

Bethke Elementary School

August 2023

**School Transportation Operations and
Safety Review and
Recommendations**

1. Introduction

This report documents the evaluation of area transportation operations and safety related to Bethke Elementary School in Timnath, Colorado. The school is part of the Poudre School District, and the evaluation follows the standardized process outlined in the past few years by the district.

This evaluation is a collaborative effort between Poudre School District and the Town of Timnath and included discussions with district, school, and town staff, a review of site conditions, and field observations during the morning drop off and afternoon pick up peak periods.

The focus of the study is to fully understand and evaluate current conditions in the vicinity of the school and based on current standards and national best practices, identify potential circulation, operational and safety improvements. The result is a summary of observations, findings, and recommendations which could improve safety and efficiency on the school grounds and adjacent roadways.

Bethke Elementary is located at 5100 School House Drive in Timnath. See **Figure 1**.



Figure 1. Vicinity Map

The school is a neighborhood school and serves students from pre-kindergarten through 5th grade. The number of students currently enrolled is about 550. Enrollment is growing with significant additional housing approved for construction north of the school.



**Bethke
Elementary**
Pre K – 5th grade
~ 550 students

2. Site Information / Existing Conditions

Building and Grounds

Bethke Elementary is located inside the oval-shaped School House Drive just south of Harmony Road between Three Bell Parkway and Latham Parkway. There are two one-way access drives (one on the west side and one on the east side) with parking for staff and visitors internal to each loop. There are 67 parking spaces in the west access area and 31 spaces in the east access area for a total of 98 on-site parking spaces. There is adequate parking on the school grounds. See **Figure 2**.



Figure 2. Bethke Elementary with Adjacent Roadways

The school has on-site sidewalks along the outside of each of the access drives. These sidewalks connect to crosswalks to cross School House Drive. The main school entrance is on the west side of the school.

Adjacent Transportation Network

Except for the two one-way access drives, all area roadways in the vicinity of Bethke Elementary School are owned and maintained by the Town of Timnath.

School House Drive (west)

The west side of School House Drive (to Summerfields) is classified as a major collector on the Town's master street plan. Speed limit 25 mph. School warning signs in the vicinity.

46 ft road width - one travel lane in each direction.
Narrow parking lanes on both sides, striped bike lanes, and detached sidewalks.
Marked school crosswalks at Stone Pt and Summerfields.

School House Drive (east)

The east side of School House Drive (to Summerfields) is classified as a local road in the Town's master street plan. Speed limit 25 mph. School warning signs in the vicinity. 46 ft road width - one travel lane in each direction. Narrow parking lanes on both sides, striped bike lanes, and detached sidewalks. Marked school crosswalks at Eagle Creek Dr and Wheatfield Ln.

Summerfields Parkway

Classified as a major collector on the Town's master street plan. Speed limit 25 mph. School warning signs on the northbound approach to School House Drive. Road width varies with the presence of medians - one travel lane each direction. Parking lanes on both sides, striped bike lanes, and detached sidewalks. Summerfields crosses the Great Western railroad tracks about 1,000 ft south of School House Drive.

*Summerfields Parkway
About ¼ mile south of Bethke
at Railroad Tracks*



Wheatfield Lane

Classified as a local road on the Town's master street plan. Speed limit 25 mph. 46 ft road width. Parking lanes on both sides, striped bike lanes, and detached sidewalks.

Stone Pt Drive and
Eagle Creek Drive

Classified as a local road on the Town's master street plan. Speed limit 25 mph. 35 ft road width. Parking is allowed, bicycles share the road, and detached sidewalks.

The intersections in the area are all two-way STOP controlled with free flow traffic along School House Drive. See **Figure 3** for an inventory of school-related facilities, signs, and markings.

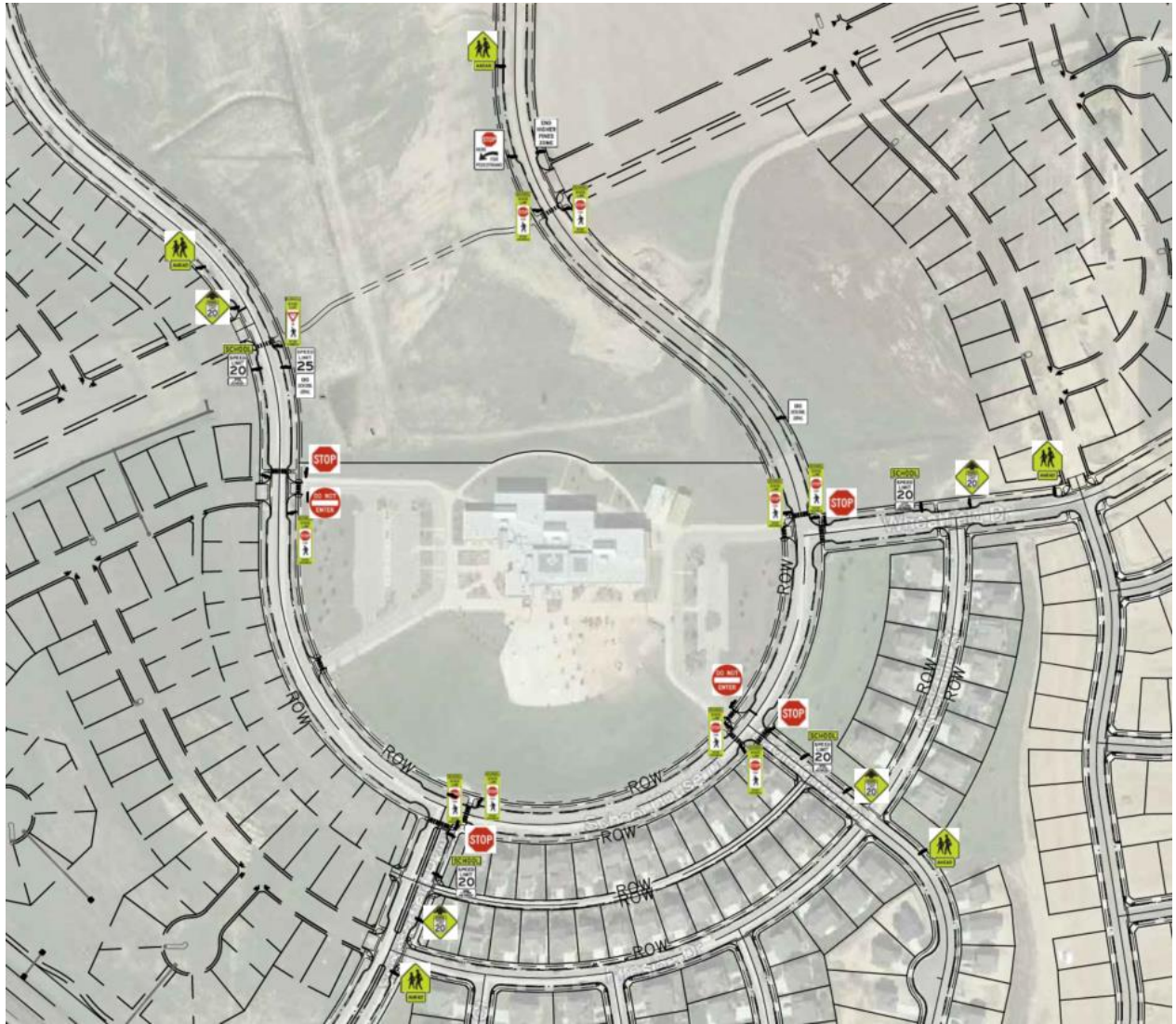


Figure 3. Traffic Control Device Inventory

School Transportation Operations

Timing

Peak times for school traffic at Bethke Elementary are as follows:

AM Inbound:	1st students begin arriving	7:35	PM Outbound:	Parent parking starts	2:25
	Most arrivals/drop offs occur	7:45-7:55		Dismissal bell	2:38
	School starts	8:00		Most pickups occur	2:40 - 2:50
				Area cleared out	2:50

Staffing

There are approximately 14 school staff members assigned to assist in transportation management. This includes four staff members that serve as crossing guards for students to cross School House Drive in the

four crosswalks, three staff members in the bus area and about seven staff members that manage the vehicular drop off / pick up area on the west side of the school.

Vehicle Circulation

Figure 4 depicts the overall transportation operations around Bethke.

Drivers bringing students to school via private vehicles mostly do so in the drop-off and pick-up area on the west side of the school. Queuing occurs in the northbound parking lane of School House Drive. (Depicted in yellow in **Figure 4**.)

Some drivers also enter the west drive loop and park their vehicles in the parking area. (Depicted in blue in **Figure 4**.)

Finally, there were approximately 25-30 vehicles parked in various locations along School House Drive to drop off or pick up their students. (Depicted in white/black in **Figure 4**.) There is extensive parking available along School House Drive, and it is not fully utilized.

Walking and Biking Numbers

Many students access the school by walking or biking. **Figure 4** shows the number and location of students that cross School House Drive to access the school. The numbers represent the number of students during the morning or afternoon peak hour, i.e. in the morning those numbers of students would be 'inbound' while in the afternoon those numbers of students would be 'outbound'.

Conversations with school staff and the crossing guards indicated that on the day of observation the number of students was typical. During the late spring or early fall, there may be a few more students walking/biking, while during inclement weather the number of students walking / biking is significantly reduced.

There were very few students crossing School House Drive outside of the four crosswalks. Those few students appeared to be crossing the road with adults to get to waiting vehicles.



Vehicles queuing along northbound School House Drive waiting to turn into the west drive loop for student pick up.



Students crossing School House Drive with the aid of a crossing guard after school.

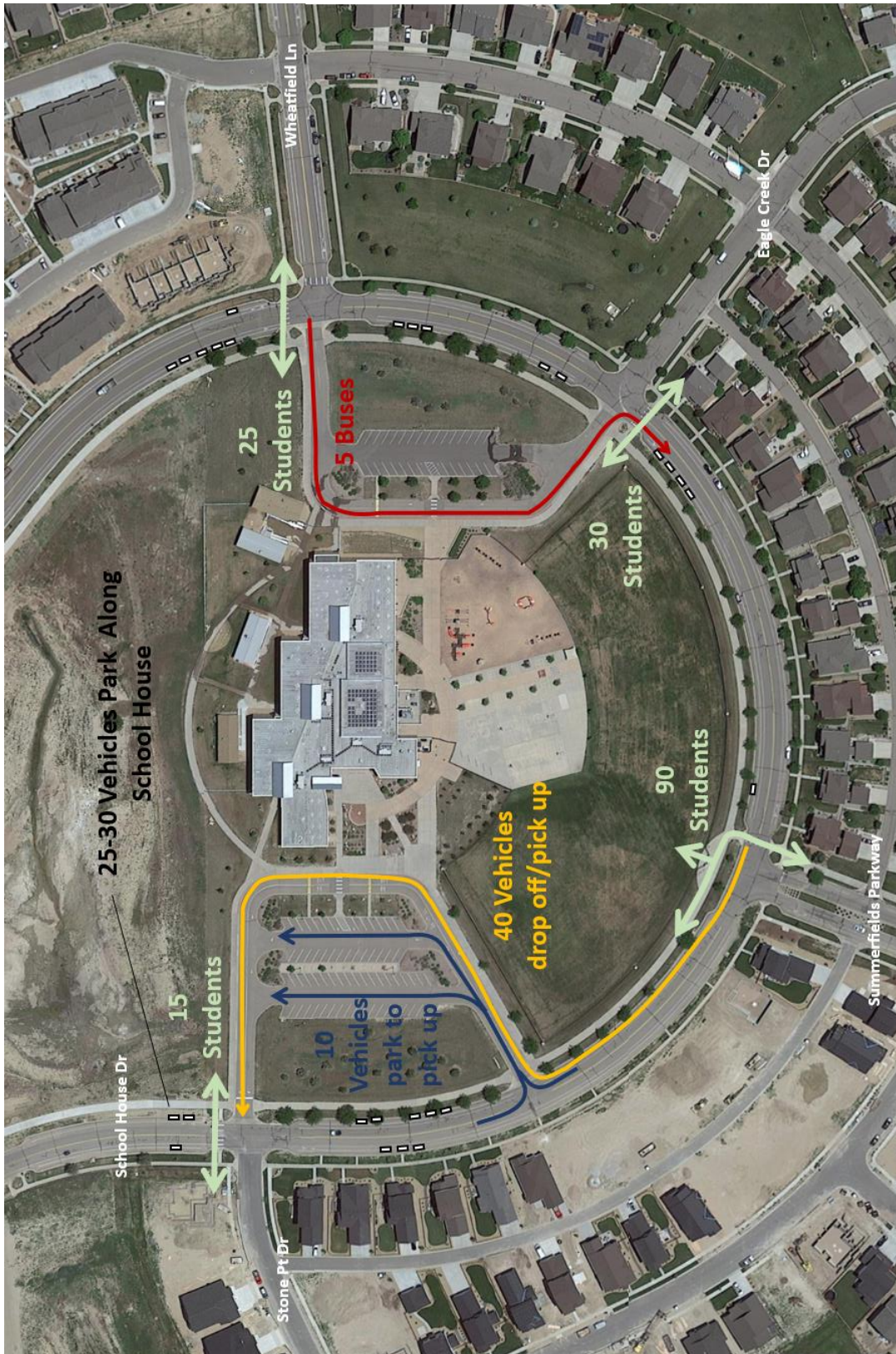


Figure 4. Bethke Transportation Operations

Area Transportation

Busing

The neighborhood school enrollment area for Bethke Elementary is shown in **Figure 5**. Students residing in the area between the railroad tracks and Harmony Road are within the walk area. Students eligible for busing include all students south of the railroad tracks (highlighted in light green in **Figure 5**).

There are hundreds of students within the busing area, which requires five to six buses. All of the bus routes use Summerfields Parkway to get to / from school.

Walking Routes

For those students in the non-busing area, the district has identified recommended walking routes that are shown in **Figure 6**. Routes are along the local roads using the detached sidewalks and cross School House Drive at one of four signed, marked, and staffed crosswalk locations.

The only exception is a group of houses just west of the school adjacent to School House Drive (shaded in yellow in **Figure 6**). The online district walking routes indicate that any students residing in those homes should cross School House Drive at the south school driveway entrance where there is no marked crosswalk. It is NOT recommended to be a crossing location and it IS recommended that the district's walking routes for those handful of addresses be changed to show students using the marked crossings to the north or south of the homes.

Individual walking routes from each address can be found online at: <https://schoolbus.psdschools.org/TransportationEligibility> (any address can be entered, and if no busing is provided, then a walking route is shown).



Figure 5. Transportation Options at Bethke

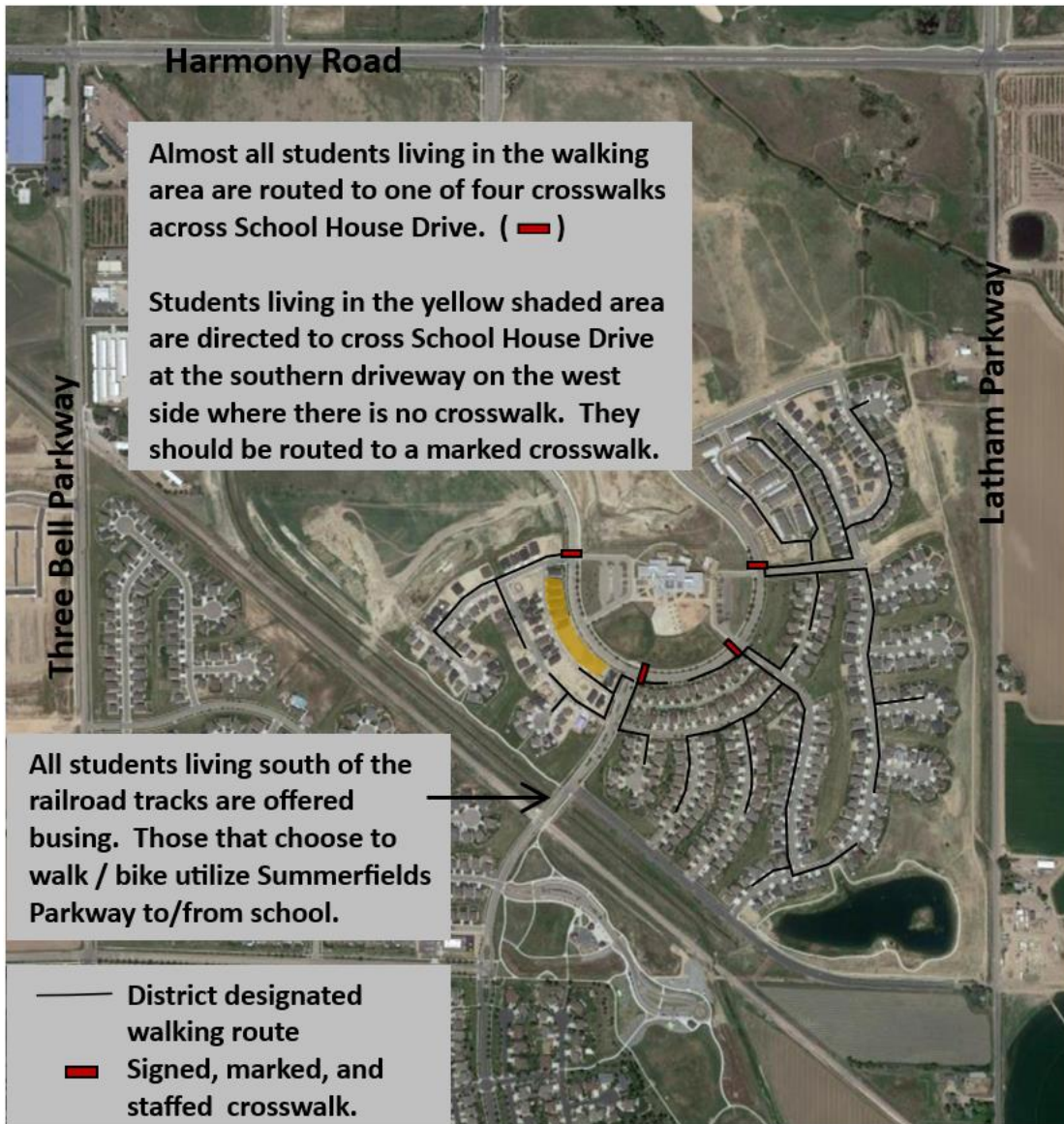


Figure 6. District Designated Walking Routes

3. Observations and Safety Review

Vehicle and Bus Observations

- The vehicle drop off and pick up loop is on the west side of the school (refer back to **Figure 4**). Queues extend out to and onto School House Drive. The queue stacks in the northbound parking lane on School House Drive. During the observation day there was a landscape service vehicle parked in the parking lane, resulting in the pickup queue having to maneuver around the service vehicle. See photo at right. No significant congestion was noted.



Queue in Travel Lane Due to Parked Vehicle

- Parents wanting to park and walk into the school will often park in the parking lot on the west side of the school. They can access these spaces without having to wait in the pickup queue. Operationally this appeared to work well.
- Twenty-five to 30 parents park along School House Drive for student drop off and pick up. Most do this on the 'inside' of School House Drive so there is no need to cross the road. A few parked on the 'outside' of the road. Observation showed students crossed the road mid-block together with their parents to access these vehicles. Ideally these drop offs and pick up would occur on the inside of the road, or students that must cross School House Drive to get to vehicles would do so at the crosswalks. A handful of parents were observed making U-turns midblock after dropping off or picking up their students.
- Bus drop off and pick up occurs on the east side of the school in the one-way loop and generally involves 5-6 buses. Staff are present in the bus loading / unloading area, and all buses head to the south to Summerfields Parkway. Before school dismissal, a few buses were seen parking in the southbound direction on School House Drive northeast of the school. It appeared to be a dwell location for the buses. Bus operations seem efficient and well managed.
- In general, vehicle speeds along School House Drive were generally slow, with good compliance by motorists at the crosswalks. There was one vehicle with a young driver on School House Drive east of the school clearly traveling beyond the speed limit. The crossing guard noted this person is a frequent violator.

Pedestrian / Bicycle Observations

- There was a total of more than 150 students that walked or biked to school on the day the transportation observations were completed. Based on input from the crossing guards, this was a typical day. On very nice days in the spring, there may be even more students walking or biking, and on bad weather days, the number is significantly reduced.
- All students walking or biking to school must cross School House Drive. There are four signed, marked, and staffed crosswalks. Observations showed all walking/biking students using these

crosswalks. No midblock crossings were observed (except for the few students getting to/from their vehicles with their parents as discussed above).

- The crosswalks are well placed. This was intentional to minimize vehicle conflicts at the access points and within the school grounds. There is a complete and connected sidewalk system leading to/from the crosswalks throughout the school walking area.
- The crossing guards wore personal protective equipment (vests) and utilized STOP paddles. They were diligent and took their jobs seriously. They were engaged, supportive, and positive with the students.
 - Vehicle compliance to people in the crosswalks was excellent.
 - Students generally observed the crossing guard's direction. Students on bicycles did not necessarily dismount as a matter of course while crossing in the crosswalk.
 - Some students cross School House Drive, and then cross the side street. Whether the crossing guard provided support for these secondary crossings varied from location to location, and varied depending on how many students were present.
- In general, the timeframe for the crossing guard presence was relatively limited (about 7:40 - 7:50 a.m., and 2:40 - 2:50 p.m.). This timeframe encompassed most student crossings. In the morning, there were a handful of students that crossed School House Drive before the crossing guards arrived.

Documented Safety Data

Calls for service and/or reported traffic crashes to the Timnath Police Department were reviewed in the Bethke area for all of 2021, 2022, and through May 2023. Most calls were related to school checks and additional patrols. There were three traffic stops and one report of a motor vehicle crash that occurred on school property where a vehicle rear ended a school bus resulting in minor injuries.

According to the data provided, there were no reported crashes for motor vehicles on School House Drive, or students walking or biking to/from school in the last two and one-half years.

Infrastructure

Roadway infrastructure (including signage and pavement markings) is in good condition. Additional observations regarding signage include:

- School zone signs with 'when children are present' are difficult for Police Department staff to enforce.
- Some signage is not compliant with the current national standard Manual on Uniform Traffic Control Devices (MUTCD). See the discussion in Section 4 for more information.
- The visibility of some signage is obstructed by street landscaping. See the photo at right (school zone ahead sign northbound on Eagle Creek).



Landscaping Impacting Sign Visibility

4. Items of Interest and Discussion

Overall, school-related transportation was orderly and efficient, and the peak periods were short-lived. Thanks to the commitment from school leadership and assigned staff that actively manage their assigned areas, there were no significant operational or safety concerns identified. There are a few items / areas that are recommended for review to further support school transportation. These items are listed below together with a discussion. Final recommendations are in Section 5.

Reduced Speed Limit School Zone

The signage for the reduced speed school zone encompasses about a ½ mile of School House Drive. This is an unusually long school zone and includes four intersections and one additional school access point. Typically, longer school zones see less compliance. School zones are more effective when they are shorter. In this case, the placement of the school 'inside' School House Drive does not lend itself to reducing the school zone length.

Consideration was given to whether a reduced speed school zone with flashing lights was appropriate and/or warranted for Bethke. The challenge for a flashing light system at this location is that due to the length of the zone, and the four intersections within the zone, a total of at least five assemblies would be needed with an associated significant cost for installation and maintenance. And in locations without electrical power available, the assemblies would need to be solar powered. Solar powered assemblies are a challenge to maintain and are not as reliable as hard-wired assemblies. Because observed vehicle speeds were already slow during peak school time, it is not believed that a flashing light system would have much effect on vehicle speeds, nor provide a safety benefit. Instead, it is proposed to replace the 'When Children are Present' plaques with specific time periods in order to make them less ambiguous and more enforceable.

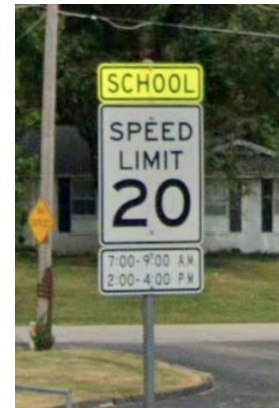
Another consideration is whether the school zone should extend onto the four side streets. School zones are designated by road and do not 'go around corners'. Therefore, the designated school zone on School House Drive does not automatically extend to the side streets. A school zone on the side street would need to be separately signed in both directions. Typical school zone determinations would identify the roadways near schools with higher volumes and higher speeds, where students must cross the roadway without the benefit of a STOP sign. For Bethke, this would mean that the appropriate roadway for a reduced speed school zone would be School House Drive. All four side streets are STOP controlled upon the approach to School House Drive, meaning that approaching vehicle speeds are very low (and stopped at any side street crosswalks). Therefore, the recommendations will show that the reduced speed signs on the side streets be removed and replaced with a school warning sign.

The reduced speed limit school zone should be along School House Drive. Supplemental reduced speed school zone signs are proposed along School House Drive so that vehicles coming from the side streets (especially the higher volume Wheatfield and Summerfields) are alerted to the reduced speed school zone. The supplemental signs also serve as a reminder for those traveling through the long school zone.

A discussion was also had on whether there is an option to have a flashing yellow beacon on a reduced speed limit sign just at the beginning of the school zone on School House Drive. A review of the



Existing



Proposed

requirements and standards within the Manual on Uniform Traffic Control Devices (MUTCD) indicates that a flashing beacon is only allowed in conjunction with a speed limit to indicate speed limits in effect 'when flashing' rather than with signs showing specific times when the speed limit is in effect as is being proposed.

Therefore, the focus of the school zone discussion was to make the school zone more easily enforceable for Police Department staff (with specific times), clarify the location of the zone to be along School House Drive, and provide supplementary school zone signs within the zone as reminders and for those vehicles turning from major side streets (Wheatfield and Summerfields).

Standardization of Signs and Visibility

There are a number of signs along School House Drive that are related to school transportation that are not properly applied based on the Manual on Uniform Traffic Control Devices (MUTCD) and State Law. Specifically, the 'State Law Stop for Pedestrian within Crosswalk' is inappropriate (per Colorado law the 'STOP' needs to be replaced with 'Yield') and they should not be used on a road edge. They are intended to be used as an in-roadway sign placed on a center line as a supplement to standard signage. These signs should be exchanged for standard school crosswalk sign assemblies as shown in the proposed signage in **Figure 7**.



Existing Non-Compliant Sign

If, in the future, compliance at crosswalks decreases and additional awareness is needed, 'State Law Yield to Pedestrians' signs similar to those currently installed could be placed in the roadway on stands. The assemblies would normally be housed away from the road and then could be moved to the roadway centerlines by the crossing guards while they are on site. The assemblies would be removed at the end of the peak pedestrian times. There are several schools in the Poudre School District that use these movable sign assemblies.



State Law Signs with YIELD could be used in Road

As noted in Section 3 on page 10, there is a school sign on Eagle Creek whose visibility is obscured by street trees. This sign should be moved, or the tree trimmed. In coming years when the trees are larger, they could be 'limbed up' to allow for sign visibility.

Finally, compliance with signs is most effective when they are not near other signs. Somewhat counterintuitive, it is better to have fewer signs than more signs. The attached signing recommendation proposes to remove several signs that are not required so the focus can be on those most impactful (reduced speed and crosswalk signs).

Figure 7 at the end of this memo details the recommended sign changes.

Vehicle Queue on School House Drive

The vehicle queue for student drop off and pick up on the west side of the school is generally orderly and once it spills onto School House Drive occurs in the northbound parking lane. But if there is a vehicle parked in the parking lane, then the queue must use the travel lane to get around the parked vehicle which impacts the through travel lane. This can be alleviated with parking restrictions in that area during school days. Examples from other area schools are shown at right, and the proposed signage plan attachment indicates the specific language suggested.



Parking Sign Examples

A benefit for the Bethke area is that street parking is not heavily utilized. There does not appear to be a negative impact to restricting parking during peak times along the queuing area.

Crosswalk Management

The four crosswalks are managed by school staff. The crossing guards wear vests and utilize STOP paddles. They are observant and diligent in their duties. Their training is primarily informal, having been passed down from staff doing the tasks in previous years. The district does have a crossing guard training program that could be utilized.

The district crossing guard training program teaches specific techniques that could be used at Bethke to refine and formalize the crossing process:

- Gather children to minimize the number of times that one must enter traffic.
- Instruct children to wait a safe distance back from the curb and only cross on the guard's signal (students were observed following a guard into the street before traffic had stopped).
- Walk to the center of the street with the STOP paddle raised.
- Ensure that traffic in both directions can see you. Move as needed to avoid being screened by stopped vehicles.
- When it has been confirmed that all traffic has stopped, instruct children to cross. Require bicyclists, skateboarders, etc. to dismount. Require students to walk not run. Running out into the street is a common cause of young pedestrian accidents. So walking is a good habit to instill. Many students observed riding bicycles did not dismount to cross the road. This can be a concern since students riding bicycles move more quickly than pedestrians, and can enter a crosswalk at the last minute, leaving little time for vehicles to stop.



Example of Students / Parents Dismounting in School Crosswalk

It is recommended that these techniques and strategies be adopted as policies used at each crossing to ensure consistency. Policies related to student and parent behavior, i.e., dismounting, waiting, and walking, should be communicated to parents, taught to students at the start of the school year, and enforced by the crossing guards.

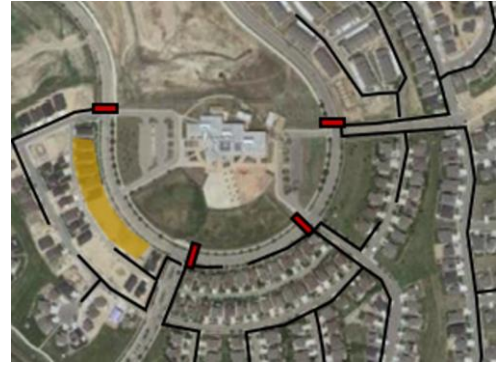
Another item of importance that was observed is that crossing guards, whose primary duty is to help students cross School House Drive, are using their judgment on if/when to support students crossing the side streets. Especially at Summerfields Parkway, which has the highest vehicle turning volumes, this can be helpful if the crossing guard is able to accommodate that. Should a crossing guard be helping students on the side street, it is critical that students wanting to cross School House Drive wait for the crossing guard to direct them before stepping into the roadway. Again, this should be communicated to parents, included in the education of students by the School Resource Officer at the start of school, and enforced by the crossing guards.

During discussions with school staff, a question was raised whether the Town of Timnath could support school transportation with crossing guards like the program between the City of Fort Collins and Poudre School District. The program between the City of Fort Collins and Poudre School District provides city-funded crossing guards at a few select locations. These locations are typically arterial streets with multiple lanes and higher traffic speeds. The crosswalks around Bethke would not qualify within the criteria for the program. Other Poudre School District schools with adjacent roads like School House Drive also use their staff to manage crosswalks.

District Walking Route

Section 3 discussed the district identified school walking routes. These routes funnel students to one of the four crosswalks.

There is a small area of residential homes directly west of the school whose walking routes are shown to directly cross the street midblock to the school. See the yellow shaded area at right. Coordination with the District is recommended to adjust those walking routes to the nearby crosswalks.



Yellow Shaded Residences Whose Walking Routes Should be Refined

Change in Intersection Control / Additional Infrastructure

There was a question whether an all-way STOP control at School House Drive and Summerfields Parkway would be a beneficial safety or operational addition for Bethke school traffic. The MUTCD has specific criteria that identify the conditions under which an all-way STOP is appropriate that considers crash history, traffic volumes, sight distance, etc. The safety record at the intersection is excellent, and the volume guidance (for both vehicles as well as bikes/pedestrians) is much higher than the current volumes at this intersection. There is anticipated to be limited, if any, benefit from an all-way STOP, and especially during non-peak school hours, compliance with a STOP sign on School House Drive will be problematic. This may result in reduced safety. It is not recommended that the intersection be converted to an all-way STOP.

Another option is to consider whether some type of vertical deflection such as a speed hump or raised crosswalk would support safety. The installation of vertical deflection is a polarizing issue, with some municipalities fully embracing their benefits of awareness and reduced speeds in the immediate area, and others using caution due to concerns about maintenance, drainage, emergency vehicle response times, noise, neighborhood opposition, etc.



Example of Raised Crosswalk

It is recommended that any consideration of vertical deflection in Timnath be supported by a community wide approach for evaluating locations of interest. Common criteria are listed below. A system can be developed to compare requested locations and prioritize if limited funding is available.

- Eligibility only for collector streets and higher volume local roads (not arterials).
- Demonstrated concerns related to travel speeds above the speed limit.
- Prioritized installation for areas with a crash history.
- Prioritized installation for school or park walking routes.
- Prioritized for areas that see inappropriate cut through traffic.
- Raised crosswalks reserved for areas of high pedestrian crossing volumes.
- Location evaluation (adjacent driveways, grade, drainage inlets, sight distance, property lines, etc.) must be completed.

The area around Bethke (especially the crosswalk at Summerfields) may be well suited for vertical deflection due to school proximity, pedestrian volumes, and more. Less supportive considerations include the fact that observed vehicle speeds were not exceedingly high and there is no crash history.

Consideration and further review of the potential for vertical deflection could be undertaken in the future if vehicle speeds are increasing, or other concerns related to school traffic become pronounced. A townwide program that establishes consistent guidelines for evaluation may be helpful as other neighborhoods often make requests once a single location is constructed. As noted earlier, crosswalk signs on stands that are placed on centerlines may be an easier and less expensive countermeasure than vertical deflection and could be tried first.

Future Growth of Residential Housing in the Bethke Area

This area in Timnath is growing rapidly, with additional residential units planned immediately to the northwest and the northeast of the school. The area northwest of the school is master planned for 500 units of residential, and the area northeast of the school is currently under construction and is approved for 475 units.

Per conversations with the District, they are projecting 100-175 students from the northwest area, and 85-150 students from the northeast area. They would all be within the Bethke walking area. Students from these new residential areas are not expected to significantly impact enrollment numbers in the next year or two. The district believes that as these new houses come online, students in the existing houses will move on to middle school and high school. The new students will slowly replace the existing students as the neighborhoods turn over.

The expected change in the transportation system for Bethke due to this growth is that more students will be walking / biking to and from school from the north. The designated walking routes for these students should be on the 'outside' of the School House Drive roadway, with the crossing of the roadway occurring at the existing signed, marked, and staffed crosswalks. It is important that no new school crosswalks across School House be created. This limits the need for additional staff and consolidates students' crossings to where motorists are expecting them.



Future Growth and Walking Routes

Police Presence and Enforcement of Consistent Speeders

Timnath Engineering staff as well as Bethke School staff appear to have a strong partnership with the local Police Department regarding school safety. The School Resource Officer provides transportation training for students each fall, and other officers are supportive of a general police presence during peak times. During the observation for this report, a police cruiser was parked at the entrance to the school zone on the northwest side of the school during the afternoon peak time.

Once the school zone signage is upgraded with specific enforcement times, speed limits will be easier to enforce. In addition, the crossing guards indicated that there is a frequent vehicle with a young driver that

speeds through the school area. A license plate turned in to the Police Department may be an opportunity to reach out to the person.

Education Opportunities

Most students and parents in the Bethke area are doing an excellent job of safely getting to and from school each day. Drivers were observed traveling slowly, queuing in an orderly fashion, yielding to pedestrians in crosswalks, etc. A couple of educational opportunities have been noted above, including bicyclists dismounting at crosswalks, and students waiting for crossing guards. The school staff had also noted concern about the railroad tracks south of the school on Summerfields Parkway. Parent and student communication about the tracks may be beneficial.

5. Summary of Recommendations

Transportation at Bethke Elementary is well organized, efficient, and actively managed. The school leadership's commitment to supporting transportation safety and operations around the school is evident. This section summarizes recommendations for continued transportation safety.

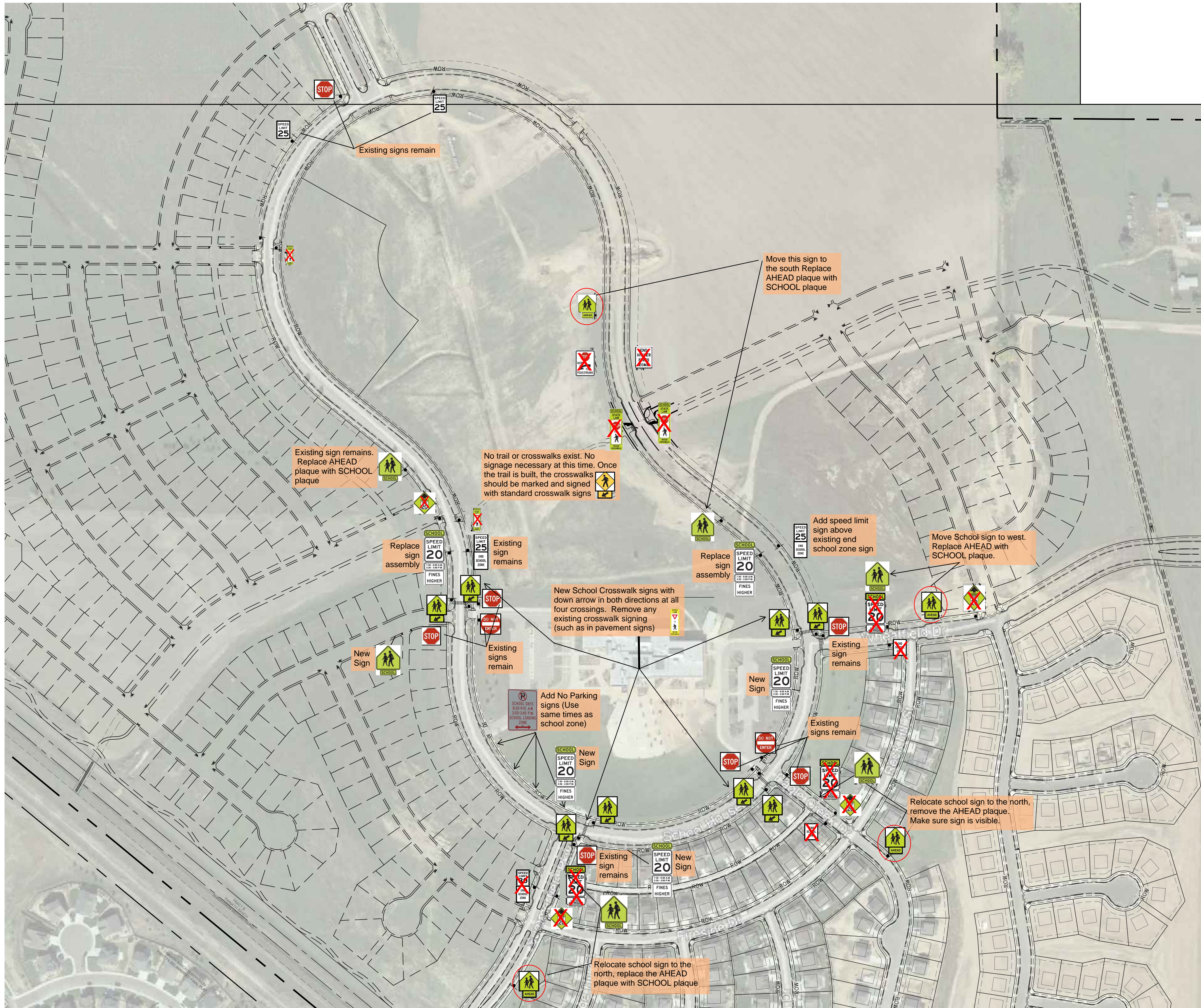
- **Signage**
 - Upgrade school signs recommendations in the attached **Figure 7**. This ensures signs meet the current national standards and are consistently applied in the area. The figure shows several sign removals (to reduce sign clutter and improve the effectiveness of needed signs), and formalization of the reduced speed school zone along School House Drive in a way that is more enforceable. There is also some relocation of signs with different supplemental plaques, new crosswalk signs, new parking restrictions in the vehicle queue area, and some additional school zone signs. The visibility of the signs should be verified.
- **Crosswalk Management**
 - Develop a consistent policy for crossing guard procedures. This includes a requirement for students and parents to dismount, wait, and walk at crosswalks. This should be taught in the annual traffic safety training by the SRO, communicated to parents and strictly enforced by the crossing guards.
 - Ensure that students are waiting to cross School House Drive until the crossing guard directs them to do so.
 - Consider using the district crossing guard training program for staff members. Ensure continued use of vests and STOP paddles.
- **Enforcement**
 - Continued Police Department presence before / after school
 - Coordination for enforcement for consistent speeders (license plate etc.)
 - Crossing guards should enforce the dismount requirement for students biking in crosswalks and require students to wait for crossing guards if they are helping students at other crosswalks in the intersection.
- **District Walking Route**
 - Work with the District Transportation staff to refine walking routes for the small number of addresses where walking routes recommend mid-block crossing. Students should be directed to a marked crosswalk.

- **Additional Infrastructure**
 - Should there be future concerns about crosswalk safety, centerline signs on stands could be used, or if appropriate, crosswalk locations could be reviewed for vertical deflection (such as a raised crosswalk). The most likely location and priority for any further countermeasures is the crosswalk across School House Drive at Summerfields Parkway.






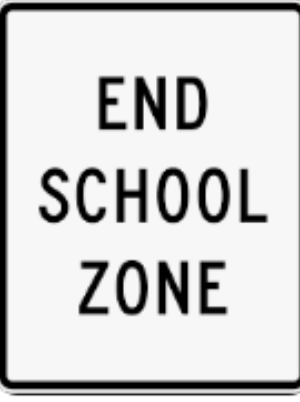

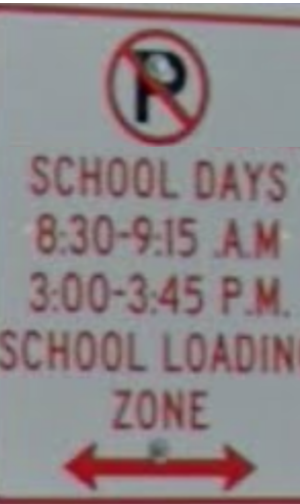
- **Future Growth**
 - As new housing comes online north of the school, all walking/biking students should continue to be routed to one of the four existing staffed crosswalks. No school-based pedestrian crossings of School House Drive should occur north of the school.


- **Educational Opportunities.**
 - Communication to students and parents with reminders regarding crosswalk behavior would further support safety in the area.


Figure 7 - Proposed Signage



SIGNAGE LEGEND

	S1-1		S4-3P
	S1-1		R2-1
	W16-7P		S4-1P
	S5-2		R2-6P
	Specialty No Parking Sign		Use Same times as school zone 7:30 - 8:00 am and 2:30 - 3:00 pm

 Remove sign

 Relocate sign

