field Auditing	16	Hrs	$12.00	$192.00
	Pedestrian Counts	48	Hrs	$12.00	$576.00
	Data Entry & Cleanup	140	Hrs	$12.00	$1,680.00
2	Surveys (Incentives, Printing, and Mailing)	1	LS	$624.00	$624.00
3	Other Printing and Supplies (Audit Tools, Ped Counting Forms, etc.)	1	LS	$400.00	$400.00
	TOTAL ESTIMATED COST OF SRTS FOLLOW-UP EVALUATION				***$3,568.00***

APPENDIX

Railroad Crossings

KDOT Traffic Engineering Assistance Progam
City of Ogden, KS, School and Pedestrian Crossings at Six Intersections

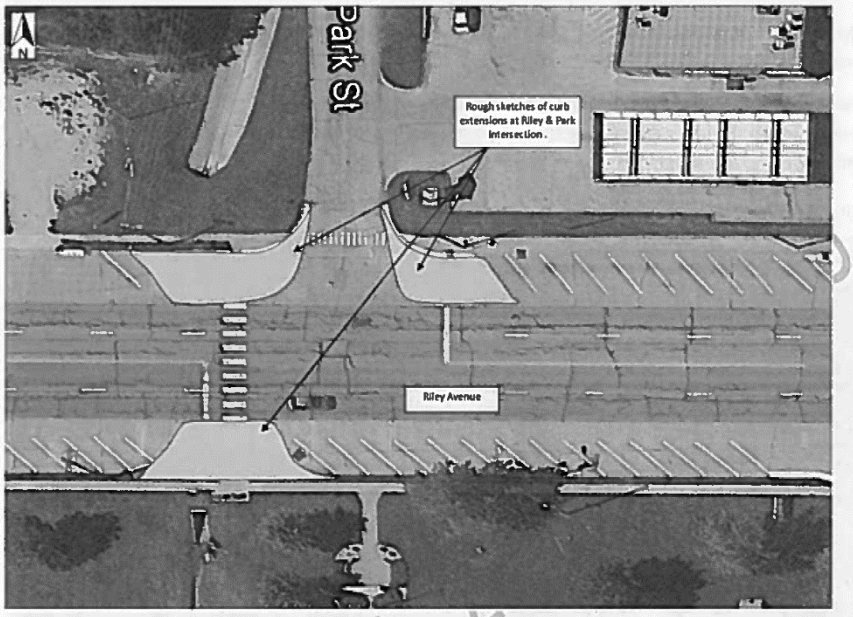


Figure 27 - Aerial view of recommended curb extension locations

2.3.6.3 High-Cost Recommendations

High-cost recommendations at this intersection are similar to the recommendations in section 2.1.6.3, to consider a project that would make substantial changes to the Riley Avenue corridor. This project would encompass changes such as: converting the angled parking spaces into parallel parking, creating left turn lanes to increase safety and prevent congestion, adding medians to prevent head on collisions, bicycle and pedestrian accommodations, replacing the pavement on Riley Avenue, landscaping of medians and curb extensions and adding decorative lighting along the streets.

2.4 RAILROAD CROSSING AT ELM

The Union Pacific (UP) Railroad and Elm Street crossing is located approximately 800 feet south of the east side of Ogden Elementary School at 13th & Elm. Elm Street is controlled with railroad signals and gate arms when a train is crossing.

2.4.1 Existing Conditions

The area surrounding this location along Elm Street is a marked bike route and has no sidewalks for pedestrians. There is currently a drainage ditch crossing this location just north of the railroad on Elm Street. The roadway width at the railroad crossing is 24 feet six inches wide. The existing bridge structure at the ditch crossing Elm Street is wooden, with a top asphalt layer and wood hand railings on each side. The bridge is 15 feet long, 23 feet wide, and has a clearance of six feet five inches from the bottom of the ditch to the bottom of the wooden beams. The ditch then crosses the railroad tracks just

KDOT Project Number: SP-0618-13 34

west of Elm Street through a concrete culvert structure. The culvert is approximately 58 feet long, 16 feet wide, and has a clearance of seven feet four inches from the bottom of the ditch to the bottom of the concrete.

Existing signs and pavement markings were identified and reviewed at this intersection. Photographs of the existing signs were used to create the following maps in order to preserve and accurately describe the existing conditions.

Figure 28 shows the current signs and pavement markings at this location.

Figure 28 - Existing signs and pavement markings at UP Railroad & Elm location

Since this area is largely residential, the lack of sidewalks or space for pedestrians to cross the railroad is a concern. Students walking or biking to school or to the businesses on Riley Avenue interact regularly with vehicles crossing the railroad. The side rails on the existing wooden bridge north of the railroad tracks are assumed to have been put in place to prevent pedestrians from falling over into the ditch although they are outdated, flimsy, and are a safety concern.

Three of the OM3-L and OM3-R Object Markers are correctly placed at the corners of the bridge but one of the OM3-R signs on the south east side of the bridge is missing.

There is also no railroad crossing pavement markings on Elm Street approaching the railroad crossing. The railroad crossing in itself is well marked with flashing lights, gates, and bells.

Figure 29 highlights some of the observations mentioned above.

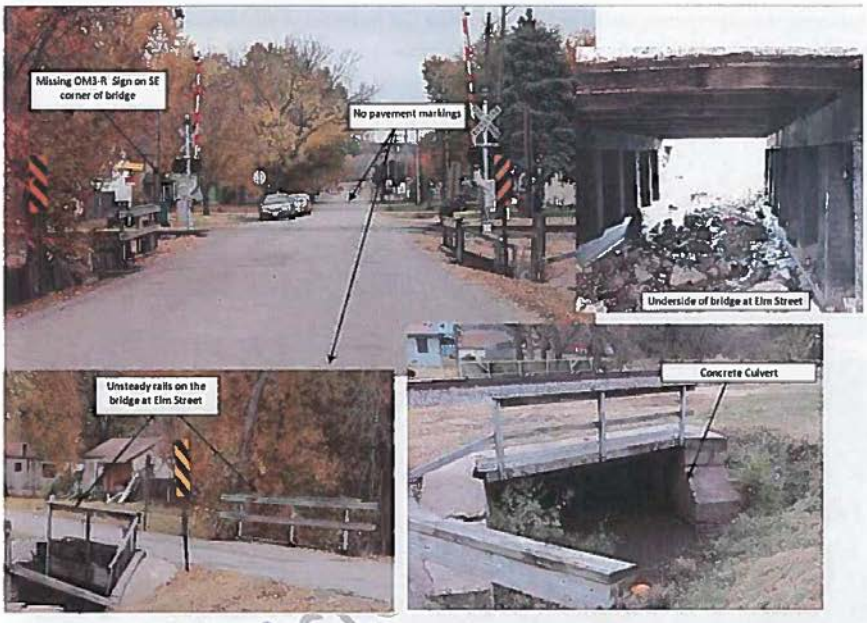


Figure 29 – UP Railroad and Elm Street crossing photos

2.4.2 Crash Analysis

There are a total of six train crossings a day at this location. The speed of the train over the crossing ranges from 20 to 65 mph. There are two gates, two bells, and train signal flashing beacons at the rail crossing to warn motorists and pedestrians of approaching trains. No crashes have been reported at this crossing in the past five years. Railroad crossing inventory and safety information copies are included in the appendix.

2.4.3 Traffic Counts

Traffic counts were collected along Elm Street at this location on Wednesday, November 6, 2013. Vehicles and pedestrians coming through the intersection were counted during the morning hour before school began from 7:30 a.m. to 8:30 a.m. and the afternoon hour when school was dismissed from 3:30 p.m. to 4:30 p.m. Elm Street is not a heavily traveled collector road. Only two pedestrians crossed the railroad tracks during the morning peak hour and one during the afternoon peak hour. Pedestrians heading north walked mainly on the left side of the road but crossed the road to the right side when a southbound vehicle approached. All pedestrians used the sidewalk beginning at the church north of the

intersection. There were no bicyclists crossing the railroad tracks during the morning and afternoon peak hours.

Figure 30 and Figure 31 show the traffic count results at the UP Railroad and Elm Street.

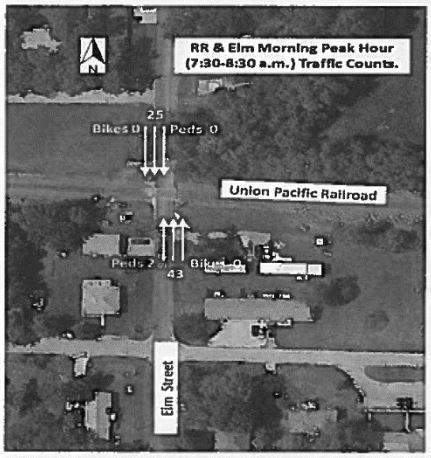


Figure 30 – UP RR & Elm AM peak hour traffic counts

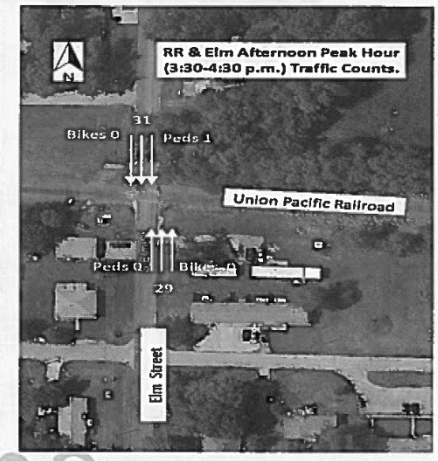


Figure 31 – UP RR & Elm PM peak hour traffic counts

2.4.4 Speed analysis

The posted speed limit on Elm Street is 20 mph. Speed studies were not conducted along Elm Street. It was observed that vehicles approaching the intersection slowed down near the railroad tracks and they all appeared to drive at reasonable speeds.

2.4.5 Gap Study

Gap studies were not conducted at this location.

2.4.6 Recommendations and Implementations

The suggested low, medium and high-cost recommendations for this intersection are discussed below.

2.4.6.1 Low-Cost Recommendations

The low-cost recommendations at this crossing primarily involve signage and pavement markings.

As stated earlier, one object marker OM3-R by the bridge north of the crossing was missing and should be replaced. The post was still in the field and therefore only a new sign would need to be mounted.

Railroad Crossing pavement markings on Elm Street approaching the railroad crossing are recommended to supplement the existing signs and signals. According to the MUTCD, the pavement markings should consist of the RR Crossing symbol and a STOP line on each Elm Street approach as shown in Figure 32 below. The No Passing pavement marking and signing in the sketch do not apply as this is a collector road with no centerline pavement markings.

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City of Ogden, KS, School and Pedestrian Crossings at Six Intersections

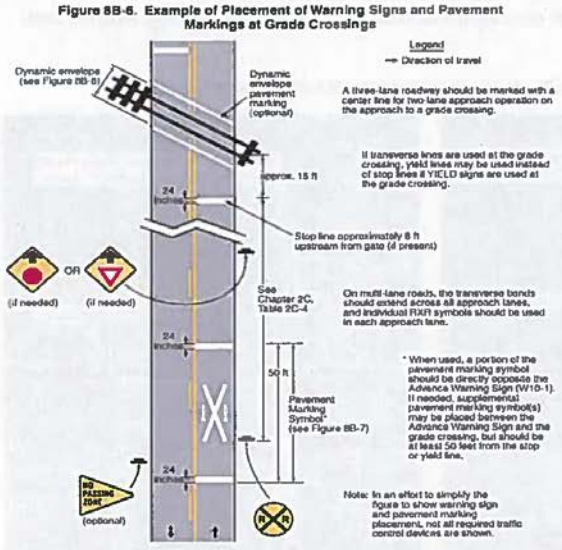

Figure 32 - Placement of pavement marking grade
Source: (Federal Highway Administration, 2009, p. 8B.27)

Figure 33 shows a map of the low-cost recommendations at this intersection.

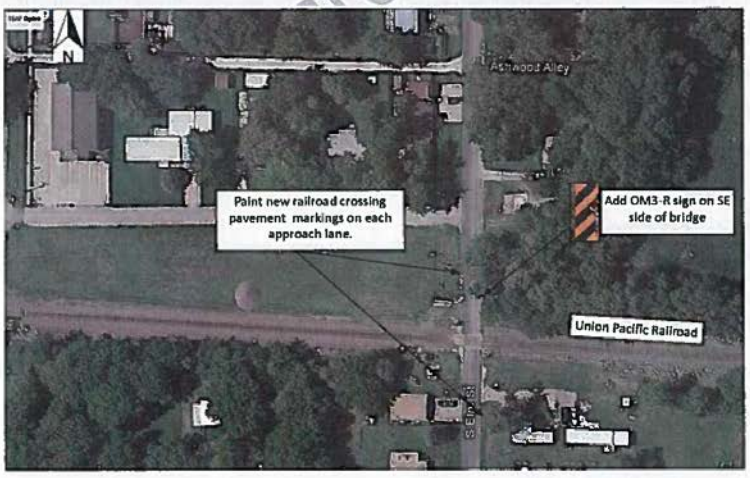

Figure 33 – Low-cost recommendations at UP Railroad & Elm Street crossing

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In addition to the low cost recommendations mentioned above, we would also highly recommend that the city hire a licensed Professional Engineer specializing in structures and bridges to perform a detailed inspection of the road bridge to determine its condition and whether it may need to be replaced. The estimated cost of implementing these recommendations is $6,600.

2.4.6.2 Medium-Cost Recommendations

The medium-cost recommendation at this location is to replace the weak wooden bridge hand rails. The study team discussed the possibility of installing guardrail at this location but deemed it is not feasible because the required guardrail span is a length that would cross over or get too close to the railroad tracks. A higher cost recommendation discussed in the following section was determined to be the better solution.

2.4.6.3 High-Cost Recommendations

High-cost recommendations for the crossing are to extend the existing concrete culvert box at the railroad and connect it to the bridge on Elm Street. An additional concrete box culvert would then be used to replace the existing wooden bridge and would extend eastward beyond the clear zone. A clear zone is an area beyond the edge of a travel way that is available for use by errant vehicles. The clear zone for this bridge was determined using the American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide, based on traffic volumes, speeds, and roadside geometry of the intersection. The clear zone at this location was determined to be 14 feet. The box culvert used to replace the bridge would therefore extend 14 feet eastward in order to eliminate the need for traffic barriers. (American Association of State Highway and Transportation Officials, 2011, pp. 3-3). The estimated cost of implementing these recommendations is $107,300.

Figure 34 shows an illustration of the high-cost recommendations at this crossing.

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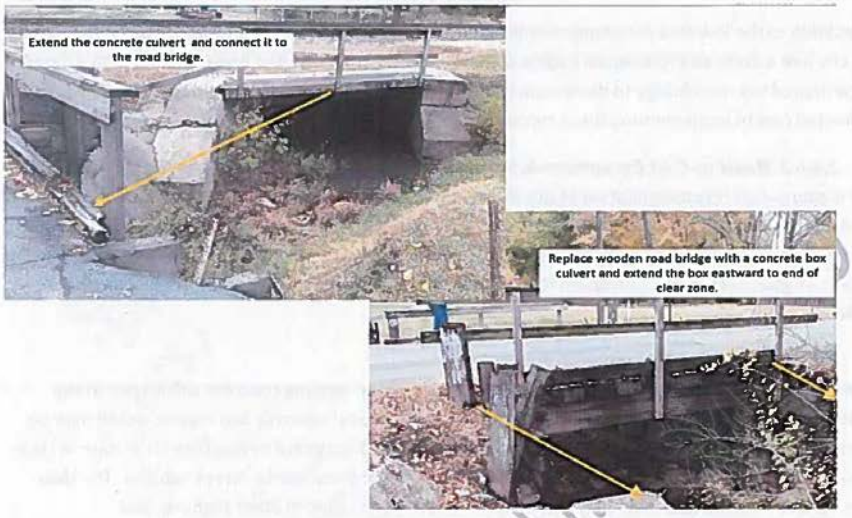

Figure 34 – High-cost recommendation illustrations at UP Railroad & Elm Street crossing

2.5 Railroad Crossing at Walnut

The UP Railroad and Walnut Street crossing is located approximately 800 feet south of the west side of Ogden Elementary School at 13th & Walnut. Walnut Street is controlled with railroad signals and gate arms when a train is crossing.

2.5.1 Existing Conditions

The area surrounding this location is mainly residential. The railroad crossing at Walnut Street is wooden and is 24 feet six inches wide. There is a drainage ditch immediately south of the railroad crossing on Walnut Street. The existing bridge structure over the ditch is wooden and is 14 feet long, 23 feet wide, with a depth clearance of eight feet nine inches. There is also a sidewalk on the east side of Walnut Street beginning on Riley Avenue and ending at the church approximately 110 feet north of the railroad. The sidewalk continues along Walnut Street approximately 230 feet south of the railroad. There is no sidewalk in the area of the railroad crossing.

Existing signs and pavement markings were identified and reviewed. Photographs of the existing signs were used to create the following maps in order to preserve and accurately describe the existing conditions.

Figure 35 shows a map of the existing signs and pavement markings at this location.

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City of Ogden, KS, School and Pedestrian Crossings at Six Intersections

Figure 35 - Existing signs and pavement markings at UP Railroad & Walnut location

Walnut Street is used by students from Ogden Elementary School who are traveling to and from the school both on foot and bikes. The intersection is heavily traveled by vehicles, especially during the morning and evening peak hours, compared to the other railroad crossings. The wood hand rails on the bridge are old and not steady. The heights of the hand rails are lower to the ground and unlikely to provide sufficient protection from pedestrian falls.

Only one OM3 Object Marker is installed at the bridge. The remaining three Object Markers that should be present are missing and should be replaced.

Faded railroad crossing pavement markings were observed on both approaches along Walnut Street and should be repainted.

The railroad crossing itself was well marked with flashing lights, signs, gates, and bells.

Figure 36 highlights some of the observations mentioned above.

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City of Ogden, KS, School and Pedestrian Crossings at Six Intersections

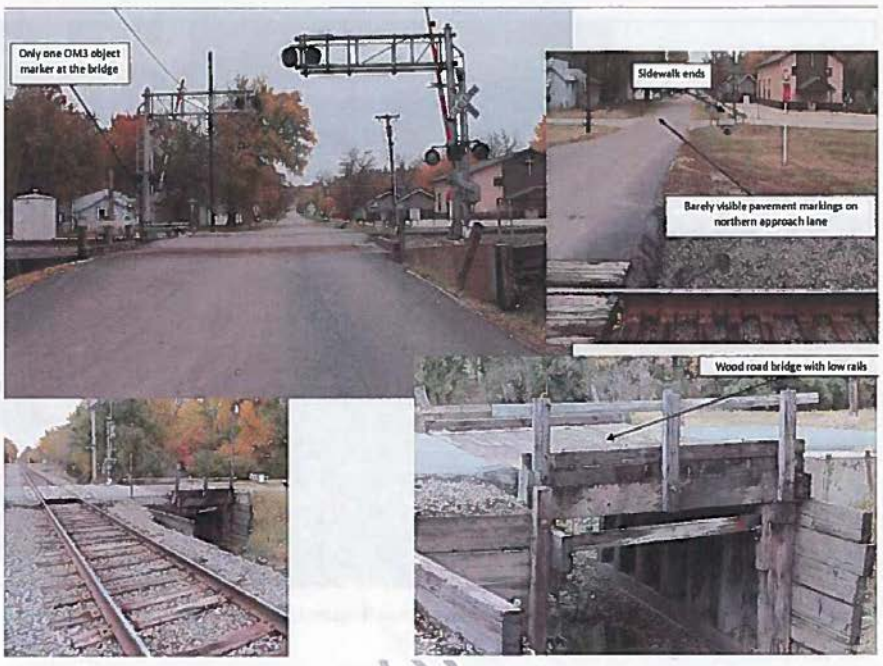

Figure 36 – UP Railroad & Walnut Street location photos

There is also a sign on the southbound approach to the railroad crossing (Figure 37) which instructs pedestrians not to walk on the street and instead use the sidewalk. The sidewalk, however, ends shortly after this sign. This is a good example of signage that could mislead and cause confusion to motorists and pedestrians. This sign could remain in place if the sidewalk was continuous on the east side of Walnut Street over the railroad crossing.

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Figure 37 - Signage restricting walking in the street (north of UP Railroad looking south)

2.5.2 Crash Analysis

No crashes were reported for at this intersection in the past five years. However, there have been two historical crashes that occurred at this intersection: one in August 1977, and one in March 1978. The first incident occurred when a vehicle traveling south across the tracks failed to stop and struck a train at night. There were no injuries and no pedestrians involved. The second incident occurred when a train struck a vehicle heading north during the day. There were two casualties, but no pedestrians were involved. There are a total of 10 trains a day at this crossing. The speed over the crossing ranges from 20 to 65 mph. There are two gates, two bells, and train signal flashing beacons at the crossing to warn motorists and pedestrians of approaching trains. Railroad crossing inventory, safety information, and crash report copies are included in the appendix.

2.5.3 Traffic Counts

Traffic counts were collected along Walnut Street at this location on Wednesday, November 6, 2013. Vehicles and pedestrians traveling through the intersection were counted during the morning hour before school began from 7:30 a.m. to 8:30 a.m. and the afternoon hour when school was dismissed from 3:30 p.m. to 4:30 p.m. Twenty-two pedestrians and two bicyclists crossed the railroad tracks during the morning peak hour while 16 pedestrians and six bicyclists crossed during the afternoon peak hour.

Figure 38 and Figure 39 show the traffic count results at this crossing.

KDOT Traffic Engineering Assistance Progam
City of Ogden, KS, School and Pedestrian Crossings at Six Intersections

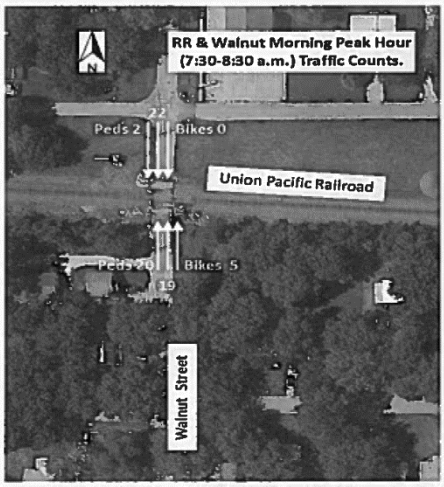

Figure 38 – UP RR & Walnut AM peak hour traffic counts

Figure 39 – UP RR & Walnut PM peak hour traffic counts

2.5.4 Speed Analysis

The posted speed limit on Walnut Street is 20 mph. A speed study was not conducted at this intersection but it was observed that due to the poor condition of the existing wooden bridge just south of the railroad tracks, vehicles noticeably decelerated when crossing the bridge, even more so than when crossing the railroad tracks. High vehicle speeds at the crossing are not a major concern at this time, however, if the bridge is replaced vehicle speeds may increase.

2.5.5 Recommendations and Implementations

The suggested low, medium, and high-cost recommendations for this intersection are discussed below.

2.5.5.1 Low-Cost Recommendations

Low-cost recommendations at this crossing are primarily signage and pavement marking.

Three Object Markers should be added at the bridge: One OM3-R and one OM3-L on the south side, and one OM3-L marker on the north side.

It is also recommended that new railroad crossing pavement markings be painted on the Walnut Street approaches to the railroad. See Section 2.4.6.1 for railroad pavement marking requirements.

Figure 40 shows a map of low-cost sign and pavement marking recommendations at this crossing.

We also highly recommend that the city hire a licensed Engineer to perform a detailed inspection of the bridge to determine its condition and whether it may need to be replaced. The estimated cost of implementing these recommendations is $7,400.

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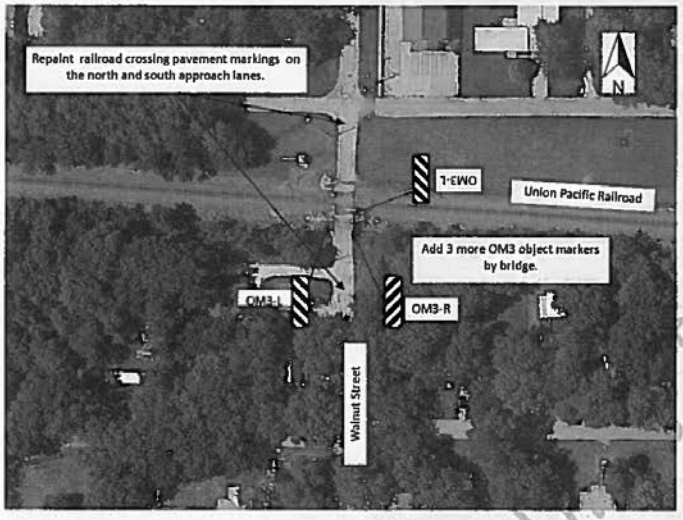

Figure 40 - Low-cost recommendations at UP Railroad & Walnut Street crossing

2.5.5.2 Medium-Cost Recommendations

This medium-cost recommendation is to extend the sidewalk that exists north and south of the railroad tracks on the east side of Walnut Street as far as possible up to the railroad crossing and then connect the sidewalk at a right angle with the street as shown in Figure 41. This would keep pedestrians on the sidewalk and out of the street up until the railroad crossing itself. The right angle connection from the sidewalk to the street would encourage pedestrians to look both ways as they join Walnut Street from the sidewalk. The estimated cost of implementing these recommendations is $9,800.

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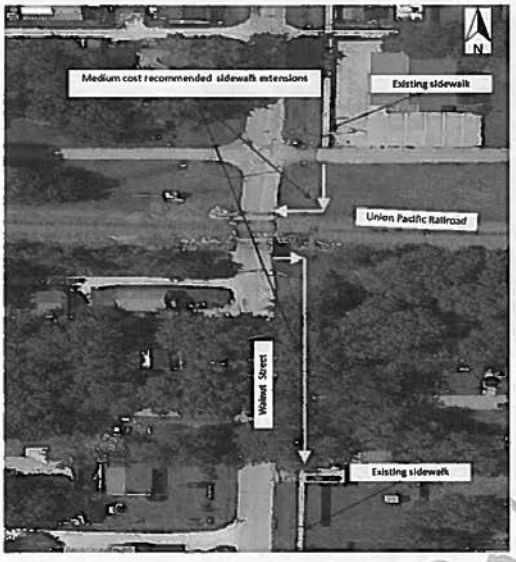

Figure 41 - Aerial view of sidewalk recommendation

2.5.5.3 High-Cost Recommendations

High-cost recommendations at this crossing include replacing the wooden bridge with a concrete box culvert and extending the culvert eastward and westward to the clear zone (14 feet). See section 2.4.6.3 for clear zone discussion. Widening the bridge will create space on the east side of the bridge to allow for an extension of the sidewalk across the railroad itself without needing to guide pedestrians into the street to cross the railroad tracks. Figure 42 and Figure 43 show a rough illustration of the high-cost recommendations at this crossing. The estimated cost of implementing these recommendations is $117,700.

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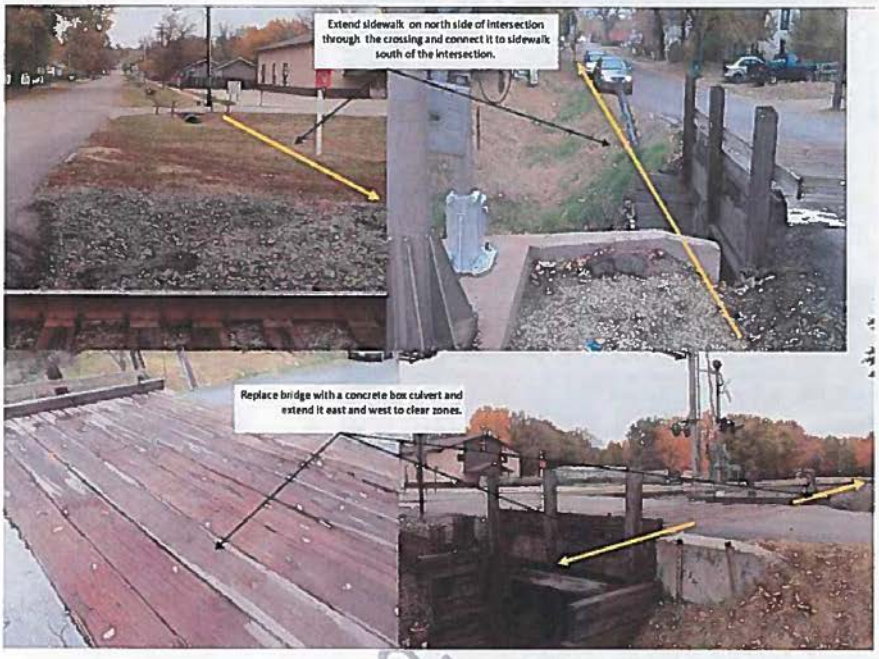

Figure 42 - Photos of high-cost recommendations at UP Railroad & Walnut Street crossing

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KDOT Traffic Engineering Assistance Progam
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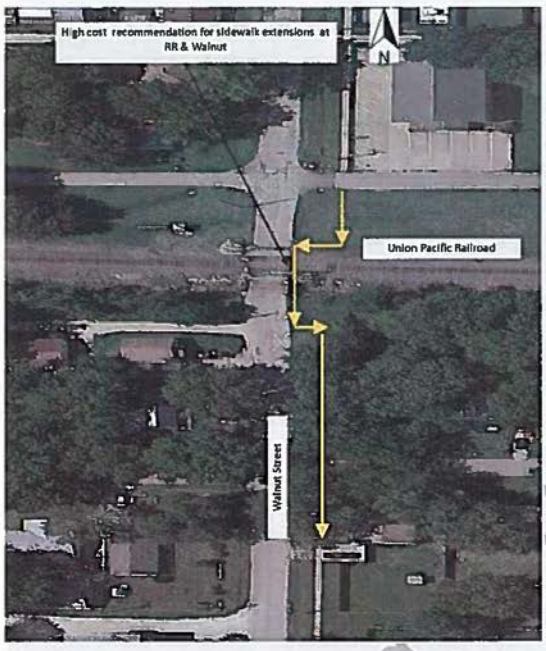

Figure 43 - Aerial view of sidewalk extensions recommendation

2.6 Railroad Crossing at Park

Of all six intersections in this study, the Railroad and Park Street intersection was the one furthest from Ogden Elementary School. It is the next through street west of Walnut Street and is located approximately 800 feet south of 13th Street and 700 feet west of Walnut Street which is the west boundary of Ogden Elementary School. Park Street is controlled with railroad signals and gate arms when a train is crossing.

2.6.1 Existing Conditions

The area surrounding this location is mainly residential and the Ogden Community Center is located approximately 800 feet north of the intersection. There are currently no sidewalks on Park Street and all modes of travel share the road. There are no bridges at this intersection as a result of a drainage channel. The railroad crossing is made of wood and measures 24 feet six inches wide. The posted speed limit on Park Street is 20 mph.

Existing signs and pavement markings were identified and reviewed. Photographs of the existing signs were used to create the following maps in order to preserve and accurately describe the existing conditions.

Figure 44 shows the existing signs and pavement markings at this intersection.

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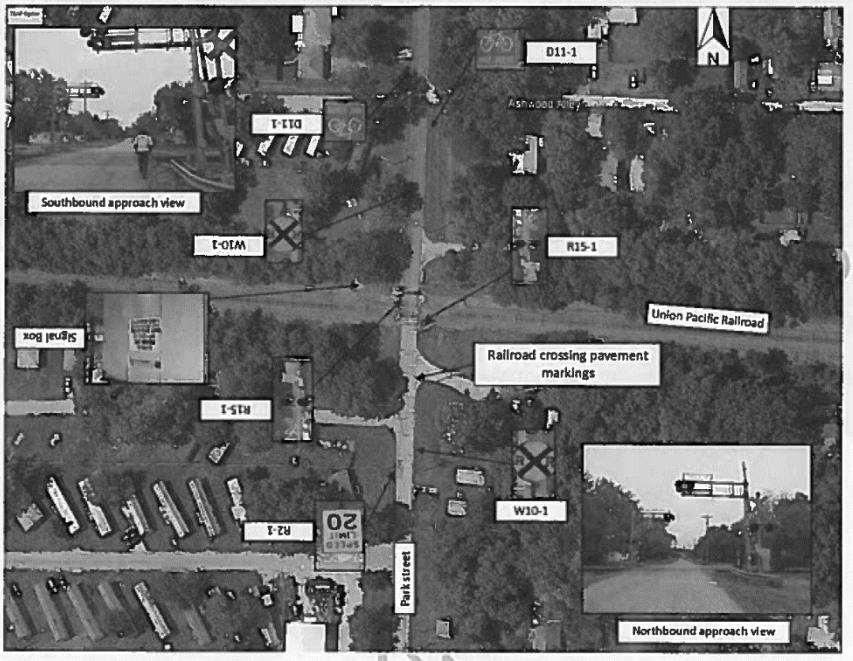

Figure 44 - Existing signs and pavement markings at UP Railroad & Park location

The height of the Railroad Crossing Advance sign (W10-1) on the south side of the tracks is lower than required. The required height of the sign is seven feet in urban areas.

There are railroad crossing pavement markings on the south side of the tracks but they are old and worn. No pavement markings were observed on the north side of the crossing.

Figure 45 highlights the observations mentioned above.

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Figure 45 – UP Railroad & Park Street crossing photos

2.6.2 Crash Analysis

The speed over the crossing ranges from 20 to 65 mph. There are two gates, two bells, and train signal flashing beacons at the rail crossing to warn motorists and pedestrians of approaching trains.

There have been no reported crashes at this intersection in the past five years. However, there was one historic crash that occurred in 1988 at night when a train struck a vehicle moving south at the intersection. No one was injured and there were no pedestrians involved. Railroad crossing inventory, safety information, and crash reports are included in the appendix.

2.6.3 Traffic Counts

Traffic counts were conducted along Park Street on Wednesday, November 6, 2013. Vehicles and pedestrians traveling through the intersection were counted during the morning hour before school began from 7:30 a.m. to 8:30 a.m. and the afternoon hour when school was dismissed from 3:30 p.m. to 4:30 p.m. A total of five pedestrians crossed the railroad tracks during the morning peak hour and six pedestrians during the afternoon peak hour at this location.

Figure 46 and Figure 47 show the traffic count results at this location.

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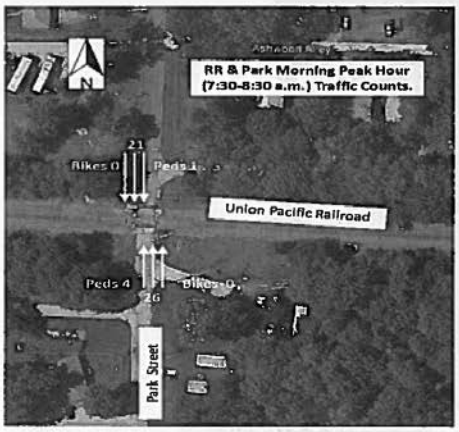

Figure 46 – UP RR & Park AM peak hour traffic counts

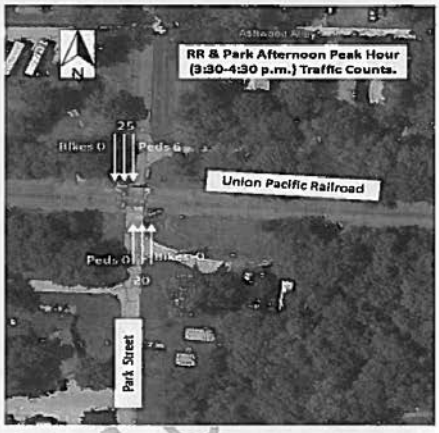

Figure 47 – UP RR & Park PM peak hour traffic counts

2.6.4 Recommendations and Implementations

The suggested recommendations for this location are discussed below.

2.6.4.1 Low-Cost Recommendations

It is recommended that new pavement markings be added on the north approach lane and that the south lane approach pavement markings be repainted. See Section 2.4.6.1 for railroad pavement marking requirements.

The height of the existing Railroad Crossing Advance (W10-1) sign on the south side of the tracks is shorter than required. According to the MUTCD, warning signs should be mounted a minimum of seven feet above the ground in urban areas. The existing sign stands at six feet three inches and should be increased to seven feet. The estimated cost of implementing these recommendations is $3,600.

Figure 48 shows a map of the recommended low-cost signage and pavement marking.

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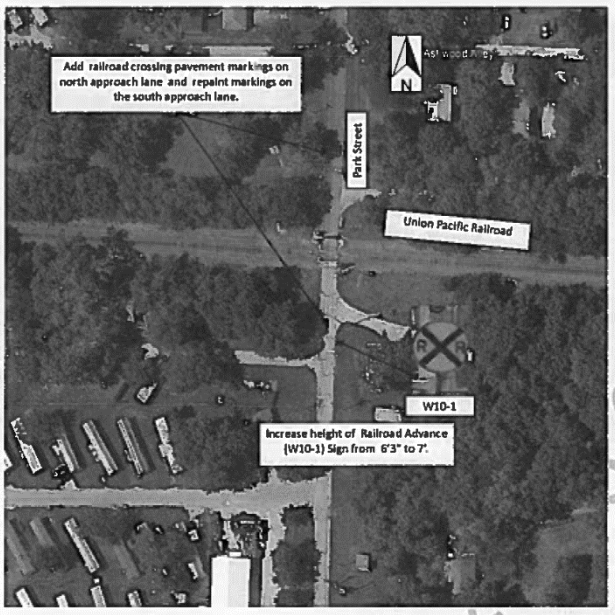


Figure 48 – Low-cost recommendations at Railroad & Park Street crossing

SAFE ROUTES TO SCHOOL SURVEY

Directions: This survey is to be answered by the parent/guardian who is **most involved in getting the child to and from school**. Everything you tell us will be kept **confidential (secret)**.

The following questions are about how your child normally travels to and from school.

		From home to school	From school to home
1.	**On a normal day, how does your child travel?** (Please answer BOTH columns on right)	❑ Walk alone ❑ Walk with friends ❑ Walk with a parent/adult ❑ Bike ❑ School bus ❑ Public bus ❑ Private car, including carpool	❑ Walk alone ❑ Walk with friends ❑ Walk with a parent/adult ❑ Bike ❑ School bus ❑ Public bus ❑ Private car, including carpool
2.	**At what grade would/did you allow your child to walk or bike without an adult to/from school?** ❑ **Grade** (K-8) _____ ❑ I would not feel comfortable at any grade		
3.	**How long does it take to get to school?** _____ minutes		
4.	**Is your house close enough for your child to walk to school?**	❑ Yes	❑ No
5.	**Does the school provide bus service for your child?**	❑ Yes	❑ No
6.	**Have you volunteered at your child's school** (e.g. PTA, PTO, SHAC, library, cafeteria monitor, classroom assistant) in the past 12 months?	❑ Yes	❑ No

Now we would like to ask you some questions about your child's way to and from school.

7.	**Which of the following are located along your child's way to school?** (Check all that apply)			
	❑ Playground ❑ Bakery/café/restaurant ❑ Large parking	❑ Park ❑ Small retail/business ❑ Large office building	❑ Walking path or trail ❑ Bus stop ❑ Industrial/junk yard	❑ Convenience store ❑ Community/youth center ❑ Vacant lot ❑ None of the above
		❑ Others: _____		

	❑ lot/garage ❑ Gas station		
8.	**Which of the following would your child have to cross if he/she walks to school?** (Check all that apply)		
	❑ Highway or freeway ❑ Intersection without a painted crosswalk	❑ Road with busy traffic ❑ Railway	❑ Intersection without street signals or stop signs ❑ None of the above
9.	**Are there sidewalks along your child's way to school?**		
	❑ Yes, on all streets	❑ Yes, on most streets	❑ Yes, on some streets	❑ Yes, on very few streets
	❑ No → Skip the next question and go to **question 11**		

10.	**What do you think about sidewalks along your child's way to and from school?** *Please tell us how much you agree or disagree with each statement by checking your answers.*	**Strongly disagree**	**Somewhat disagree**	**Neither disagree nor agree**	**Somewhat agree**	**Strongly agree**
	1) Sidewalks are well maintained and clean	❑	❑	❑	❑	❑
	2) Sidewalks are wide enough for two persons walking together	❑	❑	❑	❑	❑
	3) Sidewalks are separated from traffic by grass or trees	❑	❑	❑	❑	❑
	4) Sidewalks are free of obstructions (e.g. trash cans, power poles, or parked cars)	❑	❑	❑	❑	❑
11.	**What do you think about overall walking environment (including sidewalks** [if available]**, roads, and buildings?**	**Strongly disagree**	**Somewhat disagree**	**Neither disagree nor agree**	**Somewhat agree**	**Strongly agree**
	1) It is convenient to walk to school	❑	❑	❑	❑	❑
	2) It is well maintained and clean	❑	❑	❑	❑	❑
	3) It is well shaded by trees	❑	❑	❑	❑	❑
	4) It is quiet (without much noise from cars, airplanes, factories, etc.)	❑	❑	❑	❑	❑
	5) There are nice things to see	❑	❑	❑	❑	❑
	6) Streets are well lit	❑	❑	❑	❑	❑

	7) The school zones are well enforced	❑	❑	❑	❑	❑

12.	**Do you have any of the following <u>safety concerns</u> about your child <u>walking to school</u>?**	**Strongly disagree**	**Somewhat disagree**	**Neither disagree nor agree**	**Somewhat agree**	**Strongly agree**
	1) My child may get lost	❑	❑	❑	❑	❑
	2) My child may be taken or hurt by a stranger	❑	❑	❑	❑	❑
	3) My child may get bullied, teased or harassed	❑	❑	❑	❑	❑
	4) My child may be attacked by stray dogs	❑	❑	❑	❑	❑
	5) My child may be hit by a car	❑	❑	❑	❑	❑
	6) Exhaust fumes may harm my child's health	❑	❑	❑	❑	❑
	7) No one will be able to see and help my child in case of danger	❑	❑	❑	❑	❑
	8) My child may get injured by falling	❑	❑	❑	❑	❑
	9) My child may encounter natural disasters (e.g. tornado)	❑	❑	❑	❑	❑

13.	**How do you feel about walking considerations?**	**Strongly disagree**	**Somewhat disagree**	**Neither disagree nor agree**	**Somewhat agree**	**Strongly agree**
	1) Walking to school involves too much planning ahead	❑	❑	❑	❑	❑
	2) It's easier/faster for me to drive my child to/from school	❑	❑	❑	❑	❑
	3) My child has too much to carry	❑	❑	❑	❑	❑
	4) My child gets too hot and sweaty	❑	❑	❑	❑	❑
	5) My child thinks walking to school is "cool"	❑	❑	❑	❑	❑
	6) My child walks quite often in his/her daily routine	❑	❑	❑	❑	❑
	7) Walking is a good way to exercise	❑	❑	❑	❑	❑
	8) Walking is a good way to interact with other people	❑	❑	❑	❑	❑

	9) I walk quite often in my daily routine	❑	❑	❑	❑	❑
	10) I (would) enjoy walking with my child to/from school	❑	❑	❑	❑	❑
	11) Other kids walk to/from school in my neighborhood	❑	❑	❑	❑	❑
	12) Other kids and parents walk quite often in their daily routines	❑	❑	❑	❑	❑

14.	**How do you feel about your <u>neighborhood and your child's school</u>?**	**Strongly disagree**	**Somewhat disagree**	**Neither disagree nor agree**	**Somewhat agree**	**Strongly agree**
	1) I feel connected to people in my neighborhood	❑	❑	❑	❑	❑
	2) I feel close to people in my neighborhood	❑	❑	❑	❑	❑
	3) I feel I belong in my neighborhood	❑	❑	❑	❑	❑
	4) I feel that most people in my neighborhood can be trusted	❑	❑	❑	❑	❑
	5) I often visit my neighbors in their homes	❑	❑	❑	❑	❑
	6) I often engage in community activities in my neighborhood	❑	❑	❑	❑	❑
	7) I often volunteer for my child's school affairs	❑	❑	❑	❑	❑
	8) My neighborhood has strong relationships with my child's school	❑	❑	❑	❑	❑
	9) The school is a safe shelter from natural disasters (e.g. tornado)	❑	❑	❑	❑	❑

The following questions ask about some family information

15.	**About the Child Who Brought the Survey Home**		
	1) Child is:	❑ Male	❑ Female
	2) Child's grade: _____		

	3) Is your child	❑ Hispanic	❑ White, Non-Hispanic	❑ African American	❑ Other: _____
	4) Does your child have any of the following health conditions (Check all that apply)				
	❑ Diabetes ❑ Depression	❑ Obesity ❑ ADHD	❑ Hypertension ❑ Autism	❑ Heart Conditions ❑ None of the above	❑ Asthma ❑ Others: _____
	5) During a usual WEEK, how many **days** does your child take part in physical activity for at least 60 minutes? _____ Days/WEEK				
	6) During a usual WEEKDAY, how many **minutes** does your child spend watching television, using a computer, reading, or playing video games, when not working/studying? _____ Minutes/WEEKDAY				
	7) During a usual WEEKDAY, how many **minutes** does your child play outdoors? (Do NOT count outdoor play during school hours) _____ Minutes/WEEKDAY				
	8) Where does your child play outside **at least once a week**?				
	❑ School	❑ Park/ Playground	❑ Yard at home	❑ Neighborhood streets	❑ Friend's house	❑ Others: _____
	9) Does your child qualify for special school lunch programs?	❑ Yes, free lunch	❑ Yes, reduced price lunch	❑ No	
	10) How many different elementary schools has your child attended? _____ Schools				

16.	**About Family Members**				
	1) What is your relationship to the child you are completing this survey for?				
	❑ Mother	❑ Father	❑ Grandmother	❑ Grandfather	❑ Other: _____
	2) Are you:	❑ Hispanic	❑ White, Non-Hispanic	❑ African American	❑ Other
	3) Were you born in the U.S.?	❑ Yes	❑ No		
	4) Which adults live with the child in the household? (Check all that apply, including yourself)				
	❑ Mother	❑ Father	❑ Grandmother	❑ Grandfather	❑ Other: _____
	5) Are any of those adults available to walk your child to/from school?	❑ Yes	❑ No		
	6) What is the highest level of education completed by any adult (including yourself) in your household?				
	❑ Elementary or less ❑ Some college/Associate degree	❑ Middle school ❑ College graduate/Bachelor's degree	❑ High school or GED ❑ Graduate/professional degree		
	7) What are the ages of all the children in your household? _____; _____; _____; _____; _____				

17.	**About Your Household**

	1) Closest intersection to your home:			
	Zip Code: ___ ___ ___ ___ ___			
	2) How long have you lived in your current residence? _____ Years			
	3) What's your main reason to choose this neighborhood? (Check all that apply)			
	❑ Housing price ❑ Quality of neighborhood	❑ Close to work ❑ Easy to walk around	❑ Close to my child's school ❑ Others: _____	❑ Quality of school ❑ None of the above
	4) How many cars are there in your household? _____ Cars			
	5) Do you have any pets in your household?	❑ None	❑ Dog(s)	❑ Cat(s)	❑ Others: _____
	6) Is your annual household income from all sources:			❑ Don't know/not sure	❑ Don't want to answer
	❑ Less than $5,000 ❑ $40,000-$59,999	❑ $5,000-$9,999 ❑ $60,000-$79,999	❑ $10,000-$19,999 ❑ $80,000-$99,999	❑ $20,000-$39,999 ❑ $100,000 or more
	7) Are any of your family members serving active duty in the U.S. military?			
	❑ Yes, one parent	❑ Yes, both parents	❑ Yes, other family member(s): _____	
	❑ No			

The following questions ask about challenges and activities in last year.

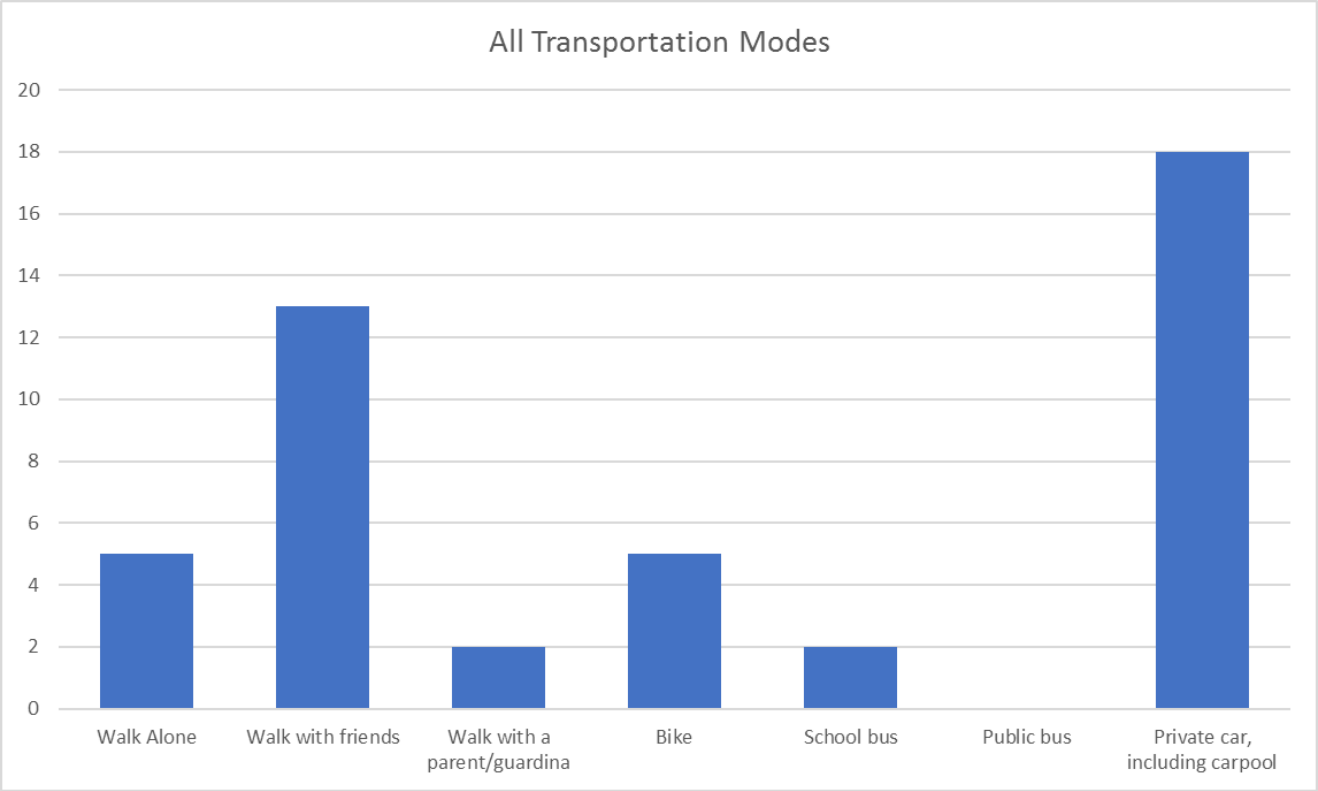
18.	**In the past year, did any of the following take place in your child's school or your neighborhood?** (Check all that apply)	
	❑ Walking to school month/day ❑ Media message promoting walking/biking to school ❑ Pedestrian safety education	❑ Crimes that involved school children ❑ Traffic accidents that involved school children ❑ Other: _____

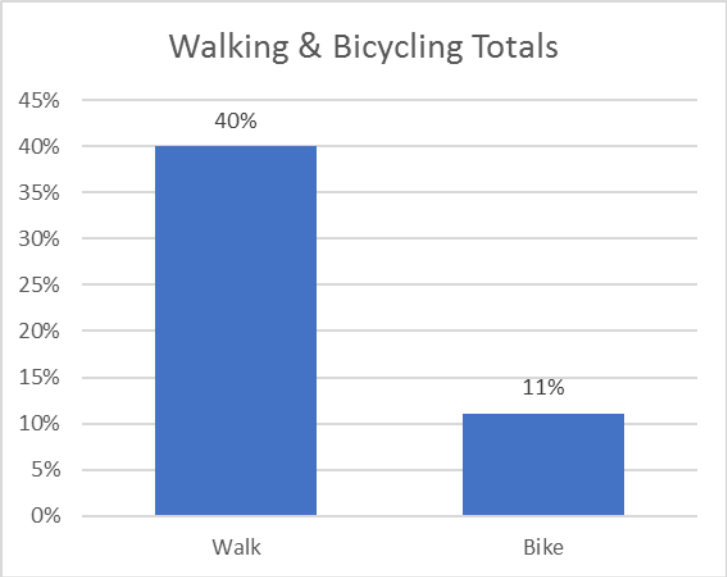
19.	**In the past year, did any of the following <u>environmental changes</u> take place along your child's way to school?** (Check at least one answer from **BOTH** columns)			
	Positive changes; new or improvements on:			***Negative changes***
	❑ Sidewalks	❑ Walking paths or trails		❑ Construction activities
	❑ Crosswalks	❑ Bike lanes	❑ Playgrounds	❑ Development of a large parking lot/garage
	❑ Parks	❑ Trees/ shade	❑ Drainage	❑ Development of industrial sites or junk yards

	❑ Traffic calming devices (e.g. speed bumps)	❑ Appearance of vacant lots		
	❑ Signage (e.g. school zone, child crossing warning)	❑ Increase in traffic	❑ Volume	❑ Speed
	❑ Others: _____	❑ Others: _____		
	❑ None of the above positive changes	❑ None of the above negative changes		

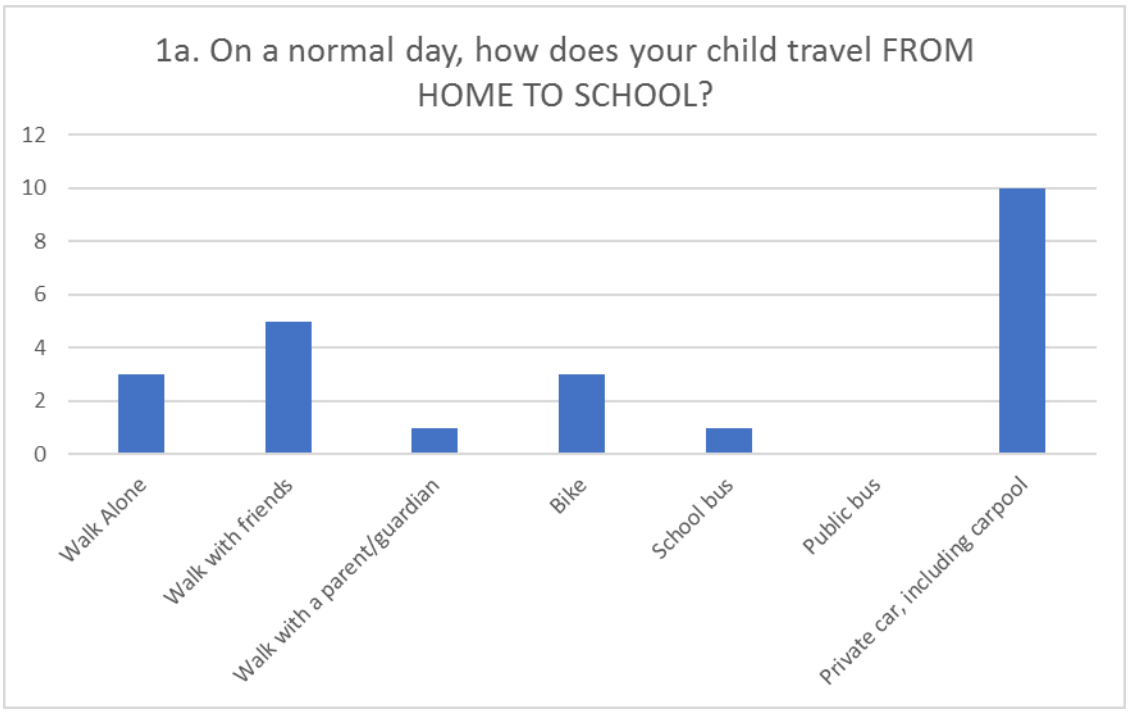
Results of the SRTS Student Arrival and Departure Tally Sheet

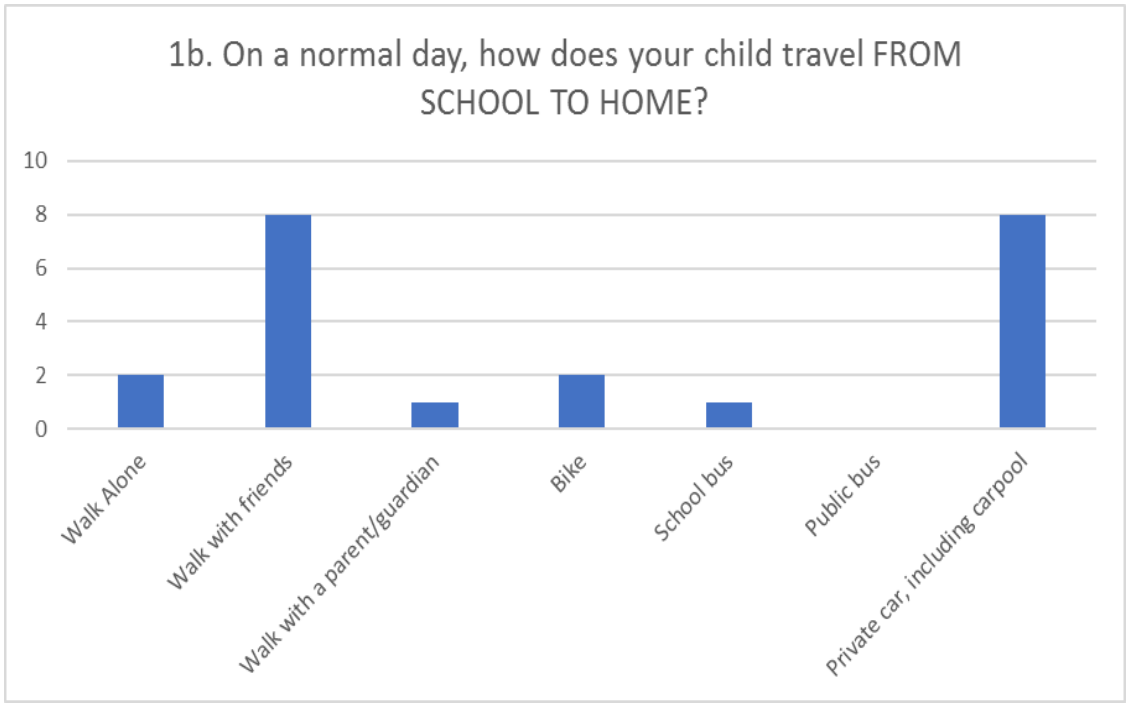
Chart 1: Student Arrival and Departure Modes

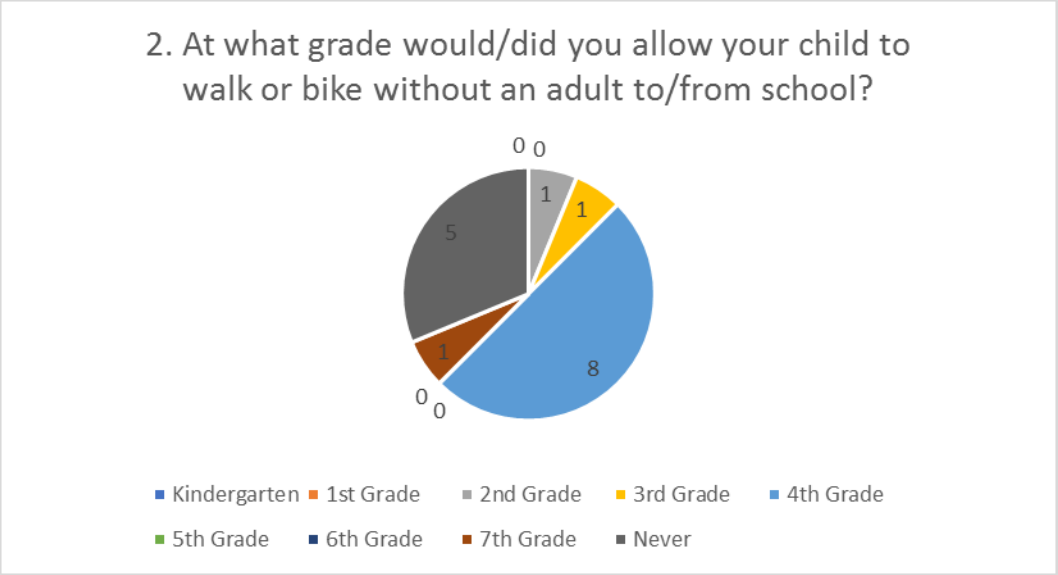


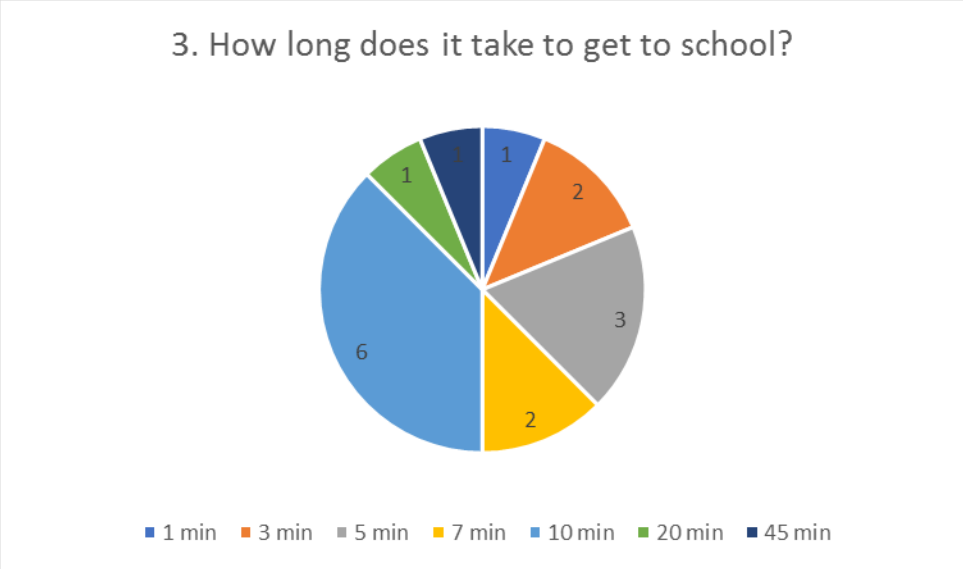


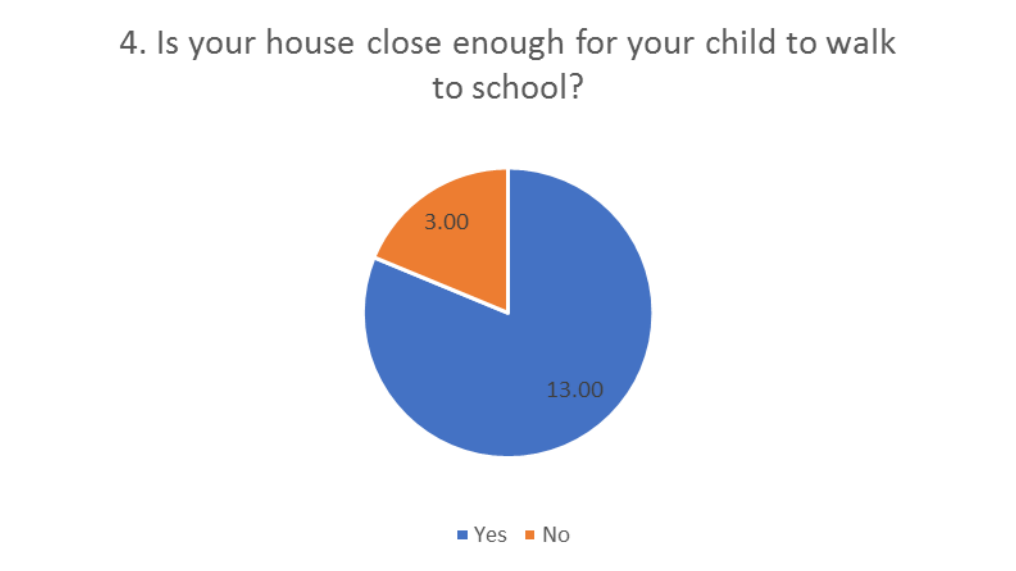
Complete Survey Results

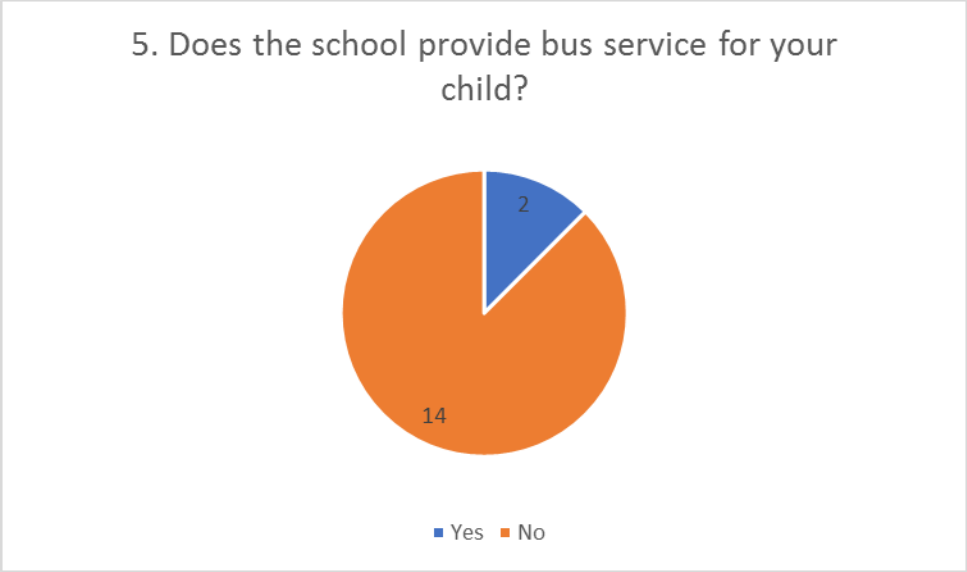


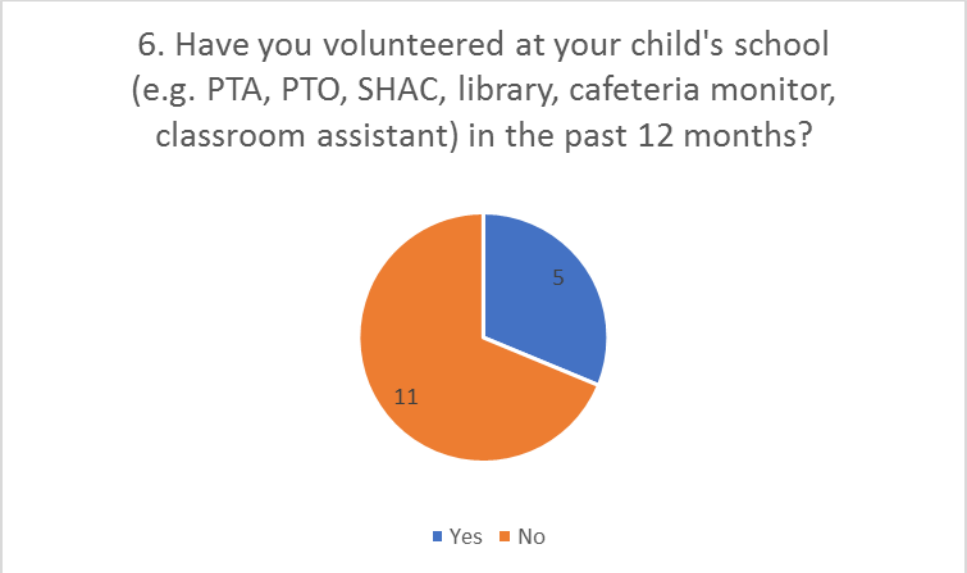



2. At what grade would/did you allow your child to walk or bike without an adult to/from school?
0
0
1
1
5
1
8
0
0
Kindergarten
1st Grade
2nd Grade
3rd Grade
4th Grade
5th Grade
6th Grade
7th Grade
Never

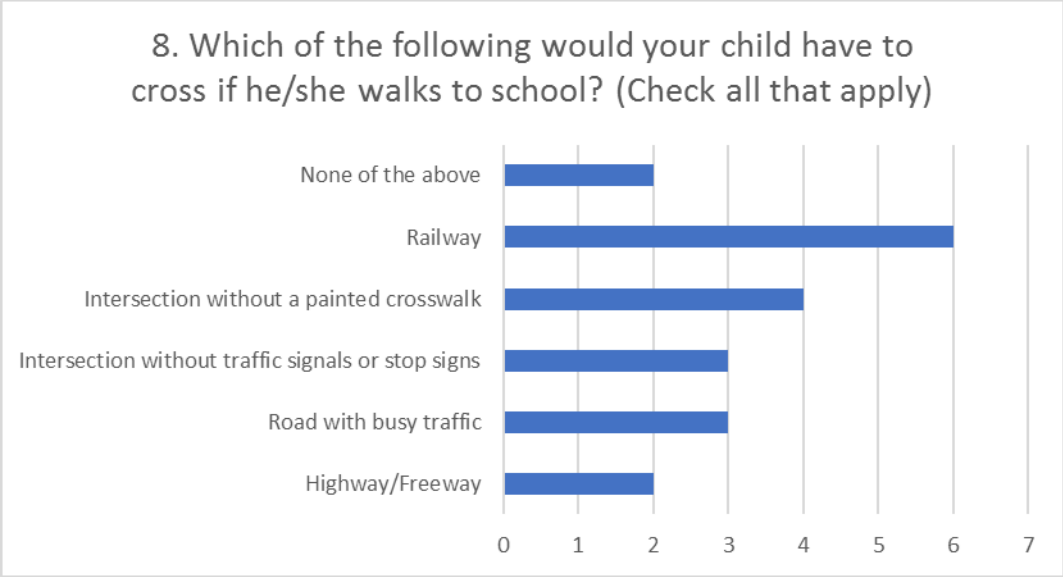

3. How long does it take to get to school?
1
2
3
2
6
1
1
1 min
3 min
5 min
7 min
10 min
20 min
45 min

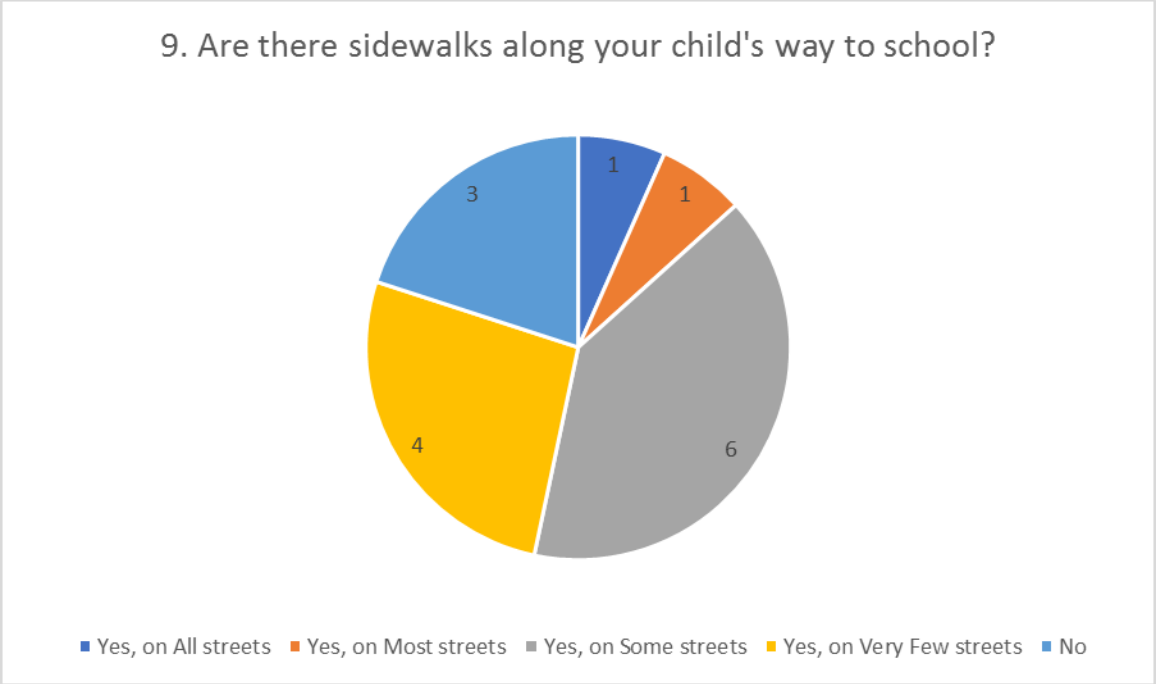

4. Is your house close enough for your child to walk to school?
3.00
13.00
Yes
No

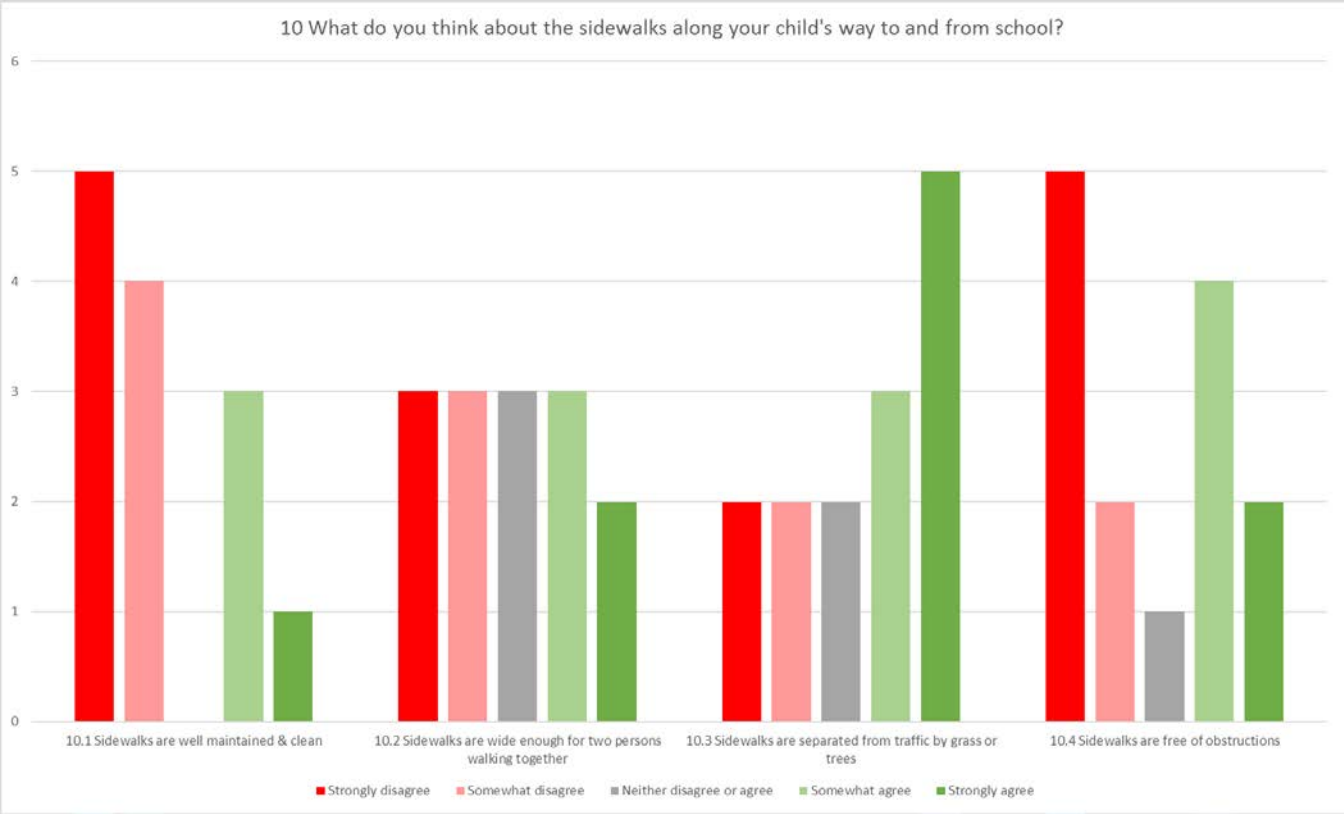

5. Does the school provide bus service for your child?
2
14
Yes
No

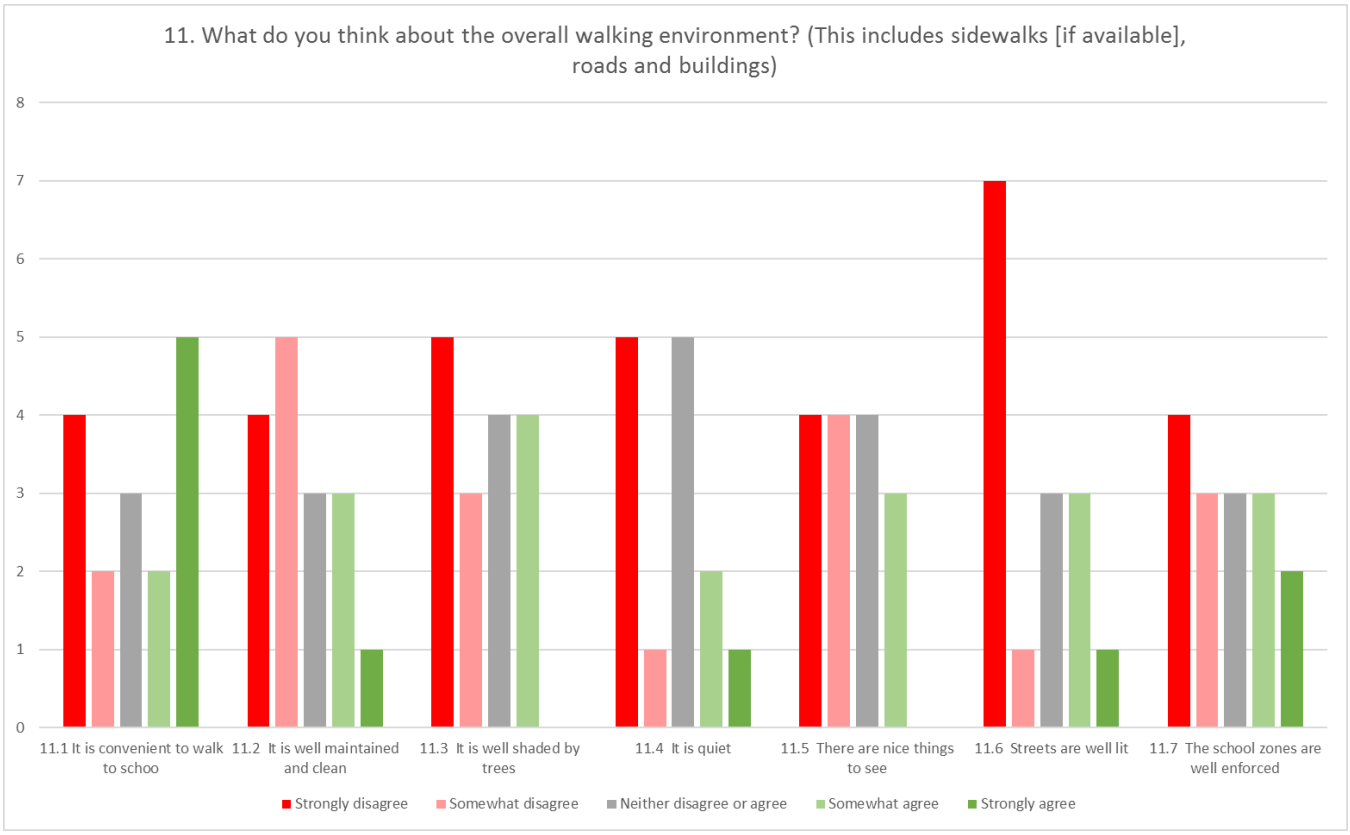

6. Have you volunteered at your child's school (e.g. PTA, PTO, SHAC, library, cafeteria monitor, classroom assistant) in the past 12 months?
5
11
Yes
No

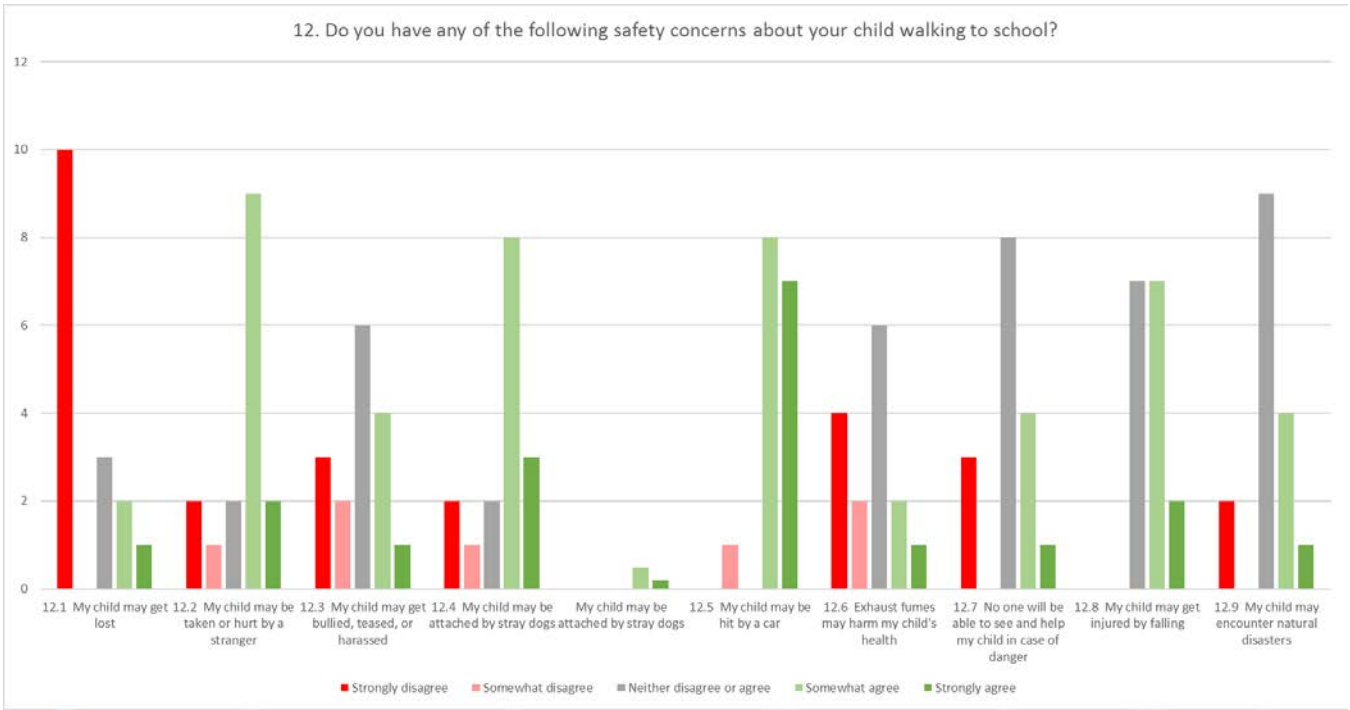

7. Which of the following are located along your child's way to school? (Check all that apply)
Other
None of the Aove
Gas Station
Vacant Lot
Industrial/Junk Yard
Large Office Building
Large Parking Lot/Garage
Community/Youth Center
Bus Stop
Small Retail/Business
Bakery/Café
Convenience Store
Walking Path/Trail
Park
Playground
0
1
2
3
4
5
6
7

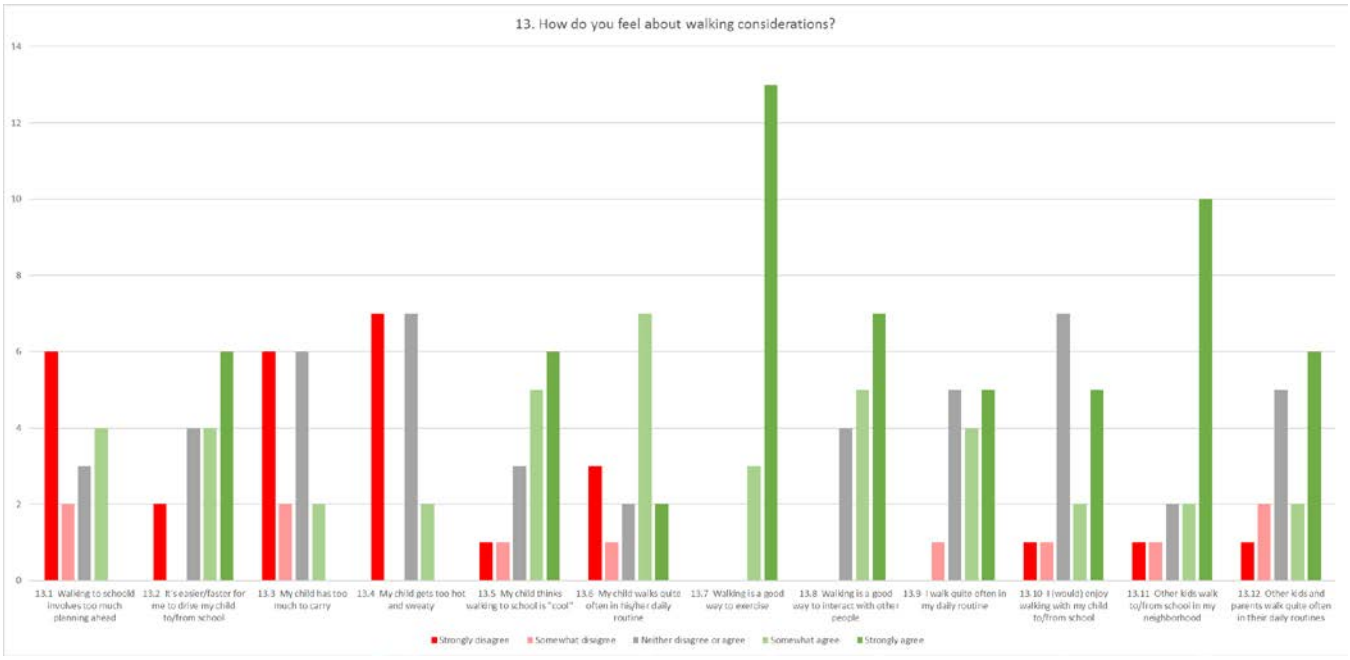

8. Which of the following would your child have to cross if he/she walks to school? (Check all that apply)
None of the above
Railway
Intersection without a painted crosswalk
Intersection without traffic signals or stop signs
Road with busy traffic
Highway/Freeway
0
1
2
3
4
5
6
7

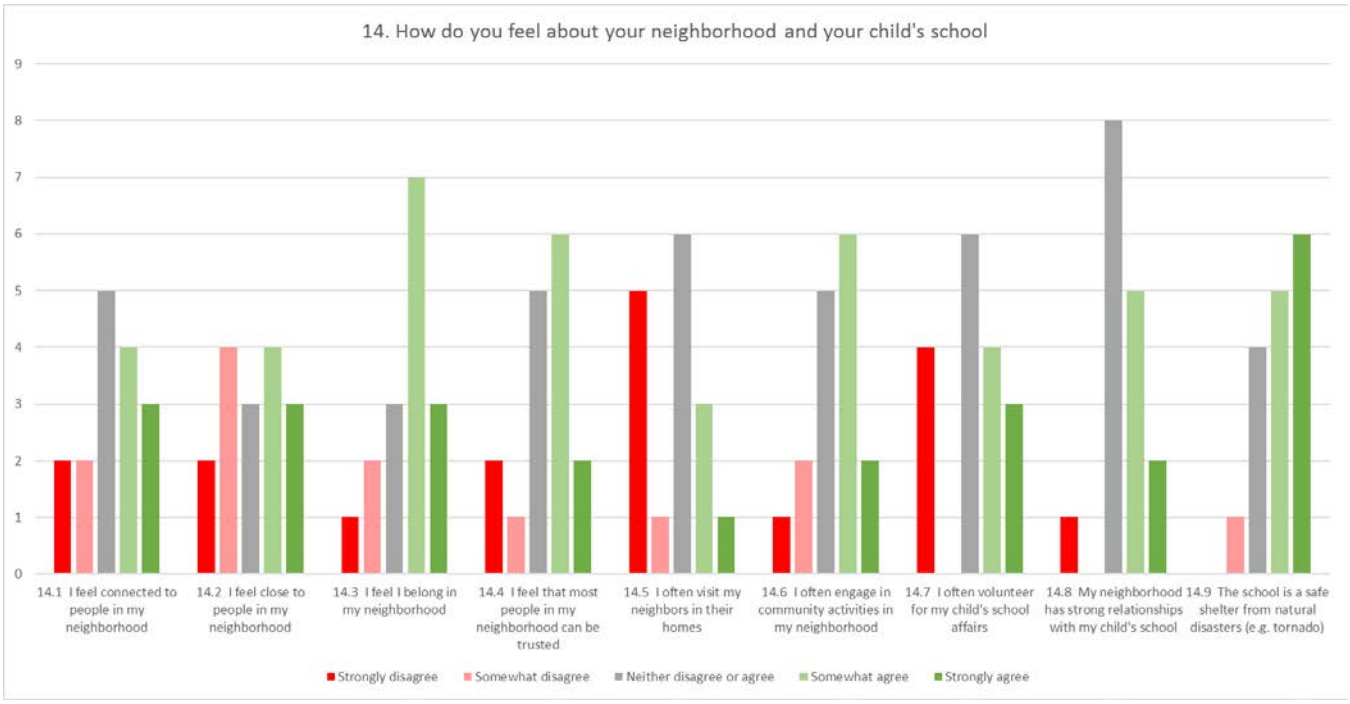

9. Are there sidewalks along your child's way to school?
1
1
3
4
6
Yes, on All streets
Yes, on Most streets
Yes, on Some streets
Yes, on Very Few streets
No


10 What do you think about the sidewalks along your child's way to and from school?
6
5
4
3
2
1
0
10.1 Sidewalks are well maintained & clean
10.2 Sidewalks are wide enough for two persons walking together
10.3 Sidewalks are separated from traffic by grass or trees
10.4 Sidewalks are free of obstructions
Strongly disagree
Somewhat disagree
Neither disagree or agree
Somewhat agree
Strongly agree


11. What do you think about the overall walking environment? (This includes sidewalks [if available], roads and buildings)
8
7
6
5
4
3
2
1
0
11.1 It is convenient to walk to schoo
11.2 It is well maintained and clean
11.3 It is well shaded by trees
11.4 It is quiet
11.5 There are nice things to see
11.6 Streets are well lit
11.7 The school zones are well enforced
Strongly disagree
Somewhat disagree
Neither disagree or agree
Somewhat agree
Strongly agree


12. Do you have any of the following safety concerns about your child walking to school?
12
10
8
6
4
2
0
12.1 My child may get lost
12.2 My child may be taken or hurt by a stranger
12.3 My child may get bullied, teased, or harassed
12.4 My child may be attached by stray dogs
My child may be attached by stray dogs
12.5 My child may be hit by a car
12.6 Exhaust fumes may harm my child's health
12.7 No one will be able to see and help my child in case of danger
12.8 My child may get injured by falling
12.9 My child may encounter natural disasters
Strongly disagree
Somewhat disagree
Neither disagree or agree
Somewhat agree
Strongly agree


13. How do you feel about walking considerations?
13.1 Walking to school involves too much planning ahead
13.2 It's easier/faster for me to drive my child to/from school
13.3 My child has too much to carry
13.4 My child gets too hot and sweaty
13.5 My child thinks walking to school is "cool"
13.6 My child walks quite often in his/her daily routine
13.7 Walking is a good way to exercise
13.8 Walking is a good way to interact with other people
13.9 I walk quite often in my daily routine
13.10 I (would) enjoy walking with my child to/from school
13.11 Other kids walk to/from school in my neighborhood
13.12 Other kids and parents walk quite often in their daily routines
Strongly disagree
Somewhat disagree
Neither disagree or agree
Somewhat agree
Strongly agree


14. How do you feel about your neighborhood and your child's school
14.1 I feel connected to people in my neighborhood
14.2 I feel close to people in my neighborhood
14.3 I feel I belong in my neighborhood
14.4 I feel that most people in my neighborhood can be trusted
14.5 I often visit my neighbors in their homes
14.6 I often engage in community activities in my neighborhood
14.7 I often volunteer for my child's school affairs
14.8 My neighborhood has strong relationships with my child's school
14.9 The school is a safe shelter from natural disasters (e.g. tornado)
Strongly disagree
Somewhat disagree
Neither disagree or agree
Somewhat agree
Strongly agree

Ogden
USD 383
SAFE ROUTES TO SCHOOL PLAN
Phase 1 Report

Flint Hills MPO

Original Report by

benesch
engineers · scientists · planners