

TECHNICAL MEMORANDUM

Date: May 20, 2026

To: Ms. Abbie Ogborn, CMC/MRCC/CMO
City Clerk/Manager

From: Lee Cannon, P.E., PTOE

CBB Job Number: 028-2026

Project: Preliminary Findings Regarding Magruder Asphalt
Roelker Road Sketch Planning Study
Wright City, Missouri

As you know, CBB is currently working on a sketch planning study of Roelker Road for the City. The north-south roadway is located south of I-70, connecting to Veterans Memorial Parkway just east of the Wildcat Drive interchange.

We understand that the Roelker Road corridor is experiencing increased development pressure with multiple projects currently planned and available ground for much more development in the future. You noted the proposed asphalt plant, the recently opened high school, a 206-lot subdivision and a commercial strip mall as recent known developments. You also indicated that the City wants to ensure safe and efficient traffic flow over time as other properties develop.

The purpose of the corridor sketch planning study is to identify the existing traffic conditions, determine the number of trips that would be generated by the various known developments; evaluate the impact of those added trips on the roadway and key intersections; and determine the ability of motorists and all other users to safely travel along and across the corridor. Roadway improvements and/or traffic control modifications will be recommended to accommodate the impact of the increased development over time. The focus of the sketch planning study is the weekday AM and PM peak hour traffic flows.

This memo specifically addresses preliminary findings and recommendations regarding the proposed Magruder Asphalt development located on a 58-acre tract east of Roelker Road immediately south of the railroad tracks.



Existing Conditions

The Missouri Department of Transportation (MoDOT) owns and maintains Veterans Memorial Parkway, effectively the I-70 south outer road, and its intersection with Roelker Road. MoDOT also owns and maintains the interchange of I-70 and Wildcat Drive to the west, Highway H to the west, and Highway F to the east. Any changes at the MoDOT intersections, now or in the future, will require their approval. We understand that the City owns and maintains Roelker Road.

Roelker Road functions as a collector within the road network. Roelker Road extends south from Veterans Memorial Parkway approximately two miles to Fruit Farm Road, near Highway M, with a posted speed limit of 35 miles per hour. A railroad crosses Roelker Road at-grade approximately 530 feet south of Veterans Memorial Drive. The proposed McGruder Asphalt development site is located at the southeast corner of Roelker Road and the railroad crossing. Star Connection Drive intersects Roelker Road to the west within the frontage of the McGruder property. A portion of the study area and the general location of the McGruder property are shown in **Figure 1**.



Figure 1 – Study Area Excerpt and Site Location



Roelker Road is relatively narrow with one traffic lane in each direction and no turn lanes. The current peak hour traffic counts on the north end taken for the sketch planning study indicate approximately 400 vehicles per hour (vph) during the AM peak hour (6:45 – 7:45 AM) and 300 vph during the PM peak hour (2:15 – 3:15 PM). A review of the traffic counts indicate that a significant portion of that traffic is generated by the high school, 325 vph in the AM peak hour and 215 vph in the PM peak hour, or 81% in the AM peak hour and 72% in the PM peak hour. It is obvious that the new high school has added a tremendous amount of traffic to Roelker Road in the past few years.

Based on the 15-hour count completed by CBB and the peak hour volumes noted above, we approximate the current daily volume is on the order of 3,000 to 4,000 vehicles per day (vpd) which is well within the limits of a two-lane roadway. A continuous three-lane section is not currently needed and will not likely be needed in the near term. Some individual intersections may benefit from the addition of auxiliary left-turn and/or right-turn lanes in the future.

Proposed Development

CBB reviewed the proposed site plan from Magruder Asphalt prepared by Marschke Engineering dated 3/4/26. An excerpt from the site plan is shown in **Figure 2**. The plan illustrates the proposed asphalt plant on the north side near the middle of the tract with a 40 foot wide access roadway and 60 foot wide right-of-way which appears to indicate that the roadway would become publicly maintained. The plan also illustrates five additional lots with no proposed land uses indicated. Lots 1 and 2 abut Roelker Road, and Lots 3, 4 and 5 abut the proposed access roadway.

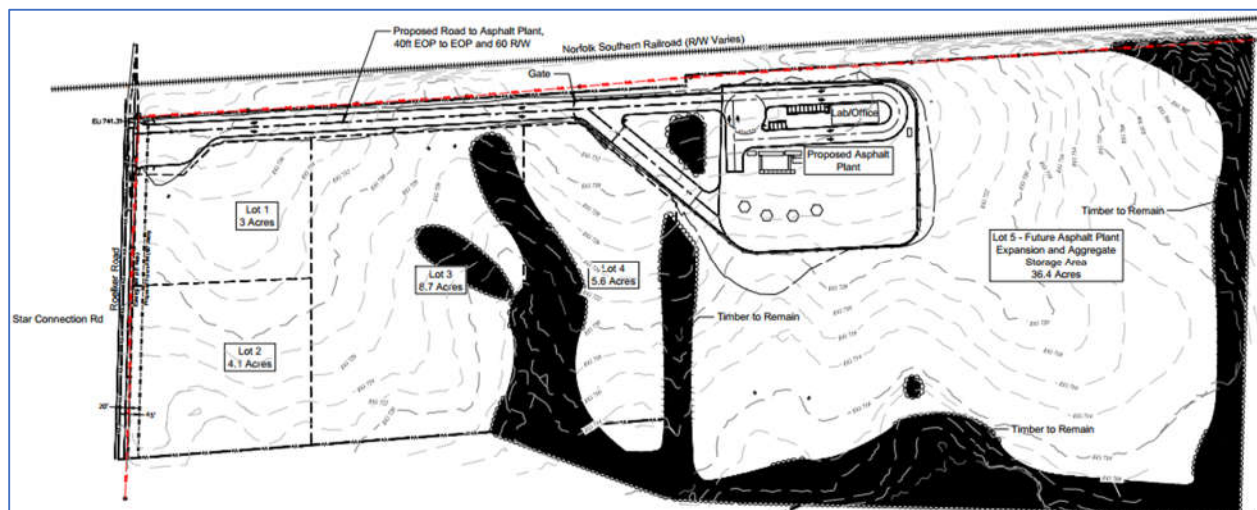


Figure 2 – Site Plan (by others)



Preliminary Findings

CBB compiled the following list of issues/concerns and recommendations regarding the proposed McGruder Asphalt development in the context of the broader planning study:

1. The initial development of the asphalt plant alone will not generate very many vehicle trips, and CBB has no operational capacity concerns related to traffic volumes. McGruder indicated that Lot 5 will also be used in the future operation of the asphalt plant, and CBB has no concerns regarding traffic volumes from the future expansion of the asphalt plant.
2. Many of the vehicles accessing the asphalt plant will be large trucks, either carrying hot mix asphalt out or bringing the asphalt ingredients in (rock, petroleum emulsions, etc.). Therefore, CBB specifically investigated relevant issues related to the large, heavy trucks.
 - a. The bearing capacity of the existing pavement on Roelker Road is not known. CBB recommends that a geotechnical firm be engaged to establish the current bearing capacity and complete a pavement lifecycle analysis assuming heavy truck operations from the asphalt plant.
 - b. If the bearing capacity of the entire road is not adequate for large trucks, CBB recommends that:
 - i. Roelker Road north of the access roadway be upgraded physically to an 80,000 pound bearing capacity, and
 - ii. All trucks to and from the asphalt plant be required to travel only to and from Veterans Memorial Parkway wherefrom they can access the state highway system.
 - c. It would also be prudent to widen and pave shoulders along both sides of Roelker Road.
3. Since no specific users have been identified for Lots 1-4, it is not known if those lots will create any traffic volume concerns in the future. The City should stipulate that additional traffic studies may be required for future developments on Lots 1-4 depending on the use.
4. The City should also consider their long-term goals with respect to property development abutting Roelker Road. Based on the findings of the Sketch Planning Study, the City may want to require properties along both sides to reserve and/or dedicate additional right-of-way, if necessary, to make way for future auxiliary lanes, pedestrian and bicycle facilities and other improvements.



5. With respect to this and any other property subdivision, CBB generally recommends that the subdivision plat be required to note currently proposed and future proposed access for all lots in order to optimize access management prior to approval. Access management refers to minimizing the number of and optimizing the location of access points for the purpose of orderly, efficient and safe traffic flow.

CBB prefers shared access for adjacent parcels and locations for new access that are either aligned directly opposite another existing intersection or spaced adequately far away (150 to 300 feet or more). The City could also consider setting guidelines for: maximum number of allowed access points based on length of frontage, minimum corner clearances, and minimum driveway spacing as well as requirements for cross access easements and stub streets for future connections where appropriate. These measures reduce the number of conflict points on the roadway which decrease congestion and improve safety. Extreme topography and the need to cross drainageways may limit some connectivity options or increase costs.

6. The proposed location of the access roadway for the asphalt plant creates a few concerns.
 - a. Since most of the traffic is anticipated to travel to and from the north, many of the trips will make a southbound left-turn into the site. Any delays caused by opposing northbound traffic will cause that southbound left-turn to wait, and vehicles will queue back across the railroad tracks. Since there is currently no southbound left-turn lane, southbound through traffic would be blocked as well, extending the queue length. Even with a southbound left-turn lane, the southbound left-turn movement would likely queue across the tracks regularly.
 - b. Furthermore, an additional access driveway would be required on Roelker Road to serve Lot 2.
7. CBB recommends an alternative location for the access road which could serve all lots, align opposite the existing Star Connection Drive, and provide additional southbound queuing space, see blue line on **Figure 3**. A side-street STOP sign should provide adequate control.
8. While a southbound left-turn lane may not meet volume warrants on Roelker Road at the proposed access road immediately, it would be prudent to consider adding that auxiliary lane now or in the future due to the large, heavy trucks that will potentially be queued in the through lane otherwise. At a minimum, right-of-way could be reserved along the property frontage for that widening.

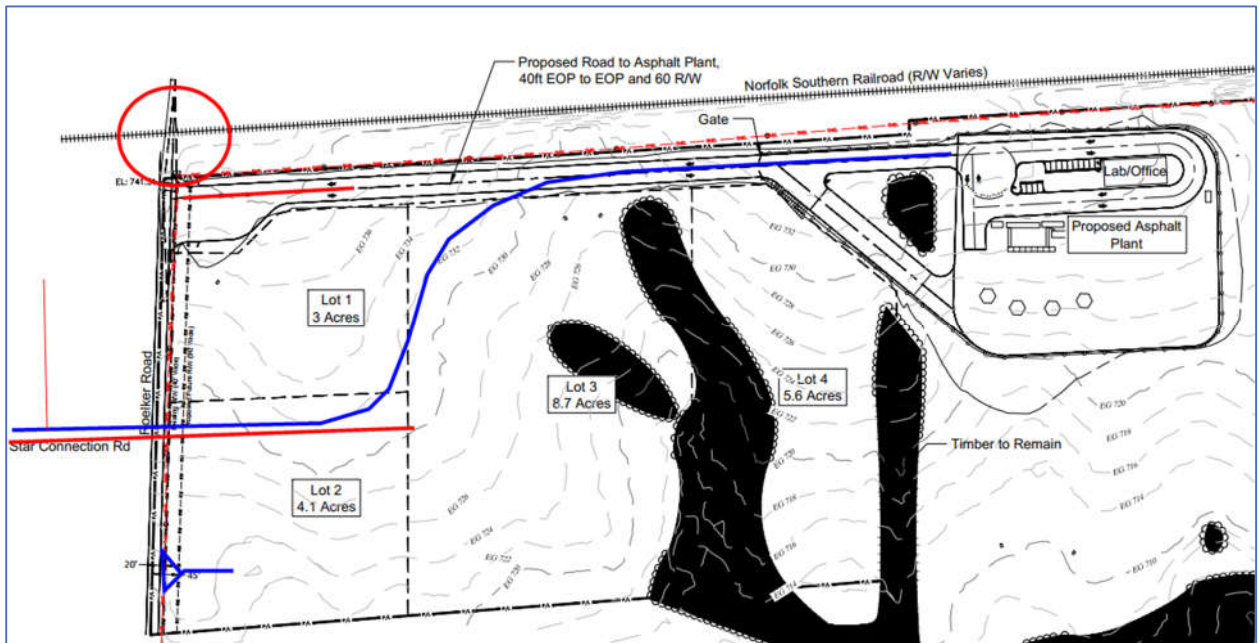


Figure 3 – Alternative Access Configuration

9. The proposed access roadway at the east pavement edge of Roelker Road and within City right-of-way along Roelker Road should be limited to a reasonable width.
 - a. CBB recommends a maximum width of 40 feet plus appropriate curb return radii to accommodate the design vehicle, selected based on the trucks which access the facility, possibly as large as WB-67. The 40-foot width will allow one inbound lane and separate left-turn and through/right-turn lanes to be marked.
 - b. CBB recommends that vehicle templates for the design vehicle be shown over a copy of the site plan to ensure that the design vehicle will remain on the paved road and apron without crossing into adjacent lanes.
 - c. CBB also recommends that sight distance triangles (based on MoDOT EPG or AASHTO Green Book standards) be illustrated over a copy of the site plan. Sight lines for standard gap lengths assuming both passenger vehicles and large trucks should be shown. These areas must be kept clear of obstructions including landscaping, berms, signs, fences, buildings, parking areas, etc. for safe operations.
10. The City should consider the benefits and costs of accepting the proposed access roadway as public right-of-way over the long term. Roads can be quite expensive to maintain, especially roadways subject to large truck traffic.



We trust that you will find the information presented in this memo useful. Should there be any questions or need for clarification, please contact Lee Cannon, PE, PTOE at 314-308-6547 or Lcannon@cbbtraffic.com.