

MEMO

To: Rich Cosgrove, Douglas County School District
Nick Westphal, Dibble

From: Chris J Martin, Douglas County Public Works Engineering

CC: Janet Herman, Douglas County Public Works Engineering
Zeke Lynch, Douglas County Public Works Engineering
Jeanette Baer, Douglas County Community Development
Eric Pavlinek, Douglas County Community Development

Date: 02/21/2025

Re: **DCSD – North Planning Area Traffic Recommendations**

Douglas County Public Works Engineering appreciates the proactive approach taken by DCSD to evaluate the traffic impacts and potential mitigation measures needed for school pairings in Highlands Ranch. The advanced coordination meeting, agreement on methodology and approach, and joint discussion of the traffic study results was appreciated and allowed a streamlined County review process. We understand that if required by planning, a location and extent land use process will be followed for the school consolidations. This will result in increased enrollment and traffic at some school sites.

We have reviewed the documents that you have provided and offer the following comments for your consideration. If these comments are addressed and suggested rewording of some mitigation measures are incorporated, Douglas County public works would accept the traffic impact studies. In addition, we acknowledge that some improvements maybe needed within the public right-of-way, and we will look to partner with DCSD on those improvements. We understand that some improvements would be funded and implemented by DCSD for those that are needed on the school sites.

Overall comments

Peak 15 minute period capacity and delay issues are not unusual around Elementary schools in Highlands Ranch. Many of the traffic level of service issues being discussed in the pairing studies are typical at most DCSD schools.

While it is understood that part of the study's endeavor is to provide potential mitigations for each of the issues found, it is unlikely that the County would act on minor issues that cause delays for short periods of time during the school peaks.

Douglas County follows MUTCD standards for determining the proper intersection traffic control and would not add stop signs or traffic signals unless warranted. We request that any recommendations involving changes to traffic control include a note acknowledging this. Douglas County has a robust traffic signal timing program which optimizes timing for prevailing conditions. We request that any recommendations involving changes to traffic signal timing include a note acknowledging this.

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Douglas County understands that DCSD is considering a school pairing between Saddle Ranch and Stone Mountain and plans to bus students to the consolidated school. Some children may choose to walk to their new school requiring them to cross Wildcat Reserve Parkway, a major arterial. If this school pairing is selected the County will reevaluate the need for a traffic signal at the Wildcat Reserve and Royal Eagle/Weatherfields intersection.

Douglas County understands that DCSD is considering a school pairing between Summit View and Heritage and would desire to connect Piedmont Drive to Summit View Parkway. The County is concerned that neighborhood cut through traffic would result and is not supportive of this connection.

Auxiliary lane warrants

The need for Auxiliary Lanes on two lane roads shall adhere to the State Highway Access Code.

For roadways with 2 or more through lanes, the need for auxiliary lanes would be established by the accepted traffic impact study (not State Hwy Access Code).

Signal Timing

Signal timing is typically optimized for prevailing conditions. Signal timing changes may not be appropriate for side street movements that experience delays for short periods during the day.

Traffic Signal Warrants

When analyzing signal warrants for an intersection that has dedicated right turn lanes on the minor approach, the County does not include the minor-street right turning volume in the analysis.

Traffic Control

Douglas County Public Works determines the needed traffic control (including stop signs and traffic signals etc.) based on criteria and guidelines set forth in the Manual on Uniform Traffic Control Devices (MUTCD). The County approaches these decisions with the needs of all travelers on the roadways. Again, it is unlikely that the County would act on minor issues that cause delays for short periods of time during the school peaks.

Comments on Listed Traffic Recommendations:

2. ThunderRidge H.S Elementary Feeders

2.1 Coyote Creek Elementary to Trailblazer Elementary

<u>Recommendation</u>	<u>Comment</u>
Coordinate with Douglas County to modify signal timing at Highlands Ranch Parkway and Spring Hill Parkway/Wildcat Reserve Parkway.	While signal timing modifications are a potential mitigation, signal timing is typically optimized for prevailing conditions. Timing changes may not be appropriate for side street movements that experience delays for short periods during the day. The County will monitor conditions to determine if timing adjustments are warranted.

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2.1 Coyote Creek Elementary to Trailblazer Elementary **continued**

<u>Recommendation</u>	<u>Comment</u>
<p>Coordinate with Douglas County to convert the Hackberry Street and Spring Hill Parkway intersection to a 4-way stop.</p>	<p>While this is a potential mitigation measure that would be an attempt to improve the LOS for the northbound approach, it would increase delay to the east/west approaches. It would also be a 24 hour per day restriction to resolve an issue that occurs for short periods of time twice a day. There are related safety issues with multi-way stop control at intersections that have low volumes for the larger part of the day as some motorists may begin to disregard the traffic control device. During the school peak periods, this measure could create longer queues impacting intersections to the east and west of this intersection.</p>
<p>Add pavement markings and signage on Hackberry Street at Spring Hill Parkway to create a shared eastbound through/left-turn lane and a dedicated eastbound right-turn lane. The existing pavement width should accommodate the layout. right-turn lane. The existing pavement width should accommodate the layout.</p>	<p>It appears that this recommendation is needed only to mitigate delays to the eastbound approach to the intersection caused by the installation of the All-Way stop control in the above recommendation.</p> <p>While this is a potential mitigation measure, as the road width is 32' lip to lip, substandard 10 ½ ft lane widths would occur. Centerline striping would be needed between intersections east and west of the subject intersection.</p>

2.2. Trailblazer Elementary to Coyote Creek Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Request Douglas County install a right-turn lane on eastbound Highlands Ranch Parkway at Westridge Village Parkway. The existing traffic volumes warrant a right-turn lane at this location and adding additional school traffic will increase the right-turn conflicts.</p>	<p>The need for this right-turn lane was evaluated based on State Highway Access Code recommendations. However, for County roadways with 2 or more through lanes as in this case, the need for a right turn lane would be based on LOS (not State Hwy Access Code). The eastbound through/right combination movement is shown to have a LOS of C or better with Total Volumes.</p> <p>The need for this recommended improvement is not warranted based on the projected operations of this intersection.</p> <p>If this improvement is proposed, please reevaluate the cost estimate to include the impact to the storm sewer, traffic signal, and utilities increasing the cost of this improvement.</p>

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2.3. Trailblazer Elementary to Eldorado Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Request Douglas County install a right-turn lane on eastbound Highlands Ranch Parkway at Westridge Village Parkway. The existing traffic volumes warrant a right-turn lane at this location and adding additional school traffic will increase the right-turn conflicts.</p>	<p>The need for this right-turn lane was evaluated based on State Highway Access Code recommendations. However, for County roadways with 2 or more through lanes, the need for a right turn lane would be based on LOS (not State Hwy Access Code). The eastbound through/right combination movement is shown to have a LOS of C or better with Total Volumes.</p> <p>The need for this recommended improvement is not warranted based on the projected operations of this intersection.</p>

2.4. Stone Mountain Elementary to Saddle Ranch Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Coordinate with Highlands Ranch Community Association to request the owner at the northwest corner of Royal Eagle Lane at Eagle Valley Way trim vegetation for increased site visibility.</p> <p>Create a no parking zone along the southbound curb, north of the bus loop entrance on Royal Eagle Lane, to prevent traffic from parking at and near the crosswalk, limiting visibility of pedestrians crossing the street.</p> <p>Monitor the intersection of Wildcat Reserve Parkway at Royal Eagle Road/Weathersfield Way for increased traffic safety concerns. If increased vehicle and pedestrian traffic causes safety concerns, additional mitigation measures may be required. No improvements are warranted at this time.</p>	<p>Check the location for this recommendation, should this be the northeast corner?</p> <p>This is a valid mitigation measure. Trimming may need to be coordinated by the County instead of the HRCA.</p> <p>This is a potential mitigation measure.</p> <p>County Traffic Engineering staff would need to quantify the issue at the crossing location and determine the appropriate action to be taken</p> <p>There is no marked pedestrian crossing location of Wildcat Reserve Pkwy (WRP) within a reasonable distance from Royal Eagle Rd.</p> <p>Bus service would need to be provided for all students south of WRP.</p> <p>A signal warrant analysis was performed for WRP and Royal Eagle Rd in 2022. A traffic signal was not warranted/recommended at this location.</p>

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2.5. Saddle Ranch Elementary to Stone Mountain Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Enact a school policy that prohibits vehicles from parking on Southbound Weatherford Way, north/east of the Abbotswood Court intersection during pick-up and drop-off times to allow for vehicle queuing.</p>	<p>This recommendation would need to be implemented by the SRO on a temporary basis during drop-off and or pick-up times.</p> <p>Note that the County cannot prohibit residents from legally parking to use the park facilities adjacent to school.</p>
<p>Partner with Douglas County to create curb extensions on Weathersfield Way at intermittent spaces along the roadway to promote reduced vehicle speeds.</p>	<p>While this treatment is not currently part of the County’s toolbox for use as a speed control measure, it could be considered at mid-block pedestrian crossing locations to reduce the crossing distance and help improve sight lines to pedestrians before they enter the roadway.</p>
<p>Monitor the intersections of Wildcat Reserve Parkway at Royal Eagle Road/Weathersfield Way and Wildcat Reserve Parkway at Kingfisher Avenue/Stone Mountain Drive for increased traffic safety concerns. If increased vehicle and pedestrian traffic causes safety concerns, additional mitigation measures may be required. No improvements are warranted at this time.</p>	<p>There is no marked pedestrian crossing location of Wildcat Reserve Pkwy (WRP) within a reasonable distance from Royal Eagle Rd. Bus service would need to be provided for all students north of WRP. A signal warrant analysis was performed for WRP and Royal Eagle Rd in 2022. A traffic signal was not warranted/recommended at this location.</p>
<p>Partner with Highlands Ranch Metro District to utilize Pronghorn Park as an additional parking area for student pickup.</p>	<p>Parents already use Pronghorn Park unless HR Open space has rented for soccer. The DCSD can pursue an agreement for this use if one doesn’t exist.</p>

3. Mountain Vista High School Elementary Feeders

3.1. Northridge Elementary to Sand Creek Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Request Douglas County install a right-turn lane on eastbound Dad Clark Drive at Maplewood Drive. The existing traffic volumes warrant a right-turn lane at this location and adding additional school traffic will increase the right-turn conflicts.</p>	<p>The need for this right-turn lane was evaluated based on State Highway Access Code recommendations. However, for County roadways with 2 or more through lanes as in this case, the need for a right turn lane would be based on LOS (not State Hwy Access Code). The eastbound through/right combination movement is shown to have a LOS of A with Total Volumes.</p> <p>The need for this recommended improvement is not warranted based on the projected operations of this intersection.</p>

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3.1. Northridge Elementary to Sand Creek Elementary **continued**

<u>Recommendation</u>	<u>Comment</u>
<p>Partner with Douglas County to install a traffic signal at the Dad Clark Drive and Northridge Road intersection based on signal warrant analysis and capacity analysis for both existing conditions and future projected conditions.</p>	<p>This intersection can be monitored for signal warrants. As this intersection has a dedicated right turn lane on the minor street approach, therefore the minor street right turning volumes would not be included in the analysis.</p>
<p>Partner with Douglas County to further review the intersection of Broadway and Southpark Road to determine if the warranted traffic signal should be installed. If the traffic signal is not installed, additional intersection improvements should be explored by Douglas County prior to DCSD consolidating any school into Northridge Elementary or Northridge Elementary to another school as either option will increase traffic into and out of the neighborhood.</p>	<p>This intersection was evaluated for signal warrants in 2023 and did not meet any criteria for a signal. It is unlikely to meet with increased traffic during only school drop off/pick up time frames.</p> <p>This intersection can be monitored for signal warrants. As this intersection has a dedicated right turn lane on the minor street approach, the minor street right turning volumes will not be included in the analysis.</p>

3.2. Northridge Elementary to Bear Canyon Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Coordinate with Douglas County to modify the signal timing at Broadway and Salford Lane as needed.</p>	<p>While signal timing modifications are a potential mitigation, signal timing is typically optimized for prevailing conditions. Timing changes may not be appropriate for side street movements that experience delays for short periods during the day. The County will monitor conditions to determine if timing adjustments are warranted.</p>
<p>Partner with Douglas County to further review the intersection of Broadway and Southpark Road to determine if the warranted traffic signal should be installed. If the traffic signal is not installed, additional intersection improvements should be explored by Douglas County prior to DCSD consolidating any school into Northridge Elementary or Northridge Elementary to another school as either option will increase traffic into and out of the neighborhood.</p>	<p>This intersection was evaluated for signal warrants in 2023 and did not meet any criteria for a signal. It is unlikely to meet with increased traffic during only school drop off/pick up time frames.</p> <p>This intersection can be monitored for signal warrants. As this intersection has a dedicated right turn lane on the minor street approach, the minor street right turning volumes will not be included in the analysis.</p>

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3.3. Bear Canyon Elementary to Northridge Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Coordinate with the Douglas County Sherriff's office to increase speed enforcement along Southpark Road.</p>	<p>This is an appropriate speed mitigation.</p>
<p>Partner with Douglas County to further review the intersection of Broadway and Southpark Road to determine if the warranted traffic signal should be installed. If the traffic signal is not installed, additional intersection improvements should be explored by Douglas County prior to DCSD consolidating any school into Northridge Elementary or Northridge Elementary to another school as either option will increase traffic into and out of the neighborhood.</p>	<p>This intersection was evaluated for signal warrants in 2023 and did not meet any criteria for a signal. It is unlikely to meet with increased traffic during only school drop off/pick up time frames.</p> <p>This intersection can be monitored for signal warrants. As this intersection has a dedicated right turn lane on the minor street approach, the minor street right turning volumes will not be included in the analysis.</p>

3.4. Summit View Elementary to Heritage Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Provide a short length of a no parking area west of the main parking lot entrance on Summit View Parkway, similar to westbound Summit View Parkway at Astorbrook Place to increase sight visibility looking west.</p>	<p>This is a likely mitigation measure.</p> <p>County Traffic Engineering staff would need to evaluate the sight distance issue at the access and determine the appropriate action to be taken.</p>
<p>Monitor the intersection of Summit View Parkway and Fairview Parkway for increased traffic safety concerns. If increased vehicle and pedestrian traffic causes safety concerns, additional mitigation measures may be required. No improvements are warranted at this time.</p>	<p>Noted</p>

3.5. Heritage Elementary to Summit View Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Coordinate with the Douglas County Sherriff's office to increase speed enforcement along Summit View Parkway.</p>	<p>This is an appropriate speed mitigation.</p>

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3.5. Heritage Elementary to Summit View Elementary **continued**

<u>Recommendation</u>	<u>Comment</u>
Relocate the school zone indicators (signs and flashers) to a location prior to the first access drives into Summit View Elementary for both directions of traffic.	<p>In 2009, Traffic Engineering reduced length of the school speed zone because studies have shown that reducing the zone encourages drivers to comply with the speed regulation resulting in safer crossings for children.</p> <p>Additional justification would be needed for a change to the speed zone.</p>

4. Highlands Ranch High School Elementary Feeders

4.1. Fox Creek Elementary to Cougar Run Elementary

<u>Recommendation</u>	<u>Comment</u>
Enact a school policy that prohibits vehicles from parking on eastbound Venneford Ranch Road, west of Meadow Creek Drive, during pick-up and drop-off times	This is currently part of Cougar Run Elementary's pick-up & drop-off plan since there is insufficient on-site queue length. This plan has been approved by Douglas County. The school may need to reiterate the expectations of the parents for this issue.
Coordinate with the Douglas County Sherriff's office to increase speed enforcement along Venneford Ranch Road.	This is an appropriate speed mitigation.
Analyze the ability to stagger school start and end times for half of the school by at least 10 minutes to decrease the peak pick-up and drop-off demand.	The staggering approach is supported by the County.

4.2 Fox Creek Elementary to Arrowwood Elementary

<u>Recommendation</u>	<u>Comment</u>
Coordinate with Douglas County to install a right-turn lane for southbound Arrowwood Drive at the parking lot access.	This mitigation should be examined further.

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4.2 Fox Creek Elementary to Arrowwood Elementary **continued**

<u>Recommendation</u>	<u>Comment</u>
<p>Install a No U-turn sign at the intersection of Arrowwood Drive and Brookwood Drive to deter U-turns in the intersection.</p> <p>Partner with Douglas County to install a crosswalk with Rapid Rectangular Flashing Beacons (RRFB) and a raised median, on McArthur Ranch, near Arrowwood Drive.</p>	<p>This is a potential mitigation measure.</p> <p>County Traffic Engineering staff would need to evaluate the U-turn issue at the intersection and determine the appropriate action to be taken.</p> <p>The County does not typically install enhanced pedestrian crossing on major arterials. County Traffic Engineering staff would need to evaluate the sight distance issue at the access and determine the appropriate action to be taken</p> <p>Note: Table 8 – LOS and Delay Results in the traffic study for this pairing indicates the Arrowwood Dr & Wildcat Reserve Pkwy is Signalized. Per the description on page 7, the intersection is unsignalized. Please clarify and/or correct.</p>

4.3. Fox Creek Elementary to Eagle Ridge Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Partner with the Church of Jesus Christ of Latter-Day Saints to utilize their parking lot as an additional parking area for student pickup to limit on-street parking.</p> <p>Coordinate with Douglas County to convert Deercrest Way at Ptarmigan Trail to an all-way stop control intersection</p>	<p>Coordination with the Eagle Ridge E.S. Traffic Management Plan will be needed. It appears from Google Street View that this arrangement is already in place.</p> <p>This intersection is within the City of Lone Tree. It appears from Google Street View that this intersection is already an All-Way Stop controlled intersection.</p>

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4.4. Eagle Ridge Elementary to Fox Creek Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Analyze the ability to stagger school start and end times for half of the school by at least 10 minutes to decrease the peak pick-up and drop-off demand.</p> <p>Add pavement markings and signage on Collegiate Drive at the parking lot access to create a shared westbound through lane and a westbound right-turn lane. The existing pavement width should accommodate the layout.</p> <p>Request Douglas County install a southbound right-turn lane at the intersection of Quebec Street at Collegiate Drive Road. The existing traffic volumes warrant a right-turn lane at this location and adding additional school traffic will increase the right-turn conflicts.</p>	<p>The staggering approach is supported by the County.</p> <p>Pavement markings and signage may not be necessary as Douglas County has approved this area as staging for pick-up times at Fox Creek Elementary. County Traffic Engineering staff would need to evaluate to determine if signage and/or marking is appropriate.</p> <p>The need for this right-turn lane was evaluated based on State Highway Access Code recommendations. However, for County roadways with 2 or more through lanes as in this case, the need for a right turn lane would be based on LOS (not State Hwy Access Code). The southbound through/right combination movement is shown operate at acceptable levels.</p>

4.5. Eagle Ridge Elementary to Acres Green Elementary

<u>Recommendation</u>	<u>Comment</u>
<p>Construct two crosswalks within the school parking lot to facilitate safe pedestrian routes through the parking lot and pick-up/drop-off queue. Crossing attendants will need to be present at these crosswalks to enforce pedestrian right of way.</p> <p>Add pavement markings at the parking lot exit to Maximus Drive to provide one entrance lane, one left-turn exit lane, and one right-turn exit lane. The existing pavement width should accommodate the layout.</p>	<p>The County supports this recommendation with the coordination with the Acres Green E.S. Traffic Management Plan.</p> <p>If space is available for the added lane, the County would support this recommendation with the coordination with the Acres Green E.S. Traffic Management Plan. If implemented, it should first be set-up with temporary marking for a trial period to determine if it functions as intended.</p>

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5. Middle Schools

5.1. Ranch View Middle School

<u>Recommendation</u>	<u>Comment</u>
<p>Analyze the ability to expand bus service to the middle school by reducing the walking radius around the school. Increased bus service was not analyzed as a required mitigation but could provide efficiency to the pick-up and drop-off by having additional buses and less personal vehicles.</p> <p>Widen the parking lot access to provide 2 entrance lanes into the main parking area between the high school and the middle school allowing for one lane to queue and one lane to pass.</p>	<p>The County supports alternatives to personal vehicles.</p> <p>On-site mitigations are generally supported by the County.</p>

5.2. Mountain Ridge Middle School

<u>Recommendation</u>	<u>Comment</u>
<p>Analyze the ability to expand bus service to the middle school by reducing the walking radius around the school. Increased bus service was not analyzed as a required mitigation but could provide efficiency to the pick-up and drop-off by having additional buses and less personal vehicles.</p> <p>Install no parking signs along Summit View Parkway, north of Wildcat Reserve Parkway to discourage parking in the northbound bike lane and southbound right-turn lane.</p> <p>Reconfigure the parking areas to allow for greater storage length for queued vehicles on the Property.</p>	<p>The County supports alternatives to personal vehicles.</p> <p>No Parking signs exist. This is on DCSO target enforcement list. County Traffic Engineering staff should evaluate the existing signage and determine if posting additional signs would be appropriate.</p> <p>On-site mitigations are generally supported by the County.</p>

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5.3. Cresthill Middle School

<u>Recommendation</u>	<u>Comment</u>
<p>Analyze the ability to expand bus service to the middle school by reducing the walking radius around the school. Increased bus service was not analyzed as a required mitigation but could provide efficiency to the pick-up and drop-off by having additional buses and less personal vehicles</p>	<p>The County supports alternatives to personal vehicles.</p>
<p>Coordinate with Douglas County to install a dedicated right-turn lane on southbound Cresthill Lane at the northern parking lot entrance/Weeping Willow Circle. Concept Level Cost Estimate: \$160,000 - \$280,000</p>	<p>The County supports the installation of this turn lane. This improvement was discussed in the meeting with Rich Cosgrove on 02/12/25. Rich indicated that funding for the improvement would come from the School District's bond dollars.</p>
<p>Provide crossing guards to the north parking lot access/Weeping Willow Circle at Cresthill Lane.</p>	<p>As this intersection is under All-Way Stop control, Douglas County would not support/approve of crossing guards in the public right of way.</p>