Community Focus Statement G: Improve traffic flow and vehicular safety.

Action Statement G.2: Investigate traffic safety at major intersections and in areas susceptible to vehicle/pedestrian conflict in conjunction with a Safe Routes to School Program.

Benchmark: A community-led Safe Routes to School (SRTS) Program is implemented.
Champion: Volunteer group or person or can be identified by the community
Estimated Cost: Variable depending on improvements proposed

Example of a sharrow that signals to both cyclists and drivers that there are bicyclists in the area. This helps drivers be more aware and helps cycling become a more viable option for school transportation. Photo source: Christopher Cotrell

Pedestrian safety studies specialize in the measurement of existing travel patterns, latent demand, operations, safety, and recommended accommodations. A study of this type for Phelan Piñon Hills would allow for an operations and safety assessment which could in turn outline alternatives to help reduce the number of vehicle and pedestrian conflicts.

Another option for vehicle/pedestrian conflict resolution or mitigation is the development and implementation of a Safe Routes to School (SRTS) Program. Implementing a SRTS program is a way to improve walking and bicycling accommodations near schools in an effort to improve safety and accessibility for children at Phelan Elementary School, including those with disabilities. This would in turn increase the number of children who choose to walk and bicycle to school. On a broader level, SRTS programs can enhance children's health and well-being, ease traffic congestion near the school, improve air quality, and improve community members' overall quality of life. The National Center for Safe Routes to School outlines the steps at www.saferoutesinfo.org. The steps are meant as guidance by providing a framework for establishing a SRTS program based on what has worked in other communities. Some communities may find that a different approach or a reordering of these steps works better for them.

To establish a Safe Routes to School Program, the California Department of Transportation (Caltrans) identifies the following general steps:

- Identify community stakeholders and form a multidisciplinary team of partners committed to working together in developing a community vision, developing project applications, and implementing those projects if selected for funding.
- Inventory and identify safety needs/hazards around schools, get information and seek out resources, and propose alternatives that would correct those needs/hazards.

- Prioritize alternatives and select the best alternative that proposes short-term and long-term safety solutions in the form of projects.
- Develop a plan for the project.
- Submit an application to compete for funding for the project when a call for projects cycle is under way.

Pedestrian Safety Study and SRTS Estimated Costs

Potential Implementation/Study	Cost (typical or average per measure or item)
Pedestrian Safety Study	$20, 000 per study
Create a SRTS Program	$ 50,000–$100,000 per study

Once a study is complete and funding is identified, plans for improvements could be developed and infrastructure installed. Table 2 summarizes potential future infrastructure that could be installed as part of the pedestrian safety study and/or in the implementation of a SRTS Program.

Potential Pedestrian Safety Improvements and Estimated Costs (Least to Most Expensive)

Traffic Calming Measure	Description	Cost (average)
Road Diet	Road diets can be an efficient tool for incorporating different modes of transportation onto one street. Where volumes and capacity permit, a road diet can narrow or reduce travel lanes and allow for the installation of bicycle and pedestrian facilities. The reduction of lanes allows the roadway to be reallocated for other uses such as bike lanes, pedestrian crossing islands, equestrian travel, and/or parking.	Depends on the level and types of improvements
Advance Yield Lines	Advance yield lines indicate where motorists and bicyclists are required to yield to pedestrians in an upcoming crosswalk. They may be used in advance of marked crosswalks at locations not controlled by a stop sign or traffic signal. They are designed as a row of white triangles resembling "shark's teeth." They should be placed between 20 and 50 feet in advance of the crosswalk, and parking is prohibited between the markings and the crosswalk. They are marked along with posting of "Yield Here to Pedestrians" signs.	Pavement marking costs per square foot are generally as follows: Median price $10 Average price $10 Minimum price $4.46 Maximum price $100 (Costs for Pedestrian and Bicyclist Infrastructure Improvements – FHWA 2013)
Advance Stop Lines	Advance stop lines indicate where motorists and bicyclists are required to stop where there are marked crosswalks with stop signs or traffic signals. They should be placed at least 4 feet in advance of	Pavement marking costs per square foot are generally as follows: Median price $10

Traffic Calming Measure	Description	Cost (average)
	the marked crosswalk, although they are more effective at 6 or more feet.	Average price $10 Minimum price $4.46 Maximum price $100 (Costs for Pedestrian and Bicyclist Infrastructure Improvements – FHWA 2013)
Stop Signs		$800–$1,000 per stop sign
Striped Crosswalk		$1,000–$5,000 per crosswalk
High-Visibility Crosswalks	High-visibility crosswalks generally have longitudinal lines that run in the same direction as the street. They are sometimes called "zebra-stripe" crosswalks or "continental" crosswalks. If they have lateral (transverse) lines along with longitudinal lines, they are called "ladder" crosswalks. Motorists can see these much better than typical transverse-line or "transverse" crosswalks.	Median price $3,070 Average price $2,540 Minimum price $600 per unit Maximum price $5,710 per unit (Costs for Pedestrian and Bicyclist Infrastructure Improvements – FHWA 2013)
Pedestrian Signage and Flashing Beacons	Appropriate signage accompanies uncontrolled (no signals or stop signs) pedestrian crossings as additional notification to drivers of the crossing. Flashing beacons can supplement pedestrian signage to command extra attention from drivers. The California Manual on Uniform Traffic Control Devices specifies the design and installation standards of various pedestrian signs and flashing beacons.	Median price $5,170 Average price $10,010 Minimum price $360 Maximum price 59,100 per unit (Costs for Pedestrian and Bicyclist Infrastructure Improvements – FHWA 2013)
Sharrows and Signed Bike Routes	The purpose of sharrows is to let motorists know that they need to share the street with bicyclists. Sharrows are designed with chevrons and bicycle stencils on the roadway to alert travelers to "be aware and share" the road with bicyclists, as well as to communicate to bicyclists where they should position themselves on the road to be most visible. The sharrow and signed bike route options can be implemented easily and are relatively inexpensive to install and maintain.	Median price $27,240 Average price $25,070 Minimum price $5,360 per mile Maximum price $64,330 per mile (Costs for Pedestrian and Bicyclist Infrastructure Improvements – FHWA 2013)
Traffic Signal		$300,000–$400,000 per signal

Action	Action Leader	Timeline	Resources
1. Organize a SRTS team of advocates to evaluate the need, methods, and scope of a Safe Routes to School Program.	Champion	Years 1 – 3	Safe Routes Partnership www.saferoutespartnership.org Safe Routes to School Noteworthy Practices Guide http://www.saferoutesinfo.org/sites/default/files/resources/SRTS%20Noteworthy%20Practices%20Guide%20FINAL.pdf California Active Transportation Resource Center: Tools http://www.casaferoutestoschool.org/get-assistance/tools/ Safe Routes Info, SRTS Guide http://guide.saferoutesinfo.org/steps/index.cfm Southern California Association of Governments Grants https://scag.ca.gov/opportunities/Lists/Grants/AllItems.aspx
2. Organize an active transportation "walk-a-bout" with the SRTS team and local planning, engineering, and other officials to assess the safety, convenience, and preferred routes for a SRTS Program.	SRTS team	Years 1 – 3	
3. Draft a SRTS Program that includes the five E's outlined by the Federal Highway Administration (Engineering, Education, Enforcement, Encouragement, and Evaluation).	SRTS team	Years 1 – 3	
4. Apply for funding for implementing the strategies in the program.	SRTS team	Years 1 – 3	
5. Implement the program and evaluate adjustments as needed.	SRTS team	Annually	