

To: Joe Wilson, Director of Public Works
From: Shawn Poe, PE, CFM, City Engineer
Subject: Traffic Calming Around Schools Synopsis Memo
Date: April 14, 2023

BACKGROUND

On April 11, 2023 at approximately 7:45 pm, a 16-year old was tragically struck and killed by a hit and run driver near the location of E. 76th Avenue at Leyden Street in unincorporated Adams County, which is near Monaco Elementary. Subsequently, several citizens have expressed concern about speeding around schools to the City Manager's Office and to City Council members. In an effort to provide the City Manager's Office with data related traffic calming measures around area schools, the following information is outlined:

- Attachment 1 - List of schools in the Adams County-14 and Adams County 27J school districts serving residents around the City of Commerce City. The list indicates whether the school is located in City limits or in unincorporated Adams County.
- Attachment 2 - Location Map of the schools in the Adams County-14 and Adams County 27J school districts serving residents around the City of Commerce City.
- Attachment 3 - Inventory of where traffic calming measures are located around schools in the Commerce City area and what type of measures are in place.
- Attachment 4 - Inventory of accident reports around the area of Monaco Elementary between 2016 and 2023 prior to the fatality accident (source is Adams County Public Works).

FINDINGS

There are two elementary schools in the Adams County 14 district located outside the City's jurisdiction in unincorporated Adams County. The streets around these schools are owned and maintained by Adams County.

There are 11 schools in the Adams County 14 district with 2 of those with speed humps on streets around the school (Alsup Elementary & Kearney Middle School). There are 9 schools in the Adams County 27J district within Commerce City and 6 of those have speed humps or other traffic calming measure on streets around the school (Belle Creek Charter, Reunion Elementary, Southlawn Elementary, Stead School, Stuart Middle School, & Turnberry Elementary).

Around Monaco Elementary School, the accident rate is around 4 accidents per year between 2016-2023 with a total of 26 during this timeframe prior to the fatality accident. Four of the accidents had Level C injuries, which is any injury reported or claimed which is not a fatal, incapacitating, or non-incapacitating evident injury. According to Adams County Public Works records, there were 2 requests for speed humps from citizens prior to the fatality accident (2016 & 2018) and 2 more requests subsequent to the fatality accident. A speed analysis along Monaco Street conducted by Adams County the 85th percentile speeds ranged from 29.7 mph to 33.6 mph between August 29, 2019 thru September 4, 2019. The posted speed limit in those areas is 30 mph.

CONCLUSIONS

At the request of the City Manager's Office, staff developed a traffic calming plan at all schools in the Commerce City area where traffic calming measures are not currently installed. The plan includes the two schools located in unincorporated Adams County (DuPont and Monaco Elementary). The plan includes two options for traffic calming – one using speed humps and the other using speed tables. A speed hump is a parabolic asphalt vertical traffic calming devices intended to slow traffic speeds on low volume, low speed roads. Speed humps are 3–4 inches high and 12–14 feet wide, with a ramp length of 3–6 feet, depending on target speed. A speed table is an asphalt traffic calming device that raises the entire wheelbase of a vehicle to reduce its traffic speed. Speed tables are longer than speed humps and flat-topped, with a height of 3–3.5 inches and a length of 22 feet). Speed tables can be used at intersections and serve as a raised crosswalk.

Attachment 5 lists the schools and the estimated number of speed humps/tables around each school. The number estimated is likely to change and the final number will not be known until the feasibility study is completed, but a combination between the two types of traffic calming can be used. Please note that a feasibility analysis will need to occur to determine the best location for each speed hump or speed table prior to installation. For each speed hump/speed table, vertical signage and pavement markings in each direction need to be installed. Furthermore, the speed hump/table cannot be installed in front of a driveway or block street drainage. To implement the plan, it is estimated to cost \$725,500 using speed humps or \$974,500 using speed tables, which includes signage and pavement markings.

Staff contacted Adams County to discuss the process to allow the City to install traffic calming measures for the two schools located in unincorporated Adams County. Adams County staff indicated an IGA or Annexation Agreement would need to be approved by both the City and the County prior to work beginning. The IGA would allow the installation of the traffic calming devices, pavement markings, and signage and assign snow removal, street sweeping, and maintenance of the traffic calming devices, pavement markings, and signage to the City. The County would still be responsible for the maintenance of the street itself and drainage

infrastructure. An Annexation Agreement would annex the right-of-way (ROW) to the City and the City would have full responsibility of the assets in the ROW. An IGA is estimated to take 60-90 days to execute and an Annexation Agreement could take longer.

The anticipated schedule for implementing the traffic calming plan at the schools is as follows:

- Advertising for the asphalt pavement management contract the week of April 17th for three weeks.
- Bids will be received early May
- Begin feasibility study for each school to determine final locations of speed humps/tables
- Award of the contract is anticipated to be on May 15th
- Anticipated construction begins in June.

Typically, the contractor can install 3 speed humps/tables per day. Therefore, if all the speed humps/tables were estimated to be installed, it is anticipated to take about 1.5 - 2 months to install taking into consideration inclement weather. Therefore, it is feasible to have the traffic calming plan completed before school begins provided the IGA required for the two Adams 14 district outside the City limits could be executed within 60 days. Please note the contractor may not have enough resources to implement the 2023 Pavement Management Plan while installing the speed humps/tables concurrently.

In addition to the traffic calming efforts around schools, the City is developing a Safety Sensitive Zones (SSZ) program for neighborhoods where speeding vehicles are a concern. The program will define certain areas of the City constituting a public safety risk based on the combination of high traffic volume and/or dangerous speeds in combination with a large amount of pedestrian traffic. The program includes assessing fines double the usual amount for speeding and other moving violations (failing to stop at stop signs, failing to signal, failure to stop on red signal indication, etc.) occurring within the zone.

In order to qualify for a SSZ, criteria thresholds will need to be occur after an engineering study is performed analyzing the conditions. Criteria could include, but not limited to traffic volumes, speed data, pedestrian counts, roadway classification, whether a primary snowplow route and/or PD/SACFD/EMS response route, etc. SSZ's could include feedback fixed radar signs, flashing yellow beacon signs, additional pavement markings, and fixed signage notifying motorists about the Safety Sensitive Zone. The SSZ engineering study will require additional staff time and/or outside engineering consultant costs and any assets added to establish the SSZ will require funds for the purchase and additional annual maintenance costs incurred. There also will be additional time/attention in these areas during winter/snow removal conditions.

MEMO CONTINUED

PUBLIC WORKS

Once the program is developed, staff will obtain input from the City Council. Afterwards, the program will be placed on a City Council agenda for consideration since it will require an amendment to the Municipal Code to implement the program.

