Executive Summary

Purpose and Need
The purpose of the Grandview Heights Safe Routes to School Engineering Study is to identify and provide active transportation choices to and from school that will improve children’s safety and promote healthy lifestyles. To accomplish this, the study needs to improve connectivity for pedestrians and bicyclists, enhance safety of the existing infrastructure, and identify strategies beyond infrastructure to emphasize active transportation in students’ lives.

Background
The Grandview Heights City School District aims to provide children with the opportunity for a healthier lifestyle that is fun and safe. School and community leaders hope to increase the number of students who walk or bicycle to and from Stevenson Elementary, Edison Intermediate, and Grandview Heights Middle Schools. Data from 2007-2009 shows that 26 pedestrian or bicycle crashes occurred within a 1-mile radius of Stevenson Elementary and the Edison Intermediate/Grandview Heights Middle School campus, including one fatality in 2008.

Overview of Existing Conditions
Stevenson Elementary, Edison Intermediate, and Grandview Heights Middle Schools are located in Grandview Heights, Ohio. Robert Louis Stevenson Elementary houses grades K-3 and is located at 1065 Oxley Road, on the eastern side of Grandview Heights at the corner of Oxley Road and First Avenue. Edison Intermediate School (grades 4-5) and Grandview Heights Middle School (grades 6-8) are housed in the same building, located at 1240 Oakland Avenue. The campus is just south of Grandview Heights High School and just north of First Avenue. Both campuses have generally safe existing routes to school, yet only one-third of elementary students walk or bicycle to school (about 70% walk or bicycle to the intermediate and middle school).

Deficiencies, Countermeasures, & Costs
Improvements for both Grandview Heights school campuses include intersection safety enhancements and some sidewalk construction. Non-infrastructure improvements such as enforcement and encouragement are recommended now to complement the existing walking/biking environment along with the new infrastructure improvements that are proposed.

The costs associated with potential infrastructure improvements within the Grandview Heights City School District totals up to approximately $298,200.
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Existing Conditions

Current conditions within the Grandview Heights City School District were inventoried for Robert Louis Stevenson Elementary School, Edison Intermediate School, and Grandview Heights Middle School. This process included creating maps of the areas surrounding each of the schools and completing walk audits of the campuses and surrounding walkable areas. Walk audits were conducted on May 13, 2011, to observe existing conditions as well as arrival and dismissal patterns. Attendees of the walk audit included Tony Lococo (Grandview Heights SRTS Coordinator) and the TranSystems Consulting Team. Meetings were also held with Brian Bowser (principal of Stevenson Elementary), Bob Baeslack (principal of Edison Intermediate/Grandview Heights Middle), and Ed O’Reilly (Grandview Heights City Schools Superintendent).

The City of Grandview Heights is 1.4 square miles in area. The Grandview Heights City School District coincides with the Grandview Heights city limits as well as the Village of Marble Cliff limits. Because of the small size of the school district, no bus service is provided to any of the schools.

Both Stevenson Elementary School and Edison Intermediate/Grandview Heights Middle School have many key elements already in place that provides good walking and bicycling environments: central locations, sidewalk on most surrounding streets, and a location in a residential area. Some of the key issues that exist in relation to walking and bicycling to the Grandview Heights schools include:

- Many of the intersections throughout Grandview Heights do not have pedestrian crossing facilities. While most of the major intersections (such as Grandview & First and First & Oxley) have crosswalks across all four legs of the intersection, many of the side streets along the routes to the two school campuses do not.
- Riding bicycles is not allowed at Stevenson Elementary and there are no bicycle racks on the school grounds.
- There are sidewalks on most streets throughout Grandview Heights; however, there are a few notable
areas missing sidewalks, most within a half-mile of the elementary school.

**Robert Louis Stevenson Elementary School**

Robert Louis Stevenson Elementary houses grades K-3 and is located at 1065 Oxley Road, on the eastern side of Grandview Heights at the corner of Oxley Road and First Avenue. Pierce Field is located across Oxley from the school along with a small commercial corridor; the rest of the area surrounding the school is residential. There are sidewalks on most of the surrounding streets providing good pedestrian connectivity from the surrounding neighborhood. However, Stevenson's lactation on the eastern side of the school district combined with the age of the students prevents many parents from letting their children walk to school.

The main entrance to the school is located on Oxley, but students are also allowed to enter the building from the south side adjacent to First Avenue as well as the north side. Most parents who drop off and pick up their children use First Avenue, many parking or idling in the “No Parking” zone in front of the school; some parents use Oxley Road to drop off. Many parents walk or bicycle with their children to school. Additionally, an adult crossing guard is stationed at the First Avenue/Oxley Road intersection to help the students cross safely at his intersection. There is also an adult crossing guard stationed at the Grandview Avenue/First Avenue intersection, which is located just over half a mile west of the school.

**Edison Intermediate School & Grandview Heights Middle School**

Edison Intermediate School (grades 4-5) and Grandview Heights Middle School (grades 6-8) are housed in the same building, located at 1240 Oakland Avenue. The campus is just south of Grandview Heights High School and just north of First Avenue. Most of the area surrounding the campus is residential except for the commercial areas around the First/Oakland intersection and along First Avenue toward Grandview Avenue. The majority of the streets surrounding the campus have sidewalks. There are also crosswalks on all
legs of each intersection on First Avenue from Oakland Avenue to Grandview Avenue; however, there are few crosswalks to the west. The City is currently resurfacing Oakland Avenue from First Avenue to Third Avenue. The project includes the addition of a multipurpose pathway on the school side of the road (replacing the existing sidewalks), a raised crosswalk across Oakland just south of the school drive, and curb bulb-outs along Oakland to slow traffic.

There are five entrances around the west, south, and east sides of the building that are all used for arrival and dismissal as each grade level is assigned a “preferred” door to enter and exit the building through. Bicycle racks are located near all of these entrances. Parents dropping off or picking up students at the intermediate school use the driveway off of First Avenue while parents dropping off/picking up at the middle school use the drive off of Oakland Avenue. However, the majority of students walk or bicycle to school. Additionally, an adult crossing guard is stationed at the intersection of First Avenue and Fairview Avenue/school driveway for the intermediate and middle school arrival as well as the intermediate school dismissal. The adult crossing guard stationed at the Grandview Avenue/First Avenue intersection is also on duty at the same time.
Assessment of Crash Data

Ohio School Crash Statistics were provided by ODOT for 2007-2009. This data shows that 25 pedestrian or bicycle crashes occurred within a one-mile radius of either the elementary school or the intermediate/middle school campus. Twenty of the crashes involved injuries. Additionally, there was one fatality at the intersection of Northwest Boulevard and Third Avenue, an area just outside of the school district but still within about half a mile of both school campuses. Fourteen of the crashes involved bicyclists and eleven, including the fatal crash, involved pedestrians. While this may seem like a high number of crashes, it likely makes up a small percentage of the children who walk or bicycle to school because there is high percentage of students that walk/bicycle to school in Grandview. Furthermore, 40% of these accidents were located in the cities of Columbus or Upper Arlington and were likely not along the routes children would take to walk/bicycle to school in Grandview Heights.

Three of the bicycle crashes occurred within one block of the intermediate/middle school campus; none were immediately adjacent to the elementary school. The majority of the crashes occurred along the main thoroughfares through Grandview Heights, including First Avenue and Third Avenue. Since most of the streets through Grandview Heights are not high speed, this implies that there may be difficulty in pedestrian/bicyclist awareness in these areas.

Surveys completed at each school in May of 2010 indicated that almost 60% of the elementary students live within half a mile of Stevenson and only 20% live further than one mile away. Roughly half of the students at the intermediate/middle school live within half a mile of the school and only about 12% live more than one mile away. While both campuses have roughly the same number of students living within half a mile of their respective school, there are significantly more walkers and bicyclists at the intermediate/middle school. Surveys showed that about 70% of students at the intermediate/middle school walk or bicycle to school while roughly 30% arrive by carpool or family vehicle. These numbers are essentially switched at the elementary school where roughly 34% of students walk or bicycle and 66% arrive by car.

The traffic volumes for roads near the schools were obtained from the Mid-Ohio Regional Planning Commission (MORPC) and are shown in Table 1. In general, traffic volumes are not high, so they don’t seem to be a major obstacle to active transportation in the community.

<table>
<thead>
<tr>
<th>Location</th>
<th>ADT (year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grandview Ave (south of Third Ave)</td>
<td>11,659 (2007)</td>
</tr>
<tr>
<td>First Ave (east of Grandview Ave)</td>
<td>2,989 (2009)</td>
</tr>
<tr>
<td>First Ave (west of Oakland Ave)</td>
<td>3,087 (2009)</td>
</tr>
<tr>
<td>Oakland Ave (north of First Ave)</td>
<td>1,163 (2009)</td>
</tr>
</tbody>
</table>
Improvement Suggestions

Infrastructure

A comprehensive solutions strategy was developed consisting of general countermeasures for each of the 5 E’s (Engineering, Encouragement, Education, Enforcement, and Evaluation). In general, the areas surrounding both Grandview Heights school campuses have good infrastructure for walking and bicycling. The Improvement Suggestions being made will help improve upon these existing conditions while providing suggestions for the areas that are lacking in current infrastructure. After improvements are made, a concerted effort on the part of the school and parents will be necessary to encourage more walking and bicycling among students.

A time frame has also been identified for each of the proposed countermeasures based on the estimated cost for implementation. The different timeframes are as follows:

- Short Term Low Cost: $20,000 or below;
- Medium Term Medium Cost: $20,000 to $150,000; and
- Long Term High Cost: $150,000 or above.

Robert Louis Stevenson Elementary School

Problem: The intersection of Virginia Avenue and First Avenue only has crosswalks across the Virginia legs of the intersection, not across First. However, this is a good location for pedestrians and bicyclists to cross First Avenue as it provides good visibility in all directions.

Proposed Countermeasure 1: Paint ladder-style crosswalks across First Avenue at Virginia Avenue. Additionally, the crosswalks across Virginia can be repainted in the ladder-style to make them more visible.

Time Frame (Estimated Cost): Short Term Low Cost ($1,200)

Proposed Countermeasure 2: In order to make drivers more aware of the crosswalk, highly visibly “Pedestrian Crossing” signs (similar to the ones in front of Edison) can be installed along First Avenue in both approaches to the intersection.

Time Frame (Estimated Cost): Short Term Low Cost ($600 total – $300 per sign)

Proposed Countermeasure 3: The crosswalk signage on First Avenue could be made even more visible by including flashing lights, similar to the crosswalk signage that is along Northwest Boulevard before the Oxley Road intersection.

Time Frame (Estimated Cost): Short Term Low Cost ($18,000 for 2 sets of flashing beacons)
Problem: There are no crosswalks across First Avenue between Grandview Avenue and the previously mentioned proposed crossing at Virginia Avenue. Additionally, there are only crosswalks across three of the streets that cross First Avenue in this area (Parkway Drive, Virginia Avenue, and Palmer Road).

Proposed Countermeasure 1: Paint ladder-style crosswalks parallel to First Avenue at the following intersections: Glendale, Avondale, Hope, and Willard. These corners have existing curb ramps that meet ADA compliance.

Time Frame (Estimated Cost): Short Term Low Cost ($2,400)

Proposed Countermeasure 2: Paint ladder-style crosswalks across First Avenue at Hope Avenue. This will provide students with a location to safely cross First Avenue when going to or coming from both school campuses. Highly visibly “Pedestrian Crossing” signs (similar to the ones in front of Edison) should be installed along First Avenue in both approaches to this intersection.

Time Frame (Estimated Cost): Short Term Low Cost ($1,200 total – $600 for crosswalk striping and $600 for 2 signs)

Proposed Countermeasure 3: The crosswalk signage on First Avenue could be enhanced by including flashing lights, similar to the crosswalk signage that is along Northwest Boulevard prior to the Oxley Road intersection.

Time Frame (Estimated Cost): Short Term Low Cost ($18,000 for 2 sets of flashing beacons)

Problem: The “School Zone” signage around Stevenson is rather subtle. Making this signage more visible will help increase drivers’ awareness that a school is nearby.

Proposed Countermeasure: Install overhead flashing “School Zone” signs that are similar to those in front of the high school campus. These signs should be located along First Avenue and Oxley Road at an appropriate distance to properly alert drivers that they are entering a school zone.

Time Frame (Estimated Cost): Medium Term Medium Cost ($50,000)

Problem: There is an existing crosswalk across Oxley Road at Hilo Lane, in front of the elementary school. This crosswalk does have signage on Oxley Road in both directions, but this signage could be made more visible as it is an ideal location for students coming from the residential areas east of Northwest Boulevard to cross.

Proposed Countermeasure 1: Make the crosswalk more visible by adding overhead crosswalk signage (like what has been done in front of the high school) at this location.

Time Frame (Estimated Cost): Short Term Low Cost ($2,000)

Proposed Countermeasure 2: The crosswalk signage along Oxley Road should be more visible by including...
flashing lights, similar to the crosswalk signage that is along Northwest Boulevard prior to the Oxley Road intersection.

**Time Frame (Estimated Cost):** Short Term Low Cost ($18,000 for 2 sets of flashing beacons)

**Proposed Countermeasure 3:** A raised crosswalk, similar to what is being constructed on Oakland Avenue in front of the intermediate/middle school, can be installed at this location to provide added visibility of pedestrians as well as to help slow drivers in front of the school.

**Time Frame (Estimated Cost):** Medium Term Medium Cost ($20,000)

**Problem:** Hilo Lane is a good connector for students coming from the residential areas north and east of Northwest Boulevard to get to school. However, there are no sidewalks along Hilo Lane, so students have to walk in the road with any traffic when taking this route. Additionally, there are not adequate pedestrian crossing facilities at the Northwest and Hilo intersection.

**Proposed Countermeasure 1:** Install 5-foot concrete sidewalks along Hilo Lane for a distance of approximately 600 feet. The sidewalk ideally should be located on the south side of the road so that students only need to use the existing crosswalk at Hilo and Oxley to get to the school. However, there are basketball courts at the park that are close to the road as well as some dedicated on-street parking spaces that the sidewalk will need to fit around.

**Time Frame (Estimated Cost):** Medium Term Medium Cost ($24,000)

**Proposed Countermeasure 2:** Paint a ladder-style crosswalk across Hilo Lane on the west side of Northwest Boulevard. Additionally, the crosswalk on the east side can be repainted in the ladder-style to make it more visible.

**Time Frame (Estimated Cost):** Short Term Low Cost ($600)

**Proposed Countermeasure 3:** Add a crosswalk across Northwest Boulevard at the intersection with Hilo Lane. This crosswalk should be on the south side of the intersection to line up with the proposed sidewalk on the south side of Hilo Lane. Curb ramps will need to be installed on Hilo Lane to make the crosswalk ADA-compliant. Additionally, the crosswalk can be routed through the existing center median in Northwest Boulevard to provide a pedestrian refuge area; this will require ADA-compliant curb ramps on both sides of the median as well.

**Time Frame (Estimated Cost):** Short Term Low Cost ($8,600 total – $600 for crosswalk; $2,000 per curb ramp)

**Proposed Countermeasure 4:** In order to make drivers aware of the crosswalk, “Pedestrian Crossing” signs with flashing beacons (similar to the crosswalk signage that is at the Northwest Boulevard and Oxley Road intersection) should be installed along Northwest Boulevard in both approaches to the crosswalk.

**Time Frame (Estimated Cost):** Short Term Low Cost ($18,600 for 2 sets of signs with flashing beacons)
Problem: There is a gap in the sidewalk on Bluff Avenue where it curves and turns into Avondale Avenue.

Proposed Countermeasure: Install 5-foot concrete sidewalks along Bluff/Avondale Avenues for a distance of approximately 300 feet to fill this gap in the existing sidewalk network. The sidewalk will cross an alley, so ADA-compliant curb ramps will need to be installed at that location; there is already a curb ramp at the corner of Avondale and First that the sidewalk can tie into. The City has looked into filling this gap in the sidewalk and found that there is one property that may require a take outside of the right-of-way, but the owner of this property is in support of adding the sidewalk.

Time Frame (Estimated Cost): Short Term Low Cost ($16,000 total – $12,000 for sidewalks and $4,000 for 2 curb ramps)

Problem: The intersection of First Avenue and Palmer Road is located across the street from the elementary school and has been noted as an area of concern by school officials. There is not a crosswalk across First Avenue at this intersection; however, there is a crosswalk across Palmer Road. Since the intersection is skewed, this crossing distance is longer than the typical two-lane residential street crossing distance. Additionally, there is a substantial amount of traffic that turns left down Palmer Road from First Avenue after dropping children off at school, which can be dangerous for the children crossing the street near this intersection.

Proposed Countermeasure 1: Paint a ladder-style crosswalk across the western leg of First Avenue from the western-most corner of Palmer Road to the school. During the field visit, it was observed that many students are dropped off on the south side of First Avenue, west of Palmer Road, and then dart across the street or jaywalk with their parents. Putting a crosswalk on the west side of Palmer Road will provide a safe location for students who are getting dropped off in this area to cross. Additionally, they will only have this one crossing instead of having to cross Palmer Road as well. Portable “Yield to Pedestrians within Crosswalk” signs can be placed at the crosswalk for added crossing safety during school hours.

Time Frame (Estimated Cost): Short Term Low Cost ($1,200 total – $600 for crosswalk striping and $600 for 2 portable signs)

Proposed Countermeasure 2: To prevent the quick left-turns onto Palmer from First Avenue, a “pork chop” island can be installed on Palmer Road to make access right-in, right-out only. A summary of the traffic impacts that would result from this can be seen in the “Other Issues” section of this document.

Time Frame (Estimated Cost): Medium Term Medium Cost ($40,000)

Problem: There are no bicycle racks at the elementary school as the current administration feels that this may be an unsafe mode of travel for the young students at Stevenson.

Proposed Countermeasure: The current routes to Stevenson are rather safe and with the proper education, bicycling to school can be a great option for the elementary students. Therefore, wave-style bicycle racks (like the newer racks at the intermediate/middle school) should be installed at high visibility locations at the school. School officials can monitor their usage and add additional bicycle racks if needed in future to exceed bicyclist demand.

Time Frame (Estimated Cost): Short Term Low Cost ($2,000 total – $400 per rack)
Edison Intermediate/Grandview Heights Middle School

**Problem:** The intermediate/middle school campus already has a number of bicycle racks in various locations around the building. While two areas have newer bicycle racks, most of the racks are old and should be replaced. Additionally, the bicycle rack on the south side of the building is not in a highly visible area.

**Proposed Countermeasure:** Replace the old bicycle racks around the campus with the same wave-style racks that can be found on the northwest side of the building. When the bicycle rack on the south side of the school is replaced, it can be relocated to an area closer to the doors to make it more visible.

**Time Frame (Estimated Cost):** Short Term Low Cost ($2,400 total – $400 per rack)

**Problem:** The “School Zone” signage around the intermediate/middle school campus is rather subtle. Making this signage more visible will help increase drivers’ awareness that a school is nearby.

**Proposed Countermeasure:** Install overhead flashing “School Zone” signs that are similar to those in front of the high school campus. These signs should be located along First Avenue at an appropriate distance to properly alert drivers that they are entering a school zone (preferably before Broadview and Ashland Avenues).

**Time Frame (Estimated Cost):** Medium Term Medium Cost ($25,000)

**Problem:** The crosswalks along First Avenue between Oakland and Grandview are not visible until a driver is in the crosswalk. This creates an unsafe condition for the children and can be improved.

**Proposed Countermeasure:** Repaint these existing crosswalks to conform to ladder-style so they stand out more to drivers.

**Time Frame (Estimated Cost):** Short Term Low Cost ($4,800)

**Problem:** Between Cambridge Boulevard and Oakland Avenue (approximately ½ mile) there are no pedestrian crosswalks across First Avenue.

**Proposed Countermeasure:** Paint ladder-style crosswalks parallel to First Avenue at the following intersections: Lincoln, Wyandotte, Glenn, Westwood, Elmwood, and Ashland. This way, students coming from the west and southwest of the campus can safely cross all of the cross streets along First Avenue. Students needing to cross First Avenue can then do so at Oakland where there is an existing pedestrian crossing device.

**Time Frame (Estimated Cost):** Short Term Low Cost ($7,200)

**Problem:** There is not a safe location for students coming from north of Third Avenue (between Cambridge Boulevard and Glenn Avenue) to cross Third Avenue.
**Proposed Countermeasure:** Paint a ladder-style crosswalk across all four legs of the Third Avenue/Wyandotte Road intersection. While the school district extends to cover part of Glenn Avenue, Wyandotte is the last aligned intersection and would be the most logical location for a crosswalk in this area.

**Time Frame (Estimated Cost):** Short Term Low Cost ($1,200)

**Problem:** Some parents indicated in their take-home surveys that they would let their children bike along First Avenue if there was a bike lane along the road.

**Proposed Countermeasure:** The current configuration of First Avenue (one travel and one parking lane in each direction) will not permit an added bike lane in each direction without requiring substantial construction to widen the road. However, shared lane markings or “sharrows” for bicyclists can be added along First Avenue from Cambridge Boulevard to Northwest Boulevard (for an approximate length of 1.5 miles). These in-road pavement markings will help alert motorists that bicyclists may be sharing the road with them as well as let bicyclists know where they should be positioned when riding in the street. The pavement markings should be placed no more than 250 feet apart. Signage should be installed along First Avenue to further alert motorists of the shared roadway.

**Time Frame (Estimated Cost):** Short Term Low Cost ($15,200 total – $12,800 for 64 “sharrow” pavement markings and $2,400 for signage along First)

**Non-Infrastructure**

**Education**

*Raise public awareness of safe non-motorized travel to and from school and promote positive prevention measures.*

**Walking Program:** A walking program could be established to educate children on safe walking habits. This program should be developed around school curriculum and rewards could be provided for completing the program. School “Walk-Smart” routes have been produced that establish recommended travel routes in order to encourage walking to school by providing a safe and efficient route to school. School crossing guard locations, crosswalk locations, and existing intersection controls are provided to inform students and parents of area conditions. “Walk-Smart” route maps will be distributed to each student at each school in order to educate students and parents on the appropriate route to/from their school.

**Safety Town:** The City or School District could coordinate a Safety Town program every year for pre-kindergarten aged children. Through the program, children are taught a number of safety issues including pedestrian, bicycle, and bus safety. Encouraging, or even requiring, students to
attend this before they begin kindergarten is a great way to get them to start learning pedestrian and bicycle safety from a young age.

**Bike Rodeo:** A Bike Rodeo is usually a bicycle safety clinic featuring bicycle safety inspections and a short, safety lecture about the rules of the road. This is followed by a ride on a miniature “chalk street” course set up in a parking lot where young cyclists are shown where and how to apply the rules. Optional activities include helmet fitting, prizes and drawings, and in some cases commercial activities such as booths set up by bicycle shops. The main focus of a bike rodeo is cycling safety for young cyclists from kindergarten to eighth grade.

Rodeos are usually held a week or two after school is out for the summer. They are usually held on a Saturday in a large parking lot where a fairly large chalk course can be laid out with simulated streets, intersections, crosswalks and stop signs. The participants are usually escorted through the course by knowledgeable adult cyclists who point out hazards, safety tips, and explain how to apply the rules of the road that were mentioned in the lecture. This initial lecture is best handled by local Police officers, either assigned or volunteers, who are familiar with bicycle safety issues and who are cyclists themselves. These officers are frequently interested in participating in such events, because they see crashes resulting from uneducated cyclists. The City of Grandview Heights could incorporate a bike rodeo into their Tour de Grandview, possibly as a pre-cursor event to the race.

**Education & Encouragement Campaign:** Have activities throughout the year at both Stevenson and Edison/Grandview Heights Middle to promote and encourage appropriate walking and bicycling behaviors to both students and parents. These events can be held during school hours as well as evening events that parents would be able to attend. Events can include:

- Walk to School Contests – rewarding students who walk to school the most out of a classroom or from the whole school with extra credit or breakfast with a local “celebrity.”
- “Frequent Walker Cards” – providing students with rewards from participating local retailers.
- “Golden Sneakers” award – a prize that goes around the school at a chosen interval (weekly, monthly, etc) to the student or classroom who has walked the most miles or trips; additionally, golden sneakers markers can be used to mark preferred routes to school.
- Walk/Bike Across America – students keep track of the distance they walk or bicycle (figured by mapping the route they take from their house or a drop-off point to the school) and at a certain time each week, the class adds up their collective mileage and map it to see how far they’ve walked (teachers can incorporate lessons about the places their class has “walked” to). Classes can compete to see who has “walked” the farthest and the winning class can get a prize.

Make sure to publicize all events in school newsletters, on the district’s website, and even with the local media. There can even be a monthly “column” in the school newsletters and/or online detailing an SRTS event being held that month or just a key concept related to SRTS.
Encouragement

*Provide safe and effective methods to promote active transportation.*

**Walking School Bus:** One way to encourage students to walk to school is by starting a walking school bus. The walking school bus is a group of children walking to school with one or more adults. The walking school bus can also take the form of a bicycle train with adults supervising children riding their bicycles to school. Walking school buses can be started by neighborhood parents and can grow to accommodate more students as interest grows. Adult supervision ensures a safer walk or bicycle ride to school for students while students benefit from exercise and fun with friends.

Some streets in Grandview Heights already have walking school buses. To encourage more streets to participate in walking school buses, programs can be listed with the school where interested parents can sign up to volunteer. For safety precautions, the Grandview Heights Police Department can provide background checks and fingerprint all volunteers. Volunteers are provided with vests that identify them as “drivers” and utilize walkie-talkies or cell phones so they can coordinate with other volunteers or police officers. The volunteers can either go door to door to pick up children or stand at designated stations. To keep the “drivers” motivated and involved, they can receive small incentives throughout the year which could include gift certificates or other items donated by local businesses. The volunteers increase the “eyes on the street” and can quickly identify problem intersections and criminal activity.

**Walking/Biking days:** Schools can establish a day of the week when walking and bicycling to school is especially encouraged and kids can walk to school with adult supervision. For example, every week on Wednesday, orange cones can be set up along the route to increase awareness to motor vehicle drivers that more kids will be walking this day and to highlight the path the students will be walking. Parents can be involved by volunteering to be assigned to a hazard area (street corner, street crossing, or slippery spot) or they can walk with their children to school. This is a great weekly walking event for kids to spend more time with their parents. The Grandview Heights City School District already does a “Walk to School Day” every year and they can use this event to encourage more walking/biking days throughout the year. Information on Walk to School Day is available at [http://www.walktoschool.org/](http://www.walktoschool.org/).

**Enforcement**

*Prevent unsafe behaviors of drivers, pedestrians, and bicyclists while reinforcing active travel behaviors.*

Enforcement countermeasures would potentially include the following measures:

- Provide visible presence for enhanced behavior of drivers, pedestrians, and bicyclists to deter dangerous activities. This should especially be done in the “No Parking” zone on First Avenue in front of Stevenson Elementary.
- Monitor the speeds of vehicles and enforce the speed limits, especially along First Avenue in front of both school campuses.
Provide guidance/education to pedestrians and motorists on traffic laws and necessary safety measures.

Deploy speed trailers to further assist in the education and enforcement of the speed limits in the vicinity of the schools.

Provide classroom education on the “rules of the road” and safely getting to and from school.

Provide information on the Education and Encouragement events on the front page of the school district’s website.

Develop crossing guard training whose benefits will be twofold: the police will get engaged in pedestrian issues while at the same time educating crossing guards and the general public.

Patrolling in winter months to make sure citizens are keeping their sidewalks clear of snow and enforcing fines if they are not complying.

The school zone enforcement and education is a countermeasure that is anticipated to be combined with other enforcement, education, engineering, and encouragement strategies that are a part of the overall school travel plan.

**Evaluation**

*Provide annual evaluation of program effectiveness and improve partnerships between the school district (including the individual schools) and local agencies.*

**Pedestrian/Bicycle Counts:** Pedestrian and bicycle counts can be collected yearly through a School Travel Tally Sheet filled out by home room teachers. This process can be used after the proposed countermeasures have been implemented to see how much the number of walkers and bicyclists to school rises.

**Parent/Teacher Follow-up Surveys:** Parent surveys were administered in the spring of 2010 as one of the first steps of the School Travel Plan. To determine the effectiveness of any proposed countermeasure(s), follow-up surveys should be conducted periodically. The results of the surveys can identify which existing programs and/or design require modification to address unmet needs. Specific focus should be placed on the type of measures that will increase a parent’s perception of safety so they will allow or encourage their child to walk or bicycle to school.

**Speed Data and Traffic Infractions:** The effectiveness of the proposed infrastructure countermeasures will be evaluated, in part, by the collection of speed data and traffic infractions. Speed counts will be conducted at or near locations where proposed countermeasures have been implemented and possibly where there is previous speed data, if available. Before and after data will be compared to determine possible benefits, such as lower traffic speeds and/or traffic volumes.
Other Issues

The intersection of First Avenue and Palmer Road is located across the street from Stevenson Elementary School and was noted as an area of concern by school officials and the SRTS team. The intersection is roughly 200 feet west of the Oxley Road/First Avenue intersection. The northbound Palmer Road approach is also skewed and has poor sight distance to the west on First Avenue. Converting the termini of Palmer Road into a Right-in/Right-out at First Avenue would improve the safety from both vehicle and pedestrian standpoints without having a substantial impact to the traffic patterns. It will also eliminate the conflicting lefts turns along First Avenue (between westbound lefts at Palmer Road and eastbound lefts at Oxley Road) within a very short distance.

Most of the houses along Palmer Road use the parallel alleys to access garages (with the exception of 6 or 7 houses north of Mulford Road, on the west side of Palmer Road). These alleys provide access to Oxley Road and Mulford Road. If Palmer Road is made a Right-in/Right-out at First Avenue, the westbound left turning vehicles (which may not be many considering Palmer Road south of Mulford Road is one-way northbound) can turn left at Oxley Road or at Virginia Road, which is about 600 feet west of Palmer Road. The northbound left turning traffic can turn on Mulford Road and access First Avenue from either Virginia Avenue or Oxley Road.
Appendices

Appendix A – Proposed Countermeasures Maps

Appendix B – School Walking Maps
Appendix A – Proposed Countermeasures Maps
Stevenson Elementary Proposed Countermeasures Map

1) New Bike Racks
2) New School Warning Flashers
3) Improve Crossing at Intersection
4) Construct Sidewalk Connection

Proposed Shared Bicycle Lane
1/2-Mile Radius
Grandview Heights City School District

1 inch = 725 feet
Edison Intermediate & Grandview Heights Middle
Proposed Countermeasures Map

1) New Bike Racks
2) New School Warning Flashers
3) Improve Crosswalks
4) Construct Sidewalk Connection

- Proposed Shared Bicycle Lane
- 1/2-Mile Radius
- Grandview Heights City School District

1 inch = 725 feet
Appendix B – School Walking Maps
School Walking Maps Description

These maps are intended to be a resource for parents as well as school administrators to demonstrate the safest routes for children to walk or bike to/from school. It is important to note that the final choice falls in the hands of the parents of every student.

**Recommended Route** – these streets are recommended for children to walk or bike along due to the presence of sidewalks or other off-street pathways.

**Recommended Route with Caution** – these streets are low volume, low speed, residential streets without sidewalks/other pathways or they are high volume, high speed arterial streets with sidewalks/other pathways. In either case, these streets are recommended for children to walk or bike along with Caution.

**Discouraged Route** – these streets are not recommended for children to walk or bike to/from school since they have NO sidewalks or other off-street pathways.

**Marked Crosswalks** – locations of existing crosswalks.

**Crossing Guard** – locations where crossing guards are present during arrival and dismissal.

**Difficult Intersections** – these intersections (signalized or un-signalized) should be crossed with caution due to one or more of the following issues; high volumes, high speeds, or lack of crosswalks (or other crossing devices).

**School Flasher** – approximate locations of 20 MPH school zone flashers.

**Traffic Signal** – locations of existing traffic signals.

**Enrollment Area** – this is the approximate area in which students are located.

½ Mile Radius – this distance is roughly considered the furthest that children between Kindergarten and Eighth Grade will walk to school. It should take a child approximately 20 minutes to walk or 10 minutes to bike a ½ mile (times can vary depending on terrain and other stoppages).
Stevenson Elementary Walking Map

- Recommended Route
- Recommended Route with Caution
- Discouraged Route
- School Zone Sign
- Crossing Guard
- Crosswalk
- Traffic Signal
- Difficult Intersection
- 1/2-Mile Radius
- Grandview Heights City School District

1 inch = 725 feet
Edison Intermediate & Grandview Heights Middle Walking Map

- **Recommended Route**
- **Recommended Route with Caution**
- **Discouraged Route**
- **School Zone Sign**
- **1/2-Mile Radius**
- **Crossing Guard**
- **Crosswalk**
- **Traffic Signal**

Grandview Heights City School District

1 inch = 725 feet